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Wadim Strielkowski *Editor*

Sustainable Leadership for Entrepreneurs and Academics

2018 Prague Institute for Qualification
Enhancement (PRIZK) International
Conference "Entrepreneurial and
Sustainable Academic Leadership"
(ESAL2018)

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Introduction

This volume of Proceedings entitled *Sustainable Leadership for Entrepreneurs and Academics* constitutes an edited volume of original peer-reviewed contributions presented at the 2018 Prague Institute for Qualification Enhancement (PRIZK) International Conference.

The 2nd International Conference “Sustainable Leadership for Entrepreneurs and Academics” (ESAL2018) was held in Prague, Czech Republic, during 13 and 14 September 2018. The conference was a unique event organized by the academic and research institution from the Czech Republic and combining different approaches to such crucial issues as leadership, sustainable development, business and economics, education, social practice, international academic policy, higher education, and research and development (R&D).

The event managed to bring together researchers from various fields of business, economics, education, social sciences, psychology and behavioural sciences, pedagogy and linguistics, as well as stakeholders responsible for sustainable development of business and education.

The conference offered a wide range of keynote speeches, oral presentations and poster presentations, as well as roundtables and workshops. Its main points of discussions and debates centred around the six main parts (alias the conference tracks):

- Part I: Leadership as a Social, Psychological and (Pop)Cultural Phenomenon
- Part II: Leadership in Social Practice
- Part III: Leadership in Business and Economics
- Part IV: Leadership in Higher Education: Commercialization of R&D
- Part V: Leadership, Energy and Sustainable Growth
- Part VI: Leadership, Sustainability and Global Security

Each of these parts is represented by several contributions in the Proceedings volume. The main focus of the conference was leadership in its two very important dimensions: entrepreneurial and academic.

One would probably agree that our quickly globalizing and stratifying world that is marked by such processes as economic interconnectedness, digitalization, microtargeting and spillover causation needs some steady points for securing the future sustainable development in both business (a practical side of things) and education (the theoretical side). The concept of leadership is becoming one of the crucial elements how this can be achieved simultaneously and seemingly.

This book of Proceedings brings together the results of the keynote speeches, presentations, poster presentations and expert discussion in which scholars and stakeholders scrutinize the concept of leadership from various angles including social sciences, business, economic theory, innovative management, international marketing, as well as higher educational and public development policies. The volume focuses on the business models and higher education schemes in various EU and non-EU countries, social and educational practices, academic policies, energy and sustainable growth, and global security from the point of view of renown academics, entrepreneurs, policy-makers and NGO representatives. The book combines contributions both from theory and from practice which makes it a unique toolbox providing a set of policies for entrepreneurs and academics alike.

Our authors and contributors come from the academic institutions, public research institutes, business schools, research centres as well as public sphere forming a wide geography of more than ten countries including Russian Federation, Poland, Ukraine, Colombia, China, Czech Republic, Armenia, Georgia, Lithuania, Azerbaijan and Romania.

I hope that you will find this Proceedings volume to be inspiring and enlightening. I also hope that it will spark many new ideas on how entrepreneurial and academic leadership might be applied for enhancing the sustainable development of business and academia of the twenty-first century.

Wadim Strielkowski

Entrepreneurial and Sustainable Academic Leadership: An Introduction



Wadim Strielkowski

Abstract Our quickly globalizing and rapidly changing world is marked by the economic and social interconnectedness, digitalization that penetrates all spheres of private and public life, issues related to the climate change and the rise of renewable energy sources, as well as such phenomena as microtargeting and spillover causation, is in need of leaders. These leaders can exist as real people, or they can be embedded into a plethora of concepts and ideas. On the one side, there is business that represents a practical side of things, on the other side, there is education that presents the theoretical side and provides fuel for business. Both sides should coexist in a sustainable symbiosis while providing novel ideas and figures that would become leaders and push the science and progress forward. This paper focuses on the entrepreneurial and academic leadership as observed from the point of view of the sustainable development. It provides some opening remarks and ideas that might ignite the wide debate on the future of leadership both in the academia and among the entrepreneurs.

1 Introduction

Nowadays, when the changes in the world around us are so unprecedented and astonishing that we barely have time to acknowledge them, the humanity faces many new threats and challenges. For example, the Internet which changed our life so profoundly that we cannot imagine our life without it made us closer to each other but it also made us to drift more apart.

Another example is smartphones. Who would have thought they become so ubiquitous and important nowadays? An average person in a developed country spends several hours a day interacting with her or his smartphone (Andrews et al. 2015; or Sheldon and Bryant 2016). According to Burnet (2014), most of us would perceive

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a loss of a damage to our smartphone as a greater shock than a death of a loved one. There is even a special term called “nomophobia” which means a smartphone separation anxiety (Han et al. 2017).

But this does not end here: our smartphones are with us all the time, and they can provide all possible (and unwanted) information about us. It just depends who would be able to access it, obtain it, and process it. An Israeli firm called Cellebrite that is specializing in unlocking smartphones is now capable to beach any devices on the market and needs about 10 min to know everything you are (The Economist 2018).

And then there are the social networks. Originally, social networks were designed in order to help people to get to know each other, to meet, and to be in contact more often regardless of the physical distance. However, nowadays they are used for such things as microtargeting of consumers and voters, as in a famous case of a British political marketing company Cambridge Analytica that allegedly interfered with the presidential elections in the United States (as well as in a number of other countries) (Ward 2018). Social networks are also becoming a threat to democracy. Evgeny Morozov describes how government of many countries uses the information from social networks to localize, find, and persecute political activists (Morozov 2011).

It is peculiar that the origins of the algorithms used by Cambridge Analytica were developed by Michal Kosinski, a young scientist born in Warsaw. He is a psychometrician, a pioneer of the new and exciting field, but his message goes well beyond profiling people using their psychological profiles, Kosinski et al. (2013) or Matz et al. (2017) show that psychological profiling (and then influence) can be done using individual behavior on the Internet—including Facebook, Twitter, Instagram, just to name a few.

Kosinski, my fellow countrymen, worked at the Cambridge Judge Business School from 2008 to 2014 and so did I from 2016 to 2017. We missed each other by a couple of years but I interacted with some of his colleagues who helped me to tackle the issues of Big Data in my energy economics and policy projects related to autonomic power system and advanced smart grids. It is amazing how often one would barely scratch the surface of the great things and deeds and would only get a glimpse of the work of titans (i.e., the great scientific leaders, like Kosinski, who are the ones shaping the future and changing the world and we idly sit and watch).

Of course, Kosinski and his colleagues did not help Donald Trump to win the elections, but they opened the Pandora’s box for others to use. From now on, most of the marketing campaigns would be happy to use microtargeting and profiling to increase their revenues and profits. And we, consumers or voters, have to be aware and alert. After all, we are not just mindless sheep led to the slaughter. We should be able to recognize what information the Internet offers and to tell the right from wrong.

All of the issues presented above are very much related to the problematique of entrepreneurial and academic leadership. Nowadays, the leaders are the people who are capable of obtaining, sorting, analyzing, and using the information to their benefit. Information became the new gold of the twenty-first century, and those who are proficient in extracting it are in the lead.

This short introductory paper for the book of Proceedings entitled “Sustainable leadership for entrepreneurs and academics” that is based on the fruitful discussions and contributions from the ESAL2018 Conference held in Prague, Czech Republic, during the 13th and 14th of September 2018, provides an overview and sets the path to follow. In addition, it aims at sparking a discussion on the future of entrepreneurial and sustainable academic leadership from the point of view of academics, researchers, practitioners, and stakeholders from more than 10 countries that contributed to this unique collection of works.

2 New Technologies for Entrepreneurial and Sustainable Leadership

Most of us would probably agree with my opinion that Internet opened the doors of the world ajar for many people, yet it made many other people to be pushed away from each other. There is simply too much information pouring over us from all sources, and our minds are struggling to process it.

One of the implications for the further development of the human race would be the biological or genetical enhancement. The examples of this can already be seen nowadays. For example, one would recall an experiment with the genetically modified babies in China who were made resistant to HIV virus or other diseases. And this is just a beginning. Many of us would not be willing to upgrade our memory or vision or would like to have an instant access to the Internet through the chip implanted in our brain. All of these things would inevitably lead to the creation of a genetically modified race of super humans. The late British physicist Stephen Hawking (1942–2018) warned us about this in his last book entitled “Brief Answers to the Big Questions” which was published soon after his death (see Hawking 2018).

Artificial intelligence (AI) is another exciting issue. Surely, it is tempting to use it in business and academia. Who would not be happy to have an artificial intelligence hologram substitute lecturing your students eight hours a day each day a week. Most humans perceive AI as a tool that would allow to free their labor and time. However, this might all go wrong. In recent Dan Brown’s thriller “Inferno” (Brown 2017), an artificial intelligence is developed by a controversial scientist to such extent that it becomes self-aware and starts to take the fate of other people into its hands. Of course, this is a border that can be crossed one day and that would be the day when the humans will cease to be the masters of their own destiny and the most advanced product of the evolution on planet Earth.

All of the new and exciting technologies described above represent an enormous potential for the entrepreneurial and sustainable academic leadership. Nowadays, most of them are already used in business and education. However, no matter how useful and resourceful they might be, in many cases the humanity is lagging behind with the legal and ethical norms. Many people do not know how to use Internet properly or how to make sure their privacy remains intact. One would hardly tell

a stranger all her or his secrets over a cup of coffee, but the same person would easily post on Facebook photographs of her or his family or share most intimate thoughts and ideas. Most people do not realize that everything ever posted, twitted, or placed on the Internet always remains there and can be easily retrieved. Internet might forgive but it never forgets.

3 Commercialization of Science and Education

Speaking about entrepreneurial and sustainable academic leadership, one has to consider the issue of the commercialization of science and education. One would probably agree that good education helps to create proper business leaders of tomorrow. In addition, business sphere always profits from the research conducted in the academia and is willing to support it financially. In a way, this is a symbiotic process.

However, this mutual interdependence is often hampered by the lack of visionaries in the academic or academic leaders. Unfortunately, even in the twenty-first century, there are still many academics who would tell you that science cannot be monetized. For example, Arend (2018) describes how business schools induce the unethical science monetization schemes. Quite surprisingly, the majority of them comes from the social sciences and humanities, i.e., the fields where commercialization of science is difficult, yet also possible. One of the possible explanations is these zealots are incapable of commercializing science themselves and are too jealous to see the others doing it. After all, leadership style of academic leaders is related to their level of leadership preparedness (Macfarlane 2011; Evans et al. 2013; Fetschenko et al. 2015; Mohnot and Shaw 2017).

This paper argues that governments should provide support for the commercialization of science and higher education, both in financial, but, most importantly, in informational terms. One of the most successful examples of that in Central and Eastern Europe (CEE) was the initiative launched by Barbara Kudrycka, Polish Minister of Science and Higher Education (2007–2013), who initiated a book entitled “Commercialization of R&D for the practitioners.” The book was a practical guide to monetizing science, and it came as a revelation to many Central and European academics. Following its success, several re-editions were made with the most recent one in 2016 (see Barszcz 2016). It appears that such a handbook is needed in other CEE countries and not only there.

It becomes clear that commercialization of science is a useful issue, but it remains largely unresearched. For example, Fini et al. (2018) show that there are not much theoretical and empirical evidence on the interdependence between the commercialization of research and education and broader societal impacts. Clearly, this is a new and promising field for the researchers.

4 Conclusions and Discussions

Overall, it appears that entrepreneurial and academic leaders will face many challenges they will be struggling to comprehend and to challenge. The new brave world presents lots of opportunities but with these opportunities come various threats. We should be aware of all these issues in the face of rapid changes science and progress offer us. Never ever in human history, the opportunities for education, information exchange, and personal growth were so broad and widely available. Internet makes the world smaller and offers eternal wisdom in a form of online courses, videos, lectures, webinars, papers, blogs, and other materials. However, this wisdom is dissolved in an ocean of irrelevant content, spoof videos, hysterical blogs, fake news, and other useless rubbish. One has to learn very well how to distinguish the former from the latter, and this is what will make the leaders of tomorrow who they are and who they will become.

The sustainable development of business and academia (as well as their interconnectedness) for the years to come will very much depend on how the future leaders will tackle the opportunities and threats that will face them. The road to the stars will be thorny but hopefully we will make it.

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Part I
**Leadership as a Social, Psychological,
and (Pop)Cultural Phenomenon**

Leadership in Social and Psychological Characteristics of Group Interactions in Management



Maksim Maramygin, Larisa Yuzvovich and Mihial Loginov

Abstract Our paper focuses on the social and psychological relations within the framework of leadership positions and group interaction in management. Leadership characterizes psychological relations that arise in the group “vertically,” that is, from the point of view of relations of domination and subordination. Leadership is a process of influence on people, generated by a system of informal relations, and leadership implies the existence of clearly structured, formalized relations it is realized through. The role of the manager is thus predetermined by structure. Leadership arises and is formed spontaneously, at the level of unconscious or semi-conscious psychological preferences. Psychological studies convincingly prove that not only the real interaction of people changes their attitude to each other, but also the expectation of this interaction. Consequently, social perception, aimed at creating personal ideas about oneself and about others, a social group, is determined by the type and nature of the interaction (including the intended). We believe that this process is one of the most significant in terms of the interaction and interdependence of the individual and the group. Knowledge of psychological processes and personality traits, its individual psychological characteristics, as well as the mechanisms and errors of social perception is not just important, but necessary as part of group interaction in management.

1 Introduction

Research dealing with the nature of the social and psychological characteristics of group interaction in the management system identifies two main trends: the first is characterized by the reduction in management to management activities and to the

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social systems in which this process can take place. Proponents of this trend argue that management is of an exclusively social nature, characteristic only of social processes and is not found anywhere else. Another tendency, which became widespread in the twenty-first century, is related to the fact that management is not only characteristic of the social, but also of the biological level of development, as well as of technical and communication systems.

Socio-psychological methods are specific ways to influence personal relationships and working relationships, as well as social processes. These methods are aimed at both groups of employees and individuals. Based on the use of moral incentives to work, they affect the person with the help of psychological techniques in order to transform the administrative task into a conscious duty, the internal human need.

In psychology, factors of social perception include the following: (i) empathy—understanding the emotional state of another person; and (ii) attraction—based on the formation of a stable positive sense of perception of another person. Within this context, attraction is considered, as a rule, in three aspects: as a process of forming the attractiveness of another person, as a result of this process, and as a quality of relations. Identification is understood in a broad sense as a process of understanding another, the deep meanings of his/her activity, carried out by direct identification, or an attempt to put oneself in another's place. Social reflection is interpreted as an understanding by a disabled person of his or her characteristics, and how they are manifested in external behavior, an awareness of how he/she (the disabled person) is perceived by other people. Attribution is the understanding by speculation or, in another way, the search for reasons in explaining behavior. Note that the object of attribution can be both the disabled person and the other person or group. Attribution is dispositional, determining the behavior of an individual by internal factors, and situational, explaining behavior by external factors (Bordea et al. 2017).

We are convinced that knowledge of psychological processes and personality traits, its individual psychological characteristics, as well as the mechanisms and mistakes of social perception, is not just important, but necessary for all members of the work group. It determines the relationship between team members, with the team itself and the organization as a whole (Čábelková and Strielkowski 2013; Strielkowski et al. 2016; or Bordean and Sonea 2018).

Thus, groups differ psychologically. As the researchers rightly point out, these differences are manifested in the nature of the psychological state of each member, the degree of their cohesion and, as a result, the psychological climate. An important indicator reflecting the formation of a special type of connections in the work collective, which makes it possible to transform a formal association of people into a real group, is group cohesion. Group cohesion is largely due to the psychological compatibility of its members and characterizes the extent to which they are integrated into the group, share the goals and values of group activities, as well as the subjective preferences of this group compared to the other, arising due to emotional reasons. Thus, group cohesion is manifested in the power of attraction to the group and its interaction with members, which encourages them to remain active in this group and not to leave it.

Traditionally, there are two main approaches to the consideration of group cohesion: an analysis of the emotional relationships between group members and an assessment of the interaction efficiency of group members, namely their ability and readiness to undertake joint activities. The first approach analyzes the frequency and strength of communication links formed in a group. At the same time, cohesion itself is represented as the aggregate of all forces that keep an individual in a group. Thus, in sociometry, to assess group cohesion, the group cohesion index is used (the higher it is, the stronger the group is), calculated as the ratio of the total number of mutual elections of group members to the number of possible choices and the level of relationships well-being. When using the second approach, cohesion is considered to a greater extent from the standpoint of the inclusion of individuals into the process of joint activity. Such an emphasis on joint activities is more peculiar to Russian psychology.

The process of group cohesion with the different levels formation of its structure is not just the communication and emotional attachment of group members, but the joint group activity. Regardless of the approach used in assessing group cohesion, this indicator is a very important indicator of its viability, determining the members' readiness for the joint implementation of the assigned tasks. The formation of group cohesion is promoted by such factors as (i) rational distribution of functions and prestige of the group itself and its activities; (ii) mutual trust and positive relationships between participants; (iii) the homogeneity of the motives of the activities and the tasks individually important for the participants, including the satisfaction of their personal needs related to group activities; or (iv) limited combination of abilities of each group member and rivalry of the group as a whole with other groups.

In practice, the opposite of cohesion is group tension, characterized by a decrease in the desire of the group members to work together. Group tension arises as a result of group conflicts and clashes between the participants and is aimed at separating the participants. Some scientists rightly warn against understanding group tension as something necessarily negative and undesirable in a group, because in certain situations, tension is an incentive and resource factor leading to change. Antagonists group cohesion and tension are dynamic processes, indicating the development of the group, and denoted by the term "group dynamics." Another dynamic process is group pressure, i.e., the impact of the group on behavior, and often the opinion of its member. The more cohesive the group, the stronger such pressure, the researchers note that at the same time the group becomes less critical of its own and gradually transfers pressure to the outside.

The concept of "socio-psychological climate" for the first time in the domestic psychology was used by Mansurov (2004), who studied the performance of production teams in the Soviet years. However, the detailed description of this phenomenon was given by Shepel (2010). According to him, the socio-psychological climate has three climatic zones: (i) the social climate is determined by the extent to which this group understands the goals and objectives, guarantees the observance of civil duties and the rights of workers; (ii) the moral climate is responsible for the moral values accepted in this group; (iii) the psychological climate that characterizes the informal relationships developed between employees directly contacting with each other.

All of these zones exist on two levels: static (permanent) level—stable relationships between team members and their interest in achieving the goals of the joint activity. Dynamic level often changes as far as it is the daily mood of employees in the process of work, or their everyday psychological mood. This is a psychological atmosphere in the team.

Thus, the socio-psychological climate implies: a set of socio-psychological characteristics of the group; the prevailing and stable psychological mood of the team; the nature of the relationship in the team; integral characteristic of the state of the team. The socio-psychological climate is determined by a combination of reasons that give rise to certain attitudes of team members, which in turn manifest themselves in their attitude to their activities and to the people around them.

The factors shaping the socio-psychological climate traditionally include: external (economic and sociopolitical situation in the country and region, standard of living, etc.) and internal, subdivided into objective factors (resource elements of the organization, including the smoothness of the labor process and management style), and subjective (personal qualities of workers, their psychological compatibility, gender and age structure of the team, etc.).

Some psychologists attempt to concretize the indicators characterizing a positive socio-psychological climate (Turgunbaeva et al. 2016; Bögel and Upham 2018). The features of interrelations are considered as such criteria—interpersonal, legal, etc., and characteristics of the collective activity efficiency. Urbanovich (2011) believes that the integral characteristic of the socio-psychological climate is the value-oriented unity of the team. Nevertheless, it should be noted that a workable and cohesive team goes through a long process of formation and development, in which the leader's knowledge of the laws and rules of the psychology of group interaction management plays an important role.

2 Leadership and Management

In the modern world, a leader is a person personifying the functions of management. We emphasize that there are quite a few approaches to the formulation and systematization of managerial functions. In this regard, the position of Krichevsky (2007) is of special interest: he believes that the chief (head/leader) along with the traditional functions conducts also a psychotherapeutic function.

Of course, the level of management and the situation leaves an imprint on the importance of the same functions of the head (Moskalenko and Yevsieieva 2015). In managerial science, this led to the formation of the concept of managers' archetypes, according to which the manager-leader, manager-entrepreneur, manager-planner, and manager-administrator are distinguished.

With regard to the above, Cherednichenko and Telnykh (2004) point out that the essential difference between the concepts of "management" and "leadership" is due to the presence of formal and informal relations in any organization. Leadership, according to the authors, the process of influence on people, generated by a system

Table 1 Differences between leadership and management

Leadership	Management
Element of the microenvironment (small group), the scope of activities—small group	The element of the microenvironment, the scope of activity—social system
Arises spontaneously	Occurs through assignment
There is no system of sanctions	There is a system of sanctions
Psychological characteristics	Social characteristics
The process is not regulated.	Society-regulated legal process
Low level of stability, since depends on the emotional state of the group	Reasonably high level of stability
The regulator of interpersonal relations in the group	Regulator of the official relations of the group
Leader-follower relationship	Relationship “boss-subordinate”
Dominants: motivation and enthusiasm	Dominant: force and coercion
The decision making process is simpler and more direct	Decision making process is mediated
The basis of the activity is vision	Planned basis of activity

Source Own results

of informal relations, and management implies the existence of clearly structured, formalized relations it is realized through. The role of the manager is thus predetermined by structure. Leadership arises and is formed spontaneously, at the level of unconscious or semi-conscious psychological preferences.

Once again, we note that Russian psychologists derive the main differences between leadership and management both from the content of concepts and from the nature of occurrence. The management provides for the organization of all activities of the group, while leadership characterizes psychological relationships that arise in the group “vertically,” that is, from the point of view of domination and subordination relations. Management is a natural and necessary attribute of the process of a formal organization emergence, and leadership arises spontaneously as a result of the interaction of people. Table 1 presents the distinctive features of leadership and management.

At the same time, it is impossible not to note the combination of the role of a leader and a manager in some cases. As Urbanovich (2011) notes, the manager-leader is characterized by a number of abilities: organizational and representative, ability to perceive common needs and problems and to lock in that part of work aimed at meeting these needs and solving problems that the rest of the team cannot master, as well as sensitivity and insight, emotional, and psychological impact and optimism.

We believe that the problem of combining two roles is primarily related to the actualization of certain functions in the activities of a particular manager. We emphasize that most experts agree that a successful manager must become a leader able to influence the opinions, positions, and performance of employees, which means that he must have certain specific characteristics, properties, qualities.

Table 2 Classifications of leader types

Classification feature	Leader type
Activity content	Leader-inspirer Leader-performer Leader—both an inspirer and a performer
Leadership style	Authoritarian Democratic Combining elements of authoritarian and democratic
Nature of activity	Universal Situational
Psychophysiological characteristics	Instrumental Emotional

Source Own results

Nevertheless, many authors note that the leadership efficiency depends not only on the qualities, but also on the characteristics of the followers, supporters, situations, features of the tasks being solved. Therefore, there is variety of classifications of leaders. The basis of the legitimacy of the power of political leaders serves as a classification feature. In accordance with this criterion, three types of leadership are distinguished:

- Traditional leadership is based on customs and traditions, foundations, and strength of habit. The relationship between leaders and followers is based on the personal loyalty of followers, either due to the strength of tradition or the arbitrariness of a leader who is allowed freedom of action based on tradition. The basis of the legitimacy and limitations of the leader's activity is tradition;
- Rational-legal leadership is based on generally accepted legal order. It is subject to formal rules, regulations, and procedures;
- Charismatic leadership is determined by faith in the extraordinary, outstanding qualities of a leader. "Charisma," Weber noted, denotes a certain quality of personality, considered extraordinary, thanks to which it is rated as endowed with supernatural, superhuman, or at least special powers and properties that are inaccessible to other people. This property of the personality can be considered as divine. Charismatic leadership arises from the need for revelation, veneration of heroes, and hope for the leader.

The classification of types of leaders, presented in Table 2, is quite common.

Thus, we emphasize that not all followers (members of the group) equally perceive the personality and actions of the leader. The leader exists in the minds of followers within their personality, and this means that the possibilities of human perception are limited by the personal data of the perceiver (social perception).

3 Psychological Impact

The psychology of influence, impact is one of the basic directions of modern psychology of management, which is explained by the direct emergence of this perspective on the disclosure of mechanisms, ways, and methods of managing subordinates.

In modern psychology, there are various definitions that reflect different approaches to psychological impact. Kabachenko (2005) believes the impact is psychological, when it is external to the addressee and, being reflected by it, changes the psychological regulators of human activity, both externally and internally oriented. Other representatives of the academic community in the field of psychology consider psychological influence as a structural unit, a component of communication. In essence, it represents the “penetration” of one person (or group of persons) into the psyche of another person (or group of persons). The purpose and results of this penetration is a change, restructuring of individual or group psychological phenomena (attitudes, views, motives, positions, states). Such phenomenon of psychological impact as the “impact potential of a labor post,” the components of which are the goals and ideas about the results of labor; given the subject of labor; system of labor; system of labor functions; worker’s rights system; system of working conditions also are important.

At the same time, we note that, despite the heightened interest in this topic, a generalized, unified concept of psychological impact, like classification, does not exist.

It should be noted that the categorical apparatus is also ambiguously interpreted, in particular, the concepts of “influence” and “impact.” In our view, the term “psychological influence” is broader than the term “impact,” and defining it as an external influence of the subject of influence on the psycho-emotional and psychosomatic state of the object of influence by applying only psychological means, aimed at cognitive, affective, and evaluative sphere of the personality, which is reflected by the person and leads to a change in the regulators of the activity and parameters of activity.

In general, the following main types of influence can be identified: persuasion, suggestion, infection, conformism, imitation, manipulation. Foreign psychologists distinguish persuasion (argumentation), suggestion, request, coercion, self-promotion, ignoring, aggressive attack, infection, the urge to imitate (assimilation), formation of benevolence.

Kabachenko (2005) identifies five main groups of means (factors) of influence: regulation of the level of satisfaction of the needs and motives of the object of influence; sensory influence aimed at various analyzers; verbal influence, generating certain features of perception and involving various linguistic and paralinguistic mechanisms; non-verbal influences involving various mimic, acoustic, and other characteristics; involving the object of influence in a specially organized activity. The methods include a set of techniques that implement the impact on needs, interests, inclinations, i.e., sources of motivation of activity, human behavior; attitudes, group norms, people’s self-assessments, i.e., those factors that regulate activity; the emo-

tional state of the person (anxiety, agitation or depression, etc.) and which changes his/her behavior.

Methods of management influence are traditionally divided into administrative, economic, and socio-psychological. Administrative methods influence organizational relationships to achieve goals. They are based on the obligatory subordination of lower managers to higher levels, on disciplinary responsibility, on the principle of unity of command. The basis of this method is the gratuitous attitude of the subject and object of management, a direct impact on the will of the executors by means of management teams that are obligatory for lower bodies. These methods of influence are distinguished by the nature of the impact. Any regulatory or administrative act is subject to mandatory execution. These methods may be accompanied by incentives and sanctions, including those of an economic nature (Zemguliene and Valukonis 2018).

Economic methods involve a set of methods of influence by creating economic conditions that encourage workers to act in the right direction and to achieve the tasks solving. Economic management is different in that a worker acquires a deep, own interest in the final result of his work. In order to start operating economic methods, it is necessary, firstly, to know under what conditions a person will work fruitfully, and, secondly, to create these conditions. Management can give the necessary results only if it relies on knowledge of the motives and patterns of behavior in the course of the work activity of the collectives of workers and of each individual (Yuzvovich et al. 2016).

Socio-psychological methods involve a set of specific ways to influence personal relationships and working relationships, as well as social processes. These methods are aimed at both a group of employees and individuals. They are based on the use of moral incentives to work, affect the person with the help of psychological techniques in order to transform the administrative building into a conscious duty, an internal human need.

Let us dwell in more detail on the socio-psychological methods of interaction, which traditionally include optimal staffing groups and groups, including the regulation of intergroup and interpersonal relations; psychological motivation, which includes the following methods: persuasion, imitation, suggestion, involvement, trust, coercion, social planning. In addition to those listed by experts, such techniques as “condemnation, deception of expectations, hint, compliment, request” are distinguished.

In management activities, both managers and subordinates have to deal with such a phenomenon as manipulation. Psychological manipulating, manipulation—a psychological effect that causes a given response by a person against his/her will. By content, manipulation is a form of management in which one’s own goals and interests of the control object are ignored. They can be completely ignored or recognized formally (fictitiously), but when making management decisions they are not taken into account as part of the management goal. The form of manipulation is a socio-psychological impact, deception, fraud, built on the fictitious recognition of the partner’s interests.

Manipulation is a special case of covert control, characterized by the fact that it takes place intentionally against the will of the recipient of the impact and causes damage (material, moral, or psychological). The authors argue that it is possible to manipulate both the subordinates and the leader. Among the manipulations of subordinates they stand out: “monkey on the neck”—associated with the change of roles: the head (manager) becomes the performer, the subordinate becomes the controller; “I want to consult with you”—the goal is to shift its responsibility to the manager both for the decisions made and for its implementation; “They tear me into pieces”—the employee takes on many instructions, but instead of a specific result refers to congestion; “Kazan orphan”—the manipulator keeps away from the leadership in order to refer that no one is leading him/her, listening, helping, and the like; “child at work”—this manipulation is used by subordinates, pretending to be senseless, in order not to carry out the work; “indispensable,” “not with my qualifications,” etc.

Among the manipulations used by managers in relation to their subordinates, the following ones can be identified: “over the chief’s head”—an attempt by a higher manager to take control, to make a lower level manager “a friend.” In this sense, the subordinate manager becomes the object of manipulated games on the part of the higher level manager, “prove that you are needed here”—this is another version of the manipulation of the subordinate manager by the superior manager; “Provocation”—this manipulation can be considered as counter-manipulation in response to an attempt by a subordinate to manipulate the leader according to the “I want to consult with you” scheme; “Here is your place”—this method of manipulation by subordinates is carried out using the environment of the office. The head places the chair for receiving visitors so far from his/her desk that the subordinate who has entered and crouched on the chair feels his/her personal and his/her question insignificance.

Manipulation can be productively used in management practice. “Firstly, to raise the image of a manager. Secondly, in order to mitigate the form of coercion, it seems that no one can manage without it. Thirdly, to eliminate the contradictions between personal goals and desires and the inclusion of personal motivations in the process of achieving a common goal. At the same time, there is a substantial ethical restriction on the use of manipulation—it becomes immoral if: (a) it is used for the personal purposes of the manager; (b) when violence against a person exceeds the level demanded by the specifics of the work.

4 Conclusions

The majority of researchers believe that leadership is a special case of management, a part of administrative activity in which various issues of management are solved by influencing subordinates based on the official basis of power and sources that strengthen it. The basis of leadership is social interaction within the group content.

The managerial impact is a part, a functional form of psychological impact. A particular feature of this type of impact is the limited scope of application. Managerial impact is used mainly in the system where status roles dominate (primarily, such as “manager,” “subordinate,” etc.).

On this basis, the managerial impact should be considered as a closed system, the structural components of which are combined into a unity with complex multilevel connections and relationships. These ties and relationships, as if building on each other, affect each other and the effectiveness of managerial influence. As a rule, there are two levels: cognitive and emotional. At the cognitive level, the partners of managerial influence are connected by mutual, albeit with different goals, cognition. On the emotional level, a peculiar understanding of the leader and subordinate occurs. Emotional relationships can have both positive and negative signs, be friendly and unfriendly, but in both cases, they influence the direction and strength of the managerial impact.

In general, we think that in its internal essence, the managerial impact represents three interrelated and successive stages. First, the operational phase, characterized by the impact of the head (manager) on the subordinate; secondly, the procedural stage, characterized by subordinate’s acceptance or rejection of the influence exerted on him/her; and finally, the effective stage, which represents the subordinate’s responses to the impact of the manager.

Summarizing, the following conclusions can be made: key aspects of managing an organization are decision making, problem solving, holding talks, and meetings, exchanging information and interacting with the team. The pyramid of management tasks includes five main levels: managerial policy, strategic management, tactical management, leadership positions, and social and psychological interactions in the team. In the concept of management, the leadership paradigm needs to be considered in two models: as a set of managerial powers and as trust based on the respect of the team.

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Segmentation of Consumers as a Leading Factor in Restaurant Marketing



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Abstract Effective management of a restaurant enterprise operating at the competitive market requires conducting marketing activities at an appropriate level. However, the consumer behavior of consumers of restaurant services and its motives are heterogeneous. Therefore, effective management of a restaurant enterprise requires solving the problem of segmentation of the restaurant services market which determines the relevance of the research topic. Our paper shows that an important variable characterizing consumer behavior is the frequency of use of a restaurant service by this respondent, since it is this characteristic that determines the attractiveness of the respondent from the point of view of marketing efforts. We conducted a survey with consumers in order to learn their preferences in three restaurants in the middle price category in Yekaterinburg. In all the restaurants, a uniform way of conducting the research was agreed: questionnaires and pens were placed on the side of the tables, and the decision to take part in the study was made by the respondents themselves. The study resulted in 265 completed questionnaires. When developing a methodological approach to the segmentation of the restaurant services market, it was proposed to introduce into scientific use the concept of a special market segment. A special segment is a fairly large and stable segment of buyers (consumers) identified by the nature of the special purchase situation or the special purpose of making a purchase, to identify which a special (independent) research method or tool can be used, which reduces the scope of the main research and simplifies it. Our results show that the use of the developed composition of the segments of the restaurant market allows to specify the process of planning the effective marketing strategy of a restaurant business.

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1 Introduction

The priority tasks of the development of any economy (including the Russian economy) are its diversification and reduction in dependence on the export of commodities, ensuring GDP growth at the expense of non-primary sectors. In modern economies of developed countries, the service sector plays a very significant role but for Russia, it is a traditionally weak point (see Dyakov and Shatalova 2016; Romanova et al. 2017; Volchik et al. 2018). This leads to a number of negative consequences for the country's economy, in particular to meet the demand for services abroad, to reduce the tourist attractiveness of Russian regions (Ivanchenko and Perepelitsa 2016). Service enterprises often fall into the category of small enterprises; therefore, a lack of competence in the effective management of such enterprises leads not only to a decrease in the quality of customer service, but also negatively affects the development of the relevant small business sectors, which makes it impossible to use their full potential in terms of replenishing budgets different levels and the creation of new job (Akulitch 2002; Capon 2009; Ehrenberger et al. 2015; Moskalenko and Yevsieieva 2015; Astrauskaitė and Paškevičius 2018; or Białowas 2018).

One of the most significant sectors of the service sector is the sphere of public catering; quality restaurant service is one of the essential factors in organizing the leisure of the population (Marvin 1997; Novelli et al. 2006; Abrahám et al. 2015). Effective management of a restaurant enterprise in a competitive market requires the formulation of marketing activities at an appropriate level (Bamford 2008; Strielkowski 2018; Tulla et al. 2018). However, the consumer behavior of consumers of restaurant services and its motives is heterogeneous. Therefore, an effective management of a restaurant enterprise requires solving the problem of segmentation of the restaurant services market which determines the relevance of the research topic.

In modern conditions of aggravated competition, organizations providing restaurant services are forced to take a more careful and deliberate approach to marketing, the main purpose of which is the consumer (Momynova 2016). The tasks associated with market segmentation and selection of target segments form part of marketing activities, known as marketing planning (see Starovoytova and Chugunova 2016).

2 Research Methods

As an original empirical part of our research, a consumer survey was conducted in three restaurants in the middle price category in Yekaterinburg, with the owners of which it was possible to reach an agreement to conduct the survey. In all the restaurants, a uniform way of conducting the research was agreed: questionnaires and pens were placed on the side of the tables, and the decision to take part in the study was made by the respondents themselves.

As a result of the study, 265 completed questionnaires were received, 234 of which were deemed filled out correctly in the verification process before processing the data (filled out completely and do not contain information clearly contradictory to common sense—which happens, e.g., when filling in a questionnaire with drunk visitors). In the case of significant internal contradictions, the questionnaires were also rejected, since the purpose of this study is precisely to identify identifiable relatively homogeneous segments—persons whose consumer behavior patterns are well established and who are able to tell about this consumer behavior. However, since some visitors view the research process as entertainment and give answers lightly, the percentage of rejected questionnaires turned out to be significant.

In accordance with the research plan, individual interviews were conducted with 7 industry experts, representatives of the restaurant industry. The interviews discussed the interpretation of clustering results based on the practical experience of industry experts. Segmentation bases and special segments were also identified, which, according to industry experts, could complement the results of cluster analysis in terms of identifying segments that are important in terms of making marketing decisions.

3 Results and Discussion

When developing our research tools, the need to limit the total number of questions had to be taken into account in order to avoid fatigue of respondents. Considering the fact that one and the same consumer, depending on the situation of using the restaurant service, can simultaneously refer to the “special” segment and visit restaurants in other situations, the questions (instructions) for the respondent should be formulated in such a way that when answering them, the respondent did not take into account situations when he acts as a representative of one of the “special” segments.

The most important variable characterizing consumer behavior is the frequency of use of a restaurant service by this respondent, since it is this characteristic that determines the respondent’s attractiveness in terms of marketing efforts. The interpretation of the results of cluster analysis in conjunction with industry experts made it possible to identify the following segments and groups of segments:

First of all, at the top level of the hierarchy, we can distinguish two largest segments—“active” and “inactive” users, the main classification feature of which is the frequency of restaurant visits (“active,” judging by their answers, go to the restaurant at least 1–2 times per month). They also believe that they “have a good understanding of restaurants” and, in general, are prepared to spend more than inactive ones. They are also generally characterized by more clearly established patterns of consumer behavior, which is manifested, for example, in clearer answers regarding the usual goals of going to a restaurant and the situations of consumption of a restaurant service.

The “active” segment, in turn, was divided into two smaller segments, very active “restaurant lovers” and a heterogeneous group of “medium-active” consumers.

“Restaurant lovers” are a relatively homogeneous group of wealthy people who often use restaurants in connection with a variety of situations and motives—from business meetings to finding new gastronomic sensations. They can afford to go to different restaurants and order expensive dishes.

“Restaurant lovers” were divided into two groups: “frequent visitors,” the characteristics of which generally correspond to “restaurant lovers,” and a special group “eat at a restaurant”—it mainly includes wealthy middle-aged and older men who not only actively use restaurants for recreation—they use them as a substitute for food prepared at home, in other words, can afford to just eat in restaurants. Note that this does not mean that these people do not eat at home, but at least sometimes they are characterized by a special situation of using a restaurant service—as a simple substitute for homemade food.

The cluster of consumers “with medium activity” turned out to be more heterogeneous. In particular, it includes the following segments:

- “Gourmets.” Going to a restaurant in not very large groups (often together) to try something new; lovers of new gastronomic sensations. Not as financially secure as active users.
- “Inexpensive to sit.” One of the largest segments in the consensual opinion of industry experts surveyed during the survey. These are people who consider restaurants primarily as an opportunity to socialize in a pleasant atmosphere, and only then as an opportunity to enjoy gastronomic sensations. They often order not a full dinner, but 1–2 dishes, and they do not want to eat a satisfying meal. Often these are friends and, especially, girlfriends, or—couples who came first of all to talk and spend time, but not to eat. As a rule, persons with an average (low) level of income, of various ages.
- “On business.” A relatively narrow segment of consumers, who use restaurants mainly in connection with working needs, for example, for business meetings. Note that “frequent visitors” also use restaurants, including in connection with work, but for them this is not the dominant situation of use.
- “Rest without saving.” People with different income levels, visiting restaurants are not very often, but regularly and not seeking to save. According to industry experts, this segment can be further classified into two, depending on income level:
 - “Rest without savings—prosperous”—persons with medium and high income levels who, for one reason or another, go to a restaurant not very often; many of them are simply economical enough and could afford more frequent visits.
 - “Rest without savings—living beyond their means”—mostly young men, not well-off, but seeking to give the impression of those. Interviewed experts are convinced of the existence of this segment and suggest that during the survey, its representatives overestimate their income. For this reason, a segment may be “not visible” during clustering.
- “Lovers of drinking.” Also, here we have a rather narrow segment of people who like to drink alcohol in restaurants. Note that the polls were conducted in “non-catered” fairly respectable restaurants; therefore, one should not confuse the

Table 1 Distribution of respondents by segments (rounded up to percent)

No.	Name	Share of the answers (%)
1	Frequent visitors	5
2	Eat at a restaurant	9
3	Gourmets	12
4	Inexpensive to sit	22
5	On business	4
6	Rest without saving	9
7	Lovers to drink	6
8	Favorite dish	3
9	Rare luxury	9
10	Random	9
11	Non-system responses	7
12	No answer	5

Source Own results

“drinkers” segment selected in this study with the regulars of pubs, pubs, etc. In this case, these are mostly middle-aged and older men, who are fairly well-off, resting with friends.

Above, the segments included in the “active” segment group were considered (Table 1). Another cluster group identified as a result of clustering was called “inactive,” which reflects the low frequency of restaurant visits by representatives of this group. Within this group, we managed to distinguish the following segments:

- “Favorite dish.” A small segment with an interesting model of consumer behavior, mostly women with low and medium incomes, who occasionally go to the same restaurant, retaining loyalty not only to the restaurant, but also to the particular dish served there. Do not order a full meal. They go to a restaurant in company with someone, not alone.
- “Rare luxury.” Representatives of this segment—people with medium and low incomes, consider restaurants as an opportunity to have a good time from time to time; however, they are generally more selective in their spending than the “rest without savings” segment.
- “Random.” Strictly speaking, it cannot be called a market segment in the sense in which it was considered in the research literature. This group is characterized by rare visits to restaurants and unformed, difficult to interpret preferences, but their questionnaires were not rejected during preliminary data processing due to the absence of obvious internal contradictions.
- “Non-system responses.” Difficult to interpret clusters formed by respondents who are not necessarily rarely visiting restaurants, but have provided insufficiently consistent answers (e.g., due to carelessness or unwillingness to cooperate) (Table 1).

Attention is drawn to a significant proportion of the “inexpensively sit up” segment. It should be noted that this segment is the least profitable—its representatives

Table 2 Segments of the restaurant market, identified by expertise

Base or segmentation variable	Identified segments
According to the situation of use	Banquets (including holidays, corporate parties, weddings, etc.)
	Business lunches (lunch break), breakfasts
	Breakfast
	Sports broadcasts
	Drinking beer
	Romantic evening
	Family trip (with children)
	Meeting with friends (girlfriends)
	Impulse buying (customers “out of human flow”)
	Live music/entertainment
By type of cuisine	Lovers of “understandable” (familiar) food
	Japanese food lovers (sushi)
	Lovers of other ethnic cuisines (by type of cuisine)
By belonging to a social group	Sustainable elite social groups
	Sustainable social groups, interest groups
By geography	Walking market (local market)
	Market short trip (difficult to walk, but you can quickly get to or drive on the road)
	Remote market (it takes a long time to get to the restaurant)
By the type of information search	Active users using the Internet to search for restaurants/offers

Source Own results

use restaurants “not quite according to their intended purpose,” occupy landing places during periods of high loading of the hall and do not bring substantial profit. Restaurants need to pay attention to the number of this segment in their clientele (this is easy to do, e.g., on a cash register and on sales statistics). This segment may require “demarketing” activities, for example, by eliminating the possibility of purchasing beverages at a reasonable price for small orders.

The opposite of them are such segments as “frequent visitors,” and, especially, “eat in a restaurant.” You can recommend a thorough study of loyalty programs and relationship marketing for these segments. However, as practical experience shows, these programs, as a rule, are at best limited to discount cards.

Further (Table 2) we will present the segments identified by expert means—which were obtained in the course of interviews with industry experts (and which are “special” segments in terms of the method of their identification—the expert survey).

Industry experts were able to name a fairly large number of segments allocated to various segmentation bases. Together with the segments obtained as a result of

the analysis of primary data, the extensive list obtained can be used by restaurant enterprises as the basis for the formation of its marketing policy.

When developing a methodological approach to the segmentation of the restaurant services market, it was proposed to introduce into scientific use the concept of a special market segment. *A special segment is a fairly large and stable segment of buyers (consumers) identified by the nature of the special purchase situation or the special purpose of making a purchase, to identify which a special (independent) research method or tool can be used, which reduces the scope of the main research and simplifies it.*

The use of the developed composition of the segments of the restaurant market allows you to specify the process of planning the marketing of a restaurant enterprise. Obvious is the use of the developed set of segments for the purposes of marketing policy targeting—that is, for the selection of target segments.

However, the possibility of applying the results of the segmentation of the restaurant services market is not limited to the task of targeting; other opportunities are due, in particular, the characteristics of restaurant management. The organizational structure and management of restaurant enterprises (especially non-chain) is characterized by the so-called product orientation (see Kotler 2009): restaurant management concentrates its management efforts on creating a quality product, a permanent marketing function may not exist as such, a plan there is no marketing.

Another feature of the restaurant services market is its locality, which is especially characteristic of restaurants in the middle price category: a restaurant largely depends on the local environment, often on the specifics of objects located in close proximity (walking distance) to it.

Under these conditions, the proposed composition of the restaurant services market segments can be used for marketing research of the market in which the restaurant operates—by comparing the corresponding segments and objects of the local market.

Next, we proceed directly to the task of improving the marketing planning process of a restaurant enterprise, which will take into account both the peculiarities of such enterprises and assume the application of the results of this study in the field of market segmentation.

It should be noted that when developing an appropriate approach, we will primarily focus on the use of appropriate guidelines in non-chain restaurants of the middle price category, which can be attributed, as a rule, to small business, given the higher relevance of the latter in terms of its socioeconomic value. In addition, it is precisely small enterprises that are more likely to experience difficulties in terms of financing the ongoing marketing function, and therefore need more detailed recommendations.

When developing a marketing plan (marketing planning process), it is necessary to take into account some features of marketing in a restaurant enterprise, which for convenience are presented in tabular form (see Table 3).

One of the most significant features of a restaurant enterprise in terms of the conditions for carrying out marketing activities is the limitation of the number of seats. That is, the volume of restaurant services that this or that institution can offer to the market is physically limited by the size of its hall. The “duplication” segment

Table 3 Features of the marketing environment in the restaurant company

Marketing of consumer goods in traditional conditions	Marketing environment in the restaurant company
Relatively flexible production capacity, the possibility of increasing through contract manufacturing, the possibility of expanding the sales network	The number of seats is limited by the available area of the hall For a non-chain restaurant, with a concept unique to the city (“atmosphere”), expansion may be virtually impossible Even if expansion is possible, it is usually associated with a high risk of choosing a location
The product is used by customers, usually independently of each other The use of the product by some users, as a rule, has little effect on its use by others	The use of the product by some customers affects the perception of the product by others <ul style="list-style-type: none"> – total load of the hall – the appearance of the guests – guest behavior
Increasing customer base is usually accompanied by improved sales performance	The sales volume depends on the actually served segments of the restaurant Representatives of unattractive market segments (for example, “inexpensively sit”) occupy seats that could be occupied by representatives of more profitable segments

Source Own results

of the restaurant concept, its transformation into a chain restaurant, is possible only in some situations and is rather the exception.

Another feature of the restaurant is that representatives of all segments use the restaurant service at the same time. Thus, the behavior of representatives of some segments affects the perception of the characteristics of the restaurant service by other customers.

The third peculiarity is connected with the segment labeled “inexpensively to sit” revealed during the empirical research whose representatives use the restaurant not quite for its intended purpose. For example, this can be observed in a cafe or a tea room. These visitors occupy space, create discomfort due to overcrowding in the hall, but do not bring substantial revenue.

Marketing in a limited number of seats requires a special emphasis on ensuring satisfaction of the most attractive segments the restaurants can offer. Furthermore, a feature of the target installations is the assessment of the need for demarketing of unattractive segments—for example, for an expensive restaurant, you can include the segments “drinkers” and “inexpensively sit.”

4 Conclusions

Thus, it appears that our results and outcomes that present the proposed composition of the restaurant services market segments can be used to solve problems that tackle the leading issues in the restaurant business.

First of all, our findings allow to broaden the marketing research of the market in which the restaurant operates which is advisable given the need to use low-cost marketing research methods by restaurant enterprises.

Second, our results can be very useful and helpful for problems of identification of actually served market segments at the stage of situational analysis—in case the marketing activity in a restaurant enterprise is not put on a fairly systematic basis. In addition, our outcomes can be used directly for the tasks of targeting and the subsequent development of the restaurant's marketing policy by the restaurant managers and owners as well as by the marketing specialists.

All in all, it becomes quite obvious that our results and findings might effectively assist marketing specialists and restaurateurs in their endeavor to increase the effectiveness of marketing activities of restaurant enterprises by reducing marketing costs.

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Transformation of Leadership Through Formation of the Sociocultural Clusters



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Abstract The search for the leader's inherent qualities is ongoing for centuries. The problem of what it means to be a leader, or what is the implication and essence of leadership, was set by many philosophers from Plato to Hegel and Nietzsche. Mostly, the answer was that the leadership is a set of individual characteristics of a person that brings about the realization of an important agenda for the society as a whole. In the nineteenth century, many authors turned to the leadership research by juxtaposing the leader and the crowd and trying to find the relevant explanation. In the late 1940s and the early 1950s, numerous evaluations of earlier theories came to the conclusion of necessity to develop a new approach to the leadership problem. Main reasons for the revision were related to the fact that the basic qualities and behavior of leaders turned out to be a peculiar function which is difficult to spot in the reality. New theories shifted their focus from individual qualities of the leaders toward their behavior that brings about the success in occupying a leading position. Development of social relations and new communicative practices had even bigger significance for the transformation of the idea of leadership, being increasingly understood from the standpoint of the network paradigm. Substantial decentralization and self-organization of clusters as the network components is another distinctive feature of social nets. Since the culture nowadays develops within information-and-network principles, the necessity to rethink the very idea of leadership as well as the functions and goals of the leader's behavior is a current social demand.

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1 Introduction

Modern culture is characterized by the constantly increasing competition and high level of uncertainty. It contributes to the special importance to the value orientation and basic principles of leadership. Moreover, it is often noted that leadership today actually represents the model of individual behavior (Rowold and Schlotz 2009). It justifies the relevance of studying the influence of philosophical ideas and concepts on the theory and practice of leadership.

The leadership has always been associated with situations of overcoming social, cultural, or elemental instability along with ideas about extraordinary people ready to find an “answer” to a “challenge” and take the responsibility involved. At the same time, the discussion about leadership, as well as about elites, is always a discussion about inequality. The phenomenon of leadership is very ambiguous and difficult to study. It is not a coincidence that methods of psychology, anthropology, sociology, history, genetics, physiology, and other sciences were repeatedly employed for analyzing it. The difficulty in defining characteristics of leadership partially occurs because the notion of leadership itself is constantly changing under the influence of a changing sociocultural reality. Nowadays, this reality is largely understood as a “tight world” being a complex and dynamic multiplex network that has an immense variety of historical, communicative, economic, social, genetic, cultural, cognitive, and other types of connectivity.

An increasing number of scholars are now getting involved in studies of connections and connectivity. The novelty of their research lies in the fact that they have reconfigured their methodological apparatus from focusing on “who” and “what” perspective into “who is connected with whom” and “how.” This approach proved to be productive in solving urgent problems for biologists, sociologists, psychologists, philosophers, engineers, political scientists, and pharmacists as well as researchers and administrators of various types. Physicists often assure that theoretical comprehension of complex networks is just as important for modern scientific and technological progress as quantum mechanics that gave the world nuclear power, cellular phones, and computers in the twentieth century (Newman 2008). Many questions arise with regard to the above: Do we observe the emergence of a new interdisciplinary paradigm? Should we reconsider our established ideas about society and culture, including ways of identifying leaders and leadership in the modern world from a network point of view? This paper tackles these and other issues and provides a comprehensive analysis and discussion of their implications.

2 Philosophy of Leadership in Classical European Philosophy

In the Classical European tradition, the reconsidering of the leadership problem is correlated with the historical changes in the cultural order. Despite cultural changes irreversibility, none of the ideas formulated has disappeared, providing an intellectual

support for certain cultural practices to the date. One of the founders of the theoretical approach in determining leadership is the Greek philosopher Plato (5th–6th century B.C.) who stated that each human is born with individual nature and that the higher justice consists of everyone's engagement into the business one has a natural inclination. It formed the foundation of the classical sociopolitical paradigm where leaders are heroes and sages. Plato believed that leadership requires a person who is able to sacrifice one's immediate interests. At the same time, the philosopher emphasizes that for a person striving for justice, the leadership is not an easy burden. Thus, the basis of the Platonic leadership concept is formed by the image of a hero, protector, ruler, and sage (Plato 2001).

With regard to the ideas of the leadership of the Enlightenment Age philosophers, the views of Voltaire (1694–1778) are remarkable. Developing notions of ancient thinkers, he attempted to prove the concept of an enlightened monarch as an ideal leader. He regarded himself as a sovereign's adviser. Voltaire believed that the duty of kings is to enlighten subjects; only this can justify their occupancy of the throne because the ruler's attention is directed toward the welfare of the people and country. The ideal leader creates "good citizens, loyal friends, and subjects who equally hate riot and tyranny but aspire for the public good." Voltaire remarked that China is the happiest monarchy in the world because China's political system is the realization of the best aspects of the ethical teachings of Confucius.

In the nineteenth century, another influential concept of leadership appeared. It much affected the further development of political thought and social relations. This concept was developed by Friedrich Nietzsche (1844–1900). He tried to justify the necessity of appearance of a higher biological type, a leading man, a superhuman. "*The goal of mankind is presented in its supreme representatives ... The mankind must work tirelessly to give birth to the great people - this, and nothing else, is its task*" (Nietzsche 1990). Such a superman is not limited by the norms of the existing morality; he is able to be on the side of good and evil. The hero can be cruel to ordinary people but condescending, restrained, gentle, and friendly in relations with his peers, the superhumans. He is distinguished by his high vitality and the will to power.

The twentieth century period is represented by many concepts of leadership. A special place among them occupies the concept of Weber. His classification formed the basis of many psychological concepts of leaders basing on the idea of a traditional leader, a charismatic figure of pre-industrial society adorned with the cult of personality, chief authority, and possession of the full-fledged bureaucratic leadership. Fiedler's Contingency Model is one of the first attempts to link the style of leadership with the situation. On average, a relationship-oriented leader is more successful in favorable situations because of one's ability in communication skills. In such situations, subordinates can behave moderately well toward the leader while she or he has some power to control their activity. A leader, who perfectly knows the skills of communication, can create a normal working atmosphere, structure the tasks clearly, and establish official authority (Bird 1940). A task-oriented leader succeeds in a favorable situation because all subordinates agree with him, because the task is clear, and because the leader is endowed with considerable power. All these

conditions are necessary in order to structure the activities of subordinates and to direct them with confidence.

The application of contingency models is extremely important, for it forms the basis for analyzing the leadership in the context of cluster organization of a network and its relationships. The absence of an amendment referent to the circumstances under the question has a negative effect on the entire structure (Lipman-Blumen 2004). A key feature of cluster structures is constantly changing relations; here, the leading positions are occupied by strong nodes with crucial positions for situation involved. Therefore, we can safely say that contingency theories have prepared a basic model for describing the phenomenon of leadership.

It is also important to describe the functional leadership model (Chemers 1997). Within this model, the leadership is understood not as a management process originating from the leader, but as a set of various behavior strategies that help the group to fulfill its tasks and achieve its goals. Leadership behavior can be roughly divided into three types:

- The main type of leadership behavior (focused straight on the task of the group; the leader offers various solutions to the problem);
- The procedural type of leadership behavior (the leader is able to guide the discussion of problems in the right direction);
- The technical type of leadership behavior (aiming at improving the relationship within the team).

Obviously, any member of the team can perform any of these tasks at any time; anyone can participate in the leadership. Previously it was believed that each function is rigidly assigned to specific members of the team, but other situations could arise. The functional model of leadership focuses not on the “who” manages, but on the “how” the management process happens. It allows spending less time analyzing the personality of the leader and better understanding of the management process itself.

3 Understanding the Role of the Leader in the Network Paradigm of Modern Culture

Understanding the fact that today we live in the world of information and networking is becoming generally accepted. The network is perceived as a natural way of communicating and developing any kind of connectivity. Representatives of various scientific disciplines fix the network wherever interactions arise and contacts are made. Widespread appeal to this subject occurred in the twentieth century when the visual language of the description of network development (mathematical theory of graphs) was adopted as a basis by scholars of various disciplines. Many of them consider Charles Pierce to be the progenitor of modern semantic networks (Brady 2000). In 1909, he proposed to use the existential graphs for representation of logical statements calling them “the logic of the future.” The network approach in the social and human sciences, the fundamentals of the theory of social relations originated

in the works of Simmel (2006), Durkheim (1996), psychologists Newcomb (1950), Moreno (1956), or anthropologists Mitchell (1968), Radcliffe-Brown (1952) and others. Contemporary understanding of social networks was laid by Solomonoff and Rapoport (1951), and in 1954 John Arundel Barnes (Barnes 1954) who introduced the very notion of “social network”. In the 1960s Hungarian mathematicians, Erdős and Rényi (1959) described the principles of the formation of social networks based on the theory of random graphs.

Studying network structure of relationships and interconnections allows identifying different types of networks and distinguishing between their topology and scale. It was noted that the choice of approach for network analysis and understanding is largely determined by the mode of connection within a network. Since the set of properties of most networks is heterogeneous, different subsystems are always observed in it. In network theories, such subsystems are called clusters. Analysis of the structures of decentralized sociocultural networks allows us today to find out how people are connected and what links them. In addition, modern researchers have the opportunity to analyze the density of ties within the network, see the most important nodes and clusters around them. This phenomenon is called the degree of clustering of the network. In fact, it is about the number of people a person is familiar with and their interactions between themselves. A large number of interconnected people for researchers serve as a mark of a high level of clusterization. Once again, if clusters are here, it is a sign of decentralized networks. They are formed around nodes, centers (hubs), which provide other members of the network with global connections. Such a system effectively links the entire network. The question is who becomes the leader in this situation.

The reason for clustering networks is saving on resources. For example, it is known that communication with nice people we like needs less effort than with people we do not like, let's say, foreigners who demonstrate unusual cultural habits, stereotypes of behavior, and speak a different language. Thus, the clustering is specified by local conditions. They can be very diverse. By understanding them, one can see ways of allocating resources an information, ways of consolidation and dissociation of the network, a degree of stability of the cluster to various influences.

Through investigating decentralized sociocultural networks one easily notes that each cluster has its leaders and their environment, i.e., a unique combination of cooperating people. Each cluster functions in a special set of historical, symbolic, financial, social environment; obviously, it has to be strong and receptive to quite different things and situations. There are several ways to measure the clustering factor. However, they all boil down to attempts of taking into account the ratio of the number of existing links connecting neighboring nodes to each other to the maximum possible number of links that could exist between them. With this approach, the cluster is defined as a set of common properties that can be attributed to a part of subjects of the relationship by identifying one or another component of the network.

In the structure described above, the leaders become those individuals through whom the main connections pass and relationships are built. Helping one's milieu to overcome environmental resistance and resource constraints (since maintaining global connections is a difficult and expensive affair), leaders take on the function

of uniting people at the local level and connecting the network globally through other hubs (persons and communication centers). In this situation, the leader creates conditions where not communicating closely people are easily accessible to each other through a small number of connections and are capable of effective interaction.

It should be noted that most sociocultural networks were not invented. They, as it is peculiar to many networks, have been self-organized from the very beginning. Someone saw the benefit for oneself collaborating with interesting people. The participants had been sharing their impressions with friends who in turn saw the benefits of such contact and joined the company. Further on, the specifics of the development of networks come into force: the number of elements grows linearly, and the number of connections increases exponentially. It means that between a dozen elements of the network, as a rule, there are thousands of links. In this way, networks grow and gain the stability through contacts which are getting duplicated and reinforced by a number of additional ways of communication. An increasing number of people, saving time, prefer virtual communication networks characterized by self-development, openness, structural rhizomorphs, decentralization, as well as a sufficient degree of autonomy and privacy of the nodes included. It leads to the virtualization of leadership which can be recognized as one of the main features of our time.

4 Problems of Virtualization of Leaders in Social and Cultural Clusters

The virtualization of relationships within social networks allows attributing characteristics of a cluster by referring to philosophical and sociocultural grounds and taking into account non-static properties of the world around. This is the case when cluster can be treated as a spatial, temporal, and logical unity of the event forming the identity of the actors participating. Then, emerging everywhere cluster communities, for example, art clusters should be defined as “projective” forms of solidarity, which in turn is linked with changes associated with the ways of identification and identity of a person. Given that the main platform for self-representations today is the Internet, which is irrational and illusory in its essence, one can talk about studying the phenomenon of leadership from the point of view of its simulative foundation, virtualization, mythology-projecting, and branding, interpreted as the basis of self-identity of a project or a person (Pavlova 2007).

Virtualization of the society and related cultural practices plunges a person into the forked world of the intersection of reality signs and hyper-reality where, especially for children and youth, it is increasingly difficult to find at least an intuitive sketch of the world picture. Thus, a significant part of people turns into a “smart mob” with such characteristics as rational behavior, fragmentary thinking, gesture, and image in preference to text, as well as some kind of playing, carnival attitude to reality. Mass attitude to the society as a game is also one of the consequences of the Internet networks development. This is relevant, but, in fact, not a novelty at all. As Berdyaev

wrote: *“a person is always theatrical in the social milieu. In this theatricality, one imitates what is accepted in given social position. If a person is too much drawn into the role, it is hardly possible to reach one’s own I. In this sense, theatricality is one of the ways of objectification. A human lives in many worlds and plays different roles, differentiating oneself in an objective way”* (Berdyayev 2011). Communications seem limitless within the current scope of objectification of the world and the possibility for subjects to create avatars.

People with leadership ambitions understand that in the “new world” success and conditions for survival are directly related to popularity while the quantity and quality of contacts become the main factors in the competition. Building connections, such individuals meanwhile form the perception of their own personal existence as a project dedicated to the creation of a “different self”. On this path, it is important to work on self-actualization and disclosure of one’s potential through inclusion in the programs socially or culturally demanded activities. However, since social usefulness today does not guarantee the acquisition of leadership status, in the realities of mass communication the process of increasing recognition and growing popularity is provided by branding technologies. Unfortunately, the authors of the majority of theoretical models and practical techniques for personal branding Speak and McNally (2010) and representatives of the company LINN (Linn Products is an engineering company that manufactures hi-fi and audio equipment. Founded by Ivor Tiefenbrun in Glasgow, Scotland, in 1973, the company is best known as the manufacturer of the iconic Linn Sondek LP12 turntable), and others observe this process from the point of view of achieving commercial success and recognition. Such an approach inevitably implies the relation not only to another person but also to oneself as to a thing, as to a commodity that needs stereotyping and selling. This kind of personal deformation is very common nowadays, also among the recognized leaders in different spheres.

During formation of the net world, subjective humanistic approaches to personal branding were formulated by Goleman (2007), and McCollam (2008). Despite the conceptual differences, these authors are consolidated by the understanding that the formation of leadership cannot be carried out by marketing tools since this task is mainly connected with semantic fields of culture, archetypes, mythologies, traditional narratives, and historical heritage. Contemporary “authentic personal brand,” where the real aspirations, values, selected patterns of behavior and speech of its owner are laid as the basis of the culturological construct, has a multilateral axiological influence on the audience through the transmission of visual attributes of the leader’s achievements. As a consequence, leaders’ opinions influence not only their cultural cluster but also the whole network of the “tight world.” The actuality of this approach is growing in line with the exhaustion of global strategies designed for demonstrating consumer values—prosperity, success, and self-realization. The individuals are bound by the cognitive dissonance of necessity to present oneself as a successful person in order to gain social approval leading to the experience of participation in a successful affair. Despite its absurdity and banality, such life strategy becomes an ultimate goal for many people. Nevertheless, a contemporary leader relying upon a clear life position and the possibility of influencing the loyal audience

aligns and stabilizes the life of one's environment and cluster thereby providing the necessary resource support to modern culture and society as a whole.

5 Topos of Modern Leaders Formation

Modern media-networking culture as its priorities declares the primary role of knowledge, improvement in processing and transmission of information; it underlines the importance of creative individuality and uniqueness of man. These guidelines are particularly relevant for city dwellers where the environment itself naturally shapes its own specific cultural space. Here, all up-to-date means of communication and information, of favorable conditions in diverse cultural milieus for various and different relationships are present. Thus, the circumstances for the formation of clusters, leaders, and information hubs are very propitious. Moreover, if the modern assessment of the quality of the urban environment directly depends on how much in this space the needs of the city's residents are met, then the city environment ability to generate leaders, as a rule, correlates with the level of the cultural potential of the city. The cultural potential here is understood as a measure of the ability of urban community (a cluster or a sum of clusters) to create and maintain conditions for development.

Specialized places with spaces that contain and broadcast the cultural potential of the city usually include:

- Presence of dominant cultural objects with the potential of creating a basic system of values in a given social space and demonstrating multiple manifestations of a given culture;
- The concentration of cluster subjects within a local territory that represents unique advantages;
- Availability of developed infrastructure that ensures rapid communication and efficient cultural exchange;
- Interaction of cluster participants among themselves in the process of formation and transformation of the value model of a given society;
- Presence of internal competition among the cluster members;
- Accelerated spread of innovations through developed information transfer network;
- The openness of the cluster as a system.

Citizens do not always perceive the spaces mentioned above as intimate and understandable. If the cultural potential of the city is regarded as the ability of the urban community for self-development, then the natural reaction of such a community will be an attempt to create its own world of urban culture. One form of such space is the "art cluster" which exists within the framework of "creative real estate."

So-called Art cluster is a cultural and business association typically located on the territory of a former industrial zone. It unites exhibition space, theater or film room, classrooms for seminars, and other similar elements. A cluster is a single unit; each

part of it must work for a common idea. The basis of the cluster is often represented by authentic cultural and historical monuments; infrastructure and the service communicative space are formed around them. Examples of “art clusters” in Russia are several centers of contemporary art: “Artplay on Yauza,” “Design Factory Flacon,” “Vinzavod” in Moscow; loft project “Floors,” “Erarta,” “Art Muse,” “Skorokhod,” “Boulthaupt,” “New Holland,” and other trendy places in Saint Petersburg.

The advantage of the cluster is in the cumulative effect of interaction between all its elements; being combined, they give a result that exceeds the sum of individual effects. The emergence of creative clusters positively influences the sociocultural environment. Economic and cultural research displays that cluster structures give a powerful impetus to the development of a wide range of spheres of society—from art and philosophy to technology and economics and, in fact, are the leaders of contemporary society.

Several basic principles can be singled out while analyzing the nature of socio-cultural clusters. The relationships within these structures occur on the basis of these principles as well as connotations that can replace the classical model of leadership. Let us distinguish some basic features of a leader in cluster structure:

- Recognition of leadership should happen voluntary, with an understanding of the purpose of this allocation. All participants in the cluster must voluntarily be ready to take on the burden of leadership and pass it to another participant. This point clearly contradicts many classical theories of leadership because it actually deprives the leader of the “will to power” (Markwell 2013);
- In the classical model, the position of the leader is usually quite clearly defined geographically while several centers nearly always are located at the distance to each other. All members of a cluster structure are geographically localized and live in proximity;
- The main criterion of leadership is not the position occupied or self-conceit of the participants but their function in the common process. In fact, the individual remains the leader only if the leading function is performed. It discovers the dynamism of the process of forming leadership (Griffin and Ebert 2010);
- The principle of the effectiveness of the relationship involves the rational use of material, labor, and financial resources. It allows to reduce expenditures and costs, increases profitability, and improves the quality of the final product due to mutually beneficial relations of the cluster members. It also suggests that the leader should be extremely effective (Manktelow and Carlson 2012);
- The principle of staying informed implies the provision of information support for the projects within the cluster, i.e., information on current changes in production and various innovation processes should be available to all participants in the cluster;
- The principle of community: relationships between different groups should have cooperation agreements not only fixed de jure. A general direction for the development of the cluster, and possibly of the industry or the region, should be developed (see Rowold and Schlotz 2009).

6 Conclusions

All in all, it appears that among the most important features of the cluster, its connectivity and sustainability should be highlighted. An important condition for sustainability is the positive interrelations within the cluster which ensure its progressive development. The existence of such relationships is an obligatory character of the cluster. The cluster may be defined as a set of subjects upholding stable relationships and united by a common goal of development.

Such relationships are possible only if there is a working model of leadership that supports the formation of a goal, establishes constant communication, and forms an integrated value system. Our findings show that these inherent features of the cluster model of leadership are fundamentally different from classical models, for it is much more dynamic, functional, and effective. Most importantly, it allows us to develop a working model of sociocultural relations in the absence of a single center. It is an extremely important quality in the process of development of the global culture.

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Leadership, Soft Power and Social Power



Oleg Gelikh

Abstract There is a plethora of reports, publications, scientific and near-scientific conversations that are being conducted today in a greater degree in political circles about the so-called soft power that forces us, once again, to address the problem of management as leading power. With regard to the above, one would probably agree that the initial goal of management as a phenomenon arising in evolution is to ensure the physiological survival of united individuals. When this goal is historically achieved, then management as a “method of survival” sets new goals and goals for itself, the main of which is raising the standard of living of united people. However, in its transformed form, called power, is the improvement of life in the first place for those who unite and lead others. This is happening due to the fact that the personification of management leads to the transformation of managers as well as leaders into an independent social force. The phenomenon of power that has arisen is separated and estranged from the goals and values of the united individuals. Unified, not having yet managed to fully organize themselves in a rational manner, are already becoming unified through some means and methods of coercion. This paper focuses on the problems arising in these processes and analyses them to the depth.

1 Introduction: Coercion and Governance

An analysis of anthropological socio-genesis convinces us that “the so-called savages refer to each other by means of infusion to which the suggestion belongs, in order to suppress in others, the biologically useful information that goes through the first signal system and replace it with impulses that are useful to oneself” (Porshnev 1974). Paleo-psychology (the science of human psychology of the Palaeolithic era) does not consider, however, the problems of repression and coercion in relation to management, but its broad methodological basis for analysing the sphere of pre-human and human relations in the process of anthropological socio-genesis allows

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us to explore and control as a special slice of these relations. The control system, which has taken up the instrument of power regulation, has not yet managed to form properly as a phenomenon itself turns into an instrument of power, losing its own genesis due to primacy. This metamorphosis is a paradox of sociality, and it is transformed into the opposite of the form that society acquires in a certain segment, probably the initial story. Even the “second signal system,” that is, the conceptual speech, as stated by Porshnev (1974): “was born as a system of coercion between individuals.” And it is precisely this that makes look at control through “coercion,” as well as related phenomena, such as “use” and “violence.”

It is necessary to look at the management in this section in its modern status, and not through the eyes of those who “established, as a maxim, that in arranging any system of government for each person, it must be assumed that he is a fraudster who has no other purpose in his actions except private interest” (Kapustin 2001). Such an attitude towards a “rogue person” initially implies the forced regulation by the authorities of all his main actions and behaviour itself. As well as a man whom the ruling power a priori considers a “fraud,” he is forced to respond to her with “reciprocity,” that is, the same kind of dislike, the edge of which is the potential for retaliatory violence.

Management approach through these categories is justified not only in the analysis of the institutional, but also the managerial level of management (Prigogine 1984; Melikhov 1998). The variety of negative assessments leads to the alarming question: isn't management generally compulsory by definition? Another question arises from this: Does coercion in itself constitute violence? And in the most generalized form, how is governance connected with violence in the very nature of human relations?

It must also be assumed that it was the growth of rational consciousness, on the basis of which management arises, that allowed the management of New Time to begin to overcome the phase of its otherness in the forms of violence. According to Foucault (1999), the beginning of this road was laid in the 18th century, who, in his monarchical forms of government, sought ways to normalize and “save” power, “when for the first time there was a problem of accumulating people and good management of them” (Foucault 1999). But the “useful” to whom? Of course, first of all, the government itself. But also, in the end, and the “subject” to her individual. The ruling power, the violence used before, randomly, sporadically, in order to save its strength, begins to build a rational “disciplinary society” in which a harmonious system of coercive measures and adequate punishment slowly moves the freedom of the “subject” who became a citizen as his consciousness grew and became aware their rights in society. The government, without itself relying on it, produces a genie of a democratic social dispensation, to which, with the growth of education, knowledge and intelligence, people become more and more ready. The process begun by the eighteenth century continues the nineteenth century, increasingly overcoming the relations of interdiction and suggestion in sociality. And already in the twentieth century, democracy is understood as “a form of political structure that allows you to adapt governments to the wishes of the governed without a violent struggle.” And if, in a democratic state, the government no longer pursues the policy that the majority of the population would like, no civil war is needed to put into the offices of those

who wish to work in such a way as to satisfy the majority (Durkheim 1996; Mises 2001).

However, is democracy as a type of government and relations ideal for the modern man? After all, Toynbee (2001) noted that “at present, the life of the Western world is determined by two institutions: the industrial system of the housekeeper and the equally complex and intricate political system, which we call “democracy,” meaning a responsible parliamentary representative government of a sovereign national state.” He assessed the merits of such a social system as “the best of the currently possible” (Toynbee 2001). All this requires a more careful consideration of the issue now in its, so to speak, “inverted” form: what violence and coercion are, and how they are connected with governance.

2 The Concept of Force and Violence

It becomes clear that the concept of violence is connected with force. Strength is the closest generic term that defines violence. By force, in a broad sense, is understood any energy action or ability to act, i.e. potential action (Goss 1993). Strength is never neutral in its social orientation. As a social value, force manifests itself not only and even not so much with its “energy indicators,” as with a wide vector of morality. Management is also a force, a force of influence, or regulation.

Often force is simply associated with violence, that is, force, as a rule, destructive, negative value-moral orientation. However, not only force in a broad sense, but violence itself as one of its vectors is a diverse and very complex phenomenon. Therefore, consideration of the initial violence, and then other vectors of force, influence, is important for understanding the essence of control.

Does the management use violence? Is violence part of its management in the management?—Here are the key issues of our analysis. For the answer, you need to determine what is meant by violence. Murder, terrorism, robbery—this is obviously violence. Everything seems clear. But an ordinary idea based on “common sense” is capable of explaining far from everything and is sometimes capable of confusing even the very essence of the matter. Even the legal definition: “violence is the carnal knowledge of a woman by force and without her consent” (Lee 1988) does not reveal the essence of the phenomenon. Is, for example, violence advertising for “brilliant” sales “at the lowest prices”? Is it possible to call violence the requirement of parents for a child to “learn well”? For a reasoned response, you should first define a concept. In a broad sense, violence is a force that manifests itself as an encroachment on a person’s freedom, against his will. Or, in other words, any domination of people over each other in the space of free will can be called violence.

What is important to us in the analysis of management as a force, influence, regulation, in the analysis of its moral and ethical side. Does a manager have moral reasons to use coercive means, including force, to achieve the goals of the organization? Is the violence fair in the actions of the administrator, the manager? Can violence achieve justice and goodness? Can violence overcome injustice?

Obviously, there are no unequivocal answers, and therefore, this problem, which is closely related to the phenomena of freedom and justice (Gelikh 2002, 2003), was considered by us earlier. The degree of domination and intensity of encroachment on freedom, obviously, can be very different, and the choice of their dimensionality also opens up the answer to the question of the possibility of always a problematic combination of violence and justice. Therefore, the classification of violence, the analysis of its “many faces” is a task both theoretically and practically significant. First of all, it is a task for the science of management.

3 The Variety of Forms of Violence

In terms of their forms, violence can manifest itself as direct (or overt), and indirect (latent or “soft”). Between these poles one can see various degrees of violent intensity: from extremely weak to its maximum possible species. At the same time, the definition taken as a basis allows “violence as a certain form of social relation to distinguish, on the one hand, from the instinctive natural properties of a person: aggressiveness, militancy, carnivorousness, and on the other, from other forms of coercion in society, in particular, paternalistic and legal coercion” (Huseynov 1994). Thus, for example, the pedagogical coercion of a pupil, the power of parents over children, state-legal coercion in most modern cases go beyond the actual violent forms of relationships but can also act as violence depending on the degree of intensity of coercion and the circumstances of its use. And this subtlety of the transition beyond the possible limits of “pre-violent” and non-violent coercion makes the analysis of the violence itself a difficult task.

Violence in the sphere of implementation can be realized both in nature and in human society, and the latter is called social violence. Our analysis omits consideration of the role of violence in nature and its possible “meaning” itself, because rain or wind, earthquake or tsunami limit human freedom, but cannot be considered in terms of their morality or immorality. Our interest is in the sphere of morality and justice of possible forceful coercions carried out by people against each other.

Social violence has a huge range of varieties due to the diversity of social activities themselves and areas of social relations. For example, Davydov (2002) analyses several types and varieties of power as a social action and influence. The most important types of such force can be: economic, financial, commercial, scientific, technical, informational, ideological, political, and some other forces, he says (Davydov 2002). Almost each of these types of social force can act both as a favourable action, and as a coercion, not becoming violence, but also as violence, when the latter manifests itself as a violation of freedom coercion: financial, economic, political, informational, etc. Due to the most tangible consequences, a special place in this series is occupied by such a type of social violence as armed violence. Social violence can also manifest itself in its other forms and forms, the diversity of which is not a task that can be finally solved even by the largest classification (Gelikh 2004). For this reason, one should dwell on its most significant forms.

Armed violence more often acts as a direct but can also manifest itself indirectly as the threat of the use of weapons. For example, the presence of troops of one state on the territory of another and without the use of armed force creates a violent pressure on social relations in a country whose population is not completely free in their economic and socio-political actions. In some cases, it is capable of producing a positive result, like the “Japanese miracle,” born not without the American military presence on the islands. In general, the justice of social management and armed violence collide as opposing phenomena. At the same time, it seems that the degree of arming of states increases the level of violent relations in society. However, a closer look opens up a different picture.

The same paradoxical conclusion can be found earlier in Bokl (2000) in his “History of Civilizations,” when the author argues that the consequence of the invention of gunpowder (which eventually led to the creation of a firearm, and subsequently artillery) became the demilitarization of English society, for such a weapon required, firstly, a more intellectual person for the army and, as a result, led to the opening of special military schools, and, secondly, most importantly, led to the abandonment of numerically large armies, which in the case of military necessity made up virtually the entire population capable of carrying weapons. Thence, gunpowder forced the rest, not demanded by the army of people, to look for another use for themselves and find it in peaceful professions (Bokl 2000).

We continue consideration of the forms of violence. It is important to subdivide violence according to its social orientation to progressive (with all the ambiguity of the concept “progress”), in another naming convention constructive, that is, helping the movement of society to more advanced forms of organization and relations; and regressive (in another name—destructive), pushing society to less optimal relations and structures, which have already been rejected by earlier social time. At the same time, such a basis for division in the classification of violence requires a great deal of accuracy from the researcher, because even the most “constructive” or “progressive” violence, as a rule, still destroys, and not always only the old and obsolete.

Violence should also be divided into primary and reciprocal. Here it seems initially that only in relation to the second one can speak of his moral justification. However, the initial, even the most direct, violence often led to positive results in their social sense (Weber 1990). It is known, for example, that morality as a phenomenon began with violence and exile (eruption) from a tribe that was retreating from established, from a modern point of view, as a rule, cruel and senseless norms. On the other hand, retaliatory violence can not only protect constructiveness and justice, but also destroy them, in the event of inadequate use, that is, exceeding “defence sufficiency.” Violence in all cases is a force that contains a destructive component, and therefore, it cannot be constructive in the full sense of a given word.

The diversity of spectra and facts of violence makes it difficult to analyse the possible fairness of its use. In the history, as a rule, only retaliatory forms of violence were subjected to moral justification and almost certainly primary violence was condemned. Analysis of violent diversity suggests that the moral vectors of violence may be different, sometimes—opposite. Patient coercion of children to be careful has a positive moral charge, and this coercion is more correctly called “pressure;”

referring to non-violent forms of influence. Advertising of educational services is moral and legitimate, if not fraught with a naked commercial goal, followed by an accelerated course of pseudo-education and intellectual poverty of the courses being read; and in this sense, advertising as such and even advertising of education bears deceit and, as a result, blocks human freedom and therefore acts as violence. The propaganda of the merits of an elected candidate, which hides his shortcomings, has a largely negative moral vector and therefore also falls into the sphere of violence. Industrial, entrepreneurial exploitation of an employee has a charge bordering on moral permissiveness, depending on the length of the working day, the level of remuneration and a number of other factors, and therefore the relationship “hired labour—entrepreneurial capital” can also be violent relationships (also from employees). Murder, terrorism, robbery all falls under this classification of violence the most obvious and most intense forms of violence, subject to unconditional condemnation.

4 Violence and Justice

Thence, the question arises: who is eligible for violence? This question is directly related to the analysis of management and authority. It is also associated with the phenomenon of justice: is it permissible in the public relations structured by legal legislation to use violence against injustice? Is violence possible to restore justice? It is, therefore, about the moral and legal side in the possible use of violence.

Attempts to answer are usually considered one aspect—against whom acts of violence. Then, the criminal is a robber, a terrorist, etc.—worthy of condemnation. However, this side of the question is also important: who could get sufficient reasons to carry out the violence here and now, if it was deemed necessary, such as, for example, to prevent hooliganism? And what should be the possible force that does not go beyond the boundaries of morality in this particular case? How should this be done if there is not enough power to enforce coercion and restrict a crime even for its primary neutralization and blockade?

Consider ways to answer the questions posed. The apparatus of coercion and violence, which forces people to adhere to the rules of life in society, is called the state, it defines; rules according to which the state acts—by law; and the bodies that are responsible for managing the apparatus of coercion—the government.

As we see, the concepts of “coercion” and “violence” in this definition are not only rationalized but are actually seen as synonyms (from which we try to escape already in the definition of violence, for all violence, we repeat, is coercion, but not all coercion is violence). Restrictions imposed by the state in relation to the possible behaviour of citizens can act as coercion, or as not being violence. For example, a ban on driving a car at a red light in the Rules of the Road, adopted as a law, is an act of coercion, coercion, but not violence, because such a restriction does not block coercion but via restricting, protects people’s freedom. Also, schooling a child in the family to wash their hands, study diligently cannot be considered violence to the extent that methods that are dominated by explanation, motivation and “pressure”

do not turn into punishments that damage his psyche and health (Berlin 2001). In addition, Miles (1906) examining the essence of non-violent coercion, gives a subtler example, saying that he has the right to keep a person who wants to join the bridge if there is no time to warn him that the bridge is about to collapse (Miles 1906).

Analysing the development of democracy, Mises argues that, due to a number of circumstances, wherever democracy prevailed, anti-democratic doctrine soon emerged as a fundamental opposition. This was argued by the fact that there is no point in allowing the majority to rule. It is supposed that the best should rule, even if they are in the minority. Opponents of democracy, Mises objects to anti-democrats, using the expression “best,” cannot have in mind anything other than the person or people most suited to the conduct of government affairs. But this leads to the same political questions: “Who is the most appropriate?” This question clearly goes back to Plato. As it is known, the wise men are “suitable” for the government of Plato (Berlin 2001).

How do the “fit sages” get power? Here we come to the crucial point of all anti-democratic doctrines, namely the doctrine of force, says Mises. Opponents of democracy, he notes, are upholding the right of a minority to seize state power by force and rule by a majority. The best of them are recognized only by those who are competent to command. However, if every group that considers itself capable of “imposing its rule” on the rest, he says, has the right to make such an attempt, we must be prepared for an ongoing series of civil wars. But this state of affairs is incompatible with the stage of the division of labour that humankind has already achieved. A modern society based on the division of labour can be maintained only in conditions of durable peace. Thus, the anti-democratic ideal of governance leads to a type of economic organization that was known long before a democracy summarizes Mises.

The democrat, continues Mises (2001), is also of the opinion that the best should rule. But the democrat believes that the suitability of a person or a group of people for management can be clearly demonstrated when they succeed in convincing their fellow citizens of their right to this position, so that the management of public affairs will be entrusted to them voluntarily, not when they resort to violent force and force the rest admit their claims. He who cannot attain a leading position through the power of arguments and the confidence that his person instills, summarizes Mises (2001), has no reason to complain that his fellow citizens prefer others to him.

Therefore, in choosing the preferences of society—the main advantage of democratic governance. Of course, democracy also has many weaknesses, which, as if on a paradox, ultimately turn into the advantage of electoral management, blocking violence and developing the freedom of the individual and citizen.

Of course, it cannot be denied that there is a certain situation when the temptation to deviate from democratic principles of government is very great, says Mises (2001). If sensible people see that people are on the way to destruction, and they find it impossible to convince their fellow citizens to pay attention to their advice, then they may be inclined to think that it will be fair and fair to resort to any measures to save everyone from unhappiness. Then, the idea of the dictatorship of the elite, held in power through coercion and ruling in the interests of all, can arise and find

supporters. But, concludes Mises, violence will never be a means of overcoming these difficulties. Minority tyranny cannot continue until it succeeds in convincing the majority of the need or, at least, the usefulness of its rule. But then the minority does not need more power to keep in power. He who wants to see the world governed according to his ideas, he says, should strive for power over the minds of people. It is impossible for the long term to subjugate people against their will to a regime that they reject. Anyone who tries to do this through violence will eventually fail, and the struggle triggered by his attempt will do more harm than the worst government could do, based on the consent of the governed. At the same time, in the reasoning about fascism, they are being put forward a conceptual thesis about the ability to resist violence as well as violence where and when all other possibilities have exhausted themselves. A democratic society involves a strong type of government, based on the conviction that without coercion and violence against the enemies of society, there can be no life in society (Mises 2001).

Thus, to block the actions of the criminal, the gangster and the hooligan at this moment, here and now not only special “organs” have the right, but also every sensible person, but only to block, within the “necessary defence,” neutralization. Only the police have the right to detain, arrest, carry out the investigation. And only the court has the right to sentence. Thus, the verdict of complete opposition to violence within a democratic state is given only to its specially created “power structures,” because they were created, as it were, by agreement of citizens, by citizens and for citizens. “As if” means at the same time that the power structures inevitably lead to a departure from civilian control over them, to independence, which they can turn into and often in social practice turn into self-sufficient structures of violence that transcend the boundaries of law and morality.

The issue of violence becomes more difficult when it comes to its economic and social aspects, which do not show obvious wrongfulness. How, for example, did St. Petersburg need a circular highway? In the transport-economic sense itself, the answer would seem obvious. In addition to this, the scope of employment is expanding; state financial flows are directed to interested entrepreneurs, but in parallel with them—into the pockets of equally interested officials. In an ecological sense, a lot of crafty exaggeration. Is the road to the “average” Petersburgers profitable? Is it good if you cut the woods so dear to his heart on the outskirts with your beloved river? Therefore, the issue of violence, and after him justice in the socio-economic sphere is harder to see. Who is the decision maker here? Responsibility for the decision of the multi-step woman, it is borne by the “representative democracy,” then it is assigned to the executive head and, often refracted from the goals, goes down to the specific management and the performer. Sometimes, it “falls” to such an extent that it is impossible to find the leaked millions, as it happened more than once in the Russian and, presumably, not only Russian reality. But she, this responsibility, is primarily delegated to the heads of the very “average” city dweller who are able (must be able) to decide whether this head, and these heads are comfortable with them. Contradictions professionalism-amateurishness, responsibility-populism, citizenship-narrow-mindedness is a well-known block of violent clashes of conflicting interests.

Many of these questions have their answers and at the same time are open to research and discussion. The search for answers often comes up against a problem that can be formulated as a question of how “soft forms” of violence are permissible and moral, such as advertising slyness, abuse of administrative rights, use of labour, “labour and intelligence of others”; clever banking to achieve financial success; deceiving a student with good intentions to make him learn a lesson, gain interest in knowledge and knowledge itself?

Finding the balance of possible, permissible managerial violence and morality means finding the key to understanding this problem. We understand coercion as a very broad force phenomenon. For example, educational coercion to brush teeth “in the mornings and evenings” by reading “My-to-Hole” and exhorting pushing a child to the bathroom for this purpose, when he forgets to do it himself or is simply lazy, until the matter has entered into solid life habit, such coercion is not violence. Based on this, it should be understood that the legitimate struggle of equal producers, within the law, even if it uses indirect forms of violence, such as in competitive struggle, is beneficial and beneficial in the form of improving the quality of products and services. Suppression of the weak, monopoly, when the quality of, for example, a radio receiver, a TV or a car is not disputed and is accepted as the only possible benefit that is well known from the Soviet era to older generations, is unacceptable violence.

In a sense, violence in the form of competitive battles can rise above certain moral concepts (e.g. sympathy for a weak and completely “good” producer who is ruined, forced to fire workers, thereby creating suffering for them, etc.) to preserve society and its viable, also moral, principles in general.

How ethically correct can the assessment of “moral excesses” be in order to achieve “people’s benefit,” if this assessment is applied to the conditions of management not of the state, but of a business organization in conditions of economic freedom, that is, for management? Ricklin (2002) examining the schools of “modern management” comes to the ideological and pragmatic conclusions about which principles of management behaviour, recommended by Machiavelli (1996), are connected with power and coercion and therefore unsuitable for management, and which of them belong to the moral “art of management.”

Speaking of morality in socio-economic relations, some researchers come to a more straightforward conclusion: “what is economically inefficient is immoral and, conversely, what is effective is moral” (Shmelev 1998). However, this may be a reduced correct assessment of possible “moral excesses” only for the economic, but not the entire institutional level of governance. In the latter, more subtle ethical approaches are needed.

Violence, therefore, in a number of circumstances can be useful and therefore socially permissible and moral, and in industrial management and social management, it can lead to the creation of wealth and the restoration of justice. However, the boundaries of “useful” and “just” violence are thin and unsteady. It is necessary to transgress the edge, and the competition impels the winner to a monopoly with its worst consequences; advertising does not orient, but makes people stupid, and these

people suffer under the yoke of the so-called indirect violence which we consider in a separate way (Gelikh 2004).

5 Conclusions and Implications

Thus, in the analysis of management as a social force, we come to the following fundamental conclusions: The sociohistorical mission of management consists in optimizing social relations in a rational way to solve personal and common tasks of individuals who have united in organizations. The initial goal of management is to jointly ensure the physiological survival of individuals, and when it has been historically achieved and the survival of the species has already been achieved, management as a proven life means new social tasks, the main of which, as mankind ascends to democratic relations, becomes the improvement of people's living standards in the social relations of man.

At the same time, the process of the formation of social relations historically develops so that the organization of people, probably only at the first instant of history, is a specially created system of communication between the participants to ensure the survival of each of those included in it. Further personification of management, separation of the leader from the environment of the tribesmen, then the leader, the head of the organization leads to the separation of leadership into a self-sufficient social force, the goals of which are separated from the common goals of the people united. The united become united through certain methods and means of relations, and violence and coercion become one of the obvious management tools.

Management, which arises in history as the coordination of interpersonal relations to ensure the survival of the genus, is formed into a system of power in its subsequent stage, a power that overlaps control before syncretic splicing with it. Management, which has taken the tool of power regulation by its means, itself turns into a complex toolkit of power, while losing its genetic basis. Such is the paradox of sociality, its transformed (turned into its own opposite) form that society acquires in the early part of history.

With this formulation, a natural question arises, how is governance associated with violence in the very nature of social relations? The growth of rational consciousness, on the basis of which management originally arose, allows social relations to begin to overcome the historical phase of their otherness in the form of suggestive and other types of violence, since the very genetic nature of management initially set itself the task of ensuring maximum freedom and initiative of individual actions human behaviour, co-organized with other people for their common, joint actions and joint tasks. Investigating the issue in its "inverted" form, we defined force as an energetic action of a wide social and moral orientation, and violence as a force whose essence is in the encroachment on a person's freedom made against his will. With a wide variety of forms of violence—this is all the domination of people over each other in the space of free will. Such a definition made it possible to pose and

consider the problem of the justification of violence in management, its possible moral justification, justice in social communications and relations.

Management, being the most informational sphere of regulation of relations, as an information impact can both reduce and expand the degree of individual freedom, individual and social relations. The perception of true information does not limit actions, on the contrary, it makes a person more effective, because, better aware of the facts, a person makes fewer mistakes. True knowledge does not create limitations, but only reveals those that objectively exist in reality itself. Accepting false information and misinformation is a significant restriction of the freedom of human actions and therefore is violence, since it blocks its adequate access to reality.

Information deception is the destruction of knowledge, and therefore, it belongs to violent acts. In this sense, advertising as a common way of presenting information can be violent in certain forms and circumstances. The same should be said about the so-called public relations (PR) as in certain circumstances and with the known means of disinformation-violent means of "public relations." All this requires the social management to control the honesty of the information provided, restrictions and blocking influences, even the prohibition of certain types and ways of presenting advertising and PR information hidden by violence turning into disinformation.

At the same time, an information restriction that does not reduce a person's freedom (as, e.g. legally, certain blocking of false information, falsehood) cannot be attributed to violent acts.

The study of violence inevitably turns its gaze to the nature of aggression. Aggression as a property of interactions is a factor not only destructive, but also creating the necessary conditions for the creative work of individuals. Aggressiveness may contribute to the manifestation of violence, but aggression itself, by definition, is not violence. Aggression as a genetically fixed quality of a person must in modern society find civilized channels of non-violent exit ("ejection valves") in sociality, and this is also one of the tasks of management.

The greater the volume of values that the human intellect accommodates, the less aggressive the person himself is; therefore, one of the main tasks of management arising from this is the development of education and upbringing in a society of culture. The diversity of values presupposes not a collision, but a palette of their interaction, in which each positive value has a worthy place. As a first aid in building plastic relationships, a culture of tolerance comes as a phenomenon of negative tolerance of people of different views.

Education, knowledge in many ways, thus, save from manifestations of aggressiveness, as they orient human behaviour towards the possibility of a multitude of sociocultural positive values, which are carried by different people. At the same time, the reflection of the danger of a counter-offensive of an uneducated, asocial, underclassman becomes one of the important tasks of modern society management, because to a greater degree it is this social stratum and it is not finding a constructive way out aggressiveness that gives rise to violence.

One of the causes of violence are conflicts, the ontological basis of which lies not so much in the aggressiveness of a person as in the non-optimality of social relations that have been formed in this case. All socio-economic liberalism as a theory and

social practice is a search for ways to resolve conflicts without the use of violence. The opposite of labour and capital, entrepreneurship and labour, the competitive struggle of economic producers can take on the essence of violence, while accepting even the most open forms of violence. However, these opposites are also not violence by definition, since in other forms of interaction they lead to creative solidarity and cooperation, beneficial to society and each of its layers. An entrepreneurial business may have many common elements with violence, but in general business and violence as phenomena will forever remain separated due to the difference in the nature of the forces that lead them to occur. It is impossible to conceive a business without creating positive values, without the desire of individuals to engage in productive activities in society.

The possibility of achieving this goal is maximally revealed in this type of social relations as democracy and its corresponding forms and methods of management, which are the most important achievements of the social history of the last millennia, based on millions of years of evolution and the formation of man himself. Democracy in relation to governance is presented as a form of social relations that allows governments to adapt to the wishes of the governed without a violent struggle. And if the main question of management is that it is subject to change by human activity in the world, then the answer in the aspect of the questions we are considering is that violence does not correspond to the nature and essence of man in the world.

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Ethnocultural Identity and Values of Leadership Among the Youth



Asya Berberyan and Ruzanna Gabrielyan

Abstract Our paper is devoted to comparative study of identity and values of leadership. We analyze scientific concepts based on theoretical review of the scientific literature and representing such tags as “ethnic identity,” “values,” or “leadership.” Ethnic identity of the Armenian and Kazakh youth represents the special focus and interest in our work. Our empirical approach used the following methods: scale of express valuation of expressiveness of ethnic identity, scale of express evaluation of feelings related to ethnicity, as well as the cultural and value-based orientation test. All of the above was based on a questionnaire aimed at identifying leadership qualities. The aim of our research is a comparative analysis of ethnic identity and leadership values of the Armenian and Kazakh students. The results of our empirical study of expression of ethnic identity and feelings related to ethnicity revealed differences in structure of self-awareness of the Armenian and Kazakh youth. The difference between the preference for traditional culture that dominates among the Kazakhs and the modern culture that dominates among the Armenians is obvious. Perception of a leader and the concept of leadership among the students coming from different ethnics is refracted through the prism of their values orientations: the leader is attributed with the same qualities that are of value for them, and for their social groups.

1 Introduction

Different socioeconomic changes taken place in all life spheres of Armenian and Kazakh society (in economics, politics, interethnic relationships, culture) resulted in a situation where stable growth of ethnic self-consciousness, especially among youth

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generation was observed along with integration, internationalization of cultures and unification of lifestyle in Armenia and Kazakhstan, as well as in other countries on the cusp of the twentieth and twenty-first centuries.

The process of ethnic revival is a positive trend at formation of public conscience. But, along with growth of ethnicity, we frequently observe violent eruption of ethnic impatience, ethnocentrism, as well as international confrontation. Ethnic consciousness is presented by a subject more sensitive to social and political changes, and, consequently, needs scientifically grounded development of definite technologies promoting its improvement, stabilization of international relations, improvement of intercultural interactions, and support of monolithic status of a state. The main condition of a stable and peace coexistence of ethnic subjects is attainment and maintenance of positive ethnic identity, which is defined as a single alternative to cosmopolitanism and militant ethnocentrism. Along with love to own nation positive ethnic identity anticipates high culture of interethnic communication and transparency of interethnic contacts. Therefore, the process of consolidation of the country population is impossible without comprehension of own historical and ethnographical roots, improvement of own ethnic identity and its realization by every individual. Improvement of ethnic self-consciousness and national consciousness among young generation is precondition for creation of democratic, legal society.

The loss of ethnic identity may lead to negative consequences for human identity in general, when sensation “I am nobody, faceless and anonymous” occurs. Therefore, ethnic identity has a great role in personality development and carries out number of required functions:

- orientation in surroundings, furnishing relatively regulated information;
- assignment of general life values;
- protection, being responsible not only for social, but also physical well-being.

2 Ethnic Identity and Values of Leadership

Ethnic identity is a constituent part of social identity of a personality, psychological category pertaining to realization of own belonging to certain ethnic community. It includes main components, such as cognitive (conceptualization and knowledge regarding peculiarities of own group and self-perception as a member on the basis of complex of characteristics), affective (estimation of peculiarities of own group, belonging to it, meaning of such belonging).

Multiple studies of ethnic identity have been carried out in psychology: peculiarities of formation and development (Phinney 2016), formation stages (Stefanenko 2014), types, structure (Stefanenko 2014; Soldatova 2012), self-image of ethnocultural identity (Berberyan and Tuchina 2014) and etc. are being studied.

With regard to the above, Stefanenko (2014) divides ideas “ethnic identity” and “ethnicity.” Ethnic identity is perception, emotional appraisal, comprehension, emotional experience of self-belonging to a definite ethnic community (Stefanenko 2014).

Meaning of this idea reflects the very experience of the individual in relations “I” and the ethnic environment—self-identity with certain ethnic community and its division from the rest of the communities, self-determination in social space with reference to many other ethnicities.

Having studied ethnic identity in modern psychology, particular emphasis is put on the changes taking places in period of basic social transformations (Berry 2003; Tajfel and Turner 1986). It is manifested in loss of link between ethnic tolerance and positive ethnic identity laid in the base of non-contradictions and balanced social identity. Often, modern researchers mention about crisis of social identity (Lebedeva 2011).

Modern scientists define youth as a social-demographic group of society, which stands out from complex of peculiarities, characteristics of social position and is conditioned by some social-psychological features, which are defined by a level of cultural, socioeconomic development, as well as peculiarity of socialization in the society.

The problem of values is the most studied themes in science. Conception of value has a complex nature being defined by unity of subjective and objective factors. From our perspective, the values are any material or ideal phenomena for the sake of which the society, social group, individual make efforts to obtain and keep them, i.e., values that are appreciated by people and which are the reason to live. From the perspective of psychology, value-based consciousness of young people is formed and developed in socialization process, when they understand values in the society. Personal, age, and cultural factors have influence on their formation. In other words, formation of value-based orientations of young people depends on the following factors, such as place of birth, place of residence, material condition of family, etc. Geographical location, social-political situation in the society, social-economic situation in the family, surroundings may have influence on establishment and development of value-based orientations as well. Mobility of group and individual youth consciousness is defined by unsustainability of social situation, uncertainty of role structures, non-formation of social status typical to such social group. It explains the problems which occur in spiritual life of the youth: deformation of values, soullessness, destruction of moral norms, aggression, and as a result—countercultural and anti-social manifestations. Besides, problems with youth occur as a consequence of intention of different powers to manipulate their consciousness and to use young people in own concrete interests.

In order to protect the system of values of young people, one should understand where they were brought up and what events they became a witness to. A distinctive feature of modern youth and the whole social medium is a social differentiation by estate-material principle. Until quite recently we could talk about youth in short form. Despite differences between urban and rural, provincial and capital, non-institutional and institutional youth, etc., there was a unified social space where the youth was involved: they studied in the comprehensive school with the same books, they were in the same space of mass media, they used the same cultural products, they had definitely established social status toward adult generation, having artificially linked to unified political and ideological camp.

Study of value-based orientations is very actual, in particular within the frames of studies aimed at study of ethnocultural identity of young people. Difference in self-image of ethnocultural identity in titular ethnic group and associated diaspora are conditioned by differences in social environment, making influence on formation of sphere of value-based orientations (Berberyan and Berberyan 2016, 2017). The young people are in incomparable starting conditions in contemporary Armenia and Kazakhstan. Such situation is typical to the established special capitalist society with unique qualities. Various methods and forms of leadership development of a personality are studied in the scientific psychology.

The leadership as value anticipates social activity of a personality as some guarantee for creative ideas, new decisions and non-standard approaches. Just these qualities testify active life and civil stances.

Discovery of leadership skills is necessary to develop civil responsibility and need in aid of many people. It has also positive meaning for cognitive and emotional development of a personality. In its turn, positive personality development promotes self-determination and formation of positive “Image-I” and position of social optimism.

Leadership values are manifestation of power and spirituality of “Image-I” striving for ideal. Leadership is both personal and interpersonal phenomenon. The main task in leadership is establishment of stable relationships with people. The source of influence on leadership has expressed personal component. The real leader is a former who acts in favor of surrounding people and is guided by moral values. Leadership may be studied as social-psychological process in the group taking into account influence of individual authority of human being on behavior of a personality in the group.

At present, there are different concepts of leadership. Some researchers show that the leader needs social space for productive and independent operation and achieving personal balance (see, e.g., Bendas 2000). George analyzed power as all sufficient high value bringing the leader’s motivation perception to light. Power from compensation phenomenon is transformed into mechanism of satisfaction of different needs—achievements, appreciation, respect, freedom. Adler examined aspiration for power as generation of fear (Adler 1963). The English psychologist and anthropologist Galton pitched an idea of heredity to leadership, and accordingly, he tried to distinguish qualities being inherited. (Galton 1869).

The key features are listed in the context of quality theory: (i) dominancy, (ii) self-belief, (iii) creativity, (iv) novelty, (v) imagination, (vi) intuition, (vii) propensity to risk, (viii) responsibility, (ix) charisma, (x) sociability, or (xi) intellect (Myers 2002). Situational theory created by (see Fidler 1967; House and Aditya 1997; or Ng et al. 2008) was widely spread. In this theory, the leader is being examined as function of a situation. As a result of tenuity, this theory underwent modification: theory of Hartley (Hartley 2002) taking into account capability of leadership in different situations.

3 Empirical Study of Ethnic Identity and Values of Leadership

In the empirical part of our study, the following responses to questions of the questionnaire were obtained for establishment of a picture: students imagine the leader as a human with dominant personal qualities, such as competence, charismatics, self-belief, ability to patch up relations with others, purposefulness, managerial skills. Responsibility as character feature in perception of students has been minimally expressed. Perception of students is refracted through the prism of their value-based orientation: the leader is conferred the same qualities that are of value for them, for the social group.

In most cases, to the question of influence of socialization on leadership qualities the students answered that leadership qualities were, mainly, innate. To the question on importance and meaning of leadership qualities for development of a professional, the students admitted such qualities in most cases. Therefore, the leader has important role for the group, and development of leadership qualities is necessary for professional activity of a personality.

In our work, an ethnic identity of the Armenian and Kazakh youth is of special interest. We have tried to analyze both ethnic identity and system of value-based orientations: main components of self-consciousness as a part of own ethnos. We have analyzed ethnic self-consciousness of people of ethos as subjects of interethnic and intercultural interactions, defined the specific character of contradictions in their daily contact and studied peculiarities and levels of tolerance.

In this study, we have applied the following methods: scale of express valuation of expressiveness of ethnic identity (Lebedeva 2011); scale of express valuation of feelings related to ethnicity (Lebedeva 2011); cultural and value-based orientation test (Pochebut 2016); and a questionnaire on identifying leadership qualities.

Scale of express valuation of expressiveness of ethnic identity (Lebedeva 2011) is applied for appraisal of expressiveness of ethnic identity of the tested. So, at answering the respondent estimates to what extent he/she feels himself/herself as a representative of own nation. In the questionnaire, the respondent must indicate his/her nationality. All in all, there were 100 respondents participated in the study—50 Armenians and 50 Kazakhs. The processed information is stated in Table 1.

Table 1 Main results of the empirical study

Types of answers	Armenians (50 persons) (%)	Kazakhs (50 persons) (%)
Without any feeling	1	2
Weak feeling	51	49
Sometimes—yes, sometimes—no	70	30
Almost always	51	49
To the full extent	40	60

Source Own results

At the second stage of our study, we have tried to appraise feelings concerned to ethnicity. It was found out from the mentioned scales (pride, quiet confidence, absence of feelings, insult, pinch, humility) that 50% of Armenians and 50% of Kazakhs is proud of own nation, 50% of Armenians and 50% of Kazakhs has quiet confidence, 60% of Armenians, and 40% of Kazakhs feels insult. Indices “pinch” and “humility” is almost set to zero.

At last, third methodology was aimed at study of cultural and value-based orientations of Armenians and Kazakhs, for which we used the methodology (see Pochebut 2016). Three types of culture are laid in the basis of the test: traditional culture (TC), modern culture (MC), dynamically developed culture (DDC):

- The Armenian, traditional culture 26%
- The Kazakh, traditional culture 77%
- The Armenian, modern culture 65%
- The Kazakh, modern culture 18%
- The Armenian, dynamically developed culture 9%
- The Kazakh, dynamically developed culture 5%

Thence, there is an observed difference between preferences for traditional culture, which prevails among the Kazakhs (77%), and modern culture, which prevails among the Armenians (65%).

4 Conclusions

Our findings show that alongside with progressive development of information technologies and under conditions of the society globalization, there is a definite growth of social categories which stand out as identification models for an individual.

Our results clearly demonstrate that the Kazakh young people prefer the traditional culture and its view of leaders and leaderships, whole the young Armenians tend to like more the modern culture and its approach to the concept of leadership and leader’s role and scope.

With regard to the above, it is important to highlight within the realm of our outcomes, that the development of identity relies on the formed value-based bases. Everyone would probably agree with our outcomes that support the thesis that any community or group includes carriers of identity formed on the base of value-based system, which exists in consciousness of members of a definite society. It is built from separate important values of an individual which are the leading guidance in contemporary world.

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Leadership Phenomenon in the Modern Humanities: From the Utility to the Ideals



Irina Khmyrova-Pruel and Alexander Koloskov

Abstract Our paper argues that there are, at least, two plans for consideration in light of the leadership phenomenon in modern humanities: the existence of the scientists and humanists in modern cultural conditions and their activities aimed at training the future experts in humanitarian fields. The paradigm of the natural and exact sciences during all lasting modernist style projects is much steadier and is defined by reference points invariable in essence on the ideas of progress, improvement of living conditions, as well as the “development” of the surrounding world. We argue that the humanitarian sphere exists in the special space that is created by the need of constant proof of “necessity,” communication with masscult space, attempt of utilitarian, its pragmatism, judgment, and mobility, variability of axiological models for the modern world in which statement not only actually scientific community, but also other social institutes participates (church, business and so forth). The paper considers the potential intensions of the modern humanities: aspiration to transparency (phenomena of modern and “urgent” culture become objects of studying, the scientific methodology is popularized, academism is succeeded by some kind of intellectual game). On the other hand, there is a “stratification” of the academic environment demonstrating non-recognition of a number of approaches by “scientific.” We discuss the problem of understanding and defining the leaderships and leaders in the modern humanities as well as its orientation and values in formation of valuable models of culture.

1 Introduction

Our statement of a problem assumes, at least, two plans of consideration: existence of the scientist-humanist in modern cultural conditions and his activities for training of future experts in humanitarian field. The paradigms of the natural and exact

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sciences during all lasting modernist style project is much steadier and is defined by reference points invariable in essence on the ideas of progress, improvement of living conditions, “development” of the surrounding person of the world. The humanitarian sphere is in special space that is created between the need of constant proof of “necessity,” communication with mass culture space, attempt of utilitarian, its pragmatical judgment, and mobility, variability of axiological models for the modern world in which statement not only actually scientific community, but also other social institutes participates (church, business and so forth). Humanists become actors playing a special role in the political culture. The concept “political culture” has its roots in the political science, history, law; however, in the cultural science, despite existence of the word “culture” which is conceptual for science, this concept (as well as the sphere) has an uncertain status. In daily occurrence, political culture is understood as a varied but a quite pragmatic phenomenon: activity of citizens interacting with the government, the legal platform of the structure of democratic society (as it is more often about the European culture), consciousness from electorate and ensuring the equal rights from the authorities in political activity, etc. In culturological and historical scientific paradigms, wider concepts are presented—cultural philosophical as well as historical and cultural. These are the approaches to determination of political culture. When characterizing structure and essence of political culture, Gaman-Golutvina (2005) absolutely fairly notes the dilemma arising before the researcher at the appeal to this phenomenon: on the one hand, it is necessary, in compliance with the developed scientific stereotypes, to aspire to the extreme clearness of definitions, on the other hand, it is necessary to consider the ontologic nature of the studied object [or its gnoseological nature (see Gaman-Golutvina 2005)]. It is necessary to add that there is a problem of searching for a language congenial to an object but not beyond scientific discourse (and it is rather, developing in supplementing this discourse) and the analyzed phenomenon towering over language of the self-presentation. Gaman-Golutvina (2005) notes a factor of “illegibility” when determining such phenomenon as the political culture which represents it as the unity of the three components: cognitive and emotional, standard and valuable, and the activity component. At the same time, a kernel of political culture is “*the standard and valuable component – the system of the political and ideological values and norms governing political behavior and the political relations in general*” (Gaman-Golutvina 2005). There is an open question about this approach and the specifics of relationship of a cognitive and emotional component as well as a component standards and values. If one would have looked at a problem from the metaphysical point of view, she or he would notice a status of this or that type of thinking in political culture; more precisely, the conversation is transferred to the course of “political consciousness” which, being a phenomenon, is more complicated than the phenomenon of political culture. It is defined as: “*the difficult ideal multidimensional, multilevel education representing reflection of system of the political relations in consciousness of a political subject as which can act the individual, group or mass of people*” (Gaman-Golutvina 2005). History, political science, sociology are all trying to understand the essence of a phenomenon of political culture in general and inherit the traditions of the American political scientists (Almond and Verba 1992; Peydzh 1999). The phenomenon

can be presented in the form of three levels of orientations: informative (political knowledge, political consciousness, ways of political thinking, political literacy); emotional (political values, traditions, ideals, beliefs, etc.); estimated (the subject of political system, the political situation connected with assessment, etc.). During the different periods of the scientific creativity, probably, feeling insufficiency, or not full compliance of own typology to political culture as to a phenomenon, Almond and Verba (1992) and Peydzh (1999) offered a new to typology. Almond and Verba (1992) also offered the typology (called subsequently classical) which was based on specifics of psychological orientations of people in political system and out of political system (reaction to it). As a result, scientists described three “ideal like” political culture: parochial (traditionalist, closed, patriarchal, the personality thinks of herself only as a part of local community, and the actor performs at the same time religious, political, economic functions); submissive (the culture of submission in which there are no main input channels and persons do not consider themselves as participants of political activity); participatory (the culture of participation to which the high political literacy of citizens and their active participation in political activity, and participation realized is peculiar, based on belief of its efficiency) (Almond and Verba 1992).

2 Leading Importance of Culture

Certainly, realities of political life of the twentieth century showed maximalism of similar differentiation. What caused need of the appeal to a definition again? As we see, in all cases of determination of political culture, we deal with system approach to the studied phenomenon. This fundamental work done by serious researchers is the basis for further development of a phenomenon of political culture within the methodological synthesis offered by Solonin (2011), the way to which achievement just begins to be laid (Solonin 2011). Thence, we will return to a definition “political culture.” Both components of definition as it was already specified have tradition of broad and narrow interpretation. In our case, it is productive to interpret the term “culture” in attempt of complete approach to its judgment loosely: as set of everything created by the person in areas spiritual, material, intellectual, social, etc. Such broad approach is justified by existence of an adjective “political” in definition. In philosophical thought, there is a tradition of substantivity of this adjective. In this case, the concept “political” finds broad sense, and the concepts “politician,” “police” accept sense narrower, applied, pragmatical, rational, connected with public processes and political technologies. So, for example, Ranciere (2006) in the book “On the edge of Political” parts these concepts. Actually, he plans for the ways of a research not only processes of self-organization, communication, interaction, and interference, but also the sphere of political. And the category “injustice” in his understanding appears ethics which are taken out for a framework and becomes the universal tool. Ranciere’s work with terms, substance political, his characteristic helps with a definition of political culture. However, it is necessary to remember

researchers from chronologically earlier tradition of judgment of the concepts called above. Leo Strauss and Karl Schmitt's peculiar dialog was devoted to this subject. The first of interlocutors wrote in "Remarks to political Karl Schmitt's concept": Schmitt unambiguously refuses to give "an exhaustive definition" of political. About "entities political" he understands a question from the very beginning as a question of specifics political ... actually liberal answer to a question of a sort in which it is necessary to define an originality political and by that the states, sounding so is still relevant: this sort—"culture," that is totality of "human thinking and action" which shares on "various rather independent subject domains," "cultural provinces." However, Schmitt clearly refuses to compare political with others "cultural provinces": distinction of the friend and enemy "is not equivalent and not similarly ... to other distinctions"; political does not designate any "own new subject domain" (Majer et al. 2012). The question of esthetic turn as relevant orientation of a modern philosophical reflection is put by Gryakalov (2013) Esthetic is considered by the author in topological correlation to political. The researcher notes that the vital frontage esthetic directly correlates with political—consciousness and existence. In production of subjectivity, esthetic and political corresponds (Gryakalov 2013) to anthropological and existential meanings of existence. Gryakalov (2013) notes that *"political calls into question into the present with its variety of manifestations and extreme complexity of definition uniform in many respects – constant characteristics of existence without which understanding life of society loses prospects. In political the abandonment in life not only in sense of ontologic inclusiveness of existence, but also as the forced-out stay there are estrangement is directly felt. Political is the sphere in which the person cannot refuse need to think of the present – at the same time himself building in inquiry which proceeds from existence ... Action of the thought of political which is built in existence gives the chance to take place thoughts in general"* It is important to note that Gryakalov (2013) shows a possibility of an exit to understanding of a qualification picture of culture, without plunging at the same time into the sphere of certain abstractions: *"the evidence of political reveals in esthetic. Esthetic acts, first, as an image of evidence in itself, secondly, as special type of background practice of generation of a thought, thirdly, it is capable to give political event character"* (Gryakalov 2013).

To some extent, esthetic attaches policy to the place—does appropriate, paradoxically adding political visible factuality. Any image of "good life" or "good society" projects includes esthetic to a component—the reflection political cannot do without some reflection of taste. At the same time, esthetic does not allow a political discourse to become "monomaniacal" with it esthetic attracts carriers of rather widespread protest consciousness. During the different historical periods, within different methodologies, the marked problems actively were comprehended and comprehended in a scientific paradigm social and the humanities to this day. Certainly, the activity of this process of definition is connected, on the one hand, with the difficult nature of the called phenomena, on the other hand, with need for science to record the maintenance of learned, to mark this complexity. The scientific discourse cannot be in every sense torn off from changeable sociocultural reality owing to what ways of a reflection of current problems "political" and its results are engaged by the identity of

the author determined by a life situation, the order of the power (or, on the contrary, its rejection) and other factors. The scientific discourse devoted to a problem political in all its historical and methodological variety has to become a studying subject as the sphere of political culture. Multi-levelness of reflections in political culture, as well as in a case with a scientific discourse attempt of an exit out of limits of concrete political reality, become one of its intrinsic characteristics. Within complete idea of the world and culture it is necessary to try, relying on tradition, to differently comprehend a phenomenon of political culture. The first that in this sense it is obviously important—need to depart from structuring this phenomenon. Political culture is a difficult interaction of the different phenomena of culture which are thought as political which are involved in the sphere of political. Political culture has the nature of an organism which each part performs the vital functions. It is impossible (and it is not necessary) to raise radical questions at complete approach to judgment of political culture, it seems “life defines consciousness, or consciousness life?,” with the purpose to build hierarchy of its elements. It becomes obvious that it is necessary to rethink correctness of the term “elements” as they connotatively send to system, structure. Perhaps, in relation to our phenomenon the term “spheres” will become more adequate. In that case at the characteristic of political culture we will be able to speak about interaction, about inter-conditionality cognitive, valuable, esthetic, and other spheres. It is represented that the important characteristic of political culture is its procedural character, and in historical sense, and in sense ontological.

3 Humanitarian Knowledge: The Leader in Formation of Values of Life

The mission of preservation of culture, realization of ideology of conservatism has to become the major task for representatives of humanitarian knowledge. Conservatism is not necessarily connected with the interests of any social group. Conservatism is a peculiar system of the general ideas and is defined by such universal values as justice, an order, balance, control. Thus, at axiological approach, conservatism is represented invariable ideology which is based on absolute timeless values.

Mankheym (1994) considered conservatism as the phenomenon of history of Modern times which arose due to the need of a protection of the existing culture from trends of the European social and political life. According to him, the French Revolution became a push to development of polar styles of thinking which developed according to the political directions. Thereof, it is possible to speak about a thought liberal or conservative.

As many researchers note, conservatives see society as organic unity of the people and the institutes created by them keeping continuity from generation to generation. Freedom is incompatible with abstractly understood equality as it categories of various order. Freedom in metaphysical sense is understood by many conservatives as freedom given by the “True Knowledge,” or a belief. The person is free in the knowl-

edge of perfection of the world created by the Lord. Being attached to belief, having touched the “Truth,” the person is also free from transitory and vain, alluvial, and not original. From the point of view of pragmatism, a main objective of freedom is protection of personal and family property both material, and non-material.

The liberalism as culture ideology is also a product of an era of Modern times and arises as a peculiar intellectual and spiritual reaction to the theocentric culture of the Middle Ages. The liberal thought developed within several centuries of a paradigm of a modernist style (according to Habermas’s definition), being complemented with new provisions, forming new outposts for the ontological bases (Habermas 2011).

The beginning to liberalism as complete cultural program was put by the idea of the democratic structure of the state, refusal of sacral of the power. The idea that the purpose of the state (and cultural construction in general) consists in creation for citizens and everything to whom its influence extends, favorable conditions for existence, was shared not only liberals. Similar thoughts can be found both at socialists, and at conservatives. However, liberals divorce them not in a question what purposes of the state, and in what ways it is possible to reach them. The ideas of social reforms, democracies, free trade, a free thought, freedom of worship, free religion become fundamental concepts of the liberal thought.

The idea of progress is not less significant in the liberal ideology. Its broad judgment began in Education. Progress was interpreted in different ways. Some thinkers considered that progress covers all eras of human history (Condorcet), and others considered that progress can be seen only in the separate periods of history, for example, in classical antiquity or in Renaissance (Voltaire). According to Diderot, progress—an aberration (aberration—a deviation, delusion) because the states ripen and fall as fruits from a tree. Many philosophers inclined to the idea of circulation in the history though interpreted it differently. Voltaire stated the idea that human history, despite retreats and deviations, develops in the line of ascent. This situation is widespread in a wide liberal thought, and it is interfaced to the idea of progress, and, therefore, to the idea of a possibility of creation of harmonious and organic life (Ranciere 2006).

The idea of freedom, value of the independent personality is the cornerstone of a set art the practitioners (fixed in romanticism and relevant to this day) and also at the heart of the methodological individualism which was productive for a set of sciences. The idea of methodological individualism is into giving into temptation to substantiate and concretize the public ideas pernicious for personal freedom. Therefore, for example, Zimmel (2018) considered that there are only individuals, there are only those products of human activity that have the material embodiment, properties of certain individuals do not exist outside reason of individuals, spiritual creations are only in personal recognition. But, how to explain the superindividual collective phenomena, objectivity, and autonomy of social educations if there are only certain individuals? According to Zimmel (2018), there is only one method to resolve similar autonomy: it is necessary to recognize only the existence of individuals.

In the modern culture, the liberal recognition of polytheism of values remains relevant. History of mankind demonstrates that among various values which are prepared by a world order, contrast really insuperable. Reflecting on the sphere of values,

Weber (2017) followed the famous theorist of liberalism John Stuart Mill but noted that making a start from clean experience, one would arrive at polytheism. According to the liberal theory, in vital reality the valuable polytheism is not removable as in logical prospect of norm of ethics it is only possible to offer as ideals, fair instructions, and laws. Ethics do not describe, it orders, she does not explain and does not predict. Ethics estimate. There are scientific explanations, and there are ethical estimates. Ethics live out of the truth.

Not less important, than the principle of freedom, for the liberal ideology is the principle of equality. People, equal on advantage, within open society are equal before the law. Equal opportunities are unconditional. The results of human activity caused by a number of objective and subjective factors will be always various, but existence of opportunities has to be guaranteed. The liberal doctrine recognizes personal merits and resists to privileges.

In the sphere economic, inseparable in general from culture, the liberal thought is based on the principle of the competition, the principle of subsidiarity (mutual aid), and defends the sovereignty of the consumer.

Being rationally intelligent, the strategy (model) of cultural development conservatism (as well as liberalism) transfers its own metaphysical categories to the categories of the “objective” world, begins search of references, “identical” for carriers of culture. The formed conservatism discourse based on the chance given by communication to anticipate objects and the phenomena, ways of their interaction, their interposition and, eventually, goal-setting face with vital realities also causes practical intervention in the world.

Art practitioners in a large-scale conservative discourse occupy the significant place not only because it is one of the most effective ways of communication at which “accommodation” of a certain reality, finding of transcendental experience is possible, but also because the bases of the called discourse (Christian ontology) assumes a certain border of rational knowledge of the world and infinity of the knowledge spiritual. The explicated conservative ideology in art practitioners is investigated thoroughly. The most general view on narrative history within a conservative discourse allows to draw a conclusion that its specifics changed.

Given rise as the political program in realities of culture of education, Byork (2001) describes how conservatism was declarative and especially did not need semantic expansion. In the process of decentralization of metaphysical thinking, the conservative discourse needs more contexts of the vital world. It reminds the weed crossings of knowledge with language and action. Owing to what transformation of forms, genres, ways of an explication of the ideas cannot always be explained with the liberal “freedom of the artist,” radical rejection of experience of the previous generations, as well as the “fear of influence.”

Polemics about the language in the Russian literary community of the beginning of the nineteenth century is widely known is studies. On the one hand, there is desacralization of book and church language. In a circle of Arzamas, it became the main relativistic installation. Moreover, the forms of Church Slavonic language storing elements of Christian tradition are some kind of “intermediaries” between the church and the secular spheres. The translation of the Bible the work on which

(after an exit of Synod option) was continued practically before the beginning of the next century became an important factor of the interaction of languages.

Change at a turn of the eighteenth–nineteenth centuries of the very tectonics of this genre, representative for education, came as the tragedy and can be used as an example of genre transformation. In the Russian tradition, the preface to tragedies are used by some authors (e.g., Derzhavin 1985) for introduction of the recipient to a wide historical context, in explanations moralizing analogies between events of the past and the present are drawn, the idea of representation of world per se is emphasized.

Researchers noted the fact that in conservatism (it is especially clear in Russian) characters and images are mythologized (Sokolov 2007). However, it is necessary to notice that in a conservative discourse they are not realized per se. On the contrary, their historicity, reality, the validity is emphasized. Perhaps because in a conservative discourse what highly morally, it is moral, is clean is true (in compliance with a religious canon). In this case (as it is paradoxical), regulatory function of orientation to the truth works. Realities of existence demand correlation of processes of the actual justification on purpose, as “the Supreme judge” the reason acts here. In addition, according to Habermas (2011): *“in a discourse dispute on the correct interpretation of the fact that the expert in the world meets contexts of the vital worlds drifting the friend from a rug need to be overcome from within.”*

Categories of the validity and reality are the major and at the appeal to a realism problem as art method. Reflective contemporaries and then numerous researchers’ realism in most cases had an idealism shadow that often crossed the single line the adjusted men of science into confusion. The modern researcher of a problem of realism as art is Kotelnikov (2010) who proposed a method for that and noted that the term “realism” inherently is critical and being guided by the detailed analysis of literary, philosophical, critical material, the author introduces for scientific use the term “critical idealism”—peculiar and more exact analog of “critical realism” (Kotelnikov 2010). Thus, the potential of a research of an ideal of the author with which the represented reality open. The analysis of the actual material of the European literature allows us to claim that often the ideal author’s reality is in space of conservative representations (such powerful figures in culture, as Dostoyevsky, Tolstoy, or Mann can be an example of that). It is necessary to pay attention to some substantial distinction of the concepts of “conservatism” and “conservative”: the last concept is wider and more liberal. It is applicable to the phenomena which do not have focuses on strict following to the metaphysical installations of conservative ideology but which at the same time are guided by them.

At a turn of the nineteenth–twentieth centuries, art practitioners who were modernizing tradition, went in two directions: neo-traditionalism and vanguard. If within neo-traditionalism the conservative discourse was transformed or in the ideological filling, or in the formal embodiment (spiritual and creative search of symbolists), then its correlation (when it in general is possible) with vanguard art needs to be conducted in the paradigm set by creators.

Kandinsky (2011) and his art unusually irritated the remarkable artist and the theorist (i.e., extremely important for us) charges that he wants to tear with tradition

and to overturn the building of the last art. Responding to charges, the artist in the work “The text of the artist” wrote that “*pointless painting is not deletion of all former art, but only extraordinary and important division of an old trunk into two main branches without which formation of krone of a green tree would be impossible is paramount*” (Kandinsky 2011). Kandinsky’s attempts to leave from naturalistic forms are basic. It is an attempt passing a form, to leave to suggestive knowledge of the truth. And in a broad sense, if to take the intrinsic bases of its search into account, the avant-gardist Kandinsky is much more conservative, than many artists realists. Not accidentally the art critic Daniel (2011) noted close connection of many ideas of the artist with modern to him symbolism (Daniel 2011). Comparing the ideas stated in theoretical works of Kandinsky with Bely’s thoughts, the researcher notes that these extraordinary creative persons coincide in music estimates as the art which is above other art forms the idea of the future individualization of creativity, full decomposition of forms of art for its validity is close to them (Daniel 2011).

4 Conclusions

In a conclusion to our discussion and our thorough analysis, we would like to note that in interrelation both components of the concept “political culture” are mutually designing. On the one hand, their combination gives sufficient width for the attempt of the complete characteristic of a phenomenon. However, on the other hand, this width (as it is paradoxical) in the theoretical plan of judgment of political culture changes the scale of the phenomenon demanding us to change the methodology. One can see that it assumes the generalized look and becomes oriented on the essence of the processes as well as on a set of phenomena embedded in this complex issue.

Overall, our results and findings show that it should be noted that in a paradigm of integrity not only the European culture, but also the Eastern cultures can be comprehended and included to become an integral part of the world’s leadership debate.

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Leadership in the Era of High-Hume



Liudmila Kiseleva

Abstract This paper tackles the transformation processes taking place in the contemporary society which are related not only to the society complex informatization, but also to a new humanitarian revolution which might have a decisive impact both on a human, as well as on the further development of the whole society. High-Hume represents high humanitarian technologies which appeared due to development of high technologies (high-tech), and form into an independent socio-cultural phenomenon. High-Hume technologies can be defined as the research, analytical, information, organization actions, in which a pattern of their performance and assessment can be traced, but the constituents of this humanitarian pattern do not have clear definitions and are not subject to mathematical assessment. This paper argues that a human who becomes the main resource and a driving factor of the society development occupies the most important place in the information society. At the same time, a human is also the main factor of risk in the contemporary society. In order to mitigate possible negative consequences of the society informatization, a concept of advanced education (High-Ed) is suggested which implements timely preparation of a person for the future and influences mainly on his/her moral values and personal traits. The paper demonstrates that the quantum leadership, basing on three types of thinking: rational, associative, and creative, becomes the most essential and the leading one in the contemporary society.

1 Introduction

The dynamic contemporary technological reforms in the context of globalization, geopolitical, as well as financial-economic transformations in the world, strengthening of competitive activity and turbulence of sociocultural environment within the information epoch have placed the contemporary society before inevitable qualitative transitions to new forms of perception, thinking, interaction and management

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of all the life processes. The contemporary epoch is fairly called the high-tech (high technology) epoch, which is caused by the huge high-tech impact on all the spheres of the contemporary society. The high-tech means a reference designation of the technology heavily relying upon science with a broad scope of application capable of causing a chain reaction of innovations and making a considerable influence over the society and its culture (Zhukova 2007). The high-tech influence over the socio-cultural sphere has developed in the emergence of high humanitarian technologies (High-Hume) (Verbitskaya et al. 2018). The High-Hume appeared as technologies, accompanying high-tech, as managerial technologies, which are meant for changing the human mind, both individual and the collective, but currently they form into an independent sociocultural phenomenon—a High-Hume phenomenon.

Many studies show that the global information society development process has a strong impact on an individual person, as well as on the whole world society (Kolin 2007). Under the informatization's influence, there are fundamental changes in all spheres of everyday life and professional activity of people: in economy, politics, science, education, culture, and the everyday sphere. According to the research, in the next 10–20 years about 50% of professions will no longer exist (Frey and Osborn 2013). That is why it is necessary to perform a sound policy in the sphere of education in advance, to develop complex personnel re-qualification and continuous education programs. The experts emphasize that creation and integration of new technologies will not be as much difficult for the traditional spheres in the post-industrial society, as fundamental reconstruction of the corporate culture and organization (Banke et al. 2016).

The wide spread of high-tech and High-Hume caused serious changes in the professional structure of the post-industrial society (High-Hume and High-Ed 2009). In the first place, they are reflected in formation of new requirements to professionals from the labour market. In the nearest future, there will be a high demand for the specialists in the High-Hume sphere, and their training will become a prerogative of the elite education (High-Ed). Currently, these specialists are already in demand in practice, but their specialized training is not yet performed at the higher education institutions at a proper level or is not performed at all. The main difference of the “High Education” from the “higher” is, that it presupposes a broader subject field, including not only training, i.e. various operations with knowledge, not only changing of transfer formulas: distance, permanent learning, or such forms as coaching, but the most important is an emphasis on synergetic development of the personality itself. Education becomes one of the leading fields of activity in twenty-first century (and at the same time—a sphere of innovative economy), where the value of a sophisticated personality and such format of actions as “flexible,” “intelligent” or “soft power” grows rapidly.

In this research, a notion of High-Hume technologies is defined, a growing value of a class of creators is set forth. Around these classes, creative corporations are formed—the “nerve knots” of producing, creative economy, several Hi-Ed (High Education) elements are stated, contributing to formation of new competences in the High-Hume sphere. A special attention is paid to quantum thinking (Zohar 2017),

due to which the quantum leaders benefit from uncertainty and instability—the phenomena that are quite typical for the contemporary epoch.

2 Phenomenon of High-Hume Technologies

The humanitarian technologies with their effective use and wide spread owe much to the fact, that the society has come into the information epoch. Alongside with the biotechnologies, nanotechnologies, engineering of living organisms, new medicine, robotics, the high humanitarian technologies are an important constituent of the 6th innovation wave.

High-Hume appeared as managerial technologies, accompanying High-tech both at the stage of creation and their functioning, and at the stage of the High-tech products implementation. A peculiar feature of High-Hume is scientific intensity. On the one hand, High-Hume has high speed of modification and rotation. On the other hand, they are often oriented to irrational, emotional, and subconscious levels of human behaviour. The professional societies, which create and use High-Hume, and, thus, their professional norms and values are yet under formation. There are several viewpoints regarding a nature and purpose of High-Hume. The first one states that there is a manipulative focus of High-Hume when they are considered as socio-humanitarian technologies, intended to modify a human mind (political technologies, marketing technologies, business technologies, etc.). In this interpretation, the main aim of High-Hume is certain managerial and manipulative impacts, which are capable of establishing and destroying the society's and human's self-regulation mechanisms (Zhukova 2007; Antipov 2016; Strenger 2004). The second one states that the personality is based on the development-oriented technologies. In this context, High-Hume is the technologies of innovations, production of new types of activity. Thinking becomes an essential and central element of such production. Unlike the traditional technologies, which are built on the basis of abstract-logical thinking laws, High-Hume is based on a creative-intuitive way to learn the world (Alekseyeva 2016).

With regard to the above, Zhukova (2007) pays attention to the fact, that the High-Hume themselves are neutral in terms of values. They may acquire either a positive or negative nature, depending on the aims of a person, who uses them. High-Hume may be implemented only by highly competent specialists in the given sphere. The humanistic values are the only restriction of the high-tech and High-Hume power. It is the high technologies, which lead to awareness of a need to prepare not simply a specialist, possessing a set amount of knowledge, abilities, and skills, but a specialist, as a personality, having high moral intentions.

Kolin (2007, p. 45) writes, that “*in the problem of the information society development a central place is occupied not by the instrumental-technological, but by the humanitarian aspects, and, first of all, by the spiritual traits of a person*”. From his viewpoint, the following may be defined as priorities in the civilization's development in the twenty-first century:

- A human, his/her moral values and personal traits;
- Justice, responsibility, and patriotism in the society;
- Culture and ethics, maintenance of national traditions;
- Education and personal development, their orientation to the future;
- Fundamental science;
- High technologies and resource saving;
- Innovative economy.

The future comes too fast. It does not give enough time for a human for adaptation to new conditions, and this causes stress, confusion, fear before the future. Though the transition to the information way of life is inevitable, it will be related to the High-Hume development in many cases.

Currently, under the conditions of transition towards the high technology reality various models of human behaviour have formed: “homo auto-creator” (a self-creating person), “homo nobrow” (a person, who obeys to the consumption practice), or a “homo zwischens” (from the German “between”), “a hesitating person.”

A “Homo auto-creator” is capable of such creativity, which is not inspired by any production needs, or social, state, or any external needs towards to his/her internal “I” (Volkov 2015). Being a “self-updated person,” a specialist strives for creative labour. In each situation of choice, she or he is ready for a risk, mistakes, new ideas. His/her motto is striving for self-improvement and maximal implementation of his/her personal potential even in spite of the cultural and social environment.

The term “nobrow” was introduced in 2000 by John Seabrook, denoting an effect of eliminating the distinctions between the high (highbrow) and low (lowbrow) cultures. Nobrow is a culture, irrelevant to taste, which is worthy of becoming the mass culture due to a big budget and professionalism of its creators, not requiring any intellect from human. An individual in the nobrow culture obeys to the consumption practice, involving constant racing for new things (Ryynanen 2005). A process of purchasing a new thing, or obtaining new services becomes more important than the thing, or the service itself. The consumer loses criticism and individuality, and he/she becomes a person of a crowd, captured by the mainstream culture (Zhukova 2007).

A “Homo zwischens” is a person, overloaded with “being in between” contradictions: between the body and soul, predetermination (fate) and freedom, sinfulness and sacredness, and so on (Volkov 2015; or Matveyeva 2006). A “hesitating person,” i.e. the one who is forced to live in the undetermined atmosphere, is turn between two different systems of values.

The specialists in the High-Hume sphere also find themselves in the situation of a “tear.” The peculiarities of their professional activity presuppose a need of a creative approach to the profession and an ability to manage other people. But existence in the nobrow culture turns themselves into those, manipulated by someone else. An objective of the education system in this situation is a correction of these models of behaviour and use of the High-Hume technologies in the process of professional formation for the creative economy on the basis of a synthesis of science, art, and technological knowledge.

From our viewpoint, High-Hume technologies represent actions (e.g. research, analytical, informational, or organizational) in which there is a pattern of their performance and assessment, but the constituents of this humanitarian pattern do not have clear definitions and are not subject to mathematical assessment.

3 High Education and Quantum Leadership

At the end of the 1990s, a new phenomenon appeared known as “creative corporations.” This phenomenon was built around a personality of a creator who has done something outstanding. The creators throw revolutionary ideas and know-how into the economy, and then build functions around them: financial, construction, production, trade, etc. All of them work for implementation of the idea, invented by the creator (Neklessa 2009). At the same time, the role of traditional production is actually decreased. In this or that form, it is more and more often passed to the contractors into the peripheral geographical and geo-economic environments.

In the High-Hume epoch, the creativity becomes from a satellite of material production development into its essential condition, and the sphere of creative activity not just passively broadens alongside with the economic progress but determines it activity. People, who produce the economic values in the creative activity process, are referred to as a creative class (Florida 2002, 2016). The creator is capable of launching the creative process, having organized its activity, and of bringing the pragmatic platform to the result. Such people should have skills of assessing the scientific ideas potential in order to turn them successfully into business, should be trained in the entrepreneurship practice and venture management of innovative production. A basis of the class of creators is their intellectual property, demonstrated by their creative abilities: a readiness to take intellectual risks to oneself, and the most important—an ability of self-improvement, self-organization, and self-updating. Some other names of the creative class are: (i) “workers of intellectual labour” (Drucker 1993; Machlup 1962); (ii) “professional-administrative class” (Wright 1998); (iii) “symbolic analysts” (Reich 1991); (iv) “BoBo group” (Brooks 2001). The name comes from a mixture of two words—bohemia and bourgeoisie.

Training of this type of specialists is only possible, in our viewpoint, within the framework of advanced education with the use of the High-Hume technologies which replaces the supporting education, which does not practically take into account the peculiar features of the new conditions of human existence in the information society. The dynamic stability and efficiency of a professional appears an essential product of educational production in the post-industrial society. We distinguish several features of “high” education which differ it from the “higher”:

- An ability of an individual to discard the out-of-date knowledge independently;
- A high competence level in interaction with indefinite practice fields of the new century;

- Edutainment—acceptance of the qualification, which people obtain due to their practical experience and activity, uniting education, entertainment, aesthetic experience and so on in it, which exist as a whole. Thus, education becomes some reflection of other various types of activity. From that activity some experience emerges, and its transition to some new forms, which can be retold to someone else.
- Educational institutions will learn to take over or perform expansion for practice—in the first place, high practice, creative practice;
- The innovative universities may be defined as institutions of development, institutions of the future design;
- The educational institutions will become the “fashion houses”—houses, which form the life strategy, the main patterns of behaviour and style of attitude to the world.

Only a small part of the population in the world will have the access to such competitive education as High-Ed, and the competition for the access to this part of education will be very fierce. The “High Education” will not be available for everyone, and not only on the financial grounds. If in the traditional society at admission to an elite educational institution the “blood elite” criterion dominated (distinction and origin), the main criterion in the industrial society is affiliation with the “elite of wealth” (fortune, money), in the information society affiliation with the “elite of knowledge” (giftedness, possession of capabilities) becomes a priority.

A theory of quantum leadership (Zohar 2017) presupposes that the creative thinking is originated from the spiritual constituent of the personality and is produced by the mental activity, quite similar in terms of its nature to the processes and systems, described by specialists in quantum physics. In order for one to become a quantum leader, nothing else is required but a new view of the world (a new view of reality)—both of one’s own internal reality, and of the external reality, where the leader will work. Existence in the High-Hume epoch presupposes new thinking—thinking, based on the well-balanced action of physical, mental, emotional, and spiritual aspects of mind and ability to use the whole brain.

4 Conclusions

It is important for a person, living in the information epoch, to develop a realized perception of the technological progress. In order for him/her to make well-informed decision, he/she should take into account the positive and negative consequences of any changes and understand, that at a choice of the technological alternatives the progress is only one of several possible options. Successful development of the information society will depend on an ability of a person to make decisions consciously, forecasting their potential impact.

The society of global communications bears a great potential in itself, but also hides some certain risks. This potential may be implemented in the interests of the society in case of continuous reinforcement of consciousness and responsibility of each person and the whole society. This consciousness should be of a humanist nature. The High-Hume technologies resulted from of the high-tech spread. In terms of their content the High-Hume technologies are often difficult to refer to a certain type. They may acquire a nature of meta-technologies, becoming a basis for efficient implementation of the social technologies with the different content. Our results show that the contemporary labour market imposes the following essential requirements to the professionals in the High-Hume sphere:

- Fundamental natural-scientific and humanitarian training on the basis of the university education;
- capability of innovations (not only of creativity, but of acceptance of innovations, of participation in novelties);
- adaptation to fast-changing production and business conditions;
- readiness to continuous qualification improvement and acquisition of new knowledge;
- ability to forecast and plan (“to manage the dream”);
- readiness to risk, flexibility, discipline;
- economic literacy and work skills in business;
- developed communicative skills, ability to work in a team and solve conflicts;
- skills to establish inter-cultural communications (ability to account for peculiar features of the mentality of a certain country, region or a social group in the professional communications; proficiency of the languages of international communication);
- ability to perform self-marketing (ability to “sell oneself” at the internal and external markets).

In a conclusion, one can observe that, at present, in the scientific literature, there is no generally accepted notion of “high humanitarian technologies.” Moreover, a list of high humanitarian technologies is not determined, and the theoretical-methodological bases of the High-Hume technologies are not developed. Our contemplations and findings show that in the nearest future, there will emerge a high demand in the specialists in the High-Hume sphere, and their training will become a prerogative of the elite education. Currently, these specialists are practically in demand already but their specialized training at the universities is not yet performed at a proper level, or not performed at all. All in all, this will be a new and promising field created for the future leaders of tomorrow.

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Development of Youth Motivation for Leadership and Participation in R&D Activities



Yulia Gruzina, Irina Firsova and Inna Lukashenko

Abstract Our paper tackles the problems in the development of mechanisms stimulating youth activity, especially youth activity in the field of science and innovation. The history of the development of human civilization proves that all significant changes in the world community were successful to some extent due to the fact that the youth actively participated in them as the most pro-active and promising social group. We show that participation of competent, enterprising, entrepreneurial, and moral young people who are able to make their own decisions and take responsibility for their decisions is significant for modern society. The outcomes of our analytical study are based on the implementation of our novel research project on the development of state incentive mechanisms for current and priority areas of youth policy in the field of science, technology, and innovation in the Russian Federation. Our results might be of a special interest for educators as well as policy-makers in science, education, and R&D sector.

1 Introduction

Motivation of the young people should be based on the motives of social activity, ensuring the conscious choice of the subject and the way to satisfy their needs. It is necessary to take into account the interests and inclinations of each person, their beliefs, ideals, as well as the value system, social and psychological attitudes of the

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person that exercise moral control when choosing a goal relevant to actual needs, as well as means and ways to achieve this goal for a positive result of involving young people in research and other spheres of activity. We need to direct and shape its motives. The substructure of internal control includes abilities, knowledge, skills in a certain type of activity, their assessment, the level of personal aspirations as the degree of a person's mobilization to achieve a certain meaningful goal.

The last half of a century led to qualitative changes in the social environment, changes in the mechanisms of socialization and adaptation of young people, as well as new patterns of youth development in society. Market conditions pose the youth with tasks requiring their active involvement in social relations, in interaction with people and social institutions of the economic, political, and spiritual spheres. The young people are in dire need of qualified assistance and support, so the youth policy in the areas of research, innovation, project activities should be built in accordance with the spirit of the time for updating the resources of young people.

The aim of our study was to assess the impact of motivation on changing the model of interaction between participants in scientific and innovative activities based on reflection mechanisms. It is well-known that this philosophical approach makes the basis of the activity not of a person, but of a research process indirectly influencing any given young researcher.

The essence of man is seen in his thinking which captures all the other functions of the soul—this is what the ancient Greek philosopher Aristotle spoke about in his treatises. The problems of individual motivation in philosophy considered as processes of an evolutionary and biological nature are given in the works of Spencer (2011), Jowett (2016), or Gorbunova (2017). Comprehension the patterns of youth development is also the focus of attention of modern philosophers such as Sarkisova (2009), Voropaev (2014), Zimnyaya (2016), Smolkin (2017). Moreover, Maslow (2012) was interested in motivational processes in the development of an individual. Reflection, as the problem of searching for a specific human property determining its position in the social world and its role is considered in the works Hartman (2002), Ortega and Gasset (2010), Ilyin (2011), Skrauch (2013), Boyko and Nikiforova (2016), and most recently Firsova (2018). More specifically, questions of motivation were considered in psychology. They were developed by absolutization of the individual components of this phenomenon.

Our paper is organized as follows: Sect. 1 provides a brief literature overview. Section 2 provides a brief analysis. Section 3 presents the motivational model of interaction of participants in scientific and innovation activities based on reflection mechanisms. Finally, Sect. 4 provides conclusions and policy recommendations.

2 Integrative Approach in the Field of Youth Motivation

The integrative approach allows us to present a holistic picture of work with young people (the core of integration). This is an approach that allows consideration of the process of learning, motivation, organization of work with young people in the

aggregate. As a result of which a “new quality” is created. In the modern information society, as noted by Skrauch (2013), working with young people on the basis of an integrative approach leads to the formation of a specialist of the “integral profile,” characterized by a high level of professional competence, which is necessary both in research and development, in project activities, and the innovation sphere.

The integrative approach combines various approaches in the framework of youth education, their motivation, and management of their activities in the areas of research, innovation, project activities, and the output of all processes to a qualitatively higher level, allowing to ensure the effectiveness of quality work with young people.

On the one hand, the integrative approach stimulates the realization of integrative possibilities in the educational process; on the other hand, it creates prerequisites for the development of the integration of the process of motivation and solving the professional tasks of a future specialist in various fields of activity. The integrative approach is based on the concepts of “integration” and “integration.” Integration ensures the compatibility of scientific knowledge from different systems and is considered as their organic interpenetration, giving a qualitatively new result, a new system knowledge. Integrity acts as a result of the integration process, as a new product of its actions, bearing the basis of quality (see Boluchevskaya 2009). Let us highlight the main factors that underlie the implementation of an integrative approach in the field of youth motivation in various fields of activity. An overview of these factors is presented in Table 1 that follows.

The community of techies, mathematicians, biologists, and linguists can be identified as a sample of an integrative approach in the field of work with young people. For example, the integrative approach of the learning process at MIPT led on the one hand, to the formation of interdisciplinary research culture, and on the other, to the formation of young people interest to participate in various kinds of research. Such an approach will allow students to participate in research and find themselves in scientific fields, which of course provides ample opportunities to declare themselves at international conferences at various levels, competitions.

During the process of researching the problem of motivation of youth involvement in research, innovation and project activities, a survey was conducted on the topic “Attitude of young people to research activities and innovations.” The survey was conducted selectively in such educational organizations as: RANHIGS, Financial University, GUU, etc. 500 people took part in this survey. The desire to do science was expressed by 5% of respondents. Among those surveyed, it is believed that problems in research activities are primarily related to the following factors:

- outflow of qualified scientists to other areas of activity—35.1%;
- absence of the leaders of scientific schools—29.4%;
- absence of perspectives for young people in science—35.5%.

According to respondents, the following factors can be considered as motivational in the development of talented youth:

- participation through grants in international competitions, conferences, programs—46.5%;

Table 1 Main factors for implementing an integrative approach in the field of youth motivation

Factor type	Factor characteristics	Contents
Organizational	Forming of a unified system of management and motivation in the development of the youth educational potential	Reflected in the activities of management structures, the dean, the head of the department. They serve as a basis for ensuring unity of understanding of integration in the educational process
Informative	Are necessary for the development of the required competencies in the areas of research, innovation, project activities, etc.	Interactions between departments and other structural divisions, which allows to structure the educational material on the basis of integration, uniting around the integrative core (competencies) the material of disciplines, preserving a certain degree of freedom, without infringing on the personality of the student, and relying on the acquired knowledge
Technological	They are necessary for the development of student personality, his leadership qualities, and ability to work in a team	They consist of the modular construction of training courses, the method of projects, interactive technologies, participation in business projects and other activities that stimulate students to master the integrative knowledge, competencies necessary to participate in various spheres of activity, including research, project activities, and innovation
Motivational	Needed to stimulate young people to participate in all areas of activity, including research, project activities, and innovative activities	Material and social motivation. Development of reflection in youth.
Institutional	Integrative work of teachers and students is necessary for the results	Creation of scientific and educational centers, business incubators, professional clubs of graduates, funds for motivating young people to participate in various spheres of youth policy

Source Own results

- participation in federal programs supporting talented youth—42.1%;
- stimulation of scientific activity through funds and grants—11.4%.

It is necessary to create conditions to attract young people to the field of innovation, research, and design work, for example:

- demand for creativity and innovation in business, science, and society—80.3%;
- high material supply of laboratories with necessary equipment, technologies, materials, etc.—90.3%;
- financial support for young people with participation in R&D—90%;
- real implementation of state programs in the field of youth policy—76.9%.

However, some negative motives for existing youth policies were also expressed. Among the negative points noted by the respondents mentioned the absence of material incentives (financial problems)—(1) 49.8,%; the impossibility of solving the social problems of young scientists and teachers—(2) 11, 2%; lowering the quality of higher education—(3) 9.4%; the outflow of talented young people from science to business—(4) 16, 6%; the inconsistency and unsystematic nature of the government policy in the field of science and innovations—(5) 12, 0%.

In the course of the study, a group of factors of attracting talented young people to research activities at the university was ranked. First of all, as young people (graduate students, young scientists and young teachers) note, in order to attract young people to research, it is necessary:

- the formation in the university of traditions of respect for young scientists;
- the presence of a real scientific supervisor at a novice researcher who spends more than 5–8 h to work with a young scientist and does not engage in any other activity;
- involvement of the supervisor in the activities of the scientific school, the presence of his research papers;
- the motivation of the supervisor on the part of the university and the state;
- providing career prospects for young scientists; creating conditions for young scientists and their supervisors for the implementation of scientific mobility, etc.

Each of the factors is of high importance and is estimated at 100 points. According to the results of the study, it was revealed that the main motivation of students' participation in R&D project activity is getting a good grade from a teacher. More than 80% of young people believe that educational institutions of higher and secondary education do not have sufficient material resources to equip laboratories conducting scientific research.

The answers to the question “Do you want to be engaged in the development of science and innovation?” yielded almost the same results—“in the case of decent wages.” Only 6% of respondents believe that young people can realize themselves in the scientific sphere, that it is difficult and long to achieve results in science. The youth believes that the youth policy in the field of motivation and attraction to research, innovation and project work should be carried out at two levels: at the level of the educational organization and state.

Competence-based approach focuses on the practical skills that the future professional should have in any field of activity. The basic concepts in this approach

are “competence,” as preparedness for the implementation of the main functions of the activity and “competence” as an integral characteristic of the professional qualification of a specialist (Zimnyaya 2016). Competence-based approach reflects the goals for working with young people that meet the requirements of the social order. Motivational factors, according to this approach, are a set of competencies, acquired by students and necessary in the framework of research, innovation, and project activities.

The purpose of education in the context of a competence-based approach is the formation of a personality capable of solving various problems (including those in the sphere of innovations, research, etc.), using existing knowledge, skills, skills, experience, that is the competent person. In this vein, it is the research work of students (R&D) that is one of the most important and effective means of forming such competences.

In the process of researching students, graduates, young scientists, teachers participating in R&D work, it was revealed what competencies are formed when participating in this kind of activity.

The development of creative and analytical thinking of students—(1) 12%; research skills and scientific intuition—(2) 8%; expansion of students’ scientific outlook in the first place, in the field of theoretical foundations of the studied disciplines—(3) 15%; instilling sustainable self-study research skills—(4) 23.7%; the ability to reasonably defend and justify the results—(5) 7.3%; preparation of term papers and graduation qualification works at a high level with the subsequent approbation at conferences with the publication in collections of scientific papers, in journals of Russian Science Citation Index (RSCI) and the list of journals approved by Higher Attestation Commission of Russia—(6) 19%; participation in the preparation of applications for grants, project competitions—(7) 5%; participation in round tables—(8) 8.4%; contractual works—(9) 1.6%.

3 Motivational Model of Interaction

As part of the development of motivational approaches engaging young people to enter the field of R&D, innovation and project activities, a motivational model of interaction between participants in research and innovation activities based on reflection mechanisms is often used.

Within the framework of the “new” activity, the young researcher and leader are considered as active participants in the innovation process, which develops the ability to reflect, where, as already noted, reflection is considered as the basis for managing the innovation activities of students and teachers.

The requirements for the level of professional competence of the teacher and the student are formed in accordance with the standards of education, taking into account modern trends in its development. Communications aimed at the formation of the process of “new” activity are carried out with the help of creative communication type, where “D” is the activity of the Department and Faculty team, and “R” is

the requirements for the activity. These communications are based on the identified contradictions, the search for ways to resolve them and the construction of new activities.

The research supervisor gives students the task of finding new ideas, collecting and analyzing material within the framework of communications aimed at the formation of the “new” activity. Next, the task has to be set (the topic of the diploma project), the solution of which is aimed at the result and its approbation. To coordinate the “new” activity process, it is possible to create either coordinating center (institute) of innovative development for an educational organization, or centers of innovative development of Departments (“points of growth”), providing support of innovative educational, design, and scientific activities. This will create favorable conditions for the sustainable development of the research activities of the educational organization.

The proposed activities based on motivational approaches will contribute to the creation of young scientists’ professional communities united by common goals, and unified methodological and information platform engaging young people in the field of science and innovations.

4 Conclusions

All in all, it becomes obvious that the system of demands is formed in the process of personal development. According to some works analyzed in the sections above, the significant goal of any individual is the connection of his needs and interests. Therefore, needs are born with conscious intentions and goals without which activity is impossible. The impulse to achieve the goal, the very goal and the conscious image of the future result, toward which the action is directed, underlie the structure of the very need. Thus, the boundaries of a separate motive of social activity, on the one hand, determine the need; on the other hand, they also give rise to a meaningful goal and intention to achieve it. With the development of youth policy in the field of research, innovation, and technology, this fact has to be taken into account.

Thence, in the process of motivating young people, the motives of social activity are formed from a combination of the above-listed motivational components of the three substructures, which together form the structure of the motives of human social activity. The structure of motives can include a different number of motives. Each motive can be formed by a different number of motivational components that have within it a subordinate relationship.

Our results show how important the development of youth motivation is for leadership and enhancing and supporting the R&D activities. These outcomes should be taken into account by the professionals in higher education as well as governmental officials.

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Personnel Development of Leadership Capacity Management in Organizations



Maria Mizintseva, Anna Sardarian and Maria Chavykina

Abstract Our paper analyses staff development in the organizational system of leadership capacity management. We investigate the correlation between the human resources (HR) development and other personnel technologies, such as trainings, work with the talent pool, career management, evaluation and certification of personnel, motivation to work and develop, or recruitment and selection. The paper describes the purpose, objectives and stages in staff development as personnel management technology. We distinguish a preparatory stage, development stage and final stage, which, in their turn, include a number of “sub-stages.” In the paper, the traditional methods of staff development in the HR development system and modern methods of development are highlighted, among which there are modular training, distance learning, shadowing, secondment, buddying and others. We single out the most expensive training methods (lectures and master classes of well-known specialists, distance learning in prestigious training companies and centres of professional development, coaching) and cheaper ones (briefing, independent learning, tutorship). Moreover, we emphasize that the choice of the development method depends on the goals that the company pursues in a particular period of time, logistics of the company, its financial capabilities, trainee’s individual characteristics, the company’s past experience in the field of training employees, time available for training, as well as other relevant factors.

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1 Introduction

The theory and practice of management has accumulated significant experience in the development of the company's personnel development as a human resources (HR) management technology. Modern colleges and universities of both Western European and North American countries as well as Russian institutions of higher vocational education run a growing number of short and long courses devoted to the HR development. Nowadays organizations include the development of personnel into the system of leadership capacity management, not only for top-level managers, but also for middle-level personnel.

These issues of staff development are widely considered by contemporary authors including (just to name a few): Pokalyuhina (2003), Vesnin (2016), Kibanov (2009), Armstrong (2004), Shatalova (2012), Kibanov and Durakova (2012) or Ustyantsev (2016).

However, one should note the fact that in this area of research there are still a number of serious problems. For example, there has not yet been formulated a single set of definitions describing the development of personnel as a technology and as a process in a modern company. A unified system of methodological support has not been developed. There are few studies focused on a particular method of personnel development and its effectiveness.

2 The Essence and Structure of Staff Development in Management

Personnel development is a combination of organizational and economic activities of HR departments in the field of personnel training, retraining and professional development. These activities comprise the issues of professional adaptation, evaluation of candidates for a vacant position, ongoing periodic evaluation of personnel, business career path planning and professional promotion of human resources, talent management, organization of incentive and work-improvement activity within the organization (Ustyantsev 2016).

Personnel development is a multidimensional concept and complex procedure for the company. The personnel development system includes training, talent and career path management. The personnel development is closely related to such personnel technologies as personnel evaluation and certification, motivation to work and develop, recruitment and selection (Fig. 1).

Personnel development, which as well includes training, is a complex concept where the employees themselves play a leading role, where the role of self-motivation is high, where the process of gaining knowledge, skills and competencies can occur independently, during independent learning. The employees can develop their abilities related to their vocation, position in the company, qualification and personal qualities, which once again demonstrates the complexity of this concept. Nowa-

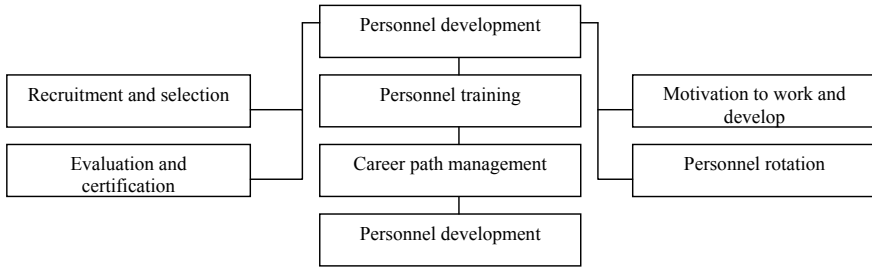


Fig. 1 Correlation between the personnel development and other HR technologies. *Source* Own results

Table 1 Basic concepts of personnel training within a company

Concept	Description
Specialized training	oriented to the present day or near future and has to do with the relevant position of employment. Such training is effective for a relatively short period of time, but, from the employees’ point of view, it contributes to the preservation of the employment, and also enhances self-esteem
Multi-disciplinary training	is economically effective, since it increases the on-the-job and job-to-job mobility of the employee. However, the latter fact represents a certain risk for the company where the employee works, since he/she has the choice and therefore is less attached to the relevant job
Individual-oriented training	aimed at the development of inherent human qualities or acquired by them in practical activities. This concept refers, first of all, to personnel who are inclined to scientific research and possess the talent of a leader, teacher, politician, actor, etc.

Source Own compilations based on Korotkova (2013)

days, researchers single out three basic concepts of employees’ training system of in-company personnel development (Table 1).

Meanwhile, the career management is part of the employee’s development. So, career management of an employee is another direction of company’s personnel development (development, correction, motivation, etc.) of a dynamic system of employee’s attitude to their knowledge, skills, job responsibilities and business qualities. Career is a process of both company employees’ professional growth, and an increase in his/her influence, authority, status, expressed in promotion up the job hierarchy, compensation ladder, prestige, etc.

A professional career is the growth of special knowledge, competencies and skills. It is characterized by the fact that a particular employee in the process of professional activity passes through various stages of development within the profession in which he/she is a specialist. Professional career can develop along the line of specialization (improving the only speciality, chosen at the beginning of the professional path) or trans-professionalization (mastering other areas of experience, expanding tools and

areas of activity) (Slender 2010). Professional career in its essence is a consistent accumulation of professional experience by a specialist during all his/her employment. Thus, a common system of human (specialist) development processes and his/her professional achievements in a certain field of activity can be considered a career (Astahov 2013).

3 Goals, Objectives and Stages of Personnel Development

The goal of professional development can be viewed in the twofold context: from the employee's point of view and from the point of view of the organization. Thus, the goal of employee's professional development from the point of view of organization is to increase the efficiency (maximize the results) of the personnel performance through implementing the goals set by the organization, improve the productive capacity of the team and its socio-psychological climate. The goal of professional development from the employee's point of view is to form and constantly enrich his/her personal characteristics, professional knowledge, skills and abilities that they need for effective carrying out their functions, rights and duties. The in-company personnel development performs a wide range of various tasks. Among the main of them, one should probably list the following ones:

- an increase of workers' quality and productivity at the enterprise;
- an increase in the employees' job satisfaction;
- the reduction in the time needed for new employees' adaptation to the job and the company itself;
- an increase in employees' loyalty to the company, a reduction in the percentage of staff turnover, attraction of the most highly qualified personnel from other companies;
- identification and retention of the employees' knowledge, including those who leave the company for various reasons, the systematization of this knowledge and their effective use;
- decrease in opposition on the part of employees to organizational changes, the increase in the effectiveness of the changes;
- ensured continuity of employees' appointment to important positions, internal recruitment (Minberg 2010).

All these strategic, research, methodological and organizational objectives can be referred to the objectives of developing and training personnel include (see Table 2).

The process of personnel development as well as any personnel technology process occurs in several stages:

- company top management's awareness of the need for personnel development;
- the choice of development actors (which categories of personnel will be developed first of all);
- the choice of the development tools;

Table 2 Basic objectives of personnel development within a modern company

Objectives	Description
Strategic	Entrusted to the heads of subdivisions together with the senior management, who determine the general activity plan on personnel training on the basis of the definition of the company's objectives in the near and long term; determine the necessary qualification of employees required for the implementation of the set goals and objectives; determine the need to take measures to acquire the necessary knowledge, etc.
Research	Achieved on the basis of information collection before the training, during training, on completion of training of various categories of personnel. The analysis of the available information shows the problems that must be solved initially when determining the needs for personnel training, the development of the training structure, and the content of training programs
2010 Methodological	Imply the use of methods and forms of training which are most consistent with the achievement of the set goals and objectives of the company
Organizational	A component of the competence of managers of all levels and the personnel service of the enterprise, they are built in the system of intra-company training on the basis of the employees' needs in training and development

Source Compiled by the authors based on Kudryashev and Moiseeva (2017)

- the appointment and selection of personnel development actors in the company (experts, coaches, invited specialists from professional training companies, etc.);
- the preparation of plan and objectives of the personnel development procedure in the company;
- the implementation of motivational activities that contribute to increasing the desire of employees for professional development;
- the main stages of personnel development;
- the analysis of the procedure for the personnel development in the company, etc.

It seems to us important to distinguish three basic stages of staff development, which, in their turn, will consist of sub-stages. Thus, it is proposed to single out the preparatory stage, the stage of development and the final stage (see Fig. 2).

4 Traditional Methods of Personnel Training in the Personnel Development System

Theoretical literature and practice of modern companies (both foreign and domestic) describe and accumulate a great deal of material and experience in the field of applying personnel training methods. Training methods can be individual and group; off-the-job and on-the-job; verbal (lecture, story, conversation), visual (schemes, fig-

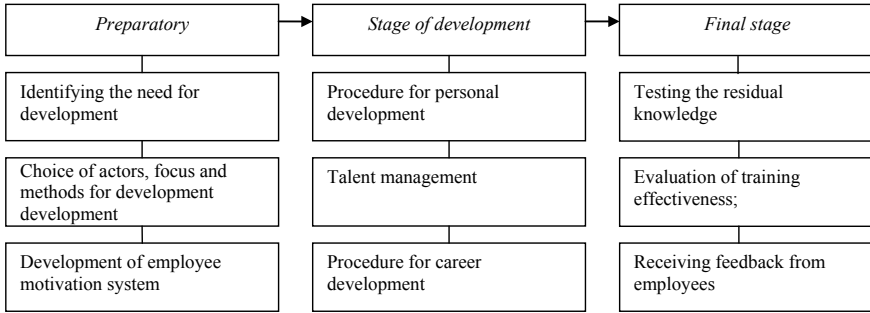


Fig. 2 Basic stages of personnel development within a company. *Source* Own results

ures, video films) and practical (problem solving, laboratory work, business cases); passive and active. For example, we can distinguish among the passive methods of training lectures, explanations, excursions and active methods of training include (role plays games, workshops, group discussions, etc.).

However, as a rule, all training methods today are divided into two large groups: external internal and training methods. Thus, the first group of training methods includes all those that occur outside the organization or outside the employee’s workplace (training in specialized centres and universities (both private and public), etc). The second group of training methods consists of all those techniques that are implemented within the company directly at the workplace (corporate master classes, lectures of invited specialists, on-the-job training, tutorship, etc.). It seems interesting to investigate the main training methods in detail. For example, one of the most conventional methods of training at the workplace is instruction, tutorial and rotation.

Instruction: This method is informing and demonstrating the process of production at the workplace and is usually conducted by an experienced employee in performing this function or an instructor. Instruction has a time limit and is aimed at mastering special actions and procedures within the competence of the trainee.

Rotation: This method is a form of independent training, during which the employee for some time moves from their position to the related one, where later acquires new skills. This method is often used by organizations in need of polyvalent qualifications, in which the organization’s employee has several specializations.

Tutorial is the most common method in companies where practical experience is of high importance for the employees training. This method requires a special tutor able to convey the experience in accessible and effective manner.

Among on-the-job training we can include training in working groups. This teaching method is widely used in Japanese and Western European companies (in particular, in German companies). Working groups are formed to solve a specific production problem in which group members have to find a solution. The working group may include employees of different levels (chief executives, middle managers, ordinary workers); however, as a rule, the size of the working group should not exceed ten

people. The group must fulfil a set task in a certain period of time. The group works out a sequence of actions to implement the task, as well as determines the time frame for its implementation. Throughout the work, the group's activities are documented and monitored by the employee selected from among the group members, so that in the future the group could analyse its weak and strong points, draw appropriate conclusions for future work, etc.

Nevertheless, some authors believe that teaching methods in the form of instruction and tutorial do not provide the employee with significant growth, do not contribute to the development of abstract thinking and creative approach to work, etc. Basically, such methods are optimal for employees in those positions that require performing certain production functions to solve current production problems (Kudryashev and Moiseeva 2017).

The most numerous training methods are off-the-job. These methods allow employees to study the experience of other companies, consider new tools and skills, develop professional competencies. Thus, a group of off-the-job methods include: This training develops new professional competencies. Among the off-the-job training methods, we distinguish seminars and lectures in other companies or organizations, distance learning, modular training, etc.

Lectures are one of the traditional methods of teaching, they can be both short-term and long-term, delivered in the premises of the customer (company) or in the training companies centres. However, today the format of seminars or master classes is increasingly used in training, where students are active actors of training, while at the lecture students are passive learners without the possibility to give the trainer effective feedback. At seminars, on the contrary, there is a constant feedback; students have the opportunity to discuss in groups of real and hypothetical situations, which, undoubtedly, makes it easier to solidify the material. Business games (training close to real situations in the professional work of the employee) are popular today in the process of training.

A master class is held in the format of a lecture (or seminar) by highly qualified specialist in a particular field. The main task of the master class is to demonstrate the real aspects of the applied work, professional thinking in that field. Independent learning is of a particular importance in the process of training and personnel development (acquaintance with the necessary information independently). It is important to note that there are employees who successfully practice this kind of training and eventually get high results. However, there are those workers who experience difficulties in self-study and are most optimally trained in groups with full-time training seminars and master classes.

Table 3 The main classifications of training methods for personnel of the company

Classification basis	Groups of methods	Types of methods
Number of participants	Individual	Independent learning, individual tutorials, coaching
	Group	Master classes, group tutorials, lectures, brain storming
Training technologies	Verbal	Lectures, stories, discussions
	Visual	Schemes, figures, video films
	Practical	Problem solving, business cases, laboratory work
Degree of student’s activity	Active	Problem-based seminars, role games, group discussions.
	Passive	Lectures, excursions, trainer’s explanations
Place of training	External (off-the-job)	Training in specialized centres and colleges (lectures, seminars, master classes)
	Internal (on-the-job)	Directly at the workplace (corporate master classes, coaching, instructions)
Time of its appearance in the practice of companies	Conventional	Briefing, tutorial, lectures, seminars
	Nonconventional	Coaching, shadowing, secondment, buddying

Source Own results

5 Modern Methods of Personnel Development and Leadership Potential

In the recent years, the domestic practice of developing and training personnel began to apply foreign techniques, which have already shown their effectiveness for a short time of their application. Thus, modern methods, which were borrowed by the Russian practice from the West, are modular training, distance learning formats, shadowing, secondment, buddying, etc.

The first foreign method, which got used in domestic practice, was distance learning, which implies the use of various telecommunication technologies. The main advantage of such a method is, undoubtedly, the opportunity to learn at any place and at a time convenient for the instructor. The essence of this type of training is that a student (or company) chooses a specific topic for training, takes preliminary test on it and receives a lesson in the form of a lecture summary, video files and a block of necessary tasks. The method of shadowing (derived from English “to be a shadow”) is to attach an experienced employee the one who wants to hold the same position.

Table 4 Advantages and disadvantages of the main teaching methods

Method	Advantages	Disadvantage
Lecture	<ul style="list-style-type: none"> – The possibility of reaching a large audience; – Relatively low financial costs 	<ul style="list-style-type: none"> – Little activity of students during the lecture; – The impossibility of providing an individual approach to trainees
Seminar	<ul style="list-style-type: none"> – Possibility of more detailed analysis of complex problems and misunderstood material; – Students’ feedback 	<ul style="list-style-type: none"> – The need for a high degree of preparation for the training by the trainer; – Small groups of participants that can lead to higher cost of training
Video training	<ul style="list-style-type: none"> – Visibility and availability of the material; – Possibility of afterwards review; – Possibility of self-learning; – Convenience of implementation; – Relatively low financial costs 	<ul style="list-style-type: none"> – Passive nature of this method; – Lack of individual approach in the process of training; – Lack of individual control
Distance training	<ul style="list-style-type: none"> – Involvement of a large number of employees; – Training at the workplace; – Convenient time of training for every student 	<ul style="list-style-type: none"> – High financial costs

Source Own results

That is, the “shadow” is able to plunge into the work process, to study in detail all the functions and actions performed during the day by a working specialist.

Secondment (meaning “sent on a mission”) is a form of staff rotation, in which the employee is temporarily transferred to other company department, after which he returns to his former duties. Temporary transferring can be both short term (about 80 h) and long term (about a year).

Buddying (“friend”) is a form of coaching but differs from it in a number of ways. In the framework of this method, an employee is assigned to the manager who patronizes him. This method implies that workers are in the same position, and the leader does act not as a coach who gives specific tasks and instructions, but as a guardian who helps and supports the subordinate. Nowadays, active methods of training become very important: business games, various business simulations; brainstorming; action learning; behavioural modelling; coaching, etc. (Nesterova 2015). Our paper proposes the author’s table of teaching methods classifications, which takes into account all the groups of training methods studied previously (Table 3). Thus, one can take into account the maximum number of classification grounds offered by specialists dealing with training problems.

Let us single out the main advantages and disadvantages of the basic training methods in a classified and structured manner (Table 4).

The choice of the development method depends on the goals that the company pursues in a particular period of time; logistics of the company; its financial capa-

bilities; individual characteristics of the trainee; the company's past experience in the field of training employees; time available for training, etc. Among the most expensive methods of teaching we can distinguish: lectures and master classes of famous specialists, distance learning in prestigious learning companies and centres of professional development; coaching, etc. Less expensive methods are instruction, independent learning and tutorials.

6 Conclusions

Generally, it appears that personnel development is a complex and comprehensive process, as new approaches to the solution of production and management problems must be found, among them there are such factors as: (i) an increase in labour productivity and quality of work; or (ii) in increase of job satisfaction in the company and greater loyalty to the company. Thus, as the important characteristics of the company's development are the professionalism of its employees, their loyalty, their further potential, job satisfaction, then professional training, retraining, advanced training and development of personal qualities are extremely important tasks performed by the personnel development system of the company within the system of development of the company's leadership capacity.

We hope that research in this area will become both deeper and larger in scale in the scientific and practical fields, and that the findings and conclusions obtained in this work can help the top management of modern companies develop the company's leadership capacity and choose the most optimal development methods. Moreover, the results of this paper can be used in further scientific research and practical developments on the personnel development within the system of leadership management.

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Digital Marketing of Place Leadership



Natalia Vlasova, Elena Kulikova and Viktor Katochkov

Abstract In the global world, cities and regions increasingly compete for resources, investments, residents, tourists. Leadership in economic development, living standards, investment, and tourism attractiveness becomes the most important competitive advantage. Two technologies can be used to form a leading position of a place—the improvement of territorial potential and its promotion. In the second case, a full range of marketing technologies is used to form a leadership image of the place. This article discusses how digital technologies are transforming approaches to marketing places to be aimed at creating leadership positions. Based on the theories of the digital economy, the features and fundamental changes that occur in the field of marketing and branding of the territory in the era of digitalization are revealed. The possibility of using digital channels of interaction in the marketing of territories is considered, their merits are revealed. The concept is introduced, the structure of the virtual potential of the territory is proposed, and a methodical approach to its analysis is formulated. A comparative analysis of the official portals of the largest cities of the Russian Federation is done using a number of e-metrics. The conclusion is made about the need to adjust the approaches in the field of territory marketing and the importance of forming the concept of digital identity of the Russian Federation largest cities, which would be an integral part of the strategy for the socioeconomic development of the city.

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1 Introduction

In 2010, in the European Union, the Digital Agenda for Europe was proclaimed, and the index of digitization of the economy and society is being calculated annually; The Ministry of Economy and Energy of Germany prepared the report “The Digital Platform. Digital regulatory policies for growth, innovation, competitiveness and participation” in 2017. In 2017, the Government of the Russian Federation approved the “Digital Economy of the Russian Federation” Program. Thus, the digitalization of the economy and the development of virtual space is an integral feature of the economies of the leading countries, affecting all spheres of life. The growth rate of the economy’ digital sector is several times higher than the dynamics in the traditional sectors. These rapid changes and new challenges must be taken into account in the concepts and methods of regulation and management, especially in the area of territorial management and planning.

Leading territories are actively using territorial marketing for their global promoting (Bayraktar and Uslyay 2017; or Radovic et al. 2017). Digital technologies are increasingly used, and gradually begin to be introduced into the scope of marketing territory. Therefore, as a rule, it is the leading territories that are the first to start using advanced technologies in the field of territorial marketing. However, there are no holistic concepts of digital marketing of the territory, possible communication channels are not used effectively, and the concept of digital marketing itself is rather vague.

2 Marketing Place Leadership

Marketing of the territory in the broadest sense is treated as a management technology aimed at improving competitiveness and ensuring economic growth. When implementing the marketing concept of the territory, it is not only about advertising the territory, its brands, and a favorable image, but also a clear understanding of local problems, their consistent solution to make the territory more attractive to residents, tourists, and investors (Astrauskaitė and Paškevičius 2018). A review of research in the field of territorial marketing proves, on the one hand, that many territories use similar technologies, and, on the other hand, that, theoretically, this area has not been sufficiently studied (Gertner 2011; Vasylichak and Halachenko 2016; or Orlova et al. 2018).

Despite the rather general goals of promoting the leading territories—attracting investments; creating a favorable image as a tourist destination and increasing income from tourists; attracting highly skilled workforce and developing a creative environment, researchers mention the difference in marketing and the formation and promotion of brands of territories at different levels—countries, regions, and cities (Ashworth and Kavaratzis 2009; Caldwell and Freire 2007; Strielkowski et al. 2012; Cassinger and Eksel 2017; Huang 2015; Sevin 2014; Lichrou et al. 2014). Often

a marketing strategy is formed for one area of the territory's activity, most often tourism or investment activity. It is in tourism that marketing technologies are used most actively (Colavitti and Usai 2015; Del Pozo and González 2012; Kladou and Mavragani 2015; or Abrahám and Wang 2017).

It is recognized that a well-formed marketing strategy can significantly increase the attractiveness of the territory and strengthen its leading position.

Leading places have an appropriate image and a formed brand and spend considerable efforts both to maintain this image and to improve the quality of the territory's potential at the global level (Botschen et al 2017; Faulconbridge et al. 2011).

3 Digital Marketing Tools for Promotion Place Attractiveness

Digital marketing or e-marketing is marketing with the use of digital technologies. Digital marketing is also sometimes interpreted as online marketing, virtual marketing, or web marketing. Digital marketing uses all digital channels of interaction with the audience, including the Internet and devices providing access to it (computers, tablets, smartphones, etc.); mobile devices, digital television, interactive screens, various devices that can collect information and transfer it to other carriers ("smart watches," fitness bracelets, and others) (Gong et al. 2017; Strielkowski 2017; Hakala et al. 2017; Tham et al. 2013).

The qualitative parameters of communication channels change significantly with the use of Internet technologies, and the line between personal and non-personal communication channels is gradually erased (Cocker and Cronin 2017).

The Internet essentially changes the choice of brand promotion tools, and the concept of digital branding is becoming increasingly common as a method of managing a brand using digital technologies. Since personal experience and "word of mouth" are of paramount importance in territorial branding, information technologies and social media may soon replace traditional territory promotion as the main tool.

Digital marketing and territory branding can be considered as one of the components of a smart city, in particular to address issues of urban planning and management. Features of the digital branding strategy of places, aimed at creating a technological innovation business ecosystem for highly skilled residents, are studied on the example of the Songdo international business district in South Korea, Masdar city in Abu Dhabi and Skolkovo in the Russian Federation (Kolotouchkina and Seisdedos 2017).

From our point of view, digital marketing of a territory is an activity aimed at the creation and promotion of local products and services, as well as the territory using digital technologies; it is the formation and promotion of the virtual potential of a territory in order to increase the competitiveness of its real potential.

When implementing such projects, a vital aspect is cooperation and coordination between numerous actors, turning off government structures, non-governmental

organizations, public associations, commercial structures, etc., for example, cultural heritage specialists, historical societies, territorial development corporations, travel agencies, etc.

Virtual potential is no less important than the real potential of the territory for the formation of a favorable image and the solution of numerous marketing tasks.

The virtual potential of the territory is information about the real potential, placed on various resources of the virtual space. The image in the digital age is increasingly shaped on the basis of virtual potential.

In a sense, virtual potential is a digital footprint and a digital shadow of a territory. The scientific literature discusses the concept of a digital trace of a person—it is a collection of information that the users consciously place about themselves on the Internet. Digital shadow is information implicitly collected about a person on the Internet based on all actions connected with the virtual space—requests, movements, purchases, videos from surveillance cameras, etc.

By analogy with a digital footprint and a digital shadow of a person, we can talk about a digital footprint and a digital shadow of a place—this is a collection of both official information about a territory, and all the implicit actions of a multitude of subjects, search queries about a territory in virtual space—on websites, in social networks, mobile applications, etc.

Studies prove the existence of a relationship between the economic situation and the economic potential and the virtual behavior of consumers. The virtual potential of the territory consists of tourist, investment, socioeconomic, and other potentials.

Tourist potential is represented to the greatest extent in the virtual space, since digital marketing is actively used in promoting tourist destinations (Oliveira and Panyik 2015). Digital technologies are increasingly used to promote large tourist sites by creating special portals, virtual tours, and mobile applications that are based on the principles of crowdsourcing and open data. This allows to significantly increase the scale of the attracted audience and involve tourists in the process of creating content during the journey.

The use of such digital technologies as the creation of virtual 3D tours, QR codification of architectural monuments and other objects, and augmented reality technology is promising.

There are studies of digital technologies efficiency for the promotion of tourist facilities. In particular, the characteristics of the image of Taiwan, which was formed among tourists based on the analysis of online photos posted on social networks, were studied. Comparison of the image of Taiwan in social networks and the image created by marketing specialists shows significant differences. It is revealed that the holistic image formed by tourists includes the unique features of Taiwan, historical sites, natural landscapes, traditional local culture, customs, and national cuisine (Michaelidou et al. 2013). Such studies provide an opportunity to adjust the strategy of effective positioning and promotion of tourist destinations online, since the promoted image must meet the expectations and demands of consumers as much as possible.

4 Digital Demand of the Largest Russian Cities

The virtual investment potential of cities can be presented on the official websites of the particular subject of the Russian Federation, the official websites of cities, including those focused on specialized resources; on the websites of special organizations focused on the promotion of investment potential (chambers of commerce, development corporations, investment funds, etc.). In some cases, the promotion of the investment potential of a city can also occur on a country's website, if this city is included in the list of priority projects/development programs. Virtual investment potential is much less represented in social networks than, for example, tourism potential. However, there are examples of the use of social networks (e.g., YouTube) for the placement of commercials to advertise the investment potential of a particular territory.

When selecting the components of the virtual potential of the territory, the methodology for ranking the brands of countries proposed by the Consulting Bloom company was taken into account (Bloom Consulting 2018). Of the four parameters affecting the strength of the brand, two directly relate to digital technologies: this is digital demand, expressed in terms of the number of Internet searches and the representation of territory in social networks.

The number of calls to the official portals of the territory depends largely on their quality and the availability of information and additional services online, including digital government services.

Digital demand, in turn, will depend on the availability and accessibility of broadband and its quality, on the proportion of the population connected to the Internet and the digital skills of the population. Such indicators are taken into account in the already mentioned index of digitization of the economy and society of the European Union.

The virtual population of Russia, its involvement in the Internet space is presented on interactive maps in the project "Interactive Atlas" of the Russia's population, which is formed on the basis of information collected from questionnaires of users of the social network VKontakte, which are publicly available.

The problem of forming a virtual image is relevant for all Russian cities. The quality of the official city web-portal certainly influences the formation of a virtual image of the city, especially if a first impression of the city is built on the basis of a portal's visit.

The official portal can be in demand by different target audiences. Analysis of the geography of attendance of the largest Russian cities' portals indicates that they are most in demand by the local population, since the modern portal provides citizens with a range of services and necessary information, it is a virtual platform for interaction with business and the public.

A comparative assessment of attendance of the largest cities' official portals was carried out with the help of Alexa Rank (a website ranking which is based on a combined measure of unique visitors and pageviews with the unique visitors determined by the number of unique users who visit a site on a given day), which makes it pos-

Table 1 Digital demand of the largest Russian cities

City	Alexa global rank	City rank	Alexa rank in Russia	City rank
Volgograd	311,486	11	16,115	9
Ekaterinburg	51,870	1	2148	1
Voronezh	304,096	10	16,792	11
Kazan	189,916	3	11,544	5
Krasnoyarsk	204,971	5	10,424	3
Nizhniy Novgorod	420,297	12	24,135	12
Novosibirsk	193,881	4	11,055	4
Omsk	157,252	2	9318	2
Perm	281,949	9	15,865	8
Rostov-on-Don	278,412	8	15,164	7
Samara	274,827	7	16,160	10
Ufa	213,984	6	12,645	6
Chelyabinsk	438,396	13	27,338	13

Source Own results

sible to see the global and Russian rankings of the portal attendance (Table 1). The lower the indicator is the better. Yekaterinburg ranks first both in the global ranking and in the Russian one, which can be partly attributed to the participation of the city in the Expo 2020 and EXPO 2025 campaigns.

The portal is not just the face of the city—it is the most important resource and tool for promotion. In addition to the official portals of the administration of the largest cities of Russia, they are quite actively creating pages in various social networks, and the importance of such activities is increasingly understood. In addition to the official pages on social networks, more and more “parallel” social pages are being created, aimed at the most diverse consumers in the territory. Social networks can be a source of data on the needs and opinions of potential consumers. Experts believe that in the near future, social networks can partially replace traditional consumer surveys.

The analysis shows that in all major cities, the mobile applications are being developed (My Ekaterinburg, My Chelyabinsk, My Volgograd, etc.) which are focused mainly on city residents and provide information about events, provide an opportunity to look at prices for goods and services, order a taxi, etc. For all major Russian cities, there are various audio guides, including those hosted on the basis of the izi.TRAVEL1 service, as well as being developed with the support of regional tourism development centers. All major cities are represented on the national tourist portal of Russia.

The next step may be to analyze the quality of the content presented on these resources, including the “7 C” model (see, e.g., Kavaratzis et al. 2015) for analyzing the city’s official portal.

5 Conclusions

The use of digital technologies, on the one hand, makes the promotion of territories more diversified, targeted, and engages consumers around the world, which makes it possible to promote territories on a global scale. On the other hand, it complicates the perception of territories and can lead to the formation of an inconsistent image, since multiple stakeholders and the consumers themselves are involved in the process. Digital marketing is not just a process of presenting territory on the Internet, not only digitalization of cultural and historical heritage, but rather a process of coordinating the interaction of various stakeholders to maximize the real potential of a territory in the virtual space and its joint coordinated progress. Virtual potential is no less important than the real potential of a territory for shaping the image of a leading territory and solving numerous marketing tasks.

An important point is the digital integration of all the population segments, the inclusion of citizens into the information society, which depends on technological solutions and the level of digital literacy.

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Part II
Leadership in Social Practice

Female Leadership: A Case of Neuropsychological Research in Colombia



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Abstract Leadership in woman or female leadership is currently gaining some focus and interest in research. In the field of neuropsychology, the number of women has been increasing over the past three decades, but one has to observe that women are still the minority at leading positions within most neuropsychological organizations, leading journals' editorial boards, and prominent academic positions. Research on this topic has shown a series of strategic elements that allow achieving leadership positions for woman in neuropsychology including features like knowing their own leadership personal style, being open and transparent, being responsible for their own mistakes, using a collaborative approach, delegating tasks when it is necessary, looking for visibility and connections, keeping focused, having confidence, and gathering information. This paper presents an example of leadership in a work team of women researchers in the field of neuropsychology of mucopolysaccharidosis (MPS) in Colombia. MPS is a rare type of genetic disorder that affects a small number of people. Our paper demonstrates how the distribution of duties according to the personal styles, collaboration with other colleagues, delegating tasks, and looking for visibility and connections might allow to form a work team with diverse characteristics for advancing in the research on the neuropsychological aspects of the MPS, a pioneering field in Colombia. Moreover, we contribute to the understanding of the disease by the patients' families and help creating the possibility of carrying out future research related to combating this disease in Colombia as well as worldwide.

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1 Introduction

In the leadership research, a good leader could be defined for the style she or he has, considering this feature as a “*relatively consistent patterns of social interaction that typify leaders as individuals*” (Eagly 2007). Female leadership and the styles women have to lead are currently constituted as a focus of interest in many research studies (Eagly et al. 2003; Eagly and Chin 2010; Pingleton et al. 2016; Sachs et al. 2018; Kubu 2018). In the field of neuropsychology, a discipline linked to neurology and psychology, the number of women has been increasing over the past three decades; nevertheless, they still occupy the minority of leadership positions within most neuropsychological organizations, editors in chief at scientific journals (Sachs et al. 2018), and academic positions where, on average, men are three times more likely than women to hold the rank of a professor (Sweet et al. 2018). These persistent disparities parallels that of academic medicine and can be attributed to multiple factors including: explicit gender bias, sexual harassment, marginalization or isolation in the workplace, career aspirations, conflicts between interpersonal and leadership styles, and the difference between man and women in proportionate amount of family responsibilities which often negatively impact women’s career progression (Carr et al. 2015; American College of Healthcare Executives 2012; Sachs et al. 2018).

Specifically, neuropsychological research about mucopolysaccharidosis (MPS), a rare disease that affect a small number of people, is scarce. This research has concentrated on neurological aspects instead of focusing in the relation between psychological processes and the brain function and structure. Therefore, being a women leader in neuropsychology is difficult, but be a woman leader in academic research of neuropsychological aspects of MPS could become a real challenge.

Nevertheless, there are examples of women in neuropsychology, who have described a series of elements that have facilitated their arrival to leadership positions. For instance, a study made with women leaders in governance and academic research show that features like: knowing their own leadership personal style, being open and transparent, owning their own mistakes, using a collaborative approach, delegating when is necessary, looking for visibility and connections, keeping focused, having lot of confidence and gathering information, seem to be strategic to achieve leadership in neuropsychology (Silver et al. 2018).

On account of this work presents an example of leadership in a work team of women researchers in the neuropsychology of MPS in Colombia, showing that the features describe above might make it easier to occupy leadership positions.

2 Mucopolysaccharidosis as a Field of Study

Mucopolysaccharidosis is a type of genetic multisystemic lysosomal storage disorder caused by a deficiency in different enzymes, that cause failure in lysosomal degradation of glycosaminoglycans (long chains of sugar molecules that are found

throughout the body) causing a variety of symptoms whose complexity depends on the affected system taking into account that these sugars buildup in cells, blood, and connective tissue (Coutinho et al. 2012). There are several types of MPS, all of them related to an autosomal recessive disorder, except MPS II or Hunter syndrome which is related to X-chromosomal disorder. Nowadays, these MPS types are also known by their original denomination because each one of them has their own natural history and causes signs and symptoms due to specific enzyme deficiency.

There are some treatments for MPS with variable effects on the occurrence and strength of the symptoms. However, some of those treatments are only administered in early stages of the disease because there is no evidence of improvement of damages in elderly patients and some others have limited effects (Coutinho et al. 2012). Prevalence of MPS varies according to the country. In Colombia, the most frequent variant is the Morquio Syndrome type A (MPS IV-A), and there are studies indicating cases of Hurler (MPS-I) and Sanfilippo (MPS-III) syndromes in some areas of the country (Gómez et al. 2012). There are several studies focused on genetic status or clinical manifestation related to these disorders due to their classification as inborn errors of metabolism disorders (Clarke et al. 2018; Zelei et al. 2018; Sampayo-Cordero et al. 2018), but specific research on psychological or neurocognitive conditions are very scarce, even when behavioral alteration and cognitive deficits are observed (Davison et al. 2012; Ahmed et al. 2016; Ebbink et al. 2016).

3 Leadership in the Neuropsychological Syndrome Research: Hurler-Scheie, Morquio A, and Maroteaux-Lamy

In Colombia, the first neuropsychological study about MPS was conducted by Castañeda-Ibáñez and Acosta-Barreto in 2016, they reported alterations in language comprehension, visual attention, and constructional tests difficulties deficit in spatial skills and planning in children with Morquio A syndrome. This study motivated the principal researcher Castañeda-Ibáñez to form a team work from the psychology program of UNIMINUTO to go deeper in the understanding of neuropsychological processes in children, adolescents, and adults with MPS. The team established an agreement with the Colombian Association of Patients with Lysosomal Deposit Diseases (ACOPEL for his acronym in Spanish) that has patients especially with the Hurler-Scheie, Scheie, Morquio A, and Maroteaux-Lamy syndromes. The team work made up for three women researchers with different personal styles contributed to the project development. The researchers distribute the different functions knowing their own leadership personal styles, Castañeda-Ibáñez led the public disclosure and sponsors, Prado-Rivera led the methodological processes and the paper writing and Cárdenas-Poveda and Rizo-Arévalo led the active participation of students from the study group in Basic and Clinical Neurosciences in research and management of

interinstitutional collaboration spaces with colleagues from other disciplines for the execution of the two phases project developed in 2016 and 2017.

The first phase of the project allowed the team to publish the next findings: children and adolescents with Hurler-Scheie and Scheie syndromes compared with Morquio A patients present a lower level of visual attention and academic skills while children and adolescents with Maroteaux-Lamy present very low performance in the capacity of perception, visual attention, and cognitive flexibility (Castañeda Ibáñez et al. 2017a, b). In adults, it was found that the executive functioning, arithmetic, and language skills were better for the Morquio A than Maroteaux-Lamy patients (Rizo-Arévalo et al. 2017a, 2018). Finally, neuropsychological processes such as verbal work memory were preserved in both patients with Morquio A and Maroteaux-Lamy (Rizo-Arévalo et al. 2017b). These findings also allowed the participation of the team in different academic events, in which the work was highlighted as pioneer in this area of research. Some of the events were the XV Congress of the Latin American Society of Neuropsychology SLAN in Natal-Brazil, the XXIII World Congress of Neurology in Kyoto-Japan, and first Congress of the Colombian Society of Neuropsychology in Barranquilla-Colombia.

Once these results were obtained, a second phase was developed for implementing the three strategies of neuropsychological stimulation of attention and memory processes designed for the patients evaluated in the first phase. A classical neuropsychological rehabilitation program oversaw by the researcher Castañeda-Ibáñez; a neurofeedback program led by the researcher Rizo-Arévalo who through a collaborative work with the biomedical engineering program of the Escuela Colombiana de Ingeniería Julio Garavito got a collaboration with PROMISE group specialized in signal analysis; and finally, a music therapy program coordinated by the researcher Cárdenas-Poveda. All the researchers delegated part of the application work to the students from the study group in Basic and Clinical Neurosciences.

The preliminary results of this phase indicate that cognitive stimulation was effective in some attentional skills for some patients with Hurler, Morquio A, and Maroteaux-Lamy patients, even so, it is necessary to expand programs to this population and interventions in the future (Castañeda Ibáñez et al. 2018). These results were presented at the tenth World Neurorehabilitation Congress (WNFR 2018) in Mumbai-India and in the XV International Congress of Behavioral Medicine (ICBM 2018) in Santiago-Chile. This phase allowed the team to identify one relevant factor that probably will increase the effectiveness of the stimulation, and it was not considered in the original design, the integration of the caregivers and parents in the stimulation strategies with the purpose of continue the process in their homes.

In coherence with the above, the team organized a final meeting with the caregivers and parents to present some designed activities to continue the stimulation in everyday activities. By now these experiences also allowed the construction of a third phase of the project in collaboration with other researchers that responds to the needs of the MPS patients and to make emphasis in academic desertion, another important factor identified in the two initial phases. These needs are related to the family and school lack of knowledge of the skills that patients can develop regardless the type of disease, so the design of an accompanying model is sought for inclusive education in the

institutions where ACOPEL patients are enrolled, based on the neuropsychological characterization, the cognitive strengths, and weaknesses of each one.

4 Conclusions

Although the clinical neuropsychological field is common in Colombia, the research field in this area has gain strength only in recent years as well as the female leadership in it. This paper describes an example of how in the neuropsychology context some features like resolving conflicts and needs, having administrative and collaborative skills, leading change, working as a team, networking and using conceptual skills, could facilitate the development of leadership in the research on this area.

Team work in the neuropsychological research of the syndromes Hurler-Scheie, Morquio A, and Maroteaux-Lamy allowed the researchers being successful in the development of this project, given that there are few studies that have addressed this issue from the neuropsychological processes perspective, including the understanding of the functioning of different complex systems such as memory, language, and perception, coordinated mainly by the cerebral cortex. This type of research has allowed to describe ways of stimulation that strengthen these higher brain processes as well as strengthen those that by the course of the disease are deteriorated.

Additionally, administrative skills and networking allowed the team to involve the patient's families in the project, who identified more clearly the strengths that each patient has, their abilities to take care of themselves and focus on the skills rather than in the difficulties that allow them to develop an active life. Finally, being open and transparent facilitates spaces for dialog between family members that could exchange experiences about the care of family member with this disease.

This research experience also allowed the team realized that the rarity of diseases as MPS limits the number of potential patients per study in the country but, developing neuropsychological assessment consensus and other interventions for children and adults with MPS could be the first step to achieve and to improve the research in this field. Furthermore, high-quality natural history data may help in future trials as in multicenter studies, a better neuropsychological characterization and a strong leadership from research and academic contexts will be essential to show this work to the world as a necessity to demonstrate results that involved good clinical practices.

Finally, part of the leadership work from neuropsychology in rare diseases like MPS is related to female researchers, who from Latin America are making more visible the profession and the work in fields not so much explored, integrating other disciplines such as biomedical engineering to transform styles, explore contexts, teach and learn and use techniques, and exploration forms to obtain and disseminate new knowledge as it happens in countries like Colombia. For this reason, it is important to encourage competencies required of a healthcare leader in any environment and to have quality and integrity as a good researcher or rater.

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Effective Team Leader and Interpersonal Communication Skills



Cezary Kwiatkowski

Abstract Effective interpersonal communication and its impact on the company's performance has been receiving increasing attention by scholars and practitioners involved in corporate management for quite a long time now. Influential leaders, i.e. those who are unique in their own right, provide examples of excellent interpersonal communication skills that have hugely contributed to reviving declining companies and restoring them to excellence. The research literature produced by those great leaders and scholars helps significantly to better understand the role of interpersonal communication skills in effective leadership. Yet, at the same time, there are reports of frequent cases in which communication between leaders and staff has failed. This paper focuses on three crucial skills that deserve a particular attention of leaders who are interested in improving their interpersonal communication competence: (i) effective listening; (ii) getting across a message clearly and vividly; and (iii) providing performance feedback in a supportive manner. A concise overview of these selected communication skills is aimed at clarifying their complex nature and reflecting on the principles that have been proposed on the basis of our research findings.

1 Introduction

Interpersonal communication skills have been an object of study and research in various areas of psychology (cognitive, social, clinical, developmental and industrial), and other disciplines, including education, family studies, business management and nursing. Such skills as public speaking, group discussion, listening, persuasion, conflict management, explaining, organizational leadership, social support, relationship management and others have been investigated by scholars with a view of helping people to acquire these skills and use them more effectively (Greene and Burleson 1998). In respect of leadership, skills that deserve a particular attention include (1) effective listening, (2) getting across a message clearly and vividly, and (3) the ability

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to provide a performance feedback in a supportive manner. The rationale behind this statement is that the nature of these three skills is complex in that each of them comprises a number of communicative microskills. More importantly, these interpersonal communication capacities are pivotal for dealing with various challenges faced by leaders (see, e.g. Moskalenko and Yevsieieva 2015; Zielińska 2016; or Strielkowski and Chigisheva 2018).

The process of listening involves a number of cognitive abilities such as the ability to choose and concentrate on relevant stimuli (attention), the ability to understand, remember, evaluate and also to respond to verbal and nonverbal messages (DeVito 2009). Listening is regarded as a crucial skill in today's workplace. Results of a survey conducted with 40 CEOs of Asian and Western multinational companies indicated that the lack of listening skills is the major weakness of top executives (Witcher 1999; or Narkunienė and Ulbinaitė 2018). Listening is vital for establishing and communicating power in the same way as by using words and gestures (DeVito 2009). Effective listeners are more likely to emerge as a group leader and often prove to be more effective managers (Kramer 1997; Johnson and Bechler 1998). They are capable of influencing other people's attitudes, values, beliefs, opinions and behaviours, as they are perceived as being able to understand the speaker's true concerns (e.g. Čábelková et al. 2015; Kwiatkowski 2016; or Kubeš and Raňčák 2018).

As in the case of the process of listening, the ability to present facts and ideas in a clear and lively manner lies behind several micro skills pertaining to, *inter alia*, cognition, linguistics and psychology of emotion. The skill of presenting ideas effectively is highly valued among managers. As Katherine Rowan states (Rowan 2003, p. 404): "... *just as good informative and explanatory communication is appreciated, the effects of poor informing and explaining are feared ... poor informative and explanatory communication skills lead to frustration between shift employees, lost revenue, and misunderstood employee benefit provisions.*" Despite the fact that importance of "good informative and explanatory communication" has been commonly acknowledged, these skills are still not sufficiently understood, which brings about frequent cases of poor informative and explanatory messages delivery.

In a similar way to the skill of presenting ideas clearly and vividly, the complexity of providing feedback is related to cognitive and emotional aspects of interactions between leaders and their teams. The significance of feedback has been established owing to a long tradition of research on cognitive and motor behaviour. The research findings suggest that feedback, accompanying performance trials, is a particularly important factor in the process of skill acquisition, because it allows the trainees to have a confirmation of what they did, and whether their action was correct and effective. The absence of feedback leaves the learners with no basis for adjusting their actions on subsequent trials (Greene 1998). Therefore, the skilful delivery of both positive and negative performance feedback is essential for the personal development of the staff and the overall company performance.

This paper seeks to develop a better understanding of the nature and role of the three crucial interpersonal communication skills in question (i.e. effective listening, getting across a message clearly and vividly, and providing performance feedback in a supportive manner) for successful leadership. It also presents the main principles of

effective communication, which are directly related to these skills. The author argues that, although developing these skills poses a challenge due to their complex nature, the benefits of undergoing a relevant training by leaders may prove paramount for organization performance.

2 Effective Listening

Listening is considered a fundamental communication skill, both for professionals in most fields and in other contexts and levels of human interaction (Bodie 2011; Boun 2015). According to May and Akerson (2003), effective listening is a matter of forming habits rather than skills. The authors have reported an outcome of a comprehensive programme that was aimed at enhancing internal communication in AlliedSignal by training their leadership to develop new habits. The programme included a series of workshops accompanied by support materials on delivering effective messages, handling difficult situations and leading meetings. As a result, after a few years, the researchers found that the AlliedSignal middle managers who participated in the programme had become more accessible and their subordinates felt more connected to them. It was found that the habits which enhance listening effectiveness include:

- *Focusing on words in order not to get distracted by surrounding messages.* When listening to someone speak face-to-face, it is common to be also processing, apart from words, nonverbal messages including body language. When nonverbal messages contradict verbal messages, it is more likely for the listener to respond to nonverbal messages rather than verbal ones. Therefore, in the event of receiving a mixed message, the listener should note that fact, e.g. by saying, “I’m not sure the message is clear to me, because I’m reading your tone of voice and body language in a totally different way that your words.”
- *Resisting the temptation to compete the speaker’s thought.* As we tend to take shortcuts, willing to “get to the point” quickly, we may have developed the habit of completing the speaker’s utterances, thereby preventing them from expressing their real thoughts. This behaviour, which is common for leaders, is usually interpreted by the speaker as lack of interest in what they want to say. In fact, the habit of interrupting displays etiquette illiteracy (Sabath 2002).
- *Keeping your comments until the speaker has finished.* If we feel strongly about the subject being discussed we may have a tendency to rush our turn as speaker before having listened to the whole utterance. This behaviour is often perceived by speakers as a sign of disrespect.
- *Making an endeavour to determine the speaker’s reasoning and assumptions.* This aids a better understanding of the speaker’s point of view. What is more, such behaviour shows that the listener is paying full attention to what the speaker is saying, which contributes to strengthening the relationship as it will enhance the

mutual interest and respect. This mechanism facilitates the process of turn-taking during interaction (Koprowska 2014).

- *Paraphrasing.* Confirming comprehension by saying out loud what we think we have heard helps to understand and remember the message. Taking notes may also enhance the memory as it provides a visual confirmation of the message. It is recommended to choose appropriate wording for introducing or closing the paraphrase. We can use such questions as: “Did I understand you correctly?” or “Is this the point you were making?”

Several decades before the above findings were published, Carl Ransom Rogers, one of the founders of humanistic approach in psychology, developed the technique of “active listening.” This technique, perceived by many scholars as an approach, is based on the premise that in order for communication to be effective, it must be non-threatening (Rogers and Farson 1957). Therefore, it must be free of passing judgements on the person we are talking to so as to avoid being drawn into agreement or disagreement. Such human typical responses as advising, moralizing, evaluating and encouragement should be avoided. The process of active listening is metaphorically defined as “getting inside the speaker,” because it enables the listener to perceive a given situation from the speaker’s point of view. The main principles of active listening comprise the following recommendations:

1. *Listen to the total meaning*—it is vital to focus on both the content of the message and the underlying feelings. We should therefore listen sensitively, trying to detect minor details in the heard utterance. This point may be illustrated with the following example of two sentences that might be formulated by a machinist addressing his foreman: “I’ve finished that lathe setup,” and “Well, I’m finally finished with that damned lathe setup.” It is transparent that, in terms of meaning, the above sentences contain the same information. At the same time, it is clear that, unlike the former sentence, the latter statement is emotionally loaded. Consequently, it is within the foremen’s sensitivity and general interpersonal competence to adapt his response accordingly.
2. *Respond to feelings*—listening with empathy allows the listener to assess if the feelings underlying a message are more important than the content. The feelings component should actually be given a priority when responding because it is often the case that the speaker attempts to communicate their feelings by disguising them within the content.
3. *Note the cues*—non-verbal messages displayed by a speaker are full of cues which need to be noticed and interpreted. Any signs revealing that the speaker hesitates may reflect their feelings. The way certain points are stressed (e.g. by voice modulation), and other points are camouflaged via various forms of nonverbal communication may indicate the speaker’s intentions. Such nonverbal communication components as the person’s facial expressions, body posture, hand movements, eye movements and breathing reflect the speaker’s attitude to the subject matter and towards the listener. Detecting and reading all these signs may help to interpret the total message.

4. *Reflect back what you think the speakers means*—we should test our understanding of the speaker’s words by repeating back, in our own words, what we think the speaker means. It is not a verbatim repetition of the speaker’s words, but a reflection on what we think the speaker means and how they feel about it.

The two approaches to effective listening presented above include principles that need to be followed so as to listen more effectively, improve mutual understanding and build the relationship between the leader and team members. They both recommend restraining from interrupting the speaker and confirming comprehension through reflecting on what the listener thinks the speaker means. The “active listening” approach emphasizes the need for listening with empathy as a prerequisite for total understanding of the speaker’s messages and feelings. With respect to the impact of nonverbal communication on understanding, it is worth noting that the cases in which there is a discrepancy between nonverbal and verbal messages are relatively rare. Therefore, although it seems reasonable to follow the *focus-on-words* principle while listening, it is also advisable to pay close attention to nonverbal messages.

3 Expressing Ideas Clearly and Vividly

Leadership has been recently defined as: “... a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse 2004). In terms of interpersonal communication, the skill of expressing ideas clearly and vividly greatly contributes to exerting influence on the team. The skills displayed by Jan Carlzon, CEO of SAS in 1981–1994, who is most noted for restoring the said declining Scandinavian airlines into “the Airlines of the Year” is a case in point. Carlzon (1987) argues that “*the most powerful messages are those that are simple and direct and can serve as battle cry for all sorts for people across all organizational levels*” (Carlzon 1987, p. 89). As the author maintains, good messages do not need to be lofty or original because the chief objective of communicating a message is to get the immediate understanding on the part of the listeners. Carlzon reports that having this ability enabled him to effectively communicate with the employees of SAS. He had frequent interactions with the employees, wherein he listened and spoke to them in simple terms. As a result, he was able to grasp their ideas and incorporate them into his strategies. The frequent interactions with the staff earned him their support and finally led to success in achieving the company goals. The author points out that when we express ideas, we should avoid cluttering them with words, because this may hinder appropriate interpretation of the message. After all, the leader’s goal is to persuade people, not to show them his intellectual superiority.

Apart from having clear logically organized ideas, a good communicator should be capable of using words that create pictures and feelings stimulating the listener’s senses (Barker 2013). In fact, it is not words that we remember the best, but images evoking sensory impressions and feelings. Such images cause the listener to plant the ideas in their long-term memory. Figure 1 depicts this mechanism.

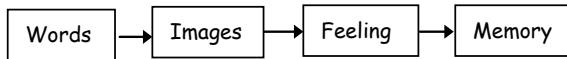


Fig. 1 The significance of using emotional lexis *Source* Own results based on Barker (2013)

The process of creating images in the listener's mind may be triggered by using examples, stories and metaphors. Using examples is the simplest way to illustrate an idea by making an abstract concept more tangible, because examples refer to real-life situations that have been experienced by the listener. Telling stories makes examples even more attractive by bringing them alive. The emotional load of many stories makes them powerful in terms of their impact on the listener's mind. By keeping the listeners in suspense and releasing their emotional response, the speaker may increase his capacity to influence the listeners. Telling stories works best when they are authentic and personal. However, telling a story will help get across an important idea only on condition that it has a clear point. Otherwise, it may prove counterproductive. As for metaphors, they are used to present complex ideas by illustrating how they relate to one another. It is a way of presenting one idea in terms of a more familiar one. This method appeals directly to the listener's senses. For instance, by saying that a certain problem is the *tip of the iceberg* the speaker is able to create in the listener's mind an image of a real iceberg with the tip that is visible from above the sea surface and with its largest part below, being invisible. This will instantly make them realize that the problem in question is of much more complex nature and gravity than it has initially appeared. The above example illustrates that apart from heightening the emotional impact (pathos), metaphors appeal to reason (logos) by leading the audience to perceive the message content in a new way. This phenomenon has been referred to as "conceptual shift" (Charteris-Black 2007).

As we have seen, the ability to express ideas clearly and vividly is a powerful tool than may benefit the leader in pursuing the organization goals. Good command of this skill requires the leader to display various capacities pertaining to linguistics, cognition, social skills and also emotional and temperamental individual traits. Therefore, leaders should practise the skill of getting across a message on regular basis.

4 Providing Performance Feedback

Both the lore and research on feedback suggest that performance feedback shall be frequently applied because it will contribute to the development of individuals and organizations. While positive feedback is commonly associated with reward and reinforcement, negative feedback is equated with punishment. As a result, employees are not likely to welcome negative feedback. Therefore, positive and negative feedback should each be scheduled in a different manner (Alter and Waldman 2008).

Table 1 Optimal sequence for negative feedback delivery

1	Private settings; face-to-face; pleasant tone
2	Respect for subordinate; prevent embarrassment; allow recipient to save face
3	Giving recipient the opportunity for input
4	Maintaining motivation and cooperation by acknowledging positive aspects of work and/or performance
5	Preventing subordinate from getting upset. Invite reaction to your feedback
6	Maintaining credibility: provide evidence rather than only hearsay
7	Building commitment for improvement; invite ideas
8	Showing you value the subordinate: comment on his or her ideas
9	Giving your ideas about how the subordinate can improve
10	Building self-efficacy; letting the recipient know that you believe she/he can improve
11	Creating a plan of action and a mechanism for monitoring progress
12	Following-up to assess progress

Source Adapted from Altwater and Waldman (2008)

In order to provide a positive feedback, it is advisable to schedule an intermittent or unpredictable manner of giving reinforcement, because this way is more likely to contribute to an incessant high performance than a continuous or predictable positive reinforcement. With respect to negative feedback, it is recommended that cumulative message is fed to the receiver rather than after each error, because frequent remarks prove to be distracting and discouraging from completing the task. With regard to the way a negative feedback impacts the reaction of the recipient, it should include such components as concessions, justifications and excuses, in order to encourage the recipient to change behaviour (Tata 2002). Concessions are formed by expressions of regret for the recipient’s failure (e.g. “I’m very sorry the results did not meet our expectations”). Justifications include attempts to show a positive aspect of the problem (e.g. “It’s good we can discuss this problem now before it escalates. There’s still time to make things right”). Excuses comprise blaming others or indicating the lack of the recipient’s intention to fail (e.g. “You know you were not the only one who made a mistake here” or “I know you were unaware of the consequences”). Applying the above components will contribute to creating an empathic atmosphere of the negative feedback and is more likely to result in the recipient’s change of behaviour than a simple quick instruction (e.g. “Just fix it”). What is more, while providing negative feedback it is important to allow the subordinates to respond. Bosses in general tend to overestimate their readiness to welcome subordinates’ input (Nemeroff and Wexley 1977). It has also been confirmed that negative feedback has fewer negative effects when it is delivered in private rather than in front of others (Leung et al. 2001). Furthermore, sequencing of positive and negative feedback is another factor that needs to be considered. A sequence of presenting positive feedback before a negative one is seen as more accurate than the other way round.

Therefore, it is always advisable for leaders to precede every delivery of negative feedback with a compliment about the employee's great attendance record or some other achievements. Altwater and Waldman (2008) recommended a procedure of providing negative performance feedback. Table 1 presents a useful list of steps to be followed.

Giving performance feedback is a fact of organizational life. The decision whether to provide negative feedback should be based on the analysis of the leader's motives, the employee's willingness to improve, their confidence in the leader and the organization's reward system. Negative feedback should be delivered without anger. It should rather include an apology for the negative repercussions the employee might have to face (e.g. financial hardship). The optimal sequencing of feedback delivery should begin with selecting the place and should close with follow-up progress.

5 Conclusions

All in all, we can see the importance of the three core interpersonal communication skills that are crucial for successful leadership: effective listening, ability to get across a message clearly and vividly and ability to provide performance feedback in a supportive manner. Good command of these skills allows the leader to trigger both cognitive and emotional responses in employees, also leading to better mutual understanding between the leader and the team members.

Effective listening is regarded by leaders as a vital skill (or habit) which still needs to be improved. It becomes obvious that effective listening competence not only contributes to clear understanding of what the speaker communicates but also to learning their true feelings. Effective ways of getting across a message are the ones that, by using simple terms, trigger the process of creating images in the listener's mind. They include using examples, metaphors and stories, which appeal to the listener's senses and emotions, thereby facilitating the immediate understanding of the message. The importance of providing performance feedback in the workplace is indisputable. While positive feedback is usually welcome, negative feedback is often received as a form of punishment. Therefore, we should provide negative feedback with caution, preferably as a cumulative message, accompanied with concessions, justifications and excuses followed by giving the listener a chance to respond.

The final point to stress here is that due to the complex nature of the interpersonal communication skills in question, the acquisition, or improvement, of these skills may appear to be a great challenge. Still, the benefits of investing in leaders' education and training may prove significant for successful organization performance.

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Unemployment Among Potential Young Romanian Future Leaders



Mihaela Simionescu and Maria-Simona Naroş

Abstract The aim of this paper was to explain the phenomenon of unemployment among people with higher education at the regional level in Romania during 1990–2017. Young and well-educated people are the would-be Romanian leaders of tomorrow, yet instead of taking the opportunities into their hands and to shape up their future, they fall the victim of the current overloaded higher educational system and the heated labor market. We employ the empirical model in order to test our hypotheses and assumptions based on the regional analysis of the data. The analysis is centered around a vector-autoregressive model (VAR) in the panel suggests difficulties in integrating graduates on the Romanian labor market. As the number of graduates increases, the unemployment rate also increases slightly, with only a decrease in unemployment after a period, indicating that there are graduates who need a period of up to one year to integrate on the labor market. Our results might be of some relevance for the labor economist and politicians all around the European Union (especially in the so-called New Member States that joined the EU in 2004 and after) as well as within the wider economic context.

1 Introduction

During the recent economic crisis, the reduction in the number of jobs has disproportionately affected young people, which are overrepresented on temporary contracts (Bell and Blanchflower 2011). Although temporary contracts may be a first step toward a more stable form of employment, the prospects are worse in terms of long-term employment and career.

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Labor market difficulties also have a negative impact on older young people 25–29 years old, who find it harder to get a job adapted to their qualifications (Bell and Blanchflower 2011; Abrahám et al. 2015; Simionescu 2016a; Simionescu et al. 2016; Volchik et al. 2018). The problems faced by young people on the labor market, as well as higher education graduates in general, have negative consequences on the standard of living, the family environment and the national or international communities they are part of. The most significant effects of unemployment are the risk of poverty and the inability to play an active role in the development of society, which are slowing down social development and therefore sustainable development in general (Psacharopoulos 2014; or Šabic-Lipovaca et al. 2016).

The main coordinates for an effective policy framework follow a new model for increasing the employability of young people. Professional profile and professional skills reduce incompatibility with national labor demand (Naushad 2018). The model of today's graduates' professional profile reflects a continuing downward trend in the education of the labor market (Vasile et al. 2008, 2009). A flexible labor market curriculum and a reorganization of the graduates' structure by occupations and occupational groups could contribute to a more efficient and faster labor market insertion (Bordea and Pelligrini 2016; Bordea et al. 2017; or Naroş 2018). Investing in education and lifelong learning must continue to use structural funds as a source of funding and promote entrepreneurship (Kuzmin 2015).

Pisică et al. (2012) suggest that there is a need to reduce employment in the informal sector and to provide incentives for motivating young people to work legally: reducing administrative costs and procedures, decreasing bureaucracy, especially for SMEs, reducing barriers that may rise at employment linked to work experience and internship periods, diminishing labor market rigidities by encouraging fixed-term contracts, temporary employment, individualized work programs (Simionescu 2014; Simionescu et al. 2017; Simionescu and Zimmermann 2017).

Remuneration programs and strategies should aim to create jobs, which will stimulate youth employment. Rural areas suffer from the lack of employment opportunities in Europe in other sectors of the economy than agriculture, largely due to the difficult access to primary education and lifelong learning (Lazányi et al. 2017). Boeri and van Ours (2008) and Vasile et al. (2015) support the promotion of equal opportunities for employment and small business development.

Career and working conditions could contribute to the gradual reduction of the external mobility of young people for jobs (Vasile 2013; Vasile et al. 2013).

The purpose of this paper was to explain the phenomenon of unemployment among people with higher education at the level of Romania's regions. As we have regional data for unemployment rate, number of faculties, teaching staff, and the number of graduates from 1996 to 2017, taken from the Tempo-online database of NSI (National Institute of Statistics), we will use a panel approach in a vector-autoregressive model (VAR).

2 Data and Methodology

Our empirical model uses a vector-autoregressive model (VAR) in the panel. This type of model is useful in this case, because it solves the problem of a small set of data through the panel approach, but it is also possible to identify the causal relationships in the Granger sense between variables (Simionescu 2016b). The general form of a VAR model is shown below:

$$y(n, t) = \mu(n) + A_n(i) \cdot Y(n, t - 1) + \varepsilon(n, t') \tag{1}$$

where:

$Y(n, t) = (y(1, t'), y(2, t'), \dots, y(N, t'))$ includes data for all units (regions), $n = 1, 2, \dots, N$

$y(n, t)$ —variable vector for each spatial unit (region)

$\mu(n)$ —unit-specific intercept

$A_n(L)$ —the obstruction polynomial with VAR model coefficients

$\varepsilon(n, t')$ —perturbations (mean 0 and variance

If an unrestricted model is estimated, matrix A_n includes $N \times k \times I$ coefficients. Moreover, VAR models measure the effect of a shock (innovations) on a variable on the other variables in the system (Canova and Ciccarelli 2006).

For the construction of the VAR models in the panel, data from the Tempo database of the National Institute of Statistics were taken on the following variables for the period 1996–2017 and for the eight regions of Romania (North-West, Center, North-

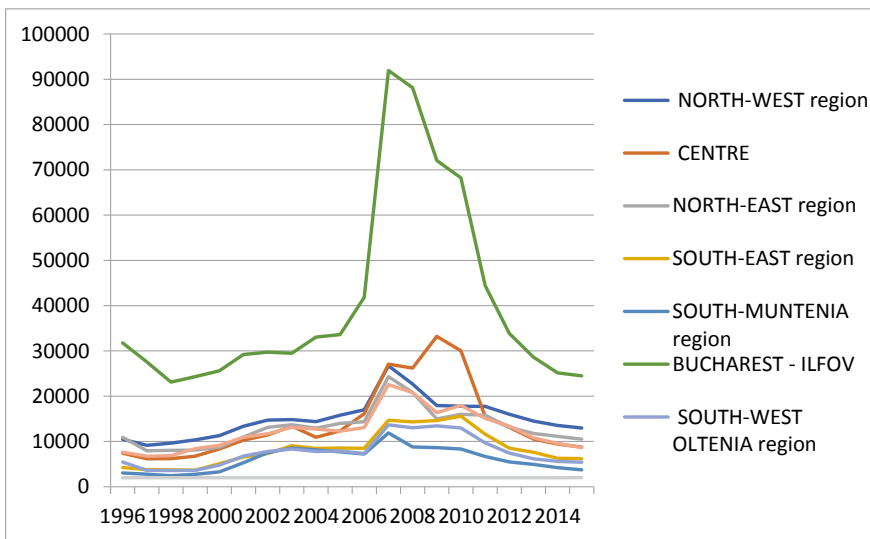


Fig. 1 Evolution of the number of graduates with a Bachelor’s degree in the regions of Romania in the period 1996–2017. *Source* Own results

East, South-East, South-Muntenia, Bucharest-Ilfov, South-West Oltenia, West): the unemployment rate, the number of graduates, the number of teaching staff in higher education, and the number of faculties.

As shown in Fig. 1, the Bucharest-Ilfov region provides the most graduates with a bachelor's degree in Romania, reaching a maximum of graduates in 2007, which is almost a tripling (189, 29%) of the number of graduates compared to 1996. After 2007, the indicator has a downward trend, which is in line with the general tendency of the graduates to drop out of national education. Given that there is a significant gap between the number of graduates from the Bucharest-Ilfov region and that of the other regions, a separate analysis of the regions, excluding the Bucharest-Ilfov region, is also needed.

3 Results and Discussion

Based on the data on Romania's unemployment rate regions, the number of higher education graduates, the staff of teaching staff in higher education and the number of faculties in the period 1996–2017, a VAR model will be constructed in the panel.

Data stationarity for each variable is first tested, as VAR models are built for stationary data only. Unit root tests indicate that data are stationary for all variables at a significance level of 5%. According to the lag selection criteria, the optimal lag is 8 (Appendix 3). For the proposed model, the errors are homoscedastic and independent, but their distribution is not normal at a significance level of 5%, as suggested by the results in Appendix 3. From an economic point of view, for this valid model it is useful to analyze the impulse function and the decomposition of variables on variance.

A shock to the number of graduates in higher education has no immediate effect on the unemployment rate, so that the unemployment rate then falls by absorbing some of the graduates from the market. A surge in the number of teaching staff in higher education has no immediate effect on the unemployment rate, but on the long run there is a stabilization of the influence on positive values. A shock to the number of faculties does not have an immediate impact on the unemployment rate, and on the long run, it reaches a positive influence on stabilization toward negative values in the sense of a slight decrease in the unemployment rate as the number of faculties increases (Table 1). The fact that the unemployment rate does not react immediately to the shocks applied to the indicators related to the higher educational system proves once again that the Romanian labor market is not flexible, as it was shown on the basis of the microeconomic approach.

A shock to the region's unemployment rate has an immediate negative effect on the number of graduates in higher education, following a long-term stabilization toward a downward trend in influence. A surge in the number of teaching staff in higher education does not have an immediate effect on the number of graduates, but on the long run, no stabilization of the positive or negative influence is observed. A shock to the number of faculties does not have an immediate impact on the number

Table 1 Response of the unemployment rate to a shock in variables

Period	Unemployment rate	No. of graduates	Effective teaching staff	No. of faculties
1	1.328586	0.000000	0.000000	0.000000
	(0.09588)	(0.00000)	(0.00000)	(0.00000)
2	0.147225	-0.060257	0.009420	0.020131
	(0.14292)	(0.13291)	(0.09838)	(0.09928)
3	0.224374	-0.027151	-0.071760	0.071532
	(0.14296)	(0.12886)	(0.10009)	(0.10037)
4	0.274870	0.027789	0.003461	0.012360
	(0.14634)	(0.13601)	(0.10270)	(0.09710)
5	-0.204081	0.055097	0.060579	-0.054840
	(0.14305)	(0.13477)	(0.10533)	(0.09475)
6	0.200094	0.051143	0.018052	0.018418
	(0.13200)	(0.13558)	(0.09529)	(0.09555)
7	0.116432	-0.001722	0.058856	-0.004206
	(0.13020)	(0.12207)	(0.09780)	(0.09741)
8	0.036769	-0.154580	0.170121	-0.112114
	(0.13755)	(0.12100)	(0.10320)	(0.09997)
9	0.800080	0.062620	0.037208	-0.045545
	(0.15913)	(0.12203)	(0.11529)	(0.11051)
10	0.148148	-0.068334	0.080485	-0.034905
	(0.17301)	(0.15720)	(0.13763)	(0.13283)

Source Own results

of graduates, so that the influence is positive, but it is not maintained in the long term (Table 2).

According to the results of Table 3, in the second period after a shock, 0.2% of the change in the unemployment rate is explained by the changes in the number of graduates, 0.004% of the variation is due to the changes in the staff and 0.022% the change in the unemployment rate is attributed to the change in the number of faculties. Although the influence of the teaching staff is initially small, on the long run it becomes the largest. This result shows that on the long run the academic staff can be taken into account in the control of the unemployment rate.

According to the results of Table 4, immediately after a shock, 1.18% of the variation in the number of graduates is explained by the changes in the unemployment rate, the influence of this variable increasing over time and being higher than the number of teaching staff of the number of faculties.

As the number of graduates increases, the unemployment rate is also rising slightly, with only a year later, a decline in unemployment, indicating that there are graduates who need up to one year to integrate into the labor market.

Table 2 Response of the number of graduates to a variable shock

Period	Unemployment rate	No. of graduates	Effective teaching staff	No. of faculties
1	-643.4178	5866.068	0.000000	0.000000
	(600.501)	(423.347)	(0.00000)	(0.00000)
2	-683.6323	-405.1352	-764.8128	757.6748
	(645.074)	(600.824)	(447.066)	(444.296)
3	67.75750	362.7176	-952.3287	695.8856
	(661.247)	(578.370)	(457.649)	(454.357)
4	-1069.502	448.2187	-366.6775	-114.9753
	(683.604)	(616.210)	(463.093)	(449.639)
5	-868.9685	1252.777	104.5269	-463.9228
	(684.745)	(631.491)	(477.326)	(450.872)
6	-1015.976	1011.149	-108.1738	-183.6246
	(659.156)	(599.310)	(477.355)	(451.217)
7	383.8058	-198.9808	80.08192	115.6727
	(645.056)	(582.030)	(492.942)	(471.166)
8	-1292.558	-913.5394	-528.9938	847.6658
	(665.872)	(585.806)	(521.159)	(490.168)
9	-1407.984	4169.842	475.6845	-121.8844
	(837.942)	(653.508)	(592.327)	(547.898)
10	-1446.705	-315.2454	-977.4875	950.7123
	(883.906)	(796.004)	(720.694)	(680.085)

Source Own results

Table 3 Decomposition by variance of unemployment rate

Period	Unemployment rate	No. of graduates	Effective teaching staff	No. of faculties
1	100.0000	0.000000	0.000000	0.000000
2	99.76968	0.202738	0.004955	0.022628
3	99.18326	0.235822	0.282794	0.298125
4	99.16707	0.266507	0.272200	0.294223
5	98.69815	0.412903	0.450472	0.438470
6	98.56389	0.533329	0.456934	0.445848
7	98.40510	0.529021	0.622884	0.442991
8	95.35180	1.646198	1.976558	1.025448
9	96.17646	1.401603	1.562224	0.859717
10	95.78014	1.551780	1.775262	0.892822

Source Own results

Table 4 Decomposition by variance of the number of higher education graduates

Period	Unemployment rate	No. of graduates	Effective teaching staff	No. of faculties
1	1.188771	98.81123	0.000000	0.000000
2	2.407030	94.42759	1.597528	1.567848
3	2.322682	90.99136	3.911294	2.774663
4	5.121146	88.07207	4.103246	2.703539
5	6.601460	86.46724	3.881048	3.050256
6	8.619207	84.67561	3.723429	2.981749
7	8.910249	84.37124	3.720546	2.997970
8	11.74074	79.95107	4.031988	4.276198
9	11.26731	82.47783	3.197103	3.057756
10	13.55096	77.95313	4.349711	4.146196

Source Own results

4 Conclusions

All in all, our regional analysis based on the VAR model in the panel suggests difficulties in integrating higher education graduates into the labor market in Romania. As the number of graduates increases, the unemployment rate also increases slightly, with only a drop in unemployment after a period, indicating that there are graduates who need a period of up to one year to integrate into the labor market. In this context, it is necessary to implement several programs aiming at better insertion in the labor market, especially of the graduates of higher education.

Moreover, Vasile et al. (2009) suggest the necessity of a flexible labor market-oriented curriculum, as well as a reorganization of the graduates' structure by professions and occupational groups. Investing in education and lifelong learning must be based on structural funds as a source of funding and should aim to promote entrepreneurship. To this end, in 2017, Managing Authority for the Operational Program Capital Uman launched 5 funding guidelines for projects aimed at reducing unemployment. The projects aim at inserting youth NEETs (people aged 15–24, who are not employed and not integrated into an education or training program), but also other unemployed and inactive people. On the other hand, it is necessary for employees to participate in short-term vocational training programs to help them adapt more easily to the job requirements.

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Management Leadership and Its Development



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Abstract Global development of digital economy in the twenty-first century leads to changes in understanding leadership phenomenon as a socio-psychological factor that can unite groups of people for reaching certain objectives and fulfilling tasks. Leadership phenomenon as a management technique is a research topic of current interest. In conditions of digital economy, an ability to create the systems of leadership internals in management contributes to growth in the frame of effective running of a socioeconomic system on the whole. In our opinion, the most importance should be attributed to the issues of uniting a group of people for achieving the objectives in times of uncertainty that supposes a current and unpredictable change of external environment. Our paper studies individual and psychological characteristics of the leadership development, but also tackles the group context of different approaches, such as socio-psychological, philosophic, and behavioral, situational. Our interest and focus in these issues are logical as far as management of the leadership has always been valued, especially nowadays when the demand among organizations is focused on the issues related to transferring leadership practices into company's brand. Thence, our paper is devoted to processes of developing different types of leaders: a manager, a leader, or a managing leader.

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1 Introduction

There is no doubt that leadership is an effective capacity of a manager in any given company which is becoming a popular topic all over the world. Successful large international companies invest tangible and intangible resources in leadership development. For the Russian business and economics, a scarce of leadership potential is becoming a serious barrier for further growth and increase of companies' effectiveness.

As a new type of economy is forming—that is, information economy,—there are few people who are recognizing the importance of company's leadership strategy and who are ready to analyze and develop the system of growing up talented and initiative employees. In such conditions, the managers should form competences of a new type of leadership that is able to integrate all subsystems in management and provide effective development of a company. In our opinion, the creating competences of a new type of leadership should be built on various approaches, such as

- functional—that considers a strategy, organization, operating activity as self-supportive functions and is adjusted in view of leadership importance as a core factor in their successful fulfillment;
- socio-psychological—that evaluates leader's characteristics demonstrating certain individual features defining his success;
- behavioral—that describes leader's demeanor which may be characterized as a leadership style;
- situational—that identifies leadership styles.

Our paper analyzes the factors determining the development of leadership qualities of a manager, and the phenomenon of leadership that tends to strengthen the effectiveness of teamwork within the context of digital economy. Moreover, it provides some selection criteria for training a manager who may be a future leader of an organization. The notion of leadership became to shape up in Russia in the first half of the 1960s. At that period, such theories as the “stratometric” concept by Petrovsky (1961), “program-and-role”-based approach by Yaroshevsky (1985), as well as the parametric model by Umansky (2001) were developed. According to Bennis and Shepard (1956), turnaround life experiences are typical for leaders. The issues of developing leadership in organization were studied by for instance, Beck and Kovan (2010), Avdeev (2014), Henman (2014), or Pavlova (2015). Professional environment in which leadership development becomes the main framework for secondary socialization was researched by famous psychologists and social scientists such as: Vikhansky (2010), Spencer (2011), Goleman (2015), Voropaev (2014), Covey (2014), Borisova and Gavrilko (2015), Yadov (2016), or Smolkin (2017). Moreover, the leadership theory in view of uncertainty was developed by Bazarov (2014). Approaches to leadership study and leadership qualities were disclosed in the works of Skrauch and Mehrishvili (2013), Sunducov (2014a, b), Zhavoronko and Beloshapka (2016), or Firsova and Gruzina (2018).

2 Evaluation of Superiors with Regard Competences

Informatization in a society leads to creating a new type of a manager possessing leadership qualities and competences necessary in information media and information economy. Effectiveness of management depends on speed of a manager's reaction to changes and on risk management. A manager needs to be a creative and energetic personality with leadership makings; the one who can take decisions quickly and take responsibility for their outcome. That is a signal of transformation of the leadership phenomenon in the era of information economy. A high level of managerial information workability along with a usage of new information technologies and solutions is also the features of an up-to-date organization. These all lodge high requirements to competences of management leaders and administration.

Nowadays, developing companies in all countries are migrating to virtual instruments technology, are automating business processes and are creating new business and managerial relationships that are based on complex IT infrastructures. During our research, some typical processes in networking management were analyzed. They include IT consulting, IT solutions, information security, cloud technologies, internet trading, etc. In such conditions, implementing clear strategic goals and tasks reflects a necessity of using non-formal elements in managerial system that is based on leadership and teamwork of wide range of employees. Leadership qualities of managers were identified with the help of statistic package SPSS, that allowed to get three sets of most significant leader's qualities (competences) within three groups. Our results show that a leader in a management system should aim to develop a new managerial style that is characterized by following features:

- orientation on management development;
- formation of organizational adaptability and mobility in view of technological and information alterations;
- creating new IT competences;
- shaping of competences and decentralization related to big data management and territorially separated teams (virtual teams);
- creation of emotional competences in generating and transforming emotional flows within a team on an interpersonal level (see Sunducov 2014a, b).

Moreover, we find that an effective leader in current conditions should possess:

- competences in knowledge and using methods of work with big data in case of information diffuseness;
- skills in localization of information pressing;
- IT awareness and IT systems development;
- competences in solving business tasks;
- ability to generate collective ideas and form the developing direction within an organization not only on a formal but also on an emotional level;
- proactive skills and creative mind.

Additionally, both practice and our findings show successful leaders tend to perform the following roles:

- a visionary leader—a talented pragmatist;
- a sober values originator—a costs optimizer;
- a collaborative business leader—an inspiring IT manager, etc.

Table 1 that follows presents the main competences of such roles attained to leaders operating under the contemporary conditions of the information economy and information society.

As Table 1 shows, component characteristics of a leader are oriented to a real business sector, that requires an increase in productivity. Efficient leadership formula is in the field of company's value formation on the basis of data running and information resources in order to optimize business expenses and reduce costs. Competence-oriented leader's profile seems to obtain knowledge and experience, that both will

Table 1 Leader's and manager's roles in the information society

Type of a leader role	Characteristics of competences
Visionary leader (foresight)	Knowledge in strategies, business processes and technologies that form values of an organization; big data work methods; analysis techniques Ability in development of strategies for effective organization, promotion of business and technologies in their integration; implementation of innovations that are able to increase internal and external value of a business Application of contiguous competences
Pragmatist	Knowledge in classical theory and management experience of former leaders; theoretical and hands-on aspects of transformation and business procedures Ability to use theory and practice of former effective solutions Application of management methods based on pragmatic principles; contiguous competences
Analyst	Knowledge in methods of dealing with large amount of data, analysis methods and data monitoring; IT methods Ability to use, generalize, describe information input; to work with data bases, cloud and other technologies; to find and make decisions for cutting costs on IT solution basis Application of IT methods, contiguous competences
Project manager	Knowledge of business cycles, technologies of teamwork; methods and assessment criteria of business projects; IT methods Ability to embody business processes for business output Application of IT methods, contiguous competences
IT manager	Knowledge of IT methods, management and decision-making methods; ways of ensuring data accuracy, accessibility and integrity as well as their security; experience in managing IT teams Ability to create, describe and use IT techniques in fulfillment of business processes Application of IT methods, contiguous competences

Source Adapted from Grishakova and Uzhanina (2016)

help to solve productively commercial, technical, and social issues. A leader should be a motivating element for a team and provide effectiveness of management including IT methods. In such circumstances, a necessity of developing information management arises. This professional socialization of a manager may have two sides: on the one hand, it is successful activity within managerial roles, and on the other hand, it is development and increasing value of a manager while mastering leading roles that are required for running a business in contemporary conditions.

While researching, some groups of managers were analyzed. The sampling had employees participating in training programs such as “Leader” and “Effective team” in the frame of improving qualification and professional retraining. The average number of participants included 20 top managers and 70 middle managers. During a training, three types of leaders were picked up: a manager, a leader, a managing leader.

The participants of the training program were asked to do tests on different psychological methods. Every respondent selected the most appropriate and demanded characteristics for a manager. Having analyzed answers with the help of statistic package SPSS, three most demanded sets of qualities highlighted by three groups of managers were derived. All of our respondents had a training that was aimed to identify managerial-and-leadership roles. After that it was possible for participants to do self-assessment. All types of managers demonstrate such characteristics as:

- dialog-based collaboration that comes out in taking certain team solutions;
- teamwork as a process of communication with subordinates and possibility of role exchange among participants depending on situations.

Among accentuated peculiarities of a modern manager, a leading one is supposed to be a variability skill, that is an ability to offer alternative strategies, to assess situations flexibly, to alter programs of development depending on changes of external factors, to self-develop and support a partners’ development, to know IT methods, to work with Big Data. Besides, a managing leader should have such competences as adaptive mobility in case of technology and information changes, ability to work with e-teams and big data, etc.

3 Methods and Models

Dealing with different methods of leader’s diagnostics, communicative, and organizational skills, we can figure out the following ones: methods called “Leader,” “Leader’s effectiveness,” “Communicative and organizing skills,” “Diagnostics of leadership skills,” etc. There is a detail look at them below.

A method called “Leader.” The method is developed for assessing a manager’s skills to be a leader. The questionnaire contains 50 questions, and on the basis of the given answers, it is possible to make a conclusion if the manager possesses personal psychological qualities demanded for being a leader. There is only one possible variant from two provided.

A method called “Leader’s effectiveness.” This questionnaire assesses not leadership but his practical activity as a leader from its potential effectiveness point stand. The respondent has to choose only “yes–no” variants.

A method called “Communicative and organizing skills” that was created by Sinyavsky and Fedoroshin (1925). A basis of such a method is famous projective procedures of an inventory type. The questionnaire allows pointing out stable features of communicative and organizational inclinations. There are such types of questions in this method that may be answered positively or negatively (“yes-no” answers). All the choices of a respondent are based on self-assessment analysis in behavioral patterns.

A test called “Diagnostics of leadership skills” by Zharikov and Krushelnitsky (2001) allows assessing a human’s ability to become a leader. There are 50 points in a test with “yes–no” answers. There is no other variant in the test. Rapid answers inclining to positive or negative reply are preferable while doing the test.

A test called “Can you be a leader?” is connected with a willing of a person to achieve a highest result in professional sphere, to be acknowledged, to occupy a leading position. The abovementioned test is able to find it out.

Moreover, some games may be used. They give opportunity not to find out leading manager’s qualities, but also form such qualities with a respondent.

There are descriptions of some games mentioned, that are oriented on developing communication, organizational, leadership, and creative skills.

“Ideas auction.” Each group of participants sell their idea showing its significance for others and for environment. At the end of a game, it is worth assessing success or failure of all participants.

“I want to know everything.” There is a list of facts provided to all participants that should be found out in a group.

“Interview.” Two participants are sitting surrounded by other members and start a dialog that is aimed to get as much information as possible in the frame of a certain topic. At the beginning, two volunteers are welcomed. They are given 3 cards each with 3 topics that they should lead out on in the process of communication. Further game is supposed to be held in pairs where participants should demonstrate ability to seize initiative and lead an interlocuter to the necessary way of communication. The main aim is to do it without suspicious in switching on this or that topic. While analyzing a game afterward it is possible to fix: (i) conformity of empathic communication; (ii) necessity to exchange equal information (“and me too...); and (iii) necessity to hold real-life and business interests of interlocuter that are in the focus of his/her mind. In addition, there are some games for developing organizational skills.

“Letters and figures.” The whole group is divided into subgroups of 7–10 people. Participants should put figures and letters in a certain order for an agreed time. The task is becoming more complex in the process of lasting, for example, O, 7, P, K, 2, 5, D, 6, S, 4. Leaders demonstrate their ability as “builders.”

“Create a model.” A group is divided into subgroup of 5–10 people. Every group is offered to build a mechanism or a model with parts consisting of all group members. After 8–10 mins of preparation, all groups demonstrate their outcomes. The other

participants try to guess what is being demonstrated. All these methods and games allow to form demanded qualities of managers, leaders, and managing leaders.

Let us consider a model of a modern manager who owns all necessary for a managing leader competence. Demanding rate of information component in management leads to development of manager’s information culture. A managing leader should be aware of and run all the processes connected with getting, organizing, processing, delivering, and using information as well as successive transforming these values in individual or group activities and mechanisms for effective decision-making process while developing an organization. The competence model required for efficient work of a managing leader is provided in Fig. 1.

Information culture enriches organization environment with certain features, it is a component of general organizational culture that develops experience of effective work with information resources. Information culture in different professional groups is reflected in different tools and approaches used in processes of awareness, collecting, organizing, processing, spreading, and using information. Informational culture of an organization should have a certain structure: mechanism of information processing (organizational component), ways of transferring information (apparatus component), subjective level of work with information (reflection). Background of information culture formation is a development of a managing leader’s competences.

A managing leader should form an information infrastructure of an organization, create systems of information support for effective managerial solutions, build up a system of information flows within corporate intranet for assisting all business activities in an organization.

Managerial culture is a coherent dynamic system consisting of components both a leader and his professional activity in its entirety. Major components of managerial culture include:

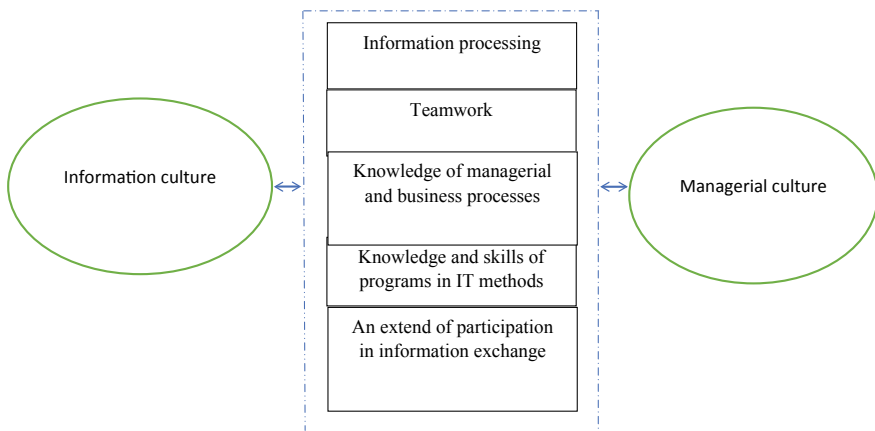


Fig. 1 The model of a managing leader’s competences. *Source* Own results

- ideological component—that involves believes, interests, preferences of a manager;
- axiological component—that is reflected in values of managerial work;
- professional component—that discloses the character of interpersonal communication with subordinates, methods, plans, organizing, motivation, controlling as well as managerial techniques and technologies, level of competences in documentation base work;
- creative component—that is closely connected with practical skills and expressed in ability of a manager to have original approach to planning, organizing, motivating, and controlling;
- reflection component—that appears in reflective-thoughtful culture of a manager, in his self-actualization.

4 Conclusions and Implications

All in all, it becomes clear that the fulfillment of effective leadership requires a set of information and managerial culture. Creation of effective leadership competences gives opportunity to develop up-to-date management system in conditions of digital economy. To train managing leaders, a certain system of programs, seminars, master classes, trainings is provided. In our opinion, criteria of content for such programs should include the following:

- hands-on systems of knowledge, skills, and competences, that can regulate autonomy, proactivity, self-studying, creativity of educators;
- person-to-person relationship that regulates matching of psychological-and-pedagogical peculiarities of educators to their future professional activity and accountability of motivational-oriented context in training materials/papers;
- integrity that regulates the entire approach to training, its content, organizational forms, methods, and means of training;
- inter-subject entirety of a course that regulates its completeness, logics, and sequence;
- professional oriented criterium that regulates content of general and functional disciplines in future professional activity and the ways for self-development in the frames of self-education.

Overall, we might conclude by stating that the ability of a managing leader to professional activity in a modern world is considered as a system of personality's qualities that can support in fulfilling his/her functions, adequate to requirements of certain business activity.

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The Phenomenon of Leadership in the Municipal Authority in Ukraine



Oleksander Kopylenko, Mykhailo Baimuratov and Inna Gryshova

Abstract Within the framework of civil society, the state regulates only its main institutions and the main aspects of their functioning, without affecting the process of forming the will of a particular person in relation to this society and its institutions. Furthermore, the state creates appropriate conditions, and the choice remains for each concrete subject, who is free of state influence within the framework of local interest, but interdependent with other members of the territorial group (territorial community). This paper focuses on the local self-government (LSG) in Ukraine and the phenomenon of leadership in the municipal authority. We propose to consider local self-government from the points of view of the impact on the public authority, genetic-historical landmarks, the autonomy within the framework of modern national constitutionalism, the influence on the formation of the constitutional space of the state, the role of the leadership of local government in the modern international community, the predecimialization of local government activities, the international legal obligations of the state regarding the establishment and development of the leadership local self-government, the reformation of the national legal system; the necessity of forming a national model of the leadership of local self-government; the role of local self-government in the formation of civil society; from positions of social development; as well as the role of the leadership local self-government in innovative state-creative processes.

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1 Introduction

The emergence and development of the institute of the local self-government (LSG) in Ukraine represents a vivid evidence of the democratization of public and state spheres. Determined that the basis of the phenomenology of public authority lies in the various characterological properties of the institution of local self-government, as an ontological manifestation of the existence and functioning of such power and an important social and legal institution of the state and the law (Rausser et al. 2018). Thus, a permanent local interest involves both motivations aimed at solving the problems themselves and at determining the responsibility for their successful solution. It should be noted that such a purely sociological approach is not something unusual, contrary to the legal establishment of the state. After all, the sphere of everyday life of people is also the sphere of realization of their life aspirations, needs, tasks, teleological dominants.

The presence of the public administration system today is the likelihood of a radical and fundamental restructuring, which finds its solution, first of all, in resolving the problem of changing priorities, and also the formation evolution of the democratic legal statehood (Štreimikienė et al. 2016). And at the same time, it means the failure of the notion of totalitarian statehood—“man for the state” in favour of the principle of statehood of a democratic—“state for a man.” That is, the emergence and priority of man-centredness to the difference from the atavism, is observed which involves the priority of the interests and rights of the state (Niño-Amézquita et al. 2017; Filipishyna et al. 2018).

Only in this case, the state, public authorities will begin to listen to the processes taking place in the society will set its main task of creating favourable conditions for self-knowledge, self-development, self-initiative and self-determination of the individual, the realization of its numerous interests, requests and needs. In this regard, Arinin’s idea that “such a government should be afraid of being late, lagging behind in its development from personalities and using the energy of individuals, first of all, the brightest, the most advanced, because their energy inspires everyone else” seems to be very revealing (Arinin 2000).

For a long period, the state as a subject of authority of the power was the only form of the organization of social life, organizing and directing all socially meaningful activities of people. However, each rule allows exceptions, and the state activities do not exclude the possibility of non-state social activities either (Romashov 1998). The keen interest to this type of social activity has caused that in the proceedings of thinkers of the New Age and the Enlightenment philosophy the term “civil society” appears, its idea is designed (Stepanov 1987).

Nowadays, some researchers represent civil society as the sum of all “non-state” feelings, thoughts and actions of citizens, their ability to self-organization. Simply put, the state is one sphere, and civil society is completely different. Two opposite poles with negative dichotomy are created: one represents a negative energy, the other—positive (Kabyshev and Pryakhina 1995). The officials attribute the minus sign to civil society, in which they see only chaos and rebellion. Proponents of

democratic reformism, by contrast, see the main evil in the existing state, promising to replace it with their own good and just law and order (Vasylchak and Halachenko 2016).

There are, though, other thoughts. But they are mainly, reduced to the description of all sorts of separate, but important, features of political life: the distinction between religious, ideological, age, sexual, ethnic, language aspects, etc. As a result, civil society is divided into dozens and hundreds of similar, but mini-communities, depending on the dominance of certain qualifying and characterological features—national, regional, corporate, in particular, party, confessional, family, group, etc., up to each individual, each “I”, as an independent and self-sufficient “society” of a man with himself. As a result, in reality, everything is reduced to the idea of the predominance of individualism and anarchy (Romashov 1998; Sirenko 1991).

Thus, in the epistemological sense, the talk is not so much about the characterization of the formal status of citizens and other individuals who are legally staying on the territory of the state or their rights, welfare, family status, etc., but about the freedom of choice and the responsibility of a person for his own life about the character of spiritual and effective national connections of different personalities in one state and in a certain historical time. It is not a secret that, first of all, it is an objective connection between individuals who are in the state, by invisible civil and human (humanitarian) ties (Kravets 2016; Baymuratov 2003). Hence, the inevitability implies the conclusion of the crucial role and importance of the public self-government (municipal) government in the organization and formation of not only civil society, but also a democratic legal state, which ideally should “serve” such a society, performing for him a secondary, official role.

2 The Purpose and Methods

The purpose of the article was to study the scientific and applied principles of the functioning of the leadership municipal government in Ukraine. In the process of research, general scientific and special research methods were used, in particular: theoretical generalization, comparison and morphological analysis—during the formation of the conceptual-categorical apparatus of the study; system analysis—to identify opportunities and justify the outcomes of the municipal government activities in Ukraine; structural and structural-functional analysis—for the substantiation of perspective directions of formation of the leadership municipal authority in Ukraine; regulatory and legal monitoring to assess the compliance of the institutional environment with the conditions of the functioning of the municipal government in Ukraine.

3 Provisions and Discussions

Indeed, the municipal government—the form of social self-organization of people, and at the local level, of them, functioning in the form of local self-government, is a powerful stimulus in the process of creating of internal motivation for the residents of the corresponding territory of the state not only for solving questions of local importance, but also in the arising of responsibility for their solution and social result in collective interests.

The LSG, on the one hand, is a territorial structure of state authority (see Article 5 in the Constitution of Ukraine (Constitution of Ukraine 1996)), it is accepted and certified by the state (Article 7 in the Constitution of Ukraine). However, the LSG is at the same time the right of a territorial community—the villagers or a voluntary association in a village society of the several villagers, towns and settlements—to decide for yourself the local issues within the framework of the Constitution and laws of Ukraine (Article 140 of the Constitution of Ukraine).

The special law of Ukraine “On Local Self-Government in Ukraine” dated 21 May 1997 (Verkhovna Rada of Ukraine 1997) not only modifies but substantially complements the meaningful understanding of the LSG, expanding its subjective composition. Thus, according to Part 1 of Art. 2 of the mentioned Law, the LSG in Ukraine is a guaranteed state right and real ability of the territorial community (interpretation by the legislator of the contents of Articles 7 and 140 of the Constitution of Ukraine)—the villagers or voluntary association in a village society of the several villagers, towns and settlements independently or under the responsibility of bodies and officials of local self-government (its bodies and officials are added to the list of subjects of local self-government)—to decide for yourself the local issues within the framework of the Constitution and laws of Ukraine.

Part 2 of Art. 2 of this Specific Law states that the LSG is carried out by the territorial communities of villages, settlements, cities both directly and through the rural, town and city halls and their executive bodies, as well as through the district and regional councils representing the general needs of territorial communities of villages, settlements or cities.

In order to determine the phenomenology of the LSG, the constitutive role of the EOM institution in the functioning of democratic legal statehood, we consider it necessary to examine the content, role and significance of the phenomenon of local self-government for society and the state.

System analysis of these tasks in relation to the phenomenon of local democracy, carried out from different positions, helps not only to reveal the legal nature of the LSG, the municipal government, its role and social purpose, but also the role of this institution in the framework of modern world constitutionalism as history, theory and practice of constitutional construction.

The LSG is an essential element of the constitutional order of democratic states and its social and legal value lies in that it actually represents the specific level of representative and executive public self-government (municipal) power, which, on the one side, takes part in the implementation of the tasks and state functions at local

government level of management, and on the other—implements a system of specific multilevel and different in the teleological sense interests of the inhabitants of the respective territorial units, which are tied with the necessity of organization of stable vital activity at the local level of society and are different from the interests of the state, withal, they do not contradict them.

4 The Role and Scope of LSG

When it comes to the terms of the role of the LSG in the modern international community, the states with traditionally developed democracy have long ago recognized the benefits of the LSG and have given it a special and important place in the composition of national and world constitutionalism—it becomes important in conditions of the evolution of contemporary national and world constitutionalism because it is precisely due to a fully fledged and efficient LSG the most significant idea of the existence and functioning of the basic principles of democracy can be realized, namely—the direct exercising of power by the people, more precisely by the population of the territory—the residents of corresponding administrative—territorial units of the state.

As for the terms of the purpose “loading” of the LSG—at the national level, the bodies of the LSG, which are most closely related to the population, were responsible for solving practically all local problems: housing and communal services, the development of services, ecology, the creation of local educational systems, health care, transport infrastructure, etc. All this, in practice, unloaded the state power and gave it the opportunity to focus on the solution of issues of national importance.

In terms of the realization of the activities of the LSG and its bodies, one can see that LSG act within the confines of the solution of important organizational and legal relations in the coordinate system “state (public authorities)—LSG (bodies and subjects of local democracy)—territorial community (total population of the corresponding territory of the state)—a resident (as a member of the territorial community and a subject that functions on the corresponding administrative territorial unit of the state)” and the stability of relations in the system with given coordinates stipulates its existence and has existential significance for the existence of not only the state as such but also for the world community of states.

When it comes to the international dimension of local democracy, the formation of a system of local democracy bodies on the territories of national states in the international aspect has stimulated the development, within the confines of international intergovernmental regional organizations the Council of Europe, or the series of international agreements. They include the principles and norms for the constitution and construction of the institute of the LSG on the territory of the state participants of such agreements. The signing of such agreements, which are the agreements of a framework nature, in particular the European Charter of Local Self-Government of 1985 (European Charter of Local Self-Government 1985), imposes on the state

participants international obligations regarding the recognition, legalization, guaranteeing, protection and defence of the institute of the LSG within its territory.

As for the international legal obligations of the state on the formation and evolution of the LSG, the monitoring for doing commitments by creation and development on the territory of the state participant of the international agreement of the LSG come to life by the international organization under the auspices of which the agreement was signed and implemented within the mechanism of convention control, which is contained in every of the agreements of this nature. The objective reason for the creation of such an international mechanism is that the international community views the LSG as an important instrument for building democracy at the state level and a powerful means of intergovernmental integrational cooperation and association.

What regards converting of the national legal system, the formation of the LSG in Ukraine and in the post-Soviet space proved to be very difficult and controversial tasks of state building—entire sequence of economic, financial, social, political and legal problems of objective and subjective character were standing on the way of this process. The objective problems include the following: a long process of transition to market reforms; the chronic limitations of the profit base and the imbalance of local budgets; the collapse of the obtaining social infrastructure subsidized from the state budget, and a sharp, substantial decline in the level of the population living; the fall of his confidence in any institutions of power; finally, the preservation of the rudiment of the Soviet system—the full duplication of powers of local councils of different levels, leading to the emergence of dual or competing competences and conflicts, which should be regularly interfered by the central authorities. The subjective factors that restrict and substantially hamper the development of the LSG system include the following: a clear distrust of state institutions towards the LSG, which led to the absence of national models of its statutory status and further development.

As for the necessity of forming a national model of LSG, the formation of a national type of regional democracy is influenced by various doctrinal positions regarding the teleological goal of the LSG, its “competence,” which are sometimes quite contradictory, multilevel and sometimes also antagonistic. This position related to the fact that members of constitutional and municipal doctrines, and legislators, now consider the LSG as: one of the basic principles of the constitutional method; one of the forms of democracy; a specific subsystem of public authority; forms of involvement of citizens in solving local issues; the rights to the LSG; system organization; similarity of social management; the Institute of Civil Society; the foundation of the modern philosophy of human rights; the most important socio-political and social-legal phenomenon; an important constituent and institutional factor of legal statehood; a subject of international relations and one that has a partial international legal personality (as a quasi-subject of international public law—LSG); social and territorial space, where systemic local interests are generated; social space, where almost all life aspirations of a person emerge, are manifested, formed and realized; the areas of occurrence and manifestation of municipal rights and freedoms of the personality (person); the areas of realization of competence of local self-government, its bodies, officials, rights and duties of its subjects; the sphere of realization of practically the whole system of rights and freedoms of human and citizen; the sphere of

realization of functions of local self-government; the areas of realization of responsibility of the subjects of local self-government, etc. (Baymuratov 2008). Such a variety of approaches, with all the positive relation to the potential of local democracy, actually “blocks” the integrational and methodological components of the LSG and does not contribute to the establishment of municipal law as an independent branch of national law of post-Soviet states and developing countries.

In our view, perspective development of the LSG is directly linked to the contradictory development of decentralization and de-concentration of state power—namely they, with a positive and permanent build-up of them, should cause objective prerequisites for real legalization and further development of LSG. Moreover, the consolidation of such tendencies in the legislation of Ukraine and their realization in practice will become a testimony that our state is determined to build a future on the basis of democracy, law and humanism.

From the standpoint of the role of the LSG in the system of institutional capacity, one can see that historical experience suggests that due to the LSG, democracy is transformed into genuine democracy, and only with the recognition and growth of the rights of territorial communities, which are its primary subjects, the political and socio-economic rights of citizens become more concrete and meaningful, a multi-lateral relationship between them and the state is harmonized, the state itself becomes more stable, and the power that it implements acquires democratic and humanistic qualities. Moreover, against the background of the stability of state-legal and municipal-legal mechanisms, their interaction, an effective statehood develops.

From the standpoint of the part of the LSG in constitutional construction, the new Constitution of Ukraine in 1996 and its adoption on the basis of the Law of Ukraine “On Local Self-Government in Ukraine” in 1997 became a qualitatively new stage in the history of domestic LSG—thus a constitutional law-governed state due to the power of its legislative power attracted social associations of inhabitants of administrative territorial units to the realization of their teleological dominants and included them in their own mechanism. It should be emphasized that the above-mentioned major normative acts have created a reliable and proper regulatory foundation for the LSG in Ukraine. On its basis, the territorial communities received the warranted right and the real opportunity under their liability or under the liability of the authorities and officials of the LSG to determine problems of local value within the confines of the Constitution and the laws of Ukraine (Article 2 of the Law of Ukraine of 21.05.1997) for the interests of residents of the populated areas (Constitution of Ukraine 1996).

In terms of the future perspective of the development of the LSG in Ukraine, it becomes obvious that in the current period, in connection with further development and improvement of Ukrainian and world constitutionalism, solving the issues of formation and organization of the system of LSG through the holding of a municipal reform, the competent activities of its subjects and bodies, urgently requires its solution the most complex set of questions that are connected right to the appearance of civil society, the realization of the parliamentary system, the protection of rights and freedoms of human and civil, and have the ways out to the institutional processes and structure existence and functioning of the Ukrainian democratic state hood.

As for the role of the LSG in the development of civil society, the LSG plays a special role in the processes of institutionalization of civil society. In this aspect, Sirenko's conclusions, who believes that "civil society is a realm of interests" and "interest is the language of civil society, the very first means of communication between people and, at the same time, the cause of action that prompts people," are very important (Sirenko 1991). His important methodological position is confirmed by the doctrinal view of Panayeko (1963), who believes that "the purpose of self-government can be any interest that is displayed by a collective of the residents of this territory" (Panayeko 1963). Thus, the sources of self-government, including the local ones, lie within the framework of the civil society. In the process of its formation and development, the LSG, as a material form of implementation of the interest of the territorial community, is legalized by the state and becomes a producer of territorial personal and territorial group, systemic individual and collective interests that are formed at the local level in the formation process, development and interaction of the civil society and the democratic legal state.

When it comes to formation and development of the legal status of a person and a citizen—the LSG becomes important in the process of promoting the autonomy of a person, against the background of parallel processes of development of the civil society and democratic statehood. Furthermore, the triangle "LSG—Civil Society—Democratic Statehood" indicated here has not only high communicative potential, but also the potential for mutual development—the result of which is the occurrence of the necessary component of effective statehood and the formation of a strong and powerful state. It would be appropriate to point out V. O. Zatonsky's position that a strong state is a state that can create a rational, internally agreed system of legal norms that would stimulate the initiative, activity and self-government of citizens, increase their role in government, would establish public check activities of state bodies (Zatonsky 2006). In addition, in our opinion, the LSG directly affects the formation and development of the legal status of a person because its space is "man-centred," within such a space, "human-dimensional" objects are created and function.

Therefore, in connection with the development of the LSG, in our opinion, it is a very productive study within the confines of the constitutional theory of the correlation of such concepts as "the legal status of a person" and "state expediency." If we consider the data of socio-legal categories as special systems, that is, those with specific features and regulatory properties, then we can state that they directly affect the measure of freedom and are objectively aimed at stimulating the legitimate, creative activity of man. Consequently, one can come to the finale that the constitutional provisions that "the person, his life and health, honour and dignity, inviolability and security are recognized in Ukraine as the highest social value," and "the establishment and maintenance of rights and freedoms" of a man are higher social value (Article 3 of the Constitution of Ukraine), and to include these theses in the theory and practice of modern constitutionalism, probably only in event of refusal from the traditional approach, expressed in the subordination of the rights and freedoms of the individual to the interests of the society and the state. This becomes especially important for the constitution of local democracy, because, according to Romashov

(1998), national interests (in fact, “state expediency”) consist of a set of rights and freedoms of individuals who create a state (Romashov 1998). Such a system, implemented in practice, means the legal consolidation of the notion of the sovereignty of a person who acts on an individual level as an axiological and epistemological premise of the LSG.

The above issues make it possible to consider the LSG from the standpoint of creating a “social fabric”. This fabric is, in terms of the social development (mainly in sociology) engaged in the identification and study of the ways of social determination, formation and internalization (the process of forming the inner mental structures which is conditioned by the assimilation of structures and symbols of external social activity (Aron 1968)) of the rules of socially meaningful behavior of individuals at the level of everyday life, that is, within the framework of existence and functioning of the LSG remains the closest item to the allocation of associative units. It is also suitable as a concept of role-sets. The concept of role sets proceeds from the undeniable fact that, at the level of observed behaviour of individuals, the relations of fragmentation and integration of the social whole appear as a combination of recognized by the society and set in the regulatory status of roles, each of which is held within the human dimension, and is distributed over a subset of individuals employed in realization of activity of a corresponding fragment or a corresponding private socially necessary function (the miner, the driver, the teacher, the doctor, the scientist, the administrator ...). From this perspective, each individual acts as a carrier of a particular set of the totality of socially significant roles, can be studied and described in terms of this set as a socially deterministic unit, the cash subject represented in the set of activities (Gryshova et al. 2017a).

When it comes to the role of LSG in innovative state-creative processes, one can see that nowadays the role of LSG in the innovative state-creative processes that take place in the states and in the international arena is vastly rising, because here it acts like one of the main elements of democratic statehood based on the concepts of parliamentarism. It should be borne in mind that the territorial communities and their formed bodies of LSG are objectively inherent external and some internal features of the people’s power and people’s representation, and this feature extends to parliamentarianism, in whose practical formation and implementation of its decisions, the population of the territories is directly involved. At the same time, within the framework of the society and the state, the LSG plays the role of an integrating factor. Territorial communities, especially in the context of recognizing their rights by the state, become objectively interested in its unity and integrity, stability and predictability of exercising the state power. It is related to the fact that only in the circumstances of the state organization of the society, these territorial communities (associations) of people can be guaranteed continuity, development, recognition, respect, guarantees and protection of their status, the possibility of maintaining social standards and the rule of law on an adequate level (Gryshova et al. 2017b).

As for the role of the LSG in protecting the rights and freedoms of a person and citizen, the multifaceted role of the LSG manifests itself in the area of the protection of human and civil rights and freedoms, because namely within its framework, at the local level of the formation and functioning of the society, there are complex

and permanent processes of the formation and activation of the civic and personal activity of each member of the community, the hypothetical opportunity and level of their amateur activity at the level of micro-, meso- and macro-levels are tested, their outlook is formed, structured, functioning and realized. In the same framework, thanks to the municipal democracy, a local human security system is formed and operates. Its creation aims at ensuring the realization by every inhabitant everyday need of existence and functioning within the limits of local society and at the state level. These needs have a systemic access to all groups and levels of rights, freedoms and responsibilities of a person and citizen (Baymuratov 1997; Gryshova et al. 2017c).

As for the role of the LSG in solving national and ethnic problems, the LSG, as a phenomenon of contemporary world constitutionalism, plays an important integration-modelling role in solving national-ethnic problems. In the conditions of the existence of a multinational Ukraine, namely the LSG acts as the most likely or most acceptable form and scope for the implementation of national-cultural autonomy, that is, it aims to promote the freedom of national minorities to their cultural traditions, language, religion and other national aspirations. Without giving somebody any national privileges, it, on the one side, effectively protects and implements the rights and freedoms of a citizen and person, and on the other side, serves as a powerful factor hindering centrifugal tendencies that can cause fragmentation of a unified state (Kravets 2016).

Finally, as for the role of the LSG in the frame of the public power, according to Art. 5 of the Constitution of Ukraine, the carrier of sovereignty and the single source of power in Ukraine are people. The people realize authority directly and through the state authorities and LSG. Thus, the division of public authority into its two branches is established: state government and public self-government (municipal) power (Baymuratov 2003). Namely in the latter, the LSG plays a major role, since it is within its framework that the interests and aspirations of territorial communities are realized.

5 Conclusions

Summarizing our discussions and findings on the local self-government in Ukraine and the phenomenon of leadership in the municipal authority, the following conclusions can be drawn: First of all, public self-government (municipal) government is genetically linked with the formation processes, development and improvement of the civil society, which forms powerful amateur and self-governing mechanisms of communicative interaction between people (citizens of the state, individuals legally located on the territory of the state and have different legal status; residents—members of territorial communities).

Moreover, the basis of the phenomenology of public authority lies in the various characterological properties of the institution of local self-government, as an

ontological manifestation of the existence and functioning of such power and an important social and legal institution of the state and the law.

Overall, one can clearly see that the main practical purpose of the municipal government, its organs and sections is the realization of the interests of territorial communities, which are implemented in a complex and integrated symbiosis of self-governing and state fundamentals.

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Leadership Criteria for Territories in the Budgetary Sector: Characteristics and Criticism



Natalya Istomina, Victor Ivanitsky and Natalya Bryksina

Abstract The article presents the characteristics of the criteria used to assess the leadership of territories in the budget (public) sector on the example of the constituent entities of the Russian Federation. As criteria, the share of program costs in the budgets of the constituent entities of the Russian Federation and the degree of implementation of participatory budgeting are highlighted. The study is based on the provisions of financial science, which characterize the essence of result budgeting, the requirements for its implementation, the essence, advantages, and disadvantages of participatory budgeting. Analytical data are presented for the leading territories in terms of the share of program expenditures and the degree of participatory budgeting implementation. It is noted that any rating is a subjective measurement that does not always fully take into account the situation in a particular territory. It is emphasized that the achievement of high rankings should not become the main goal of the territories' state bodies; nevertheless, the inclusion of rating indicators in planning for the future ensures competent planning of the efforts of government institutions to improve the quality of the budget process.

1 Introduction

Identifying a leader among a specific set of subjects is a natural management process, characteristic of both the public sector and the corporate sector, and even households. The condition for the implementation of this practice is the establishment of a set of criteria with which the corresponding properties of each subject are compared. Leaders are recognized as subjects for whom the values of these criteria were the

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largest among the possible options (or the smallest—depending on a particular criterion content). The practice of the activities of the leaders is recognized as the best and is recommended for use in a particular area by all related institutions.

It should be emphasized that the definition of leadership in any case is quite a subjective process. The system of criteria may be imperfect, and it is not enough to clearly define the position of a particular subject among the entire set of subjects. This is especially likely if there are qualitative criteria in the criteria system that cannot be measured unambiguously (Strielkowski and Chigisheva 2018).

Leadership assessment of territories in the public sector has been introduced into the practice of budgetary activities since the early 2000s in the Russian Federation. For this purpose, a set of criteria proposed by the Ministry of Finance of the Russian Federation is applied. The basic criterion is the share of expenditures of the budgets of the subjects of the Russian Federation, formed in the format of programs (the share of program expenditures). The introduction of new budget decisions, in particular, participatory budgeting into practice of the constituent entities of the Russian Federation, formed the basis for determining the territories leadership on the basis of innovative technologies introduction in the public (budget) sector.

In the framework of this study, an assessment of the leadership of the Russian Federation territories in the public sector will be carried out based on the criterion of the share of program expenditures in the budgets of the constituent entities of the Russian Federation, based on the criterion of the prevalence of participatory budgeting practices; critical conclusions and recommendations for the future development will be justified.

2 Determinants of Territory Leadership in the Public Sector

During the last century, central and territorial governments made efforts to implement fiscal reforms (Grizzle and Pettijohn 2002; Chamberlin 2015; Radovic et al. 2017; Niño-Amézquita et al. 2017). The key direction of the reform in most countries of the world, including the Russian Federation, was the introduction of the effective budgeting ideology (result-oriented budgeting).

The development of the budget process in the Russian Federation based on the effective budgeting ideology has led to the emergence of various performance indicators as criteria for the leadership of territories in the public sector. This is a rather important trend. The degree of development of effective approaches in the budget sphere characterizes the compliance of the budget policy of the subjects of the Russian Federation with the current trends in the budget sphere of developed countries. It allows comparing the results achieved in Russia with the best international practices.

The transition to effective budgeting meant, in fact, a transformation of the approach to the budget itself. Instead of a simple sum of incomes and expenses, the budget began to be considered as the result of a set of decisions made by the

authorities and management on the use of limited resources, like “*symbol and the peak of the public decision-making system*” (Stratan and Manole 2017).

Essential requirements for the implementation of the result budgeting concept are the availability of information on the goals and results of government spending and the construction of the budget process in a format of promoting the use of this information for making decisions about the budget funds allocation (Ushakov et al. 2017; Strielkowski et al. 2017). At the same time, the program classification of expenses is extremely important. It allows to compare the costs and benefits of using budget funds for decision making (based on grouping expenses for individual “simple” services or “simple” goals) (Robinson and Last 2009). Also, effective budgeting expresses the desire of the authorities to focus on how well institutions and programs operate in terms of providing the population with services and products (goods) (Young 2003). Note that the term “effective budgeting” or “result-based budgeting,” widely used in European countries, is replaced by the term “performance-based budget (budgeting)” in the United States, while in other countries the terms “outcome-based budget” or “output-based budget” are more applicable (Bruska and Labrador 2016).

An important issue is the question of what indicators can assess the leadership of territories in terms of implementing the practice of result-based budgeting (Stojanov et al. 2011). Since the planned results of using budgetary funds are recorded in the programs—base for budgeting, the Government of the Russian Federation uses the indicator “the share of budget expenditures within programs in the total budget expenditures” as the main criterion. The ranking of regions according to this criterion has been prepared in the Russian Federation since 2009. Leading regions are presented in Table 1.

The absolute leader among the regions of the Russian Federation is the Chuvash Republic—the share of program expenditures here has been 100% since 2015. Other leading territories demonstrate a significant positive trend in terms of the “share of program costs” criterion, which is especially noticeable in such territories as the city of Moscow and the Republic of Karelia. It should be noted that the group of leading regions includes only one subject of the Federation with a high level of budgetary provision (the city of Moscow). It emphasizes the lack of a direct link between the financial status of a territory and its place in the ranking in terms of program expenditure.

In our opinion, the mechanical absolutization of the share of program costs should not become the main goal of the budget policy of the Russian Federation territories. The program itself is a complex mechanism, where goals, objectives, resources, time aspect, results, indicators, etc. are combined. In the Russian Federation, the transition to the program structure of budgets began at the federal level, at the central government level, similar to the experience of many countries, in particular Slovakia (Soltés and Stofkova 2015). As a result, the development of the program format of territorial budgets should be linked to nationwide decisions and recommendations. Each territory should be interested in the qualitative development of each program, which will ensure the overall quality of budget planning and budget execution in a program format. Actually, budget planning as an integral part of budget management

Table 1 Leading regions by share of program expenditures in budgets (2007–2017)

The subject of Russian Federation	2009	2010	2011	2012	2013	2014	2015	2016	2017
	The share of budget expenditures, formed in the programs' format, %								
Bryansk region	50.17	66.20	64.54	99.40	99.51	99.29	99.49	99.60	99.36
Tver region	97.22	97.74	98.05	98.67	97.90	67.58	98.60	98.60	99.16
The city of Moscow	16.66	34.42	15.36	92.49	93.22	94.36	95.95	95.06	97.57
The republic of Karelia	13.61	99.32	93.48	91.86	91.19	92.58	95.11	98.17	97.90
Chuvash republic	59.03	70.63	62.68	98.20	98.56	99.03	100.00	100.00	100.00
Kirov region	38.95	31.64	93.12	97.81	99.73	99.56	99.56	99.63	99.53
Penz region	91.32	81.28	83.92	96.02	99.09	93.64	94.74	93.29	96.95
Omsk region	19.60	78.39	74.82	91.99	96.86	68.59	98.46	98.40	98.80

Source: Ministry of Finance of the Russian Federation (2018)

(Bernatska 2018) should be combined with efforts on budget accounting, control over budget execution, and other areas.

It is acceptable to change the position of a territory in the ranking of the program costs share, if the logic of the regional budgeting requires it. The condition for the correct determination of the place of a territory in the ranking for a given indicator should be the corresponding information support.

3 Territorial Leadership in Budget Policy

Participatory budgeting started in the 1980s in Brazil, although there are studies that indicate that the first “rings” or calls for public participation in the allocation of resources date back to the beginning of the 20th century (Ebdon and Franklin 2006). Participatory budgeting is a decision-making process when citizens discuss and agree on the allocation of public resources and are also directly involved in the political decision-making process (Wampler 2007).

The key advantages of the practice of participatory budgeting are: the possibility of real influence of citizens on public decisions; ensuring citizens’ understanding the budget situation and forming more realistic expectations; the choice of more realistic and attainable goals for the use of funds; creating more realistic and accurate budgets; efficient allocation of resources; development of civil society and democracy (Tănase 2013). Participatory budgeting also provides reliable information on social priorities (Walczak and Rutkowska 2016).

The presence of participatory budgeting practices in the region (along with other tools) makes it possible to evaluate the territory as a leader in terms of openness (transparency) in the public sector, and public involvement in the decision-making process on budget spending priorities. In the leading regions in terms of the implementation of participatory budgeting, a more active dialog between the authorities and society is established. It provides confidence in public policy, correct understanding of the needs and interests of residents, which generally ensures stability and sustainability of development.

The most representative of chronological volumes of analytical data for conducting research on the status and development of participatory budgeting is available according to the program (practice) “Program for Supporting Local Initiatives.” This program was developed according to the request of the Government of the Russian Federation by the World Bank and extends to rural settlements and urban neighborhoods.

Leading regions for the duration of the implementation of participatory budgeting practices in the form of a program supporting local initiatives in the Russian Federation should be considered the Stavropol Krai (Territory) and the Kirov region (oblast), and by the number of implemented projects—the Kirov region (Table 2).

It is interesting that by the criterion of participatory budgeting practice, it is impossible to draw a general conclusion about the leadership of the territory in the public (budget) sector. Participatory budgeting complements traditional budget

Table 2 The total number of projects implemented under the program of support for local initiatives in the regions of the Russian Federation (2007–2015)

The Subject of RF	2007	2008	2009	2010	2011	2012	2013	2014	2015
Stavropol Krai	98			39	31	28	33	36	22
Kirov region	–	–	–	26	197	268	429	364	267
Nizhny Novgorod region							32	192	255
Tver region	–	–	–	–	–	–	53	93	168
Republic of Bashkortostan	–	–	–	–	–	–	–	69	No data
Khabarovsk Krai	–	–	–	–	–	–	–	13	34

Source Own results

planning and budget execution with community involvement, greater openness, and transparency in the selection of projects for financing. It does not cancel traditional leadership in terms of common indicators (such as budget provision levels, absolute amount of revenues, and expenditures of the regional budget, etc. It is interesting to note that leaders in the development of participatory budgeting in a program form to support local initiatives in Russia are not leaders in the public sector on the specified criteria). It should also be understood that participatory budgeting in the format of the Program for Supporting Local Initiatives is not the only form of participatory budgeting in the regions. The adoption of a participatory budgeting development program in 2017 by the Government of the Russian Federation will certainly lead to the revitalization of the state authorities of the constituent entities of the Russian Federation in this area. Consequently, according to the creation of new rankings, the positions of traditional leaders in participatory budgeting can be completely different.

Leadership of the territory due to the presence of participatory budgeting practice cannot also be evaluated absolutely unequivocally due to the fact that the practice of case-sensitive budgeting is associated with a number of shortcomings. The most significant shortcomings are the need for temporary and other efforts both from citizens and from state bodies at the initial stage of implementation; the possibility of a lack of government interest in engaging the population/civil society into the budget process; the risk of manipulating budgets and allocating resources in order to achieve the personal benefit of participants; lack of necessary knowledge and information to ensure high-quality public participation; significant financial costs, loss of time, and other costs (Tănase 2013).

To a certain extent, the leadership of territories by the criterion of “spreading the practice of participatory budgeting” can also be considered as anti-leadership, meaning insufficient efforts by state and local governments to solve the problems of the population. After all, if a significant number of projects are being implemented in

the territory with the participation of the population, this indicates that the necessary amount of funds cannot be allocated from the regional and local budgets to finance the elimination of these problems. The use of data from the territory ranking to disseminate the practice of participatory budgeting should be comprehensive, taking into account a detailed study of the budget situation as a whole. If participatory budgeting is not an imposed practice, but a conscious choice of the population in cooperation with the authorities and local self-government—the leading place of the territory, all other things being equal, should be assessed more positively.

4 Conclusions

Leadership of territories in the budget sphere according to the criteria of the share of program expenditures in budgets and the degree of distribution of participatory budgeting are tools for assessing changes occurring in the budget sphere at the regional level and the basis for conclusions from the state authorities. Taking into account the totality of information on the parameters of the budgetary sphere of the territories, federal authorities can formulate assessments of the success of the reforms carried out by the authorities of the constituent entities of the Russian Federation, the effectiveness of the implementation of national guidelines on various aspects of the budget process, and the quality of dialog with the population, etc.

It is important to track the dynamics of each territory throughout the entire period of the ranking. If the leading territory in a certain year falls down by several positions (levels) in the ranking, efforts should be made to collect data on the change reasons, as well as to separate the objective reasons for the change from the subjective ones. The next step should be to develop a package of measures to improve the situation. The significant growth of the position of the territory in the ranking also deserves studying and possible distribution as an example of best practice in the development of the program format of the budget process and the distribution of participatory budgeting.

The condition for a high quality of rankings and correct use of their results in the budget policy of a state and territories is an improvement of the methodology of preparing rankings and collecting necessary information all around the territories of the country.

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Regulatory Environment for the Formation of Leadership Positions for the Persons with Disabilities



Genrix Kazarian, Rymma Gryshova and Nino Durglishvili

Abstract One would probably agree that the provision of persons with disabilities is an important objective of the legal regulation of social relations in which participants are persons with disabilities. There is a need for the proper regulatory environment that would enable people with disabilities to shape themselves into leading positions in business, economic, and social life. This paper focuses on and analyses the present state of the regulatory framework for the social and economic provision of persons with disabilities in Ukraine. We conduct a thorough investigation of all levels of legal regulation by conducting a concise analysis of basic normative legal acts regulating relations in the national system of the social and economic provision of persons with disabilities. A proper social and economic provision for persons with disabilities would mean to provide them with various rights. In particular, one can mention the right for housing, possibility of their movement, treatment, rehabilitation, education, employment, etc. should be considered. We determine that for effective regulation of the social and economic provision of persons with disabilities, it is necessary to carry out certain coordination work among all subjects of this system. Moreover, we identify omissions in the legal regulation of the social and economic provision of persons with disabilities in Ukraine, namely absence of approved state strategic plans and program documents; lack of elaboration, systematization and implementation of the tools of a mechanism of institutional regulation of the social and economic provision of persons with disabilities; gaps in fiscal legislation.

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1 Introduction

The regulatory framework, which takes care of relations in the sphere of providing of interests of persons with disabilities, still remains an important factor under all provisions. The role and importance of such regulation is based on the following principles: firstly, possibility of a quick response to the facts of violations of the legal rights of the disabled is provided; secondly, we will emphasize the possibility of continuous monitoring of the support of persons with disabilities, meeting their needs, statistical data on the number of such people, including the fixation of persons by disability groups and other criteria; thirdly, by means of legal regulation, the level of proper awareness of persons with disabilities in relation to the state of social and economic provision (medical care, rehabilitation, material support, etc.) is provided. Among the criteria for assessing the effectiveness of legal regulation are its effectiveness and leadership positions in the system of providing persons with disabilities. In author's opinion (both from a scientific and practical point of view), the effectiveness and leadership positions make it possible to understand at what level and how qualitatively the state, its bodies, and officials perform the functions assigned to them with regard to the provision of persons with disabilities.

2 Literature Review

Legal regulation is a significant category when a person (and a citizen) implements and ensures her or his interests. The criterion for assessment of the importance of legal regulation is its real positive sign for the functioning and development of an individual, disabled people, and society as a whole. The value of such regulation is its ability to be a means to meet the universal, socially important, well-founded needs, and interests of the whole society and the individual (Čábelková et al. 2015; Mostenska 2015). Based on the respective needs and interests, the goal is formed through the implementation of specific tasks in various spheres of social relations, including the sphere of social and economic provision of persons with disabilities.

Considering the issue of the essence of the social and economic provision, it is necessary to take into account such concepts as “social guarantees” and “social risks,” because the social and economic provision includes social guarantees to the population, which must be provided by the state under market conditions, in accordance with the principles of a social and economic policy. In a modern scientific literature, the concept of “social risk” is considered as a danger that causes social deformations and disproportions in the functioning and development of man and society. According to Roik (1995), a social risk is a probability of material deprivation of the working people as a result of the loss of opportunity to participate in the economic process (Roik 1995).

In Ukrainian legislation, for example, state social guarantees are channeled via minimum wages, incomes, pensions, social assistance, amount of other types of social

benefits, established by laws and other normative legal acts that ensure a standard of living, which is not lower than a subsistence minimum (Moysenchenko and Ryvak 2016; Strielkowski et al. 2016; Strielkowski and Čábelková 2016; Filipishyna et al. 2018).

Yurii et al. (2004) study the social and economic provision and determines it as a provision of certain categories of citizens with social benefits at the expense of budget funds (Yurii et al. 2004). According to Mochernyi (2001), the role of the most important element of the system of social and economic provision is always given to social insurance (Mochernyi 2001). The social insurance in the system of the social and economic provision prevails both in the amount of financial resources and mass of coverage, and diversity and quality of services.

Consequently, the specific feature of the problems of ensuring the rights of a person or a citizen in Ukraine is that their solution involves a parallel solution at the state level of at least three strategic state-building objectives, namely ensuring economic stability and economic growth; development and implementation of an effective social policy; application of lawmaking, codified activities, elimination of existing gaps in social and economic legislation, and adoption of new laws designed to increase the level of assurance of social and economic provision.

3 The Purpose and Methods

The main scope of this paper is to determine the nature of the social and economic provision of persons with disabilities, identify the issues of legal regulation in Ukraine and prospective directions for improvement of the existing legislation in order to ensure stable leadership positions and formation of the priorities for the implementation of European standards. In the course of the study, the following methods have been used: analysis and grouping (for identifying the problems of legal regulation of persons with disabilities in Ukraine), theoretical and logical generalization (for characterizing the content and peculiarities of the functioning of the regulatory legal mechanism and its leadership positions in the world), structural and functional analysis (for justification of directions for improving the legislative framework for provision of persons with disabilities in Ukraine).

4 Results and Discussions

The effectiveness of legal regulation in various spheres of life of a person and a citizen in general, as well as in the sphere of the social and economic provision of persons with disabilities, in particular, is important. In our opinion, it is the thorough consideration and perfect research of such effectiveness will give an appropriate impetus to improve the regulatory framework, which will promote the development of state programs in this sphere, increase the standard of living and state standards

for improvement of regulatory and legal tools by means of which the social and economic provision of persons with disabilities is implemented.

According to our findings and in order to provide an effective legal regulation, there is a need to achieve balance and coherence of the relevant normative legal acts, which regulate relations regarding the social and economic provision of persons with disabilities. With this purpose, the present state of the regulatory framework for regulation of the social and economic provision of persons with disabilities in Ukraine has been analyzed. In this context, it is appropriate to identify and study all levels of legal regulation through conducting the analysis of basic normative legal acts regulating the relations in the domestic system of the social and economic provision of persons with disabilities. An analysis of a number of relevant normative legal acts makes it possible to argue that such regulation is carried out at 9 hierarchical levels (see Fig. 1).

Among the normative legal acts that are related to the sphere of the social economic provision of persons with disabilities, it is worth highlighting those that are of particular importance and affect the formation and development of state social policy. These documents include the Decree of the Cabinet of Ministers of Ukraine No. 706 On Approval of the State Target Program “National Action Plan for the Implementation of the Convention on the Rights of Persons with Disabilities” for the period up to 2020 dated August 1, 2012 No. 706 (Cabinet of Ministers of Ukraine 2012). The basic normative legal acts that have a general, universal character in the regulation of relations with regard to the social and economic provision of persons with disabilities include the Law of Ukraine No. 875-XII “On the Fundamentals of Social Protection of the Disabled of Ukraine” dated March 21, 1991 and the Law of Ukraine No. 2961-IV “On Rehabilitation of Disabled Persons in Ukraine” dated October 6, 2005. Moreover, the basic normative legal acts regulating the relations with regard to the social and economic provision of persons with disabilities, one should pay attention to those which include separate norms regulating a limited circle of social relations in this direction or are more specific character.

The entire regulatory framework for the social and economic provision of persons with disabilities can be divided by the classification that delineates respective interests of such persons satisfied by the state in accordance with specific spheres of activity, namely rehabilitation, medical care, and social insurance of the disabled; sphere of education, employment, and professional training of the disabled; socio-household and material support and access to an appropriate social infrastructure.

Analyzing the current state of legal regulation of the social and economic provision of persons with disabilities, it is necessary to draw attention to the following important points. Firstly, foreign experience and international standards occupy a key place in the formation of domestic state policy and legislation in this sphere, as well as the impact of the statements of such legislation, which is carried out in relation to the regulation of issues that comply with the basic principles of the social and economic provision of persons with disabilities, increase the effectiveness of legal regulation and adaptation of international standards to domestic realities.

Secondly, the legal regulation of the social and economic provision of persons with disabilities in Ukraine is characterized by the presence of a significant number

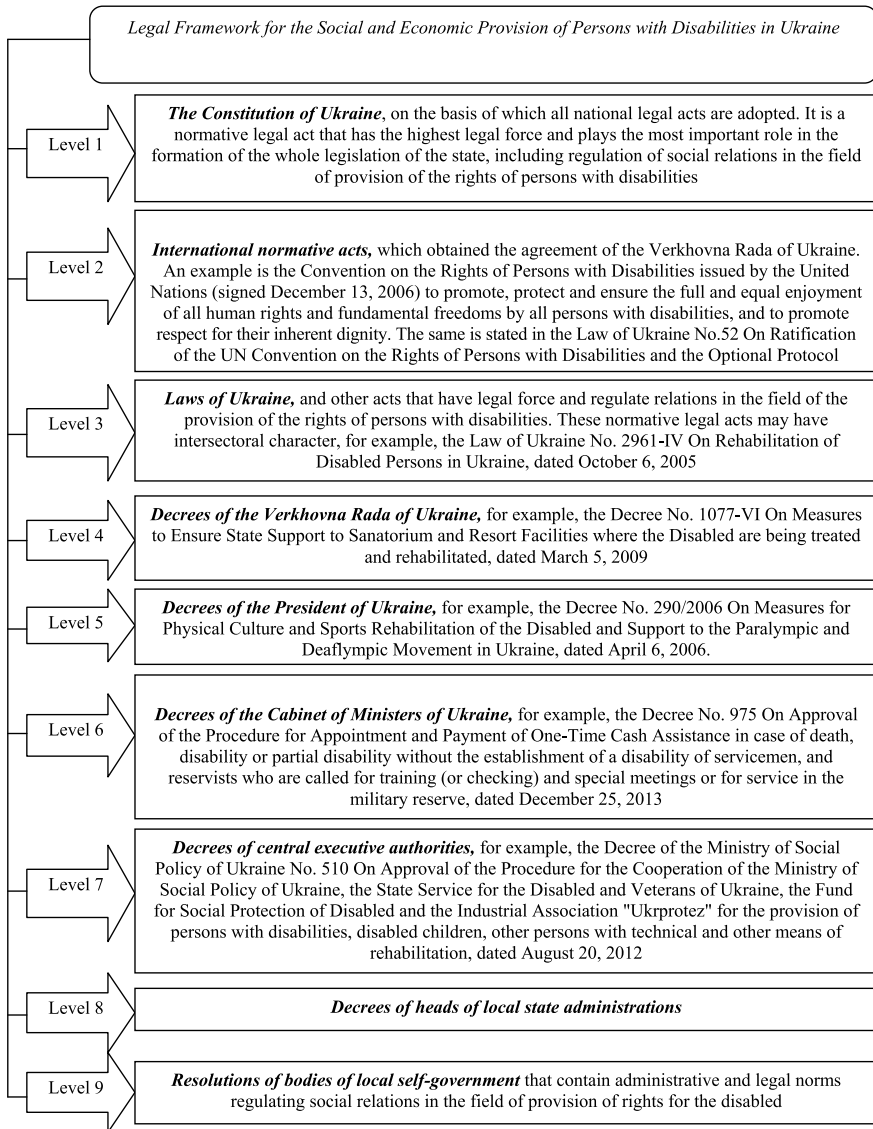


Fig. 1 Legal framework for the social and economic provision of persons with disabilities in Ukraine. *Source* Own results

of subordinate normative legal acts, which adversely affects the level of security and information provision of such persons. It should be noted that in order to improve the legal regulation of the social and economic provision of persons with disabilities, the existing wide range of subordinate normative legal acts could be systematized in one by-law or generalized in the law, the Code of Social and Economic Security. A good example of this is the European Code of Social Security, adopted on April 16, 1964, which has been ratified by a large number of countries. This document contains statements on disability assistance, so the need to adapt domestic legislation to this type of normative legal act is relevant for today. Therefore, ratification of such a European code is among the promising directions of improvement of the regulatory and legal regulation of the provision of persons with disabilities. Undoubtedly, experts in this field should express their vision and considerations. The regulation of the social and economic protection of persons with disabilities in a separate section of such an act, taking into account the relevant legal aspects, can contribute to significant positive changes in the lives of people with disabilities in Ukraine (Kopylenko et al. 2016; Gryshova et al. 2017a).

Thirdly, the settlement of issues related to the information provision of persons with disabilities. This direction plays an important role in providing the disabled with necessary additional materials. This issue in Ukraine is urgent for resolution, and therefore requires the improvement of the regulatory framework for informing the population.

Fourthly, the level of legal regulation for the prevention of disability in the domestic legislation is in an improper condition in comparison with foreign ones. In the author's opinion, this issue should be solved in the context of the priority of improvement of the regulatory framework on labor and health protection, and rehabilitation of the disabled, which, in turn, will help not only improve the efficiency of existing state programs, but also preserve the health of people with disability and the population of the country in general.

The state provides exclusively state-financed organizations providing social services with financial support, and subsidies. As a result, such state-financed organizations become monopolists and it leads to distorting the market for such services. The current fiscal legislation in Ukraine is based on the concept that social services are provided to categories of people living in difficult conditions a priori in budget institutions (and not in non-state institutions) and are financed by the items of expenditures "Social protection and social security." Such a rule of law violates the principle of equal access of non-state providers of social services to obtain funding (Gryshova et al. 2017b).

To improve the quality of domestic legislation aimed at the social and economic provision of persons with disabilities, it is necessary to draw the attention of researchers to problematic issues, the solution of which would contribute to the dignified life of the disabled in Ukraine and their effective integration into society. The conceptual points that require attention in the direction of qualitative social and economic provision of persons with disabilities include:

- (1) further harmonization of domestic legislation with international standards;
- (2) improvement of procedural norms related to the establishment of the appropriate status of a disabled person and his social and economic provision;
- (3) improvement of the regulatory framework for the social and economic provision of persons with disabilities and its main elements;
- (4) strengthening control over the level and quality of the social and economic provision of persons with disabilities;
- (5) increasing the effectiveness of coordination activities between state and non-state bodies, enterprises, institutions, and organizations, whose activities are aimed at high-quality social and economic provision of persons with disabilities;
- (6) establishment of mechanisms for the functioning of medical, rehabilitation, and other facilities where persons with disabilities are held or staying;
- (7) development of effective mechanisms for financing the social and economic provision of persons with disabilities (Gryshova and Shabaturova 2014; Gryshova et al. 2017c).

We consider it expedient to pay special attention to the fact that, first of all, it is necessary to improve the legal regulation of the social and economic provision of persons with disabilities in Ukraine due to improper regulation of the activities of state and non-state bodies and organizations, which are entrusted with the functions of the social and economic provision of persons with disabilities. The Institution of the Ombudsman is one of the most effective institutions that ensures a proper social and economic provision of persons with disabilities. He is one of the effective legal institutions that was established as a result of democratization of the mechanism of state power in the countries that began to build a social state and form a civil society. This institute operates in more than 100 countries of the world. There are various models of such an institution, which differ in their ombudsmen's powers, their place in the system of state authorities, organization of work, territorial framework of activities, etc. (Banakh 2014).

In Ukraine, the Institution of the Ombudsman has been constantly developing recently, as evidenced by the formation of such institutions as the Authorized President of Ukraine on the Rights of Disabled People. It is impossible to avoid the international experience of such institutions, which are classified as specialized ombudsmen in the world. A foreign experience shows that the effectiveness of such an institution increases greatly by the division of spheres of control between specialized ombudsmen. Specialized ombudsmen have been successfully used in different countries of the world for a long time. Thus, in most countries, there are ombudsmen for the rights of the child, the protection of the rights of the elderly, national and ethnic minorities, consumers, on issues of equal opportunities, information and in the fields of labor and social relations. Furthermore, there are student, military, tax, business ombudsmen, and others in some states.

5 Conclusions

Overall, taking into account all issues identified during the analysis, one can conclude that the current regulatory framework for the social and economic provision of persons with disabilities is at a very low level and does not correspond, to a certain extent, to international standards and standards that each social democratic should adhere to state. Consequently, the author focused his attention to those problems and possible directions for their solution to improve the regulatory framework of the state in certain spheres of the social and economic provision of persons with disabilities in order to improve their livelihoods.

The key issues of the legal regulation of the social and economic provision of persons with disabilities are the following: lack of approved state strategic plans and program documents, in particular such as the Concept and the National Strategy of the Social and Economic Provision of Persons with Disabilities in Ukraine, as well as the Plan of Measures for their Implementation; insufficient development, systematization, and implementation of instruments of the mechanism of institutional regulation of the social and economic provision of persons with disabilities in Ukraine—state standards of the social and economic provision, licensing, and accreditation of the organizations providing social and economic services; gaps in fiscal legislation that violate the equality of organizations providing social services for the social and economic provision of persons with disabilities in accessing funding from budgets of all levels.

The conceptual points that require attention in the direction of qualitative social and economic provision of persons with disabilities include: further harmonization of domestic legislation with international standards; improvement of procedural norms related to the establishment of the appropriate status of a disabled person and his social and economic provision; improvement of the regulatory framework for the social and economic provision of persons with disabilities and its main elements; strengthening control over the level and quality of the social and economic provision of persons with disabilities; increasing the effectiveness of coordination activities between state and non-state bodies, enterprises, institutions, and organizations, whose activities are aimed at high-quality social and economic provision of persons with disabilities; establishment of mechanisms for the functioning of medical, rehabilitation, and other facilities where persons with disabilities are held or staying; development of effective mechanisms for financing the social and economic provision of persons with disabilities.

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Part III
Leadership in Business and Economics

State Budgets and Leading Approaches for Balanced State Finance



Tatiana Veynbender and Anna Fadeeva

Abstract Our paper focuses on the aspects of financial balance and success of a state as a global leader represented by the creation, maintenance, and preserving the state budget. We argue that healthy state finance all together make any country in the world a global leader when it comes to economic and geopolitical position. We use the example of the United States of America to demonstrate how the budgetary processes are designed, operated, and optimized. Moreover, we analyze the budget devising, approval, and implementation using the US case study. In addition, we contemplate on the budget surplus and polemize on its use and importance in the healthy state finance. We come to a conclusion that a budget surplus for any given country, or a state is predefined by the government adhering to strict and unchanging laws, regulations, as well as standards. It might be tempting to change the rules of the fiscal and budgetary game as the political and economic situation evolve but the economic history teaches us that the rules of the game cannot be changed while the game is played. We conclude by stating that true (geo)political leaders in our complicated global and digitized world need to have healthy and balanced budgets.

1 Introduction

The financial success of a person, institution, and even a state is determined by how well the country manages its finances, incomes or revenues, and the expenses. The effective management of the financial as well as natural resources of an entity is premised on a sound budgeting process, and therefore a good budget (Mishra and Singhanian 2014; Newbery et al. 2018). A budget, in its simplest form, is a breakdown of all expected or projected revenues, and how the same is anticipated

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or planned to be spent. Indeed, Hofstede (2012) defined a budget as a financial plan for a particular period, which includes revenues, costs, expenses, and other resources estimates for that particular period. Evidently, from this definition, from an individual's perspective, the budgeting process requires the capture of all the revenues and projected expenses (Jankelová et al. 2017). However, at the organization, and moving on to the state or national levels, more so in countries, such as the United States, that have a two-tier government, the budgeting process, and by extension, the output, or the budget, is a rather complex process.

The different interests, goals and objectives, and other parameters cause the complexity of budgets at the government or state levels. Indeed, Poterba and Rueben (2001) observed that budgets, at the state level, are rather complex and require proper planning and implementation for the realization of the goals or the objectives of the budget. In agreement, Cloutier and Langley (2017) observed that in a government or state level, the process is complicated and the failure by the different parties to agree results in a fiscal fallout and ultimately, shutdown of government until such a time that the parties involved can come to a consensus. Accordingly, the formulation or the development, and implementation of a budget requires bringing or coordinating different stakeholder groups; adherences to the laws regulations, and policies set to manage or guide the budgeting process; ensure that the budgets so developed take into consideration public interests and priorities as per the public's objectives; and take into consideration factors in the external operating environment.

2 Budget Development Process Leadership and the Law Aspect

A budget, as elucidated above, captures the revenues and expenses estimates of an entity, with the objective being to ensure that the budget is at least balanced, where the expenses equal the revenues, or to get a surplus, a situation in which the revenues exceed the expenses. This explanation of the budgeting and budget process is quite simplistic but provides an overview of the basics of the budgeting process, and the goals or objectives that guide such a process. The same principles apply to any other balance of resources (Kuzmin 2015; Lisin et al. 2015).

At the national or state level, even though the basics are the same, the process is rather complicated (Strielkowski and Höschle 2016). We will use the case of the United States in order to demonstrate how the whole process works. We assume that since the United States can be considered one of the world's economic leaders due to many factors and peculiarities of its economic and historical background, its example of state budgeting and state finance might be inspiring for the others.

The United States has two tiers of government: the federal and the state levels of government. The leaders of the different arms of the governments, as observed by Klarnar et al. (2012), at the two levels, have to ensure that the budgets reflect the overall national goals and objectives. The achievement of such alignment requires

close leadership and cooperation between the different governmental institutions in the budgetary making process, from the pre-budgeting period, budget formulation, to the implementation and execution.

Upon election, the President of the United States takes on different responsibilities, key among them being the head of the government. As the head of the government, there are different projects that the President must implement within the course of discharging its mandate to the people. In this capacity, the President of the United States acts as the chief accounting officer. More particularly, performing this role, the president, or generally, the executive or the presidency, conducts revenues and expenses, working with the different institutions of the government. Indeed, according to Poterba and Rueben (2001), the executive, or the presidency, issues out requests from the different government departments, which are then collated to form the president’s budget that is presented to congress for approvals. The United States Government (2018a) in concurrence observed that the first phase in the budgeting process is the submission of proposals from the government’s agencies and departments (Fig. 1).

These proposals are then used, as observed above, to create the Presidents’ budget for presentation to the congress. Within the budget, according to Rekova et al. (2018), are the revenues, from sources such as taxes and other revenues from individuals and businesses or debt from selling of bonds and bills, while the expenses included items such as provision of social security services, interest on debts, and other expenses and the costs met by the government.

The budget proposal, from the collation of proposals from different parts or arms of the government, is then submitted to the appropriate legislature for debate and passage to be signed into law eventually. According to the information gleaned from the United States Government (2018b) website, the Senate and the House of

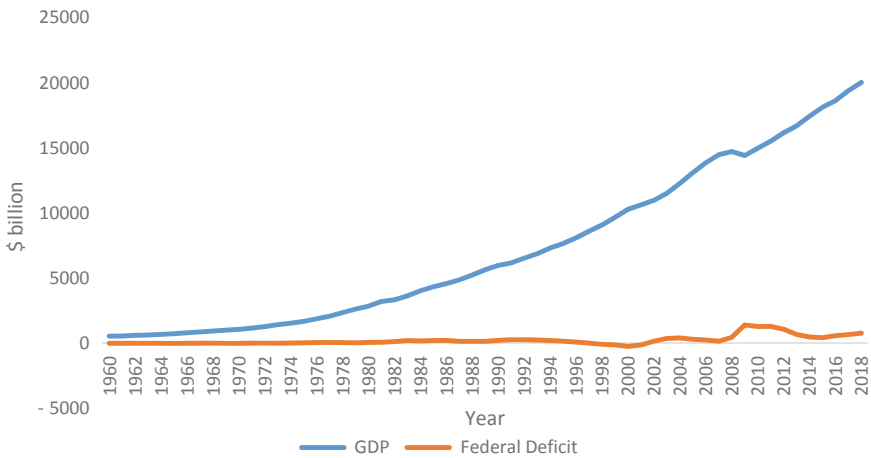


Fig. 1 United States budget spending: GDP and federal deficit (1960–2018). *Source* United States Government (2018a)



Fig. 2 Diagram of preparing and approving of the United States budget. *Source* Own results

Representatives create budget resolutions premised on the proposal brought into the legislature by the head of government. The resolutions are then used by the appropriations committee to distribute funding, which are presented to the chambers, in the form of bills, which are then signed into law by the president once passed in these stages. Evidently, the process of creating and implementing or executing budgets is a very elaborate process at the federal level. It is the same case at the state level.

At the state level, the head of government is the governor. The head of the government therefore, just as was the case at the federal level, at the state level, a budget's revenues and expenses are set by head of government, legislature, or by an independent commission. Indeed, According to Hou and Smith (2010), at the state level, despite the fact that the state legislatures wield a lot of budgeting power, the governors, who are the heads of government, propose the budgets, and also have veto powers in some states. The veto powers imply that they can strikeout or disagree with some line items, which are then excluded from the budget. The whole process can be better illustrated by a diagram (see Fig. 2).

Further, with the budgeting balancing requirements, states are not supposed to carry forwards budget deficits, which then necessitates a method of ensuring that the expenses and costs do not exceed the revenues. According to Gamage (2010), in a situation where there is an apparent shortfall in the inflows or revenues, the heads of government, the governors in some of the states in the country, have the power to withhold money allocated or appropriations to agencies or different arms of the government. Important to note, the different services that the government at different levels offers to the populace are funded by these budgets, and therefore, improper management could result in the closure of government. In that case, it is evident that the President, at the national level, and the Governor, at the state level, should be exemplary leaders to foster the achievement of the goals and objectives of the administration, as facilitated by the budgets.

3 Leadership Aspect of Budgeting and State Finance

The role of leadership in ensuring the success of a budgetary process, more particularly, from the heads of government is invaluable. As enumerated by Gamage (2010), who opined that the leadership, in this case, the governor and the president, plays an important role in ordinary budgetary politics and foster institutional design policy to improve the budgeting process. Indeed, Alt and Lowry (2000), enumerating

the importance of partisanship in fostering the success of the budgeting plan highlighted the political problem of bipartisanship or divisions within the government and their subsequent adverse effects on the entire budget making process. The complexity associated with the budgeting process at the national or state level, therefore, requires adept leadership to ensure the success of the budgeting process, covering the submission of proposals to the president or governor at the state level, signing a bill into law and in so doing mitigating the likelihood of closure of government. The closure of government, according to the Government of the United States (2018), could imply that the citizens are not able to access services such as grants, tax refunds, and other social services. It is therefore important for the different levels of government, more particularly, the leadership, to ensure the creation and implementation of a budget. To do so, there is a need for a legal, regulatory, and other measures to ensure the success of the budgets.

As intimated within the arguments developed herein, it is evident that the budgeting process is a highly regulated and standardized process. Firstly, the process of the presidency or the governor developing the budget is evidently premised on particular standard operating procedures, which dictate that submissions should be made from agencies and government institutions. Indeed, according to Klarner et al. (2012), there are specific laws and regulations, or standards that have to be adhered to when formulating and implementing the budgets. For example, according to Poterba and Rueben (2001), enshrined in the constitution, the law or statutes, or independent commissions, or institutions such as National Association of State Budget Officers (NASBO), are standards, rules, and regulations such as the balanced budget requirements, which mandate the presidency, governors, or their respective legislatures. These laws are there to ensure that the expenses, at all times, do not exceed revenues, and debt is not accrued for recurrent expenditures. Other important laws, regulations, and policies that affect or touch on the process of creating and implementing budgets include Tax and Expenditure Limitations (TELEs), such as Colorado's Taxpayer Bill of Rights (TABOR); and Taxpayer Transparency Act in 2007, as well as other regulations ensure the operational effectiveness and efficiency of the system, which entails mitigating deficits (Eliason and Lutz 2018).

In order to achieve a budget financial surplus as a given country, or a state, it is important for the government to adhere to such laws, regulations, and standards. The laws should be unchanging as the rules of the game that when once set should remain in place for the whole duration of the game.

For example, according to Gamage (2010), budget restrictions, such as legal balanced budget requirement and state budget office or the Congressional Budget Office's on policies and regulations, are aimed at mitigating a deficit. Other factors to consider in the process of creating and implementing a good budget include changes in the external environment, such as the state and federal and state government's budgetary cuts, which results in lower funds available to implement budgets (Klarner et al. 2012); economic performance, with recession and bursts having different effects on the taxes collected and other related issues (Gamage 2010); and changes in technology among other issues. More particularly, for focusing on economic performance, such as recession or booms, the government will experience

decreases or increases in taxes collected, and in turn, premised on that will change the tax rates to reflect the changes in the operating environment.

4 Conclusions

All in all, one can see that healthy state finance, state budgets, as well as state budgets deficits all constitute a very complicated business. Even such advance world economic leaders as the United States have to stick to a very complicated and complex procedure that allows to plan, maintain, and run a balanced budget. Many other countries attempt to borrow the blueprint but with regard to the above one needs to remember that simply copying solutions from other countries is not going to ensure the success in financial sphere of a given country. Each economy has its own problems and its own path; therefore, healthy and unhealthy state budgets are something that only true leaders can successfully mitigate and control.

One would probably agree with us that true geopolitical (and political) leaders in our over-complicated global and over-digitized world need to have healthy and balanced budgets that adhere to simplistic and transparent rules. The rules should be made simple and should be observed by all parties involved in shaping up healthy and balanced state finance.

Finally, we have to state that in spite of the different interests, goals, and objectives, and a plethora of other parameters that bring in chaos to planning and executing budgets at various strata of governance level, the process is achievable and can be learned through trial and error. There is a certain degree of complexity involved but there is nothing true leaders would not be able to cope with.

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Leading Approaches to Managing Organizational Portfolio in a Dynamically Changing Environment



Irina Tkachenko and Marina Evseeva

Abstract Achieving market leadership for modern companies, especially high-tech companies, is associated with intensive innovation aimed at advancing technology development. Project portfolio management—a toolkit that has been widely recognized in managing a set of organization’s projects in international practice, and Russia is going through a stage of comprehensive theoretical understanding. At the same time, it is the management of the project portfolio that is considered the basic tool for implementing the strategy of the project-oriented organization. Project portfolio management is associated with the manifestation of an organization’s dynamic capabilities. The portfolio of innovative projects of a modern company, as the embodiment of its strategy aimed at technological leadership, should have built-in functions of flexibility and adaptability in a dynamically changing external environment. The practical implementation of these functions can serve as real options, as the possibility of correcting the discrete phases of portfolio projects.

1 Introduction

The competitive environment of modern organizations, especially those high-tech and knowledge-intensive ones, is characterized by extreme dynamism and uncertainty. Achieving leadership in product and technology markets is not only possible with the continuous improvement of existing technologies, a necessary condition is proactive innovation activity—activity aimed at advancing development (Hauser et al. 2006). The natural format for the implementation of innovation is a project approach. Following the classic idea of the nature and properties of innovations as introduced innovations (Schumpeter 1942), we follow the interpretation of an inno-

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vative project as “a project with a content as applied research and/or development, their practical use in production or implementation” (Sicotte et al. 2014).

It is natural to assume that in a high-tech organization at any given time of various stages of implementation there are several projects, multi-projects, or programs that are innovative and form a portfolio of innovative projects. Project portfolio management is the management of a collection of projects and programs to achieve the organization’s strategic goals (PMI 2013). Project portfolio management includes evaluation, selection, prioritization, balancing of projects within the available resources, as well as continuous assessment of the compliance of the project results with the company’s strategic goals (Ghasemzadeh and Archer 2000; Engwall and Jerbrant 2003). There are a number of opinions that portfolio management is a way to implement an organization’s strategy (Morris and Jamieson 2005; Artto and Dietrich 2004; Cooper et al. 1999; Killen and Hunt 2010; Lowstedt et al. 2018). Patanakul (2015) considers the compliance of the strategy, adaptability to external and internal changes, the expected value of the portfolio at the strategic level, the predictability of the results of portfolio projects, transparency of decision making on the operational level at the strategic level.

Thus, the purpose of the portfolio of innovative projects is the organization’s leadership in the market of technologies, products, and services. The goal of managing a portfolio of innovative projects is to ensure the organization’s flexibility and adaptability in a changing environment. The specific objectives of managing a portfolio of innovative projects include (1) dynamic assessment of the compliance of the portfolio profile with the relevant parameters of the technology market; (2) selection of innovative projects that ensure the rapid development of technologies and products and/or the creation of market niches; (3) the creation and use of mechanisms and algorithms to quickly reconfigure the portfolio in response to a changing market situation.

A company’s ability to effectively manage a portfolio of projects is attributed to its dynamic capabilities (Killen and Hunt 2010; Daniel et al. 2014; Clegg et al. 2018). The practical implementation of the dynamic abilities of a firm can be considered using the functions of real options as a way of interacting with the uncertainty of the external environment (Brennan and Trigeorgis 2000).

2 Literature Review

Analysis of foreign scientific literature has shown that project portfolio management of the organization (Project Portfolio Management) is a rather popular research topic over the past 10–15 years. This is primarily due to well-established links between the practice of strategic management and the organization’s project portfolio management (Prencipe and Tell 2001; Artto and Dietrich 2004; Cooper et al. 1999; Meskendahl 2010; Martinsuo 2013; Lowstedt et al. 2018). A characteristic feature is the theoretical approach of research. The most significant results among them, in our opinion, are that project portfolio management has been identified as an organiza-

tion's dynamic capabilities (Killen and Hunt 2010). It is also important that two levels of key attributes of project portfolio management efficiency (Patanakul 2015) and prospects for the implementation of dynamic capabilities in information the organization's project portfolio management system (Daniel et al. 2014) have been identified. The effect of environmental uncertainty on the formation of project portfolios (Petit 2011) has been formalized, and the phenomenon of consumers integration and their impact on the success of an organization's project portfolio management (Voss 2012) have been found. It should be noted that the issues of formalizing and improving the processes of project portfolio management in the last decade have somewhat lost their relevance in the foreign scientific environment, apparently due to the intensive development of standardization in this area of management. In the Russian studies, on the contrary, the subject matter is the methodological support of basic processes for managing the company's project portfolio: developing criteria and indicators for selecting projects into a portfolio (Yevtushenko 2017), balancing mechanisms and evaluating portfolio performance (Afonichkin and Afonichkina 2016).

Attention should be paid to the prevalence of financial performance indicators, which does not always correlate with the strategic nature of the organization's project portfolio that can include projects with no direct commercial effectiveness, but with long-term structural, organizational, or market advantages. In both foreign and Russian studies, the results of applied research are rarely offered, which is probably due to the intraorganizational, process character of the study object and the lack of open data. In addition, it should be noted a clear lack of research in the field of management of the company's innovative projects portfolio. We see this as a kind of omission—the differentiation of research in the field of innovation and project portfolio management as a practice of implementing the strategy does not allow to build a holistic basis for managing the organization's innovative activities from the perspective of portfolio management tools, while it is this tool that allows the organization to be flexible and adaptable to dynamically changing external environment (Petit 2011). In our opinion, the management of a portfolio of innovative projects has specific features, and a high degree of unpredictability of the environment places special demands on the mechanisms of management and presentation of the results of a projects portfolio.

3 Dynamic Abilities and Real Options

The foundation for the emergence of a company's competitive advantage is the system of valuable, rare, unimulated, and irreplaceable resources of an organization (Barney and Clark 2007). But the possession of resources itself is not enough to maintain the firm's competitive advantages in a dynamically changing environment (Teece 2007). The ability of an organization to integrate these resources, create their uncopyable combinations, strengthen, and divide is known in theory and practice of management as dynamic capabilities (Eisenhardt and Martin 2000; Teece et al. 1997). The company's dynamic portfolio management capabilities include the ability for

managers to make decisions on the allocation of company resources in a portfolio and project routinization (Hermano and Martin-Cruz 2016), fix and respond to deviations in the strategic portfolio matching, which allows for reallocation and re-prioritization of projects (Jonas 2010), aggregate and for dissemination of the knowledge gained from the implementation of other projects in the project activities of the organization (Brady and Davies 2004). The speed of the company's adaptation to the requirements of the external environment depends on how embedded these abilities are in portfolio management processes.

Considering the management of innovative projects portfolio as a specific dynamic ability of an organization, it is important to understand exactly which management processes ensure its implementation in the company's practice. Based on the study of literature sources, we have identified the following processes:

- Assessment of strategy conformity. This process provides a dynamic assessment of the parameters of the portfolio of innovative projects regarding the current strategy of the organization and allows for timely identification of deviations between the portfolio results and the achievement of the organization's goals. The assessment may also be valuable for the actualization of the company's strategy itself, provided that the portfolio is systematically assessed for environmental parameters, primarily of a market and technological nature.
- Systematization of the learned experience in the implementation of portfolio projects. Allows to create an intraorganizational base of best practices and a platform for project routinization.
- Routinization of the projects. It provides an opportunity to get predictable results of the implementation of individual portfolio projects, reduce the risks of an organizational nature, and increase the project efficiency.
- Moving resources. The process is aimed at the efficient allocation of portfolio resources among projects, which makes it possible to focus resources on the most priority projects.
- Prioritizing portfolio projects. The process of systematically assessing portfolio priorities in accordance with the required results and ranking projects to obtain the maximum possible effect from the aggregate results of portfolio projects.

It can be seen that all the above processes are focused on the intraorganizational manifestation of the dynamic abilities of the company. However, the purpose of the portfolio of innovative projects is to ensure the company's competitive advantages in technology and product markets. Therefore, portfolio management in the perspective of a firm's specific dynamic ability must include processes that are tuned to take into account environmental factors. The basic process here should be the assessment of external compliance. This is a process of comparative assessment of the technological and product parameters of the portfolio relative to the external environment. The assessment is aimed at identifying deviations of the portfolio parameters from the parameters of the competitive environment, for example, technological lag. The project composition of the portfolio essentially depends on the results of this assessment. Orientation to external indicators does not contradict the

essence of the portfolio of projects, which consists in ensuring the achievement of the strategic goals of the organization, if one of them is technological leadership.

The next important element is the interaction of the portfolio of innovative projects with the uncertainty of the external environment, which increases with an increase in the level of technological efficiency of the industry market where the company operates. Uncertainty is a source of threats and opportunities, depending on the nature, having both negative and positive impact on obtaining project results and the portfolio as a whole. In a highly dynamic competitive environment, portfolio managers of innovative projects should have access to tools that enable them to respond quickly to emerging opportunities and threats (Gemunden et al. 2018). We hold the view that here the toolkit of optionally forming a portfolio of innovative projects can be successfully used. In modern scientific literature, the position prevails that real options should be considered in the context of increasing the accuracy of evaluating the innovative projects efficiency where traditional investment analysis methods are not fully suitable due to the static nature and the impossibility of taking into account investment opportunities (Amram and Kulatilaka 1999; Boer 2002; Mun 2002; Firsova 2018). In our opinion, consideration of the real options from the perspective of the dynamic abilities of a company should be done (Brasil et al. 2018; Kylaheiko et al. 2002). In this article, under a real option, we understand the possibility of changing the course of project implementation (Buhvalov 2004), thereby reacting flexibly to the possibilities and threats of the environment, which is characterized by high uncertainty. The use of a real option provides variability in decision making under uncertainty with the discrete formation of new project conditions (Firsova 2018). Of course, this opportunity increases the cost of the project. However, at the same time, the project increases its strategic value. Real options are classified into three large groups—(1) options for changing the scale; (2) options for waiting; (3) flexibility options. The first group of options is related to the possibilities of deciding whether to expand or reduce the scope of project implementation, depending on market conditions. The second group of opinions is dealing with the possibility of changing the parameters of the project. The third is with the possibility to postpone investment decisions until more accurate information becomes available (Boer 2002). Thus, at the level of individual innovation projects of the portfolio, this is about creating opportunities for the manifestation of managerial flexibility and variability, ensuring the organization's ability to adapt to the changing demands of the external environment. And when it comes to the level of the portfolio of innovative projects, the whole issue is about the possibility of modeling and developing the dynamic capabilities of an organization in managing a portfolio of innovative projects.

4 Empirical Research

In August 2018, we conducted a study with the purpose to identify the basic processes for managing portfolios of innovative projects in large and medium-sized high-tech Russian enterprises. The study was conducted with the usage of sociometric methods

by compiling and processing particular prepared questionnaires. Twenty-three large and medium-sized enterprises of the Ural region were selected for participation in the study; by type of activity, the production of electronic components, equipment for radio, television, and communications related to high-tech industries; production of measuring instruments, control, management and testing; manufacturing of aircraft, including spacecraft. In addition to the type of activity, the criteria for the formation of the sample were as follows: (1) at least 20% of the total annual volume of investments—investments in innovations; (2) existing organizational structure of project management (project office, corporate standards); (3) including indicators of innovative development of the company into the strategy. The questionnaire was developed with 20 questions, grouped into four blocks:

1. General characteristics of project activities in the organization.
2. Portfolio management processes for innovative projects, including performance evaluation.
3. An indirect view of the manifestation of the organization's dynamic capabilities in managing projects portfolio.
4. Methods of accounting for factors of uncertainty and variability of the external environment of the organization in the formation of tools for managing the portfolio of the organization's innovative projects.

Processing of the survey results showed the presence of primary elements of a structured portfolio management of innovative projects in the surveyed enterprises. At 90% of the enterprises in the sample, a project management system has been formed—a corporate methodology has been developed, an organizational structure and a process model for managing projects and programs have been created. About 55% of enterprises have a corporate document that formalizes the management of a portfolio of projects and programs, functions are assigned to the project management office, projects are selected by financial performance criteria into portfolios (i.e., the portfolio has a net present value equal to the sum of the reduced costs of individual projects), targets and indicators are defined efficiency of project portfolios—achievement of target indicators of enterprise strategy. At 20% of enterprises in the sample, the portfolio of innovative projects is accepted as the one to be separated from the total portfolio, and for its implementation, a separate pool of resources has been established, performance indicators have been set, taking into account not only commercial efficiency and strategic compliance, but also environmental parameters. At the same time, these provisions are not formalized in any way. And only at one enterprise out of 23 participating in the survey, management has ideas about how to interact with uncertainty, variability, and dynamism of the external environment by incorporating real options into the portfolio of innovative projects, but in practice these methods are not applied.

5 Conclusions

Summarizing, it is necessary to emphasize that as a key element of the adapting process of the portfolio of innovative projects to the requirements of a dynamically changing environment, we consider taking into account the compliance of the portfolio profile with external factors and including real options into the portfolio of innovative projects. Accounting for the parameters of the external environment allows you to create relevant innovative projects portfolios that can provide technological or product leadership of the organization. At the same time, the selection criteria for projects in the portfolio should not be limited to indicators of commercial or financial efficiency, since individual innovative projects may be of strategic value and of paramount importance for the organization to maintain long-term competitive advantages. The inclusion of real options in the innovative projects portfolio makes it possible to be quick and flexible in making management decisions regarding emerging opportunities and threats, thus effectively interacting with the uncertainty of the external environment. Formalization and implementation of these elements will provide an opportunity to model and develop the dynamic capabilities of the organization and maintain the stability of its competitive advantages.

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Integrated Assessment of Leading Strategic Sustainability for Integrated Business Structures



Vera Alekseenko, Nika Seredina and Viktoriya Kosaynova

Abstract Integration, globalization and informatization in the modern market all cause the acceleration of reproduction processes cyclicity, contribute to an increase in the degree of stochasticity and variability of the external and internal environment which leads to a decrease in manageability and increased risk and weakly structured nature of the process of strategic management in integrated business structures. Based on the provisions of theories of synergy and system genetics, the formation of an integrated methodology for assessing the leading strategic sustainability determines the importance of not just the availability of a set of resources, but also the level of their compatibility and contingency. Our proposed integrated assessment methodology provides for an assessment of the actual state of resource support for the subjects of integrated business structures that take into account the market capacity and annual rated capacity. Based on the calculation of the levels of local and integral strategic sustainability of resource provision, the final indicators of local and integral sustainability are estimated taking into account the magnitude of profit and sales volumes of products. Our methodology would allow business entities to make rational management decisions that are strategically important for the successful business. This brings an update to the need and justifies the timeliness of its development to enhance the strategic stability of companies operating under high-risk environmental conditions.

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1 Introduction

In the process of market transformations and changes in the ways of interaction between business entities, the forms of identifying resources in the production and management processes also get modified. The role of network resources necessary for the implementation of the strategic management process not only for individual companies but even more for integrated structures is growing. In accordance with the changing understanding of the economic essence of resources, the processes of their transformation get also modified, which leads to a change in the obtained result. The increase in the value of strategic management resources as a result stimulates the continuous development of key competencies at the level necessary for the formation of technological, socio-economic, institutional conditions that ensure the successful development of new dynamic capabilities based on assessing the strategic sustainability of resource support for integrated business structures.

The distinctive characteristics of the development of the economy in the beginning of the 21st century are the processes of integration, informatization, globalization, which form the market for the world leading countries. These processes cause the acceleration of reproduction processes cyclicality, contribute to an increase in the degree of stochasticity and variability of the external and internal environment which leads to a decrease in controllability and increased risk, and makes the structure of the management process in integrated business structures (IBS) weak (Nezhnikova 2015).

In comparison with the production activity of autonomously functioning business entities, the integration processes of enterprises make the level of business more complex; therefore, the issues of assessing the strategic stability of resource support for integrated entities become especially relevant. In order to find a remedy against the negative impact of factors caused by the globalization of socio-economic systems, it is necessary to ensure the sustainability of resource flows, build economic and resource security which cause the growth of competitiveness and resource potential of IBS subjects.

Conquering and strengthening market positions requires a strategic approach from top managers and managers of the companies being part of IBS since strategic stability plays a priority role in comparison with the short-term goals of maximizing profits. The essence of the theory of strategic stability is considered in detail from the perspective of mathematical models. A lot of criteria, models and methods for determining stability have been developed with reference to technical systems, including the Raus-Hurwitz criteria, Mikhailov criteria and Nyquist criteria (Khasheva and Molchan 2014).

Sustainability of socio-economic systems due to variability and non-linear development is a more complex concept. In this connection, theories of synergetics and system genetics are used to study the strategic stability of resource support for such systems (Prokopenko 2014; Borisova 2010).

Based on the provisions of these theories, when determining the complex of strategic stability indicators, it is necessary to identify the essence of resources in

relation to the economic category under study. Clarification of accepted modern approaches to the identification of resources as an economic category (Tis et al. 2003; Burney 1991; Mahoney and Pandian 1992; Cool et al. 2002; Orekhova 2017) allows the formulation of our own definition of the term “resources” with reference to the economic justification of the importance of IBS strategic stability.

Resources are specific assets involved in the production and investment process with the goal of creating an additional value (cost) of integrated business structures that enable enterprises to implement business strategies that enhance the socio-economic and organizational-managerial effectiveness and ensure strategic stability.

2 Resource Provision of Integrated Business Structures

Based on the proposed definition in order to form a set of evaluation indicators, Table 1 shows the grouping of resources that ensure the sustainable development of IBS.

Iversen (2000) proves that the enterprise can receive a positive economic effect provided that there is a complementarity of company internal resources. In accor-

Table 1 Classification of resources that ensure sustainable IBS development

Resource group	Tangible asset	Intangible asset
<i>Group I. Internal resources</i>		
Financial	Number and structure of own, attracted and borrowed funds	<ul style="list-style-type: none"> – Access to investment and borrowed resources – Liquidity of financial assets
Material and technical	<ul style="list-style-type: none"> – Specificity of material and technical assets (investments in equipment) – Presence of a unique production chain – Amount of financial investments used for expanded reproduction 	<ul style="list-style-type: none"> – Availability of access to raw materials – Uniqueness of the applied technology
Organizational	Existing communication channels of the enterprise	<ul style="list-style-type: none"> – Intellectual property – Business processes – Organizational culture
<i>Group II. Network resources</i>		
Marketing	<ul style="list-style-type: none"> – Management of market channels – Brand value, goodwill 	<ul style="list-style-type: none"> – Suppliers loyalty – Client work features – Stakeholder loyalty
Social	Information interactions	Level of trust among IBS subjects

Source Own results

dance with this, the resources shall be classified according to the degree of their complementarity (see Dubrovsky and Orekhova 2011):

- Resources providing negative synergetic effect when conjugated;
- Resources providing “zero” synergetic effect when conjugated;
- Conjugated resources, the joint use of which will have a positive economic effect.

Obviously, the level of complementarity is largely due to the influence of the non-material component of resources, which are predominantly internal. However, the integrated interaction of business entities increases the growth of the importance of network resources for obtaining a positive synergetic effect. Thus, IBS strategic stability determines the importance of not just the availability of a set of resources, but the level of their compatibility, conjugation.

For the process approach, the Harvard scientific paradigm serves as a demonstrative scientific basis for substantiating the importance of resource conjugation (Osadnik 2001; Katkalo 2002). The paradigm is the standard of thinking of leading specialists in various sectors of the economy. It is a set of values, a field of knowledge that characterizes the importance and influence of resources on the production process, while taking into account the cause–effect relationships with regard to the quality characteristics of the products. The paradigm is expressed in the totality of scientific achievements embodied in the model of posing the problem, where a certain level of knowledge in a specific scientific field is fixed at a given time interval.

In the process of market transformation, changes in the ways of interaction of the subjects the paradigm is corrected, improved. As a result, a new “layer” of knowledge is being formed, based on previous experience, but providing a fundamentally new system of views on the solution of pressing economic problems. During the last decades of evolution of the resource paradigm, a number of researchers (Kostiuk 2016; Kharchenko 2015; Kudina 2012) distinguish three generations in its development (Fig. 1).

Feedback in this model demonstrates a cyclical, continuous production process. As a result of a repetition of the production process through regular training, innovative, technological, and intellectual development of employees and the enterprise as a whole take place. This makes it possible to identify hidden reserves, increase the effectiveness of the use of technical equipment and technology, use information technologies more actively, and thereby develop the resource potential that ensures the strategic stability of integrated business structures. Therefore, feedback in the structure of the model is a modernizing component, which is of great strategic importance.

The essence and significance of resources in the paradigm significantly changes in the direction of increasing the importance of non-material (innovative, intellectual, information, network, management, etc.) assets. If material resources directly used in the production process are of special importance at the first stage, at the second stage, the focus shifts towards gaining access to strategic resources (financial, organizational), providing the additional impulse necessary to form the competitive advantages of the company. At the third stage, the role of network resources necessary for the implementation of the strategic management process not only for individual companies but even more for integrated structures is growing.

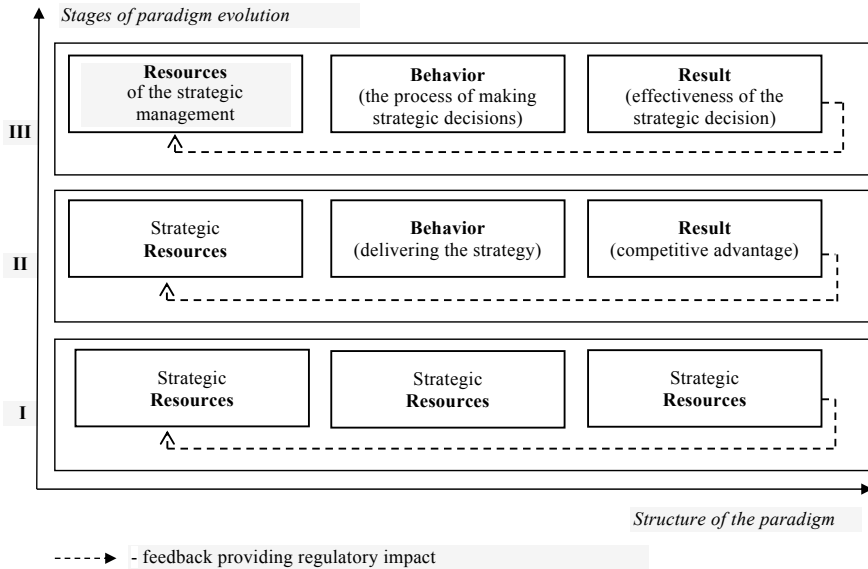


Fig. 1 Evolution of the Harvard resource paradigm. *Source* Own results

In accordance with the evolution of the economic importance of resources in the management process, the behaviour of business entities also changes. At the first stage, the behaviour concerned the performance of production processes necessary for the manufacture of products; at the second—the behaviour changes in the direction of creating organizational conditions for the implementation of the adopted strategy focused on strengthening market positions; at the third stage, the goal of the behaviour is the implementation of all stages of the process of making strategic decisions that ensure sustainability and affect the development of dynamic capabilities in the formation of key competencies of business entities.

In accordance with the change in the importance of resources and the behaviour of business entities, the result also changes significantly. If at the first stage, the result was production of products of specified quality and volume, at the second stage, it was obtaining competitive advantages necessary to ensure a stable position in the market, at the third stage, it is promising strategic solutions aimed at long-term sustainable development of integrated business structures. The third stage provides for the continuous development of key competencies at the level necessary for the formation of technological, socio-economic, institutional conditions that ensure the successful development of new dynamic capabilities on the basis of assessing the strategic sustainability of IBS resources.

According to the evolution of the paradigm, the previous models do not deny the preceding ones, but expand the areas of their application, that is, they modify the paradigm and thereby deepen the research results of scientists in assessing the strategic stability of business entities.

The results of the analysis of the structure of the Harvard Resource Paradigm indicate that resources are a backbone from which both the production and organizational management processes start, since for the successful implementation of each of them, not only a strictly defined set of relevant resources is required, but also their rational combination.

3 The Mechanism of Strategic Stability

The strategic sustainability of the provision of resources to integrated business structures is achieved through the development of a comprehensive valuation methodology.

One of the problems of assessing strategic sustainability is the insufficiently developed methodological base, the lack of necessary and sufficient tools for managers to choose alternatives to strategic decisions in the context of uncertainty in the external environment. Therefore, an effective assessment of the strategic sustainability of the resource supply requires the introduction of strategic planning, monitoring and controlling tools to the practice of business structures that enable the development of mechanisms for strategic sustainability.

It is advisable to build the mechanisms of strategic stability on a block basis, taking into account the continuity of the action of dynamic factors, which allows us to orient the operation of the mechanisms for a long-term perspective. The sequence of the functioning of the blocks will make it possible to form the strategic stability of the resource supply for IBS (see Table 2).

The advantages of functioning of the mechanism of strategic stability of IBS resource support are the following (see, e.g. Shashlo 2017):

- allows to plan organizational and management activities;
- allows to form the methodical base of the resource support to IBS in order to make rational management decisions;
- remains stable in critical and high-risk situations through the development of a system to neutralize the negative impact of environmental factors.

The integral indicator of sustainability should reflect the assessment of the dynamics of production volumes and sales of products and the profitability of sales of products (Mishlanova 2015).

The methodology for the integrated assessment of the strategic sustainability of IBS resource support includes a number of stages:

Stage 1: Assessment of the actual state of resource support for IBS subjects, taking into account the market capacity and annual rated capacity. The assessment includes the indicators that are part of the model for the formation of an effective IBS. The model is a multicriterial problem expressed by (1) and (2):

Table 2 Algorithm of functioning of the mechanism of IBS strategic stability resources provision

No.	Block	Functions of the strategic stability mechanism
1	Communication	Collection of information on the influence of environmental factors on the IBS resources
2		Collection of information on the state of the internal environment and the availability of the resource potential of IBS subjects
3	Analytical	Analysis of financial, material and technical, organizational, marketing, social sustainability
4	Strategic decision-making block	Formation and adoption of a general strategy, local and instrumental strategies to ensure strategic sustainability of IBS resources
5	Organizational	Organization of the implementation of strategies
6	Motivational	Motivation of staff to successfully implement strategies
7	Monitoring	Monitoring of the processes of strategies implementation
8	Tactical decision-making block	Making tactical management decisions based on the results of monitoring
9	Organizational	Organization of the process of implementation of management decisions to ensure the tactical stability of IBS resources
10	Motivational	Staff motivation for successful implementation of management decisions to ensure the tactical stability of IBS resources
11	Monitoring	Monitoring of the implementation of management decisions to ensure the tactical stability of IBS resources
12	Analytical	Analysis and evaluation of the implementation of strategies for IBS resources provision

Source Own results

$$\begin{cases} R_1 \rightarrow \max \\ R_2 \rightarrow \max \\ \sum_{n \in N} V_n + \sum_{j \in J} V_j \leq M \end{cases} \quad (1)$$

$$\begin{cases} \left(S_n + \sum_{n \in N} T_n + \sum_{n \in N} L_n + \sum_{n \in N} R_n + \sum_{n \in N} I_n \right) \cdot V_n \\ + \left(S_j + \sum_{j \in J} T_j + \sum_{j \in J} L_j + \sum_{j \in J} R_j + \sum_{j \in J} I_j \right) \cdot V_j \\ \leq (X_j^{\max} + X_n^{\max}) d_k \cdot \left(\sum_{n \in N} V_n + \sum_{j \in J} V_j \right) \leq D_k \\ 0 < V_j \leq \min(B_j, X_j^{\max}) \end{cases} \quad (2)$$

where

- R_1 is the profitability of sales of products i for business entities outside the IBS j at a certain time t ;
- R_2 profitability of sales of products i for IBS business subjects n at a certain time t ;
- $j \in J$ a set of consumer markets of IBS products j that sell products i outside the IBS at a certain time t ;
- $n \in N$ set of consumer markets of products i in the structure of IBS n at a certain time t ;
- $k \in K$ a set of resources that are used to produce products i at a certain time t ;
- V_j sales volumes of products i beyond the limits of IBS j at a certain time t ;
- V_n sales volumes of products i among IBS subjects n at a certain time t ;
- C_j the average selling price of a production unit i outside of the IBS j at a certain time t ;
- C_n the average selling price of a production unit i among IBS subjects n at a certain time t ;
- S_j the self-cost of products i which were sold outside the IBS j at a certain time t ;
- S_n the self-cost of products i which were sold among IBS subjects n at a certain time t ;
- T_j transport and supply surcharge for the sale of products i under the terms of the contract outside the IBS j at a certain time t ;
- T_n transport and supply surcharge for the sale of products i under the terms of the contract among IBS subjects n at a certain time t ;
- L_j a set of indirect taxes associated with the production and sale of products i outside the IBS j at a certain time t ;
- L_n a set of indirect taxes associated with the production and sale of products i among IBS subjects n at a certain time t ;

- R_j a trade surcharge for the products i , which are sold outside the IBS j at a certain time t ;
- R_n a trade surcharge for the products i , which are sold among the subjects of the IBS n at a certain time t ;
- I_j a set of marketing costs for the sale of products i outside the IBS j at a certain time t ;
- I_n a set of marketing costs for the sale of products i among subjects of IBS n at a certain time t ;
- M maximum annual rated capacity of IBS subjects participating in production i ;
- d_k costs of material resources (raw materials) k at a certain time t ;
- D_k availability of material resources (raw materials) k at a certain time t ;
- B_j rated constraints on the sales of products i outside the IBS j at a certain time t ;
- X_j^{max} maximum annual market capacity at a certain time t .

This multicriterial model allows to make timely decisions on changes in the volumes of production (decrease or increase) based on the obtained values of profitability indicators R_1 and R_2 .

Stage 2: Calculation of the levels of local and integral strategic stability of IBS resource support.

Development of a map of market differentiation is based on the definition of the geography of local target segments (product markets) for the sale of products. In order to achieve that, calculation of local profit and output indicators for the main target segments (commodity markets) is done as follows (see (3) and (4)):

$$P_{ijt}^{loc} = V_{ijt} \cdot P_{ijt} \tag{3}$$

$$V_{ijt}^{loc} = V_{ijt} \cdot C_{ijt} \tag{4}$$

where

- P_{ijt} profit received for the unit of products sale i for this target segment j at a certain time t ;
- V_{ijt} volume of output i sold in this target segment j at a certain time t ;
- C_{ijt} price for the products i sold in this target segment j at a certain time t .

In addition, calculation of the integral indicator of profit and output can be expressed as a sum of local indicators (see (5) and (6)):

$$P_{ijt}^{int} = \sum P_{ijt}^{loc} \tag{5}$$

$$V_{ijt}^{int} = \sum V_{ijt}^{loc} \tag{6}$$

Calculations of the level of local stability of IBS resource support are done below (see (7) and (8)):

$$Y_{ij}^{V_{loc}} = \frac{V_{ijt}^{loc}}{V_{ijt+1}^{loc}} \quad (7)$$

$$Y_{ij}^{P_{loc}} = \frac{P_{ijt}^{loc}}{P_{ijt+1}^{loc}} \quad (8)$$

where

P_{ijt+1}^{loc} profit received from the sale of products i in this target segment j in the forecast period of time $t + 1$;

P_{ijt}^{loc} profit received from the sale of the product i in this target segment j in a given time period t .

Calculation of the level of integrated sustainability of IBS resource support can be expressed as follows:

$$Y_{ij}^{V_{int}} = \frac{V_{ijt}^{int}}{V_{ijt+1}^{int}} \quad (9)$$

$$Y_{ij}^{P_{int}} = \frac{P_{ijt}^{int}}{P_{ijt+1}^{int}} \quad (10)$$

where

P_{ijt+1}^{int} the profit received from the sale of the product i in all target segments in the forecasted period of time $t + 1$;

P_{ijt}^{int} profit received from the sale of the product i in all target segments in a given period of time t .

Stage 3: Calculation of the final indicators of local and integral stability of IBS resource support for the period t taking into account the profit and sales volumes i is done as follows (see (11) and (12)):

$$I_{ijt}^{loc} = \sqrt{\left(Y_{ij}^{V_{loc}}\right)^2 + \left(Y_{ij}^{P_{loc}}\right)^2} \quad (11)$$

$$I_{ijt}^{int} = \sqrt{\left(Y_{ij}^{V_{int}}\right)^2 + \left(Y_{ij}^{P_{int}}\right)^2} \quad (12)$$

One can see that the value of the indicator varies from zero (low level of stability) to one (the highest level of stability). The dynamics of the indicators of strategic stability of IBS resource support indicates reduction or increase in resistance both in general and in terms of geographical and commodity characteristics. In addition, the dynamics of indicators characterizes the degree of accounting for the criterion of economic and industrial security and the risk factor and uncertainty surrounding the business environment.

4 Conclusions

All in all, it appears that conquering and strengthening market positions requires a strategic approach from top managers and managers of the companies being part of IBS since strategic stability plays a priority role in comparison with the short-term goals of maximizing profits.

Our results and findings might help IBS subjects to make rational management decisions that are strategically important for the successful business. In view of the sufficient simplicity and adaptability to various spheres of activity and the possibility of carrying out the assessment in dynamics over a long period of time, the methodology can be mastered by managers of the involved structural units without the involvement of specialized agencies.

Our methodology allows to embed and to take into account a large number of factors of the interaction of IBS subjects with the external environment, stakeholders, enterprises influencing the leading strategic stability of IBS resource support which will provide opportunities for modelling business processes with the involvement of a larger number of changing parameters.

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Leading Behavioral Characteristics and Investors' Decisions: An Experimental Approach



Anna Blajer-Gołębiewska, Leszek Czerwonka and Arkadiusz Kozłowski

Abstract Individual investor behavior is subject to many factors including risk attitude, behavioral heuristics, cognitive biases, herding, etc. The aim of this study was to investigate the impacts of selected behavioral factors of an investor as a leader in making individual investment decisions. To achieve this aim, we conducted an economic experiment which allowed us to observe individual behavior of subjects on an artificial stock exchange. In this study, we investigated two groups of factors, applying: (1) psychological scales assessing two independent thinking styles: rational and experiential which may affect investors' decisions and (2) measures of subjective self-assessment of investors' characteristics, namely their expected emotional response to losses and risk attitude. We claim that subjects behave according to how they perceive themselves and how they would like to be perceived. Therefore, they are subject to confirmation bias. Analyzing data from an economic experiment, we found that propensity to invest in the case of male subjects was influenced by the following six factors: experience in investing, need for cognition, faith in intuition, risk attitude, age and the time of decision making. Higher need for cognition refrains some investors from investing when they regard the amount of possessed information as insufficient. Faith in intuition increases the propensity to invest in the case of seemingly positive financial results of the analyzed firm. However, both results concerning rational and affective thinking styles hold true only for male subjects. In the case of female subjects, no significant impact of the need for cognition and of faith in intuition was reported. Propensity to invest in the case of female subjects was influenced only by two factors: expected emotional response to losses and trust

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in strangers. Curiously, these are the remaining two factors that did not affect male subjects' investment decisions.

1 Introduction

In the research literature, there are studies on factors influencing individual investment decisions, such as risk attitude, behavioral heuristics, and herding. Previous studies indicate that factors that may affect the size of investment in shares and the willingness to invest some or all of its assets include: risk aversion, gender, age, or cognitive biases. In this study, we investigated two groups of factors, applying: (1) psychological scales assessing two independent thinking styles: rational and experiential which may affect investors decisions and (2) measures of subjective self-assessment of investors characteristics, namely their expected emotional response to losses and risk attitude.

As far as thinking styles are concerned, the rational analytical one is represented by need for cognition. We hypothesize that higher need for cognition refrains some investors from investing when they regard the amount of possessed information as insufficient. The experiential one is intimately associated with affectation, emotion, and faith in intuition. We hypothesize that higher faith in intuition increases a propensity to invest in the case of seemingly positive financial results of the analyzed firm. Referring to the measures of objective assessment of investors' characteristics, we consider factors that have already been measured in some previous studies. However, we think that the measure of subjective self-assessment of these factors made by investors themselves may change the results. For instance, when subjects assess themselves as risk lovers, they may in fact behave riskier to confirm their self-judgment (confirmation bias). Similarly, subjects reporting less emotional response to losses will display less emotional behavior.

Consequently, the aim of this study was to investigate impacts of selected behavioral factors on individual investment decisions. We conducted an economic experiment which allowed us to observe individual behavior of subjects on an artificial stock exchange. The remainder of this paper is organized as follows. In the first section, we review the literature on factors affecting investment decisions. In the second one, the research design and methodology are presented. In the next section, we discuss data analysis and present results. In the final section, we provide discussion and conclusions.

2 Selected Behavioral Factors Affecting Investors Decisions

Two of the key factors affecting the propensity to invest are risk and ambiguity. There is a huge number of measures of risk attitude (e.g., Safe Asset vs. Risky Task) (Kramer and Weber 2012) and behavioral measures of risk (e.g., Sequential Investment Task;

Frey et al. 2015; Mentel and Brożyna 2015; Mentel et al. 2017). However, very often a researcher has to decide between the measurement accuracy of a chosen method and its simplicity. Simplicity is highly desirable especially in complicated experiments, when there is no time for time-consuming tests. It makes researchers sure that the task will be understandable to respondents. One of the simple risk elicitation methods is a risk question from the German Socio-Economic Panel Study (SOEP) (Dohmen et al. 2005, 2011). Respondents are asked to answer the following question: ‘How do you see yourself: are you generally a person who is fully prepared to take risk or do you try to avoid taking risk?’ by indicating a number on an 11-point scale: from 0 (‘unwilling to take risks’) to 10 (‘fully prepared to take risk’). This seemingly simple method leads to reliable results. Dohmen et al. (2005) found this measure to be ‘a good predictor of actual risk-taking behavior’. In the cases of specific behaviors, the context-specific risk measures were best predictors. However, according to the study, the general risk question (from SOEP) was also found to have a substantial predictive power, overperforming an incentivized lottery measure. The general risk question has already been used in studies related to investment decisions, for instance by Fossen (2011). The results of his study suggest a positive relationship between willingness to take risk and entrepreneurial investment (measured by the ownership of private business equity).

The results of many studies in the field of psychology and experimental economics confirmed that people are ambiguity averse. They prefer the lottery with known probabilities instead of a similar lottery with unknown probabilities (Ellsberg 1961). This means that investors must take into account both risk and ambiguity when making investment decisions. Research on the relationship between ambiguity and the propensity to invest was conducted by, among others, Antoniou et al. (2015) and Dimmock et al. (2016). In empirical research, it is difficult to find the right proxy for describing ambiguity. However, some research (especially in the area of medical decision making) shows that ambiguity, uncertainty, intolerance, and need for cognition are correlated (Buhr and Dugas 2006; Ianello et al. 2017). One of the most popular psychological tests to measure need for cognition is the Rational Experiential Inventory (REI) (Pacini and Epstein 1999). The REI test helps to evaluate how people process information (Norris et al. 1998) measuring two thinking styles: rational (analytical, cognitive, conscious) and experiential (affective, emotional, intuitive, precocious). Consequently, REI consists of two subscales: Need for Cognition and Faith in Intuition. Each of these subscales consists of five elements—statements. Subjects are asked to determine to what extent they agree with each of these.

The other factor that influences investors decisions is the expected emotional response to losses. According to the prospect theory, ‘losses loom larger than gains’ (Kahneman and Tversky 1979). When asked to judge their feelings about possible outcomes, people often state that losses have greater effect on their feelings than gains. This is how loss aversion arises. As a result, expected emotional responses to losses and gains may also be correlated to a risk attitude. Furthermore, previous studies revealed that older adults cope better with losses, e.g., in a study by Bruine de Bruin et al. (2018) older adults reported relatively lesser negative emotions after

losses. Lucarelli et al. (2015) were analyzing accumulation of emotional experience. They found that emotional response to gains and to losses is trend dependent.

Almost each real-life investment is associated with some level of risk. However, people still decide to invest. The possible explanation for this fact is the phenomenon of trust. When people trust, they take risk into consideration, but they are able to accept it because they hold positive expectations about the outcome. As a result, trust is claimed to allow people to invest or to invest more. There is no commonly accepted explanation of trust. It can be analyzed in terms of ‘economic preferences, social norms, personality traits, group processes or expectations’ (Evans and Krueger 2009).

The relationship between age and investing was also examined in previous studies. The conclusions from empirical studies are as follows: people become more risk averse as they get older. Bonsang and Dohmen (2015) stated that the age-related change in risk attitude can mostly be ascribed to cognitive aging. Christelis et al. (2010) found that the propensity to invest in stocks is strongly associated with cognitive abilities. This relationship occurs for both direct stock market participation and indirect participation through mutual funds and retirement accounts.

Previous studies show the impact of gender on stock market investments. Women are found more risk averse (Barsky et al. 1997; Croson and Gneezy 2009) and then less likely to participate in the stock market or possess a high share of stocks as their investment (Barber and Odean 2001; Dwyer et al. 2002; Halko et al. 2012). In a study on behavior of mutual fund investors, it turned out that women take risk to a lesser extent than men. However, the difference is largely not due to gender but due to knowledge disparities (Dwyer et al. 2002). In a study of the relation between gender and share investment in Finland, information on risk attitudes from 81 investment advisers and managers, 77 finance students and 177 private banking customers was collected (Halko et al. 2012). The researchers did not notice the difference with respect to stock market participation, while men had a larger share of shares in their investment portfolio than women. The observed differences resulted from woman’s greater risk aversion. What is important, they found that a self-reported financial risk attitude is a better measure than traditional measures, based on allocation to hypothetical investments or certainty equivalent (Halko et al. 2012; Kalinowski 2017).

In this study, we focus on selected psychological characteristics of investors: expected emotional response to losses, need for cognition, faith in intuition, risk attitude and trust in strangers. We also considered age, gender, previous experience in investing in stock markets and the time of decision making.

3 Experimental Design and Methodology

For the purpose of the research outlined in this paper, we designed an experiment. At the very beginning of the study, the subjects were informed that they would take part in a game resembling stock market environment and their aim was to earn the highest possible amount of artificial money. In order to achieve reliable results of the

study, we had to increase the subjects' cognitive effort and to motivate them to make decisions which they really consider to be optimal. Consequently, we introduced financial incentives: the subjects, who scored more than the average, were supposed to receive 50.00 PLN (about 11.50 EUR).

After assessing their expected emotional response to losses, the subjects entered the artificial stock exchange. At the beginning, they could observe changes in prices of a firm listed in the stock exchange. The subjects were told that they would observe 'a firm selected by the computer program', but they were not conscious that for each of them it was the same firm. The observations covered 10 periods. Prices were fluctuating, but the trend was positive, and at the end of the last period of observation, the price was 11% higher than at the beginning of the first period of observation. The subjects were also given the same additional information on this company, including its size, market sector and its financial indicators (in relation to the average values of indicators in the sectors). The aim of such a manipulation was to create exactly the same, positive perception of the firm perceived by each investor. This enables researchers to compare investment decisions of the subjects. Then, the subjects were given artificial money of 10,000 monetary units, and they could decide about the amount they would like to invest in the shares of the company. At the final phase of the 'game', the subjects were asked to fill in REI-10 scale (with Need for Cognition and Faith in Intuition subscales) (Pacini and Epstein 1999), to assess their risk attitude using SOEP risk question (as described in Sect. 2) and to assess their trust in strangers on the basis of the statement 'Nowadays, one cannot be too careful in dealing with others' (5-point Likert scale). Then, they answered questions about their age, gender and experience in investing in stock markets. The final score of each subject and information about winning was revealed in the last screen of the experiment.

4 Findings

The final sample included 319 subjects (female = 204; male = 115), mainly students of the last year of Master studies in finance and lecturers in finance. About 7% of subjects had some previous experience in investing on stock exchanges (mean = 1.5 years, s.d. = 0.5). Due to the nature of the experiment, the distribution of the invested amount is limited to the range [0, 10,000]. Most of the observations (82%) are full thousands and zeros. About 13% of observations fall on extreme values (0 and 10,000). The distribution is not regular; it is multimodal; in particular, it is far from the normal distribution. Conducting preliminary statistical analysis, we found a relationship between gender and the amount invested (Fig. 1). In the association plot indicating deviations from independence in contingency table, if the observed frequency of a cell is greater than the expected one, the box rises above the baseline and is shaded dark gray; otherwise, the box falls below the baseline and is shaded light gray. The height of the rectangles is proportional to the contribution of a cell to Pearson's chi-squared statistics, and the width is proportional to the expected count corresponding to a cell. The plot confirms that there is a relationship between gender

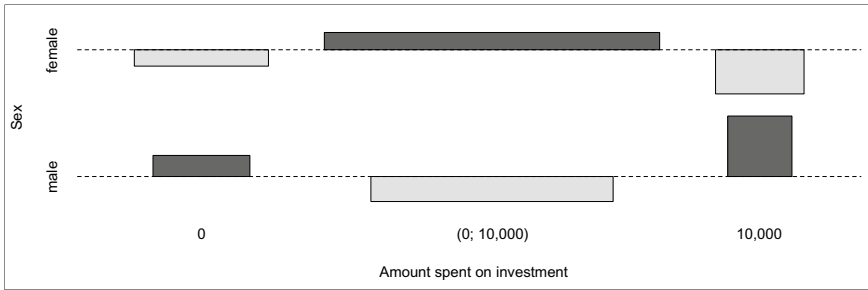


Fig. 1 Association plot indicating deviations from independence in contingency table. *Source* Own results

and the amount invested (p -value for chi-squared test for independence equals 0.029). Women were much less likely to make extreme choices (zero or the total amount). A particularly large disproportion exists in the case of choosing the entire amount for the investment—men much more often opted for such options than women.

The modeled variable Y is a part of the available funds spent on investments, $Y \in [0, 1]$, i.e., Y can take fractional values, 0, and 1. For this reason, the fractional regression model will be appropriate (Papke and Wooldridge 1996; Ramalho et al. 2011). It was decided on a two-part model that includes a binary model for the discrete component, and a fractional regression model for the continuous component. The choice of the two-part model, i.e., separate models for limit value and for the fractional part, instead of the one-part model, i.e., the same approach to all observations, was dictated by two reasons. First, the non-trivial part of the observation falls on the boundary value 0 (no investment). Second, from the authors' prior knowledge, it follows that there are some factors which may affect whether someone makes the investment or not, but if the investment is made, different factors may explain the amount invested.

In the binary component, we modeled the propensity to invest, i.e., the probability of a decision to invest any amount of artificial money; hence, the explanatory variable takes value 0 if $Y = 0$, and 1 if $Y > 0$. All units from the research sample were used to estimate the binary model, which here is a logistic regression. The models are estimated by the maximum-likelihood method. Then, a fractional regression model was used to model the amount invested where only observations with values from the interval $(0, 1]$ were used. Logit was used as a link function. The model was estimated by Bernoulli-based quasi-maximum likelihood.

Regarding the results of the preliminary analysis, the models were estimated separately for women and men. Furthermore, final models, after exclusion of statistically insignificant variables ($p > 0.1$), were presented and analyzed. Two specifications tests were performed for each model. The first is the well-known RESET (Regression Equation Specification Error Test) created by Ramsey (1969) and intended originally for linear regression. However, it can be adapted to any generalized regression model. Here, the maximum power of the linear predictors was set at the level of 2. The sec-

Table 1 Binary component of a two-part model—logit specification ($Y = 0$ vs. $Y > 0$), male

	Estimate	Std. error	<i>t</i> value	Pr(> <i>t</i>)		Odds ratio for change	
						Unit	Range
<i>The Full Model</i>							
Intercept	3.534	5.484	0.644	0.519			
Age	-0.251	0.197	-1.274	0.203		0.778	0.366
Experience	-1.308	0.628	-2.082	0.037	**	0.270	0.270
EER to losses	0.337	0.215	1.564	0.118		1.401	3.850
Need for cognition	-0.059	0.083	-0.713	0.476		0.943	0.412
Faith in intuition	0.144	0.064	2.268	0.023	**	1.155	17.835
Risk attitude	0.280	0.106	2.634	0.008	***	1.323	16.432
Trust	0.323	0.361	0.895	0.371		1.382	2.637
Time	0.335	2.064	0.162	0.871		1.398	1.247
$R^2 = 0.202$ RESET(2) test = 0.497 GOFF test = 0.646							
<i>The Final Model</i>							
Intercept	-1.867	1.167	-1.600	0.110			
Experience	-1.594	0.590	-2.701	0.007	***	0.203	0.203
Faith in intuition	0.148	0.056	2.617	0.009	***	1.159	19.232
Risk attitude	0.230	0.095	2.431	0.015	**	1.259	9.993
$R^2 = 0.145$ RESET(2) test = 0.975 GOFF test = 0.706							

Source Own results

ond test is goodness of functional form test (GOFF), which can also be interpreted as goodness of link test (Ramalho et al. 2013). Both tests for each model indicate that we fail to reject the zero hypothesis that the linear combination of predictors with logit as the link function is the proper choice for the models. Regarding R^2 , the best fitted models are those for males, especially binary models explaining the propensity to invest any money versus total passivity.

According to the analysis of the binary component of the two-part model, we found that statistically significant predictors of investing (vs. not investing) in the case of male subjects were previous experience in investing at stock markets, risk attitude and faith in intuition (Table 1). More risk loving and more believing in their intuition male subjects tended to invest in stock. Interestingly, more experienced in investing male subjects were more likely to refrain from investing. The remaining variables (age, expected emotional response for losses, need for cognition, trust in strangers and the time of decision making process) were statistically non-significant.

Table 2 Fractional logit regression model, male

	Estimate	Std. error	t value	Pr(> t)		Odds ratio for change	
						Unit	Range
<i>The Full Model</i>							
Intercept	-3.053	2.188	-1.395	0.163			
Age	0.135	0.077	1.759	0.079	*	1.144	1.714
Experience	-0.134	0.379	-0.353	0.724		0.875	0.875
EER to losses	0.082	0.104	0.792	0.428		1.086	1.389
Need for cognition	-0.063	0.030	-2.093	0.036	**	0.939	0.386
Faith in intuition	0.024	0.032	0.748	0.454		1.024	1.610
Risk attitude	0.112	0.044	2.519	0.012	**	1.118	3.059
Trust	0.001	0.152	0.005	0.996		1.001	1.002
Time	-1.698	1.002	-1.696	0.090	*	0.183	0.326
$R^2 = 0.098$; RESET(2) test = 0.376; GOFF test = 0.352							
<i>Final Model</i>							
Intercept	-2.075	1.836	-1.130	0.258			
Age	0.125	0.074	1.693	0.090	*	1.133	1.649
Need for cognition	-0.063	0.029	-2.159	0.031	**	0.939	0.390
Risk attitude	0.102	0.043	2.363	0.018	**	1.107	2.770
Time	-1.857	0.928	-2.001	0.045	**	0.156	0.294
$R^2 = 0.083$; RESET(2) test = 0.623; GOFF test = 0.620							

Source Own results

In the group of male subjects, who decided to invest (fractional logit regression model), those who tended to invest more were older and more risk-loving subjects, as well as those with lower need for cognition (see Table 2). They were taking less time to make their decisions.

According to the analysis of the binary component of the two-part model, we found that in the case of female subjects, there was only one statistically significant predictor of investing (vs. not investing): expected emotional response (EER) to losses (Table 3). The more emotional response to losses was expected by a subject, the more probable it was that the subject would invest. In the group of female subjects, who decided to invest (fractional logit regression model), those who were more trusting in strangers tended to invest more (Table 4).

Furthermore, analyzing the whole sample we found some statistically significant pairwise correlations and differences in mean or proportion between explanatory

Table 3 Binary component of a two-part model—logit specification ($Y = 0$ vs. $Y > 0$), female

	Estimate	Std. error	<i>t</i> value	Pr(> <i>t</i>)		Odds ratio for change	
						Unit	Range
<i>Full Model</i>							
Intercept	1.600	3.761	0.426	0.670			
Age	-0.023	0.156	-0.147	0.883		0.977	0.912
Experience	15.727	1881.764	0.008	0.993		x	x
EER to losses	0.477	0.164	2.904	0.004	***	1.611	6.732
Need for cognition	-0.011	0.055	-0.194	0.846		0.989	0.833
Faith in intuition	-0.053	0.046	-1.154	0.248		0.949	0.349
Risk attitude	0.004	0.080	0.055	0.956		1.004	1.045
Trust	0.291	0.278	1.045	0.296		1.337	2.391
Time	0.981	1.391	0.705	0.481		2.667	1.911
$R^2 = 0.055$ RESET(2) test = 0.745 GOFF test = 0.443							
<i>Final Model</i>							
Intercept	0.883	0.389	2.270	0.023	**		
EER for losses	0.460	0.155	2.966	0.003	***	1.584	6.297
$R^2 = 0.031$ RESET(2) test = 0.936 GOFF test = 0.996							

Source Own results

variables. More risk-loving subjects trusted more in strangers ($r = 0.1322, p = 0.0181$) and expected less emotional response to losses ($r = -0.1626, p = 0.0036$). Male subjects, in comparison with female subjects, more often had experience in investing (test for a difference in proportion: $\chi^2 = 13.55, p = 0.0002$), were more risk-loving (test for a difference in mean: $t = 3.26, p = 0.0012$) and were taking less time to make their decisions (test for a difference in mean: $t = -3.06, p = 0.0023$). Curiously, the subjects with higher need for cognition were risk-takers ($r = 0.2271, p = 0.0000$) and they were taking more time to make their decisions ($r = -0.1742, p = 0.0018$).

5 Discussion and Conclusions

The main novel contributions of our study are applications of (1) psychological scales assessing two independent processing modes: rational and experiential which may

Table 4 Fractional logit regression model, female

	Estimate	Std. error	t value	Pr(> t)		Odds ratio for change	
						Unit	Range
<i>Full Model</i>							
Intercept	-1.323	1.223	-1.082	0.279			
Age	0.000	0.050	-0.008	0.994		1.000	0.998
Experience	0.127	0.322	0.396	0.692		1.136	1.136
EER to losses	0.064	0.060	1.065	0.287		1.066	1.292
Need for cognition	0.007	0.018	0.387	0.699		1.007	1.129
Faith in intuition	0.002	0.016	0.100	0.921		1.002	1.032
Risk attitude	-0.001	0.029	-0.035	0.972		0.999	0.990
Trust	0.184	0.090	2.032	0.042	**	1.202	1.736
Time	0.165	0.468	0.353	0.724		1.180	1.115
$R^2 = 0.020$; RESET(2) test = 0.778; GOFF test = 0.778							
<i>Final Model</i>							
Intercept	-0.950	0.197	-4.827	0.000	***		
Trust	0.190	0.092	2.068	0.039	**	1.210	1.770
$R^2 = 0.015$; RESET(2) test = 0.520; GOFF test = 0.518							

Source Own results

affect investors decisions and (2) measures of subjective assessment of investors characteristics.

The propensity to invest in the case of male subjects was influenced by the following six factors: experience in investing, need for cognition, faith in intuition, risk attitude, age and the time of decision making. Male subjects with a higher need for cognition refrain from investing. It is compatible with a hypothesis put forward in the introductory part of the paper, that higher need for cognition refrains some investors from investing when they regard the amount of possessed information as insufficient. The results concerning the impact of faith in intuition on the propensity to invest also support the hypothesis put forward. Faith in intuition increases a propensity to invest in the case of seemingly positive financial results of an analyzed firm. However, both results concerning rational and affective thinking styles hold true only for male subjects. In the case of female subjects, no significant impact of need for cognition was reported.

Our results support the results of studies of Barsky et al. (1997) and Croson and Gneezy (2009) showing that women are more risk-averse. Generally, women’s investing behavior is subject to different factors than in the case of men. However, we did not find a support for the claim that women are less likely to participate in

the stock market or possess a high share of stocks as their investment (Barber and Odean 2001; Dwyer et al. 2002). On the basis of our results, we would rather support the results of the study of Halko et al. (2012) claiming that the observed differences resulted not directly from gender, but from greater risk aversion in the case of women. The propensity to invest in the case of female subjects was influenced only by two factors: expected emotional response to losses and trust in strangers. Curiously, these are the remaining two factors that did not affect male subjects' investment decisions. According to Evans and Krueger (2009), trust is claimed to allow people to invest or to invest more. In our research, this applies only to female subjects. However, analyzing the whole sample we found that more risk-loving subjects trust more in strangers. Probably, they are able to accept higher risk because they hold more positive expectations. Furthermore, rational thinking style (need for cognition) was significantly positively correlated with risk attitude, and negatively with the time of decision making. As we could expect, emotional thinking style (faith in intuition) was positively correlated with expected emotional response to losses. While we are conscious of the weaknesses and limitations of the study, we believe it to be a useful starting point for further investigation into this problem.

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Transport in Macro-Logistic Systems: Leading Tendencies and Perspectives



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Abstract Our paper focuses on the role and influence of transport on the development of the macro-logistic systems which represent a leading trend in transport and logistics nowadays. We argue that the modern transport contributes to the improvement of freight traffic along the entire chain of distribution from the manufacturer to the final consumer. Moreover, we study and analyze the development of transport and logistics services. These services might become one of the key leading factors contributing to the increased competitiveness of the entire logistics system. Our results might be useful for experts in logistics and transport studies, as well as for the entrepreneurs working in the field of transportation, especially those searching for the new leading technologies and approaches and willing to take the risks.

1 Introduction

One would probably agree that the macro-logistic system covers the supply chain in the external environment of the enterprise which means that it is represented by wholesale and retail intermediaries of the commodity market. The transport of this system is represented by vehicles of wholesale intermediaries, retailers, and independent carriers included (attracted) for the provision of wholesale and retail distribution and logistics services (Jacyna 2013; Morganti and Gonzalez-Feliu 2015; or Wu and Haasis 2018).

Wholesalers' vehicles are represented by material handling equipment that combines the transportation and stacking of goods into piles, racks, as well as transport and motor vehicles intended for transporting goods to customers. In addition, this

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group may include tools for small-scale mechanization—hand trucks, car trucks, and related equipment (Czyzewski and Smedzik-Ambrozy 2015; Zitkiene and Dude 2018).

The vehicles of retailers are extremely different depending on the volume of their activities. In large shopping centers, shopping, and entertainment centers, lifting and transport equipment is used to place goods in the warehouse and in the upper tiers of the shelves of the sales area, freight and passenger (passenger-and-freight) elevators, and small-scale mechanization to deliver goods from the warehouse to the sales area. Companies that practice delivery of goods to the buyer, as a rule, carry it out under contracts with independent carriers.

2 Integrating Value of a Logistics Distribution Center

When discussing issues related to the freight traffic in the macro-logistic system, the functions of the subjects of the logistics supply chain should be divided. Therefore, the manufacturer of commercial products—the initiator of its movement along the chain is a consignor from the point of view of a transport worker, and the wholesale intermediary enterprise acts in a two-person job (Fancello et al. 2017).

With regard and relation to the shippers, it is the consignee, and in relation to the next link of the chain—the shipper. The retailer—the final link in the supply chain is always the consignee—the customer for the wholesaler. Delivery of the goods realized by it to the consumer is carried out by the buyer on a personal or public transport. To carry out services for the delivery of goods to the buyer involved vehicles of small and micro-enterprises of transport or individual entrepreneurs (Moskalenko and Yevsieieva 2015; Štreimikienė et al. 2016).

For wholesale enterprises, the issue of cargo delivery for customers is connected with such an organization of work that would ensure the completeness of order fulfillment in terms of volume, assortment, and time of delivery of goods to the distribution network (Lisin et al. 2015; or Bychkova et al. 2018). At the same time, it is necessary to take into account the properties of a product and the characteristics of its consumption, the throughput of roads at a certain time of day.

All this testifies to the importance of consolidating the activities of manufacturers, wholesalers, and road transport enterprises (ATE), aimed at satisfying customers, at fulfilling the principle of trade: “everything is right at the right time, in the right place.”

Compliance with this principle is achieved only when it is possible to effectively combine, above all, the economic interests of all participants in the logistics supply chain. Within this context, the interest of the manufacturer can be expressed by the growth in sales, lack of problems with sales, and stable demand for the products. The interest of retailers is to provide the customer with maximum demand for goods and services, but the goods come from a wholesale intermediary (or manufacturer as shown earlier); therefore, the company is interested in actions agreed with it that ensure mutual economic interest.

A wholesale enterprise—a logistics distribution center (LDC)—an element of integrating the interests of all participants in the supply chain and the entire logistics network including transport; integration not only in terms of the logistic functions associated with commodity-transport flows, but also the integration of the production functions of manufacturers.

At the same time, the interest of the LRC is determined by extracting the maximum profit due to the effective implementation of the sales functions of the manufacturer, ensuring the high efficiency of retail enterprises and respecting the interests of the road transport company (ATE).

ATE-enterprise services, providing a special type of service—a process that adds nothing to the use value of the transported goods, but brings it to the place of consumption. The interest of ATP is determined by the profitability of the operation of vehicles, which largely depends on the distance of transportation, as the basis of pricing for transportation services on transportation is the mileage of the car and the time at work. As a result, ATEs are interested in such routes where there are sufficiently long transportation distances and the volumes of goods transported.

Local retail chains are characterized by a situation that does not meet the interests of the ATE—insignificant distances through the city and suburbs, insignificant transportation volumes (small-lot, small), the lack of permanent routes (due to the situation on the city's roads). Under these conditions, the LDC should solve the problem of ATE's interest in working on logistics retail routes. Most often, it is solved by creating transport and logistics companies. The essence of which is to integrate interests on the basis of corporate relations of logistics distribution centers with large ATEs that carry out freight forwarding services. The essence of forwarding is to perform in the interests of the shipper and the consignee of such works as: information on the progress of transportation, escort, and protection of the cargo; loading and delivery of goods, marking of goods, registration of shipping documentation, preparation of goods for transportation, etc. (Lazarev et al. 2018).

The implementation of these works requires the availability of special equipment and workers of appropriate training and qualification.

Partnerships ATP and LDC allows the first to “transfer” logistics operations with goods to the second, while reducing the fleet of special material handling equipment and staffs. At the same time, there is a release from manufacturers.

The increasing role of vehicles in the implementation of freight transportation, the efficient operation of supply chains and the formation of macro-logistic systems is reflected in the theory of logistics, the emergence of such areas as “transport logistics” and “transport and warehouse logistics,” which are considered and determined by the authors (Nikolaychuk 2011; Fedorov et al. 2016; Ivut' and Kissel' 2012) as an area of research for the continuation of production logistics (micro-level logistics).

ATE can rightfully be regarded as a system, the enterprise whose production activity consists in transforming material elements into a service.

Working on the basis of contracts with LDC, vehicles become a direct participant in logistic processes for the timely execution of orders of the subjects of the logistic chain. In fact, LDC ensures the most effective use of motor vehicles due

to the maximum usage of their capacity and carrying capacity, offering appropriate consignment, ATE, and the supply of vehicles specified in advance (Meidutė 2005).

Successful development of partnerships is possible only on the basis of long-term agreements and joint participation in transportation planning. Subjective–objective relationships in the macro-logistic system need to be considered and formed at all levels of the supply chain. The formation of transport and logistics companies is hampered by uncertainty in the capabilities of partners, assessment of the risk of the transfer of any functions, third-party operations, distrust of insurance companies generated by the instability of the economy, private changes in credit conditions, insurance, or currency exchange rate fluctuations (Jankelová et al. 2017).

The logistics distribution center is an integrating element of the interests of the established logistics system. The integration is based on partnership relations between the subjects of the logistics chain, i.e., joint efforts to achieve the interests of all its participants. The interaction of participants is implemented in several areas:

- legal regulation defining the rights, obligations, responsibilities of the subjects of the logistics chain and ATE when transferring goods to the carrier and back, when goods move between the subjects of the logistics chain;
- economic as a mechanism for using levers and incentives to improve the efficiency of logistics services and transport operations. Of great importance is the motivation of staff, increasing interest in keeping the work;
- rhythm, which determines the timeliness of the execution of orders;
- technological interaction is formed due to the fact that the logistics chain of sequential distribution processes by the subjects of the logistics chain should be considered as a single technological process in which strictly regulated temporary indicators for the production of a certain quantity of marketable products are determined by each participant;
- information interaction is based on a variety of information received from manufacturers, retailers, and distribution centers, which is the basis for the development of measures to intensify the process of product movement, the development of a system of services for wholesalers, retailers and distributors of commodity flows, and the development of a service system.

3 Logistics Services as a Factor of Transport Enterprise Competitiveness

A service as a process can be associated with a product in its material manifestation or not be associated with it, i.e., sent directly to the customer (Kotler 2000). Logistics services wholesale distribution, distribution centers in the supply chain in the course of logistics services can be material, that is, associated with the commodity-transport stream or intangible, run on a commercial basis and not be associated with the goods or transport.

The system of logistics services as a set of services provided by the subjects of the logistics chain and ATE consists of their services to a certain circle of consumers of goods.

Logistics services of the manufacturer of commodity products can be a series of production or sales activities and operations. These are material services aimed at a product, but fulfilled according to additional requirements and conditions of the customer, i.e., paid above the agreed price of the enterprise. Logistics services of retailers are defined as “product augmentation,” as they arise in the process of its implementation.

At present, the development of “product augmentation” by a variety of non-essential services is becoming one of the most effective methods of competition. The assortment and price competition is relegated to the background, since the range of products is slightly different in retail outlets. In addition to services to the buyer, retailers provide significant services to the producer of goods by conducting tastings, participating in advertising campaigns, organizing outbound trade and other promotions that promote new goods, and obtain information about the goods present in the trade for quite a long time.

Separately, it is necessary to dwell on the services of wholesale intermediary, logistics distribution centers integrated with ATE. Characteristic for them is working in a highly competitive market of logistics services where the choice of a wholesale intermediary is determined by the customer based on an assessment of such parameters as order fulfillment time, delivery reliability, availability of necessary stocks, price objectivity of services, preservation of goods, etc. (see Giri and Sarker 2017).

The choice by the customer between large logistics centers, with wide possibilities of rendering logistic and commercial services, and small freight forwarding and trade and intermediary structures is determined by the volumes of products manufactured. The choice largely determines the amount of the cost of transportation, insurance, etc. At the same time, the customer does not always take into account the possibility of significant cost savings from the occurrence of the synergistic effect of obtaining a complex of intermediary services. In particular, we can talk about trade synergies, when the customer is given the opportunity to use common, already available distribution channels for various goods.

The creation of modern terminals, transport, and logistics companies with storage facilities allows us to increasingly offer outsourcing services—transferring certain business processes or production functions to serving another company, which is professional in this field of activity, as defined by Anikin and Rudaya (2009). Depending on the volume of transferred functions and the relationship between them, there are:

- full outsourcing, when the execution of a function (for example, the logistics of production) as a whole or a complete set of any operations (e.g., receiving returns) is transferred.
- partial outsourcing—only a part of the tasks included in the business process is transferred, which is a process that is repeated many times in a clear sequence, measures, efforts, etc., taken to obtain a given result.

The entire set of services provided by wholesale distributors can be divided into three groups: logistics services provided by transport and logistics companies—the first group, the second group is value-added services, but not related to transportation and the third group is non-goods distribution supply chain.

The first group of services is related to the organization and management of the movement of goods between the subjects of the logistics chain, their movement in space and time, which determines such characteristics of the commodity flow as movement speed, mass of goods being moved in the forward direction and in the opposite direction.

The second group of services is logistic services, not related to the transportation of goods, but actively influencing the timeliness and speed of order fulfillment. Carried out in the places of storage of goods and are defined as warehouse work on cargo handling (sorting, rejection, forming sets, and batches of goods) in accordance with the order, taking into account the characteristics of the goods and the vehicle to move it.

The third group of services is defined as “logistics service,” “transport and logistics services,” “logistics services,” but with all the variety of definitions, the essence of these services is largely determined by the concept of “outsourcing” and work not related to the distribution of goods in the supply chain. These services are carried out on a commercial basis. These may include insurance services for goods and/or vehicles, warehousing for the production of material resources, management of sales of finished products of an enterprise (in this case, the existing logistics chain can be used), or the entire logistics system of an enterprise. A separate subgroup of commercial services is represented by transport services: intracity, intercity, and international transportation of goods; compilation of optimal transport routes, implementation of customs formalities, control of the passage of goods along the entire route of their movement, operational communication with drivers, etc. (see, e.g., Zúñiga and Martínez 2016).

4 Conclusions

Overall, our results and findings reveal that logistic information systems allow the practitioners to unlock the functions of management, as well as control over the movement of goods and transport flows and facilitate the exchange of information by all participants including drivers and freight forwarders.

Consideration of the issues of the role, participation, as well as the main and leading tasks of transport in logistics systems allowed us to determine the place of transport in the process of product distribution as an equal, active subject of the logistics supply chains. The concept of “transport” in the context of the processes under consideration also covers vehicles of enterprises producing commodity products operating in the territory of enterprises, as well as transport and material handling equipment operating in production and storage facilities.

Our results might be important for the professionals in the field of logistics as well as regulators and state and private stakeholders aiming at reaching the leading positions on the logistics market by occupying the new niches.

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Leading Approaches to Increasing the Efficiency of the Inventory Process in the Retail Network



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Abstract The inventory process is carried out in every business and state company and is typically obligatory. The support of an efficient IT system in a retail store is one of the most important leading factors improving the efficiency of key business processes, including the inventory process. One of the leading improvements in this process is the ability to enforce data entry. Another factor is the use of modern code readers. This is connected to the necessity to implement many improvements and modernization. However, these costs are completely justified in improving the company's operation. Our paper is dedicated to eliciting the ways for increasing the efficiency of the inventory process in the retail network. Our empirical findings are based on the ERPwincash IT system that is the product developed by the authors and used in Polish business companies. Our results show that professional and modern support of business processes, including the inventory process, is associated not only with the simplification of processes, but also prevents unwanted incidents.

1 Introduction

In Poland, keeping accounting books is a statutory duty of business entities which in particular are obliged to efficient and reliable documentation of their property (Journal of Laws 1994; Jastrzębski 2017). An important process enabling compliance with this obligation is an inventory (annual stock take), which consists of all activities aimed at determining the actual state of the company's assets (Brodzicki 2016). The inventory process is, therefore, a set of actions leading to the determination of the real state of the company's assets at a given time and a comparison of this with the accounting entries, which may result in the need to adjust such records (Zielińska 2016; Madej et al. 2017; Yazdani et al. 2017; Bychkova et al. 2018). Inventory can

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be seen as one of the basic logistics processes, as it often leads to a change in the quantity and quality of the product over time (Pfohl 1998). This process additionally enables effective control of owned resources, which is not only one of the basic tasks of logistics (Empowering Logistics 2018), but also wider management (Griffin 2005; Białowas 2018).

Effective and objective control is of key importance for the correct course of the individual phases to which the logistic system is divided in the context of correct and undisturbed material flow (Pfohl 1998). Correctly carried out inventory process is an important factor influencing an improvement of material management and an improvement of enterprise assets management, in particular by verifying the physical condition and suitability of property components, detecting and accounting for shortages and quality problems. Inventory can be periodic in nature, i.e. from the requirements dictated by the legislator; occasional, or a result from the occurrence of extraordinary events, such as burglary or fires; transfer-receipt, i.e. the need to reliably transfer assets and continuous, i.e. the need to extend this process over time without having to stop the operation of the warehouse (Bach 2015).

The inventory should be carried out by a commission, where the head of the unit employing at most 10 people can appoint a one-man inventory commission. A member of the committee appointed in this way must also form part of an external inventory team if this process is outsourced (Gofin 2018). The use of a modern IT system in this process, in particular an integrated ERP class system, can significantly increase the productivity of inventory teams, as well as improve the legibility and credibility of the company's records (Długosz 2009; Serafin 2014). Such systems facilitate central control of all logistic processes occurring inside the enterprise, as well as a route of integration with the environment such as contractors and clients, which can positively affect the quality of services provided, speed and efficiency of the carried-out processes (Olejarz and Życzyński 2015).

2 Inventory Improvement in Commercial Networks Based on an Integrated IT System

An integrated IT system is an indispensable tool to enable efficient management of logistics processes in enterprises (Kanicki 2011; Haq and Boddu 2017). The researched retail network uses the ERPwincash IT system for this purpose, which supports various inventory methods chosen by management.

Inventories on the Central Warehouse are carried out for the entire stock including storage locations once a year. Every second year they are using a counting service performed by an external company. The ERPwincash system makes it possible to carry out the inventory process using a data collector on which a dedicated module is installed, as well as using the inventory project established and maintained in the ERPwincash system with the ability to load the counting results received from an external company. In this case, an export file based on inventory project defined in

the ERPwincash system will be prepared and exported for the external company and the final counting result will be imported back to the internal system. An important aspect is that the external inventory control is performed directly in the internal system by designated employees.

Inventories in stores are carried out directly in the internal IT system and may apply to the entire range of warehouse, selected groups of goods or even a single item. It is possible to carry out a standard inventory in the system which has a direct impact on the stock value. Saving and approving this type of stocktaking process will generate a report of inventory differences and documents correcting the quantity of goods in the warehouse. It is also possible to make an inventory for information purposes only, without saving changes in the warehouse.

3 Working with ERPwincash IT System

The basic type of standard stocktaking is a full inventory. In this case, all goods that are in the warehouse are subject to this process. For this type of stocktaking, the IT system does not show the goods that are subject to it. Such a list is created dynamically directly during the counting process. Due to the complexity and time-consuming nature of this process, it is often necessary to introduce a temporary restriction of access to other warehouse functions, including temporary limitation of customer access to the sales point, including its closure. In order to prepare this type of stocktaking, the user selects the type “standard inventory” and the warehouse that will be subject to this process (Fig. 1).

In the next step, the user can add sheets to the process for additional counting groups, also called commissions (Fig. 2).

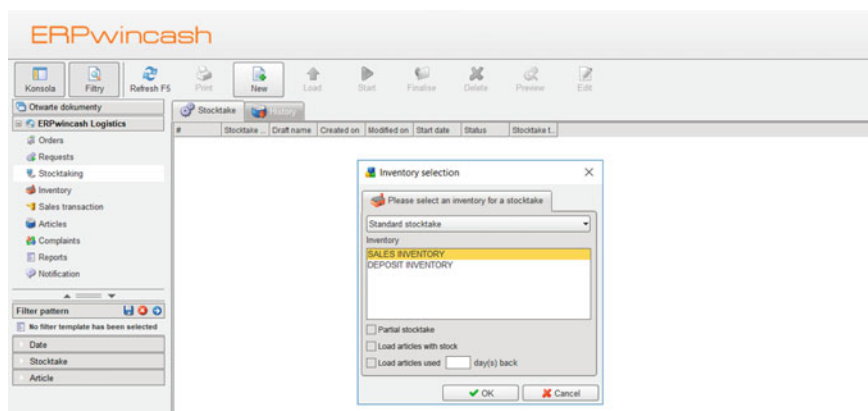


Fig. 1 Selection of a full stocktaking. Source Own results

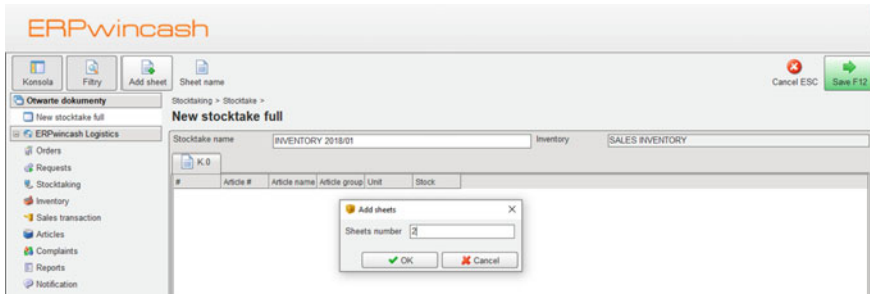


Fig. 2 Adding additional sheets. *Source* Own results

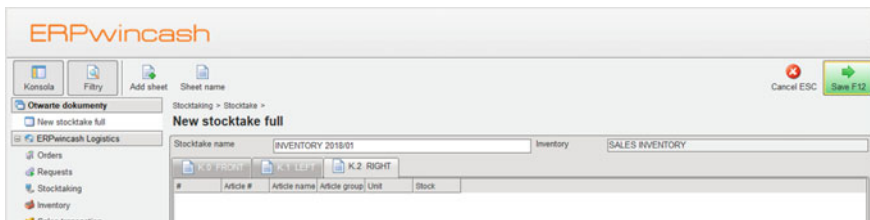


Fig. 3 Defining and naming zones. *Source* Own results

The user gives names to all sheets in order to better define the scope of work for each commission. There is no limit for the number of sheets, however, their number and names should lead to a more transparent division of the store’s inventory into areas. For this reason, commissions can be interchangeably also called (counted) zones. There is no limit for the number of sheets/zones, however, their number and names should lead to a more transparent division of the store’s warehouse into areas. In our example, the inventory manager decided to define three zones named front, left and right. It is easy to see that this operation makes it possible to perform an additional division of the warehouse into counting zones especially for the stocktaking process, which leads to increased efficiency. Bordering such defined zones can be additionally physically marked in a way that is better understood by employees (Fig. 3).

As mentioned above, in the case of a full inventory, the prepared project does not contain a list of articles that will be subject to count, because this list will be created directly during the counting founded items in a given zone. A project prepared in this way can be launched, which will start the stocktaking process. In most cases, the entire warehouse will also be blocked for other activities, including sales (Fig. 4).

Inventory changes the status to “STARTED” and other warehouse processes are blocked (Fig. 5).

After clicking the “LOAD” button, the user will be asked to select the zone that will be counted. The first user selects the “FRONT” zone (Fig. 6).

For stock counting the user can choose one of following methods of entering data:

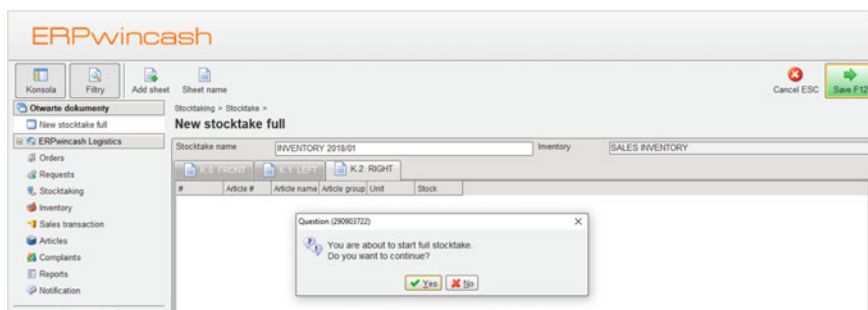


Fig. 4 Start of the inventory process. *Source* Own results

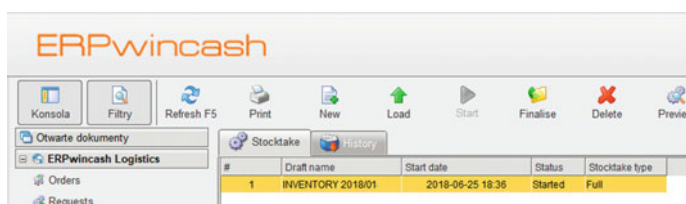


Fig. 5 Completed full inventory. *Source* Own results

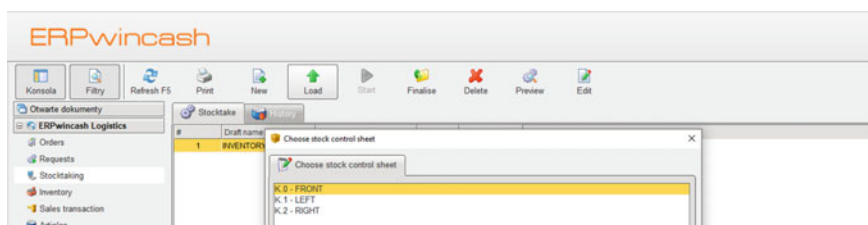


Fig. 6 User's selection of the zone. *Source* Own results

- scanning every single article using a scanner connected to the computer;
- scanning only one article and manually enter the counted quantity;
- article scanning using a dedicated program installed on the data collector.

During the data entry, the user can label any line with any comment. In our case, the user found three pieces of a given item in the FRONT zone and decided to move two of them to the “RIGHT” zone (Fig. 7).

After completing the counting in a given zone, the user closes the input window (Fig. 8).

If different users have been defined in the store to perform the counting of individual zones, the inventory process can be much more efficient due to the support for parallel operation of individual users (Fig. 9).

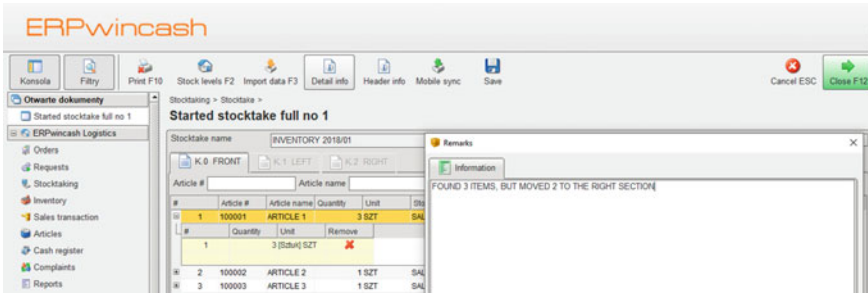


Fig. 7 Entering information for the item. *Source Own results*

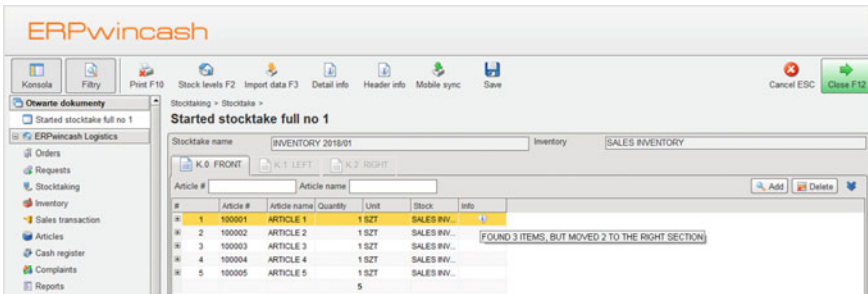


Fig. 8 Completion of FRONT zone counting. *Source Own results*

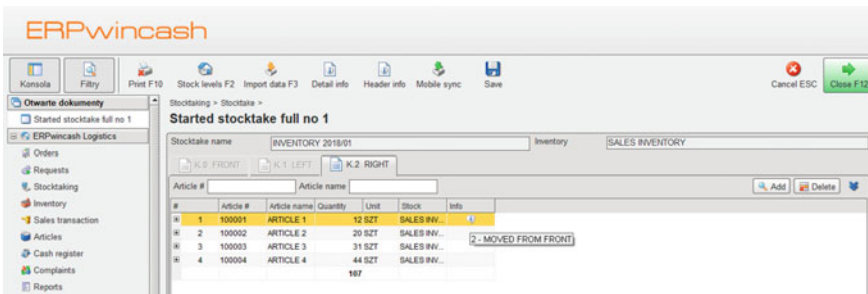


Fig. 9 Counting sheet for the RIGHT zone. *Source Own results*

The user also has the option of entering additional text for the entire sheet. He can then determine at what stage he has completed his work, or make other remarks about his counting area (Fig. 10).

During the counting process, as well as after its completion, a user with sufficient rights has the opportunity to review the data entered by particular groups both on an aggregate basis and in details visible in individual zones (Fig. 11).

The detailed data will be visible at the bottom of the preview window after the user selects the article of interest (Fig. 12).

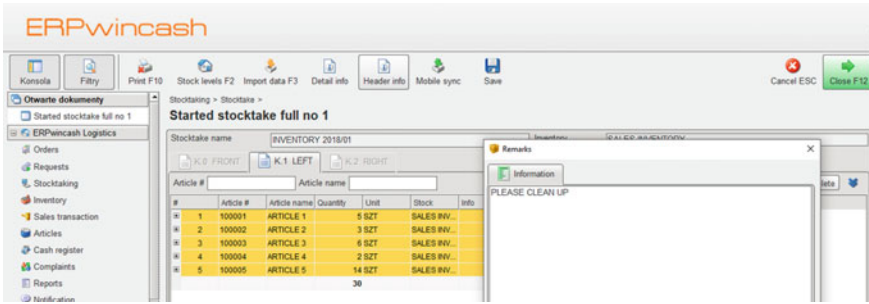


Fig. 10 User’s notes about the LEFT zone. *Source Own results*

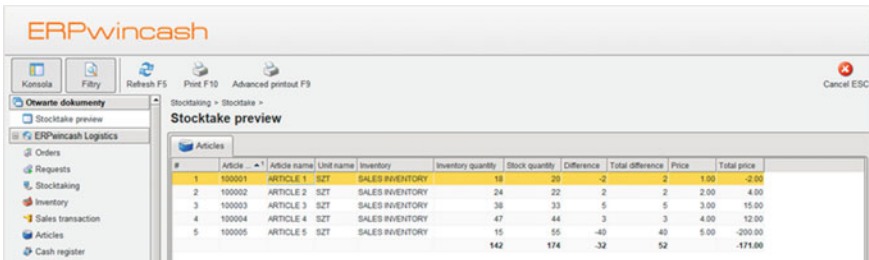


Fig. 11 Preview of the aggregated data entered. *Source Own results*

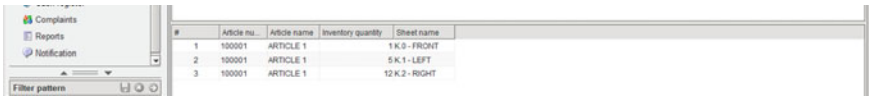


Fig. 12 Detail view. *Source Own results*



Fig. 13 Stocktaking approval. *Source Own results*

After completing the counting by all commissions, the inventory manager has the right to approve and close the stocktaking (Fig. 13).

As a result of the inventory, in case of a surplus, an income document will be created. Also all shortages will be book as one additional document. The full stocktaking process carried out in this way, gives the best insight into the warehouse, however, it is a long-term process and often implies the need to temporarily close

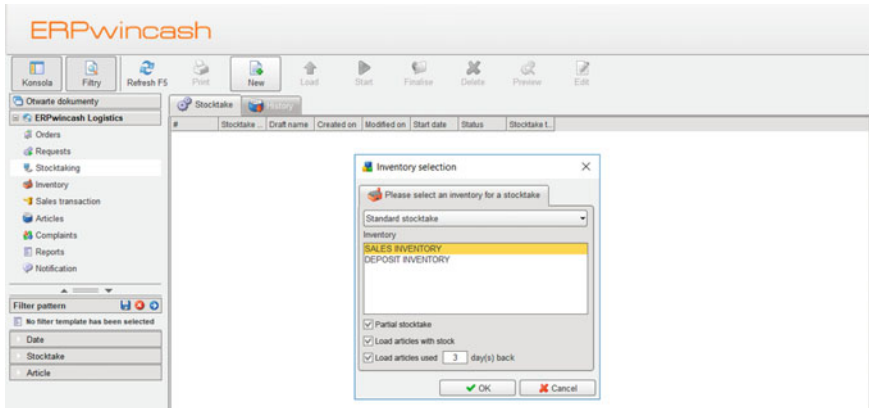


Fig. 14 New partial inventory. *Source* Own results

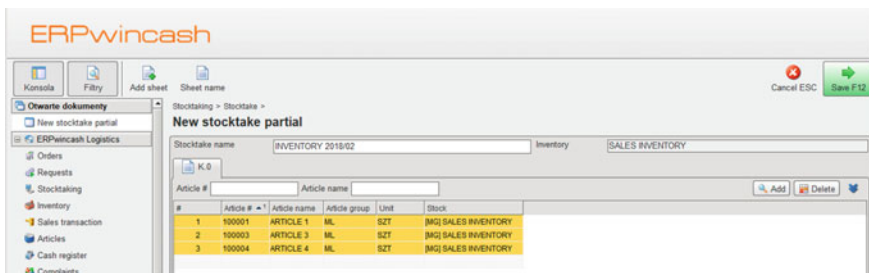


Fig. 15 List of articles that meet the given criteria. *Source* Own results

the store for customers, which can lead to measurable losses. For this reason, retail stores mostly use the possibility of spreading the inventory over time. In this case, we have a case of a partial inventory that does not apply to the whole warehouse, only one selected group of goods, or even a single index. In the company which was subject to the audit, full inventories in retail stores were performed very rarely due to their potentially negative impact on customers. Obligations resulting from the law are fulfilled on the basis of partial inventories. In total, they secure an proper stocktaking process of the entire warehouse during the accounting year. During the partial inventory definition, the user can choose additional parameters that have a significant impact on improving the efficiency of this process (Fig. 14).

After selecting the inventory type “PARTIAL”, the user can limit the list of items to those that have a positive stock level. In addition, within such an initial list of articles, the user may provide an additional restriction to items that have a turnover in a given period. In this way, the list of articles is limited to those that have a high probability of being changed (Fig. 15).

In the case of a partial inventory, the system prepares a list of articles that will be subject to it. An authorized user can still modify such a list. Partial inventory is

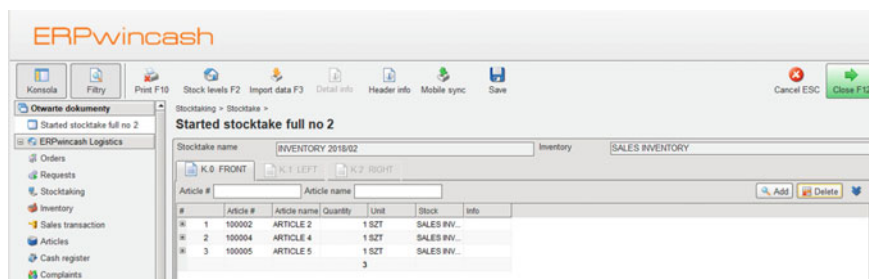


Fig. 16 Partial inventory zones. *Source* Own results

#	Article #	Article name	Unit name	Inventory	Inventory quantity	Stock quantity	Difference	Total difference	Price	Total price
1	100002	ARTICLE 2	SZT	SALES INVENTORY	8	22	-14	14	2.00	-28.00
2	100004	ARTICLE 4	SZT	SALES INVENTORY	15	44	-29	29	4.00	-118.00
3	100005	ARTICLE 5	SZT	SALES INVENTORY	10	55	-45	45	5.00	-225.00
					33	121	-88	88		-369.00

Fig. 17 Preview of data entered during the partial inventory. *Source* Own results

therefore subject to predetermined articles, not all goods found in the warehouse. In our example, the system has prepared a list of articles there are available in stock and there have been used in the last three days (Fig. 16).

To ensure better comparability with the previous stocktaking, also in this case the inventory was divided into three zones, identical to those defined for the first inventory. The rest of the process proceeds similarly to full stocktaking, except that only the items appearing on the previously prepared list are counted. After completing the counting in all zones, the inventory manager can check the results and approve the inventory (Fig. 17).

An important improvement resulting from the support of the IT system of the stocktaking process, apart from accelerating and facilitating the counting of the goods, is the ability to precisely determine where the goods are located, without having to handle exact storage locations, which is practically impossible in retail stores. Thanks to this, even a new employee demonstrates great competence, he can indicate to the customer a zone where the goods are located, which can be treated as an activity reducing the risk of an image crisis resulting from lack of competence (Tworzydło 2017).

In our case, a partial inventory took place three days after the full inventory. The right choice of parameters during the creation of a partial inventory leads to a significant reduction of the time needed for this process. In the example the system

has selected for the partial inventory only articles that have changed from the previous inventory, which reduced the scope. By using the possibility of dividing the warehouse into zones and using the same zones in both inventories, we obtained one more important information. Because a specific product was present in several zones, we can check in which zone the goods were rotating. The stock level for the goods “ARTICLE 2” and “ARTICLE 4” in the LEFT zone did not change, while the same time the stock level for these goods in the RIGHT zone decreased from 20/44 to 4/12 pieces. Maybe that is where our customers are looking for it - proper use of this information may be helpful when planning the placement of goods in the store, also may positively affect the sales results.

4 Conclusions

Overall, one would probably agree with the fact that the full stock-taking process in retail store should be used exceptionally due to the risk of long counting time, which has a negative impact on other activities. The use of a partial stocktaking process in the retail store with the division into zones seems to be a good solution for retail networks, especially due to the possibility of carrying out such inventory in parallel by several people, its systematization and a significant reduction of the time necessary for it. In addition, during such type of inventory it is not necessary to stop other logistic processes, and in particular to limit sales, which may result in a better financial result.

The support of the IT system in the optimal selection of articles that will be subject to this process, improves efficiency and additional information gained through the use of zones may help to better deploy goods in the store, which may lead to increased sales. We demonstrated how ERPwincash IT system might help business companies in better reporting stock-taking and improving their retail activities in order to gain the leading positions on the markets, both domestic and international.

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Leading Approaches in the Accelerated Development of Reverse Secondary Resource Logistics



Olga Zueva, Sergey Shahnazaryan and Lyudmila Protasova

Abstract Our paper tackles and justifies the feasibility of a comprehensive review of reverse logistics with the inclusion of secondary resources in order to ensure the reproduction cycle. Moreover, we propose a refined formulation of the concept of reverse logistics with regard to waste management activities. In our view, this topic represents one of the leading approaches in this field that needs to be studied and developed further. Our findings allow to construct the classification of secondary resources as well as to establish the criteria for the level of preparedness of secondary resources for use that influence the process of the movement of secondary resources from the source of origin to the point of consumption. We consider such issues as the flow of secondary resources in conjunction with the flow of returns of goods as well as packaging and packaging in order to build a more efficient logistics system of secondary resources, reducing the volume of education and disposal of waste. Our findings demonstrate that the application of the concept of logistics in the field of extraction of secondary resources from solid waste streams would allow both researchers and practitioners to find new ways that would allow to drastically improve the efficiency of capital use together with ensuring a higher competitiveness and leadership potential for all participants in integrated logistics chains.

1 Introduction

Nowadays, the level of development of logistics which is manifested in complex logistics systems as well as the ever-increasing specialization of individual functional areas of logistics requires focusing on the entire chain of cause–effect relationships,

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their mutual linkage, and ensuring overall focus (Carter and Ellram 1998; Terentyev 2010; Konova et al. 2012; Lisin et al. 2015, 2018; Brodzicki 2016; Hofmann and Rüschi 2017; Plenkina et al. 2018; or Pellathy et al. 2018). The majority of the logistic systems currently in operation are focused primarily on one direction of movement of inventory items—from the producer to the final consumer. At the same time, organizations are increasingly faced with the return of goods, which in a given volume are present in any of the fields of activity. As a result, these organizations need to develop the processes of reverse movement within the already established logistics system. The most common trend in the management of reverse flows of returned products is either a markdown and re-sale, or disposal by burial at landfills and landfills. In contrast to the current domestic trend, global experience indicates the presence of rationally developed reverse logistics processes that allow not only increasing the involvement of secondary resources in the production of new products, but also have a positive effect on the environment.

Logistical management of secondary resources is poorly regulated in our country, since the state policy in the field of environmental protection is focused primarily on measures to compensate for the harm from the impact already made, and not on minimizing it (Giuntini and Andel 1995; Lisin et al. 2016; Kashintseva et al. 2018; or Kubeš and Rančák 2018). The problem of reverse flows in logistics, which form the basis for building a logistics system of secondary resources, is represented by a small number of scientific publications, and the main focus of which is the coverage of issues of return of goods, resulting in poorly studied the problem of organizing the reverse movement of secondary resources into production (Pohlen and Farris 1992).

The degree of scientific elaboration of the problem is determined by the following circumstances. The desire to maximize the rational allocation of available resources was inherent in humanity at all times, which was one of the reasons for the separation of logistics as a science. Since the first mention in the treatises on the military art of the Byzantine emperor Leo VI (865–912) and to this day, the views on the concept of “logistics” have changed significantly. Currently, logistics activities have become comprehensive and are used at the micro-, meso- and macro-levels of logistics systems.

The problematics of reverse logistics and the scope of its application are being developed by a whole array of authors and researchers (Thierry et al. 1995; Kroon and Vrijens 1995; Fleischmann et al. 1997; Albekov 1998; Rogers and Tibben-Lembke 1999; Zueva 2007; Bukrinskaya 2010; Barnyak 2013). It is necessary to state that the solution of the scientific problem in the development of the logistics system of secondary resources and the strengthening of its role in the process of preserving the environment is in its infancy and scientific search.

Despite the diversity of theoretical approaches to the study of reverse logistics flows both in the field of product management and in the field of waste management, most of them do not find application in practical activities. This is due, firstly, to the fact that these projects are usually developed without taking into account the influence of external factors, and secondly, they are mainly focused on making a profit. Such a view on the essence of reverse flows contradicts the basic idea of the considered direction of logistics—reducing financial and material losses. With

regard to secondary resources, this problem is aggravated by the fact that the process of extracting them in our country is not profitable for all species, which increases the negative impact on the environment. In addition, when planning the process of returning secondary resources from the spheres of consumption and circulation into the production sphere, insufficient attention is paid to the structure of intermediary organizations in the field of recycling, including the purchase of secondary resources. These reasons led to the choice of topic, object and subject of research, setting its goals.

The object of the research is the material flows of secondary resources in the logistics system of secondary resources affecting their movement in the sector of industrial, trade and intermediary organizations, households. The purpose of the presented work is to develop the theoretical foundations and methodological tools for analyzing the process of the formation and development of reverse logistics of secondary resources.

2 The Concept of Reverse Logistics Secondary Resources

The study of the problematics of the definition “reverse logistics” is best to start with consideration of the economic foundations of logistics as a fundamental direction. The economic foundations of logistics are based on a three-pole system (triangle): macroeconomics, microeconomics, and regional (spatial) economics and are a reflection of the theory of general economic equilibrium, economic reproduction, economic growth, the theory of sustainable development, as well as the theory of international trade, international economic integration, etc.

The following models and theories of economics are reflected in the methodology of logistics, as the methodology of optimal placement of logistics capacities, the theory of market equilibrium, the theory of innovative development, and the theory of efficient organization of economic space.

The study of reverse logistics of secondary resources in modern economic conditions acquires special relevance and importance, since this logistics system is characterized by dynamism, complication of the mechanism of formation and development, the emergence of new factors that have a significant and controversial impact. Under these conditions, the interpretation of the main categories of logistics and their interconnection is essential. According to the authors, the content of the definition of “logistics” should include reverse flows. As a result of analyzing different points of view, it is proposed to use the following clarified concept: “Logistics is a process of continuous and permanent organization, planning, forecasting, and improving the movement of material and associated direct and reverse flows in the areas of production, circulation, consumption, and disposal by creating interrelationships between different logistics systems.” Reverse flows are understood to be all flows whose movement is opposite to a direct flow.

The traditional point of view on logistics assumes that the goods, having reached the point of consumption, are fully used; however, the situation of incomplete con-

sumption of the supplied goods most often occurs. This situation laid the foundation for a new direction of logistics—reverse logistics, the origin of which is considered to be the United States and European countries. According to the authors, the definition of “reverse logistics” should take into account not only economic, but also environmental aspects, since in the future, activities in the field of reverse logistics should be aimed at recovering losses from returns and reducing environmental impact. After analyzing different points of view on this concept, the following interpretation is proposed: “Reverse logistics is the process of returning from the sphere of consumption and circulation to the sphere of production and utilization of inventory items that can be resold, reused, repaired, and, if impossible implementation of these actions, their proper disposal.”

As the results of our study showed, when considering the field of reverse logistics tasks, domestic authors often exclude issues of waste management, which contain a large amount of potentially recyclable secondary resources. This attitude is related to the fact that waste products in our country are not perceived as a source of secondary resources, since their management activities are considered not related to the movement of goods. However, the scope of waste management must be included in the scope of the tasks of reverse logistics.

In today’s Russia, one can observe a “fragmented” logistic system of secondary resources within which they are transformed into secondary raw materials. One of the promising tasks of logistics is the formation and development of an efficient logistics system of secondary resources. At the same time, the diversity of points of view on key concepts of reverse logistics reveals the need for their harmonization in order to create a unified conceptual apparatus necessary for building a logistic system of secondary resources. In fact, the inclusion of an environmental aspect in the reverse logistics system is not only a research task, but also a social order of society, through which the task of preventing environmental pollution during consumption (exploitation) of goods, as well as ensuring the safety of the environment for humans should be solved.

Based on the analysis of various logistics concepts, it was found that only a few of them take into account the movement of reverse flows in their operation. An erroneous view of reversible logistics is based on the fact that it adds no value, causes losses, and exerts unnecessary financial pressure on manufacturers and trade. Today, most organizations consider reversible logistics as their secondary function and few have allocated individual resources and personnel to fully manage return processes, which have complex inventory control, information management, cost accounting, disposal methods that have a positive impact on the environment.

Product returns affect each member of the supply chain. This is due to various reasons and depends largely on who is the initiator of the return, as well as on the nature of the materials involved in this process. Nowadays, recycling of packaging is increasingly being used, especially in Europe, where manufacturers have to take returnable packaging and packaging materials from customers. Accordingly, the need for returns can occur at any stage of product distribution.

Reversible logistics includes both the return of goods and the movement of inventory items, for example, empty pallets, container carts, and other containers for

packaging single items that require adherence to special temperature conditions; used packaging; spare parts; goods sent and returned from repair; relocation of commercial and office equipment; secondary resources and waste. In this regard, the classification of flows of reverse logistics becomes important.

When organizing the management of reverse flows of goods sent for repair and warranty service, various options are possible, depending on what the reason for the return is and whether it is repairable within the time specified in the warranty. The first option provides for repair and return to the buyer within the warranty period, the second—repair and subsequent sale as discounted, the third option is to use the product as a secondary resource in case of impossibility and inexpediency of repair, when costs exceed the potential profit from re-sale.

3 Classification of Secondary Resources

Within the process of formation and development of reverse logistics of secondary resources, as one of the promising ways to reduce waste disposal, it is important, according to the authors, to have a clear understanding of the structure of the conceptual apparatus in the field of waste management. In accordance with the interstate standard, waste is classified into used and unused. In turn, unused wastes are divided into those that cannot be used in the national economy or are currently being used for various reasons (economic, environmental, social, and others) impractical.

The term “secondary resources” includes such concepts as “secondary (returnable) material resources” and “secondary energy resources.” As you can see, the main criterion for the use of waste in the future is the appropriateness of their use. It is according to this criterion that the notion of “secondary material resources” is further divided into such definitions as “secondary raw materials,” “secondary products,” “secondary functional unit,” “secondary component,” “secondary products,” “special returnable resources,” and “trash.”

Of particular note is the concept of “waste,” which is defined as unused industrial, agricultural, household, institutional, commercial, food, and other residues for which there are currently no conditions for disposal. Thus, only for returns from the sphere of consumption falling under the category of garbage, there are no ways to reuse. In other cases, the main criterion for the use of returns from end users is a focus on obtaining benefits, rather than a desire to reduce the volume of burial.

Classification of secondary resources primarily involves the division into “simple” and “complicated.” “Complicated” secondary resources are different devices, for the extraction of secondary raw materials from which it is necessary to use significant resources. “Simple” secondary resources are easily amenable to the extraction of secondary raw materials from them, while basically only sorting and cleaning is required. It should be noted that it is through the processing of “simple” secondary resources that the secondary raw material is obtained, which is used in the production of new products, while the scope of secondary raw materials is quite wide.

One of the main sources of secondary resources is municipal solid waste. The legal basis for the classification of municipal solid waste in the Russian Federation is the Federal Waste Classification Catalog (FWCC), which separates waste by origin, state of aggregation, and hazard.

Organizations involved in the purchase of secondary resources are located in a separate sphere—the sphere of utilization, which is as close as possible to the sphere of circulation. This situation of the utilization sphere is connected with the fact that the process of collecting secondary resources in the sphere of circulation is less time-consuming compared to collecting it in the sphere of consumption, which can provide large volumes of secondary raw materials. In addition, the secondary raw materials generated in the distribution area are most often represented in pure form, in contrast to the sphere of consumption, in which it is included in the composition of the waste.

4 The Study of the Logistics System of Secondary Resources

The idea of a comprehensive study of the logistics system of secondary resources in the framework of reverse logistics is based on the fact that during the times of the USSR, an effective operational model of such a logistics system was developed. In addition, at present, in the EU countries and the USA, special attention is paid to the problem of waste management, since the rational organization of this process allows reducing the negative impact on the environment. As a result of the analysis, it was revealed that the extraction of secondary resources from waste does not exceed 20–25% in EU countries, and in the Russian Federation in the last 10 years, it is at the level of 5–7% of the possible.

It becomes clear to us that the composition of municipal solid waste generated in the Russian Federation is similar in its structure to that of the European Union and the United States. The results of comparing the composition of municipal solid waste are presented in Table 1 that follows.

When analyzing the results of the study, it was found that, although the composition of the generated solid household waste in our country is close in its structure to the composition of solid household waste in foreign countries, one can observe a higher indicator of the level of extraction of secondary resources from municipal solid waste. The reason for the low level of processing is the lack of appropriate conditions and infrastructure (Zueva 2007).

The process of processing and extracting secondary resources from waste streams is directly related to the existing and existing waste management system. The specific character of the waste management market is its exclusively local character. As a rule, in each region, there is a separate group of organizations that controls the management of solid waste. The final price for purchased secondary resources is determined by the organization consumer. One can see that recycling has many

Table 1 Comparison of the composition of municipal solid waste in some countries, in %

Components of solid waste	Austria	Belgium	England	Italy	Canada	USA	Russian Federation
Paper, cardboard	28–36	32	29	30–40	52	32–45	22–38
Food waste	20–35	22	25	25–35	15	13–19	30–49
Trees, leaves	2.0	1.0	2.0	3.0	1.5	10–20	1–5
Metal	2–5	3.5	8.0	4–5	5.0	8–9	2.5–5.5
Textile	1.0	2.0	3.0	2.0	2.0	2.0	3–6
Plastics	5–6	5–6	7.0	6–8	4.0	4–6	3–6
Stones, ceramics	9.0	0.5	2.0	3.0	–	2.0	0.5–3
Glass	8.0	4.0	10.0	7.9	5.5	8–10	2–4
Coal, slag	24	20	14	Included in siftings	5.0	–	–
Siftings more than 16 mm	Included in coal and slag			15.0	10.0	11.0	4–9

Source Own elaborations based on World Bank (2018)

commercial and technological components. At the same time, the technology is subordinated to commercial, and therefore, the main reasons for the low level of waste management are due to economic factors.

In the matter of commercialization of the processing of secondary resources, there are two important problems. The first is the absence of a legislative base in the matter of regulating this activity, and the second is the underdevelopment of the structure of intermediary organizations in the area of dealing with secondary resources.

5 Conclusions

Our findings show that the existing system for collecting solid household waste is poorly adapted to the process of extracting secondary resources from them. This is due to the fact that it was originally designed for the process of disposal of waste, and not using them as secondary resources. We consider it impossible to convert it once into a system focused on the extraction of secondary resources. It is necessary to gradually convert the current waste management system into a more efficient one.

In general, our results allow us to reveal the features of reverse logistics in matters of the flow of secondary resources, to expand the understanding of reverse logistics and its relationship with environmental protection. The application of the concept of

logistics to the field of extraction of secondary resources from solid waste streams would allow to find new leading ways for dramatical improvement of the efficiency of capital use coupled with ensuring a higher competitiveness of all participants of integrated logistics chains.

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Formation of the Company Leadership in the Competitive Strategy



Evgeny Popov, Vadim Krivorotov and Natalia Starodubets

Abstract Our paper discusses the scientific and methodological foundations of the formation of the strategic competitive advantages of a firm in order to achieve its leadership position in the market. At the same time, the competitive potential of a firm is assessed from the standpoint of the influence of many factors which, according to the authors, can be combined into two fundamental integrated blocks. One of these blocks consists of basing factors that characterize the system of determinants of competitive advantages of the firm. The other block consists of the factors of the competitive environment in which the firm operates. These blocks of factors form two sources of competitive advantages of a firm: operational efficiency and the strategic positioning in the market. In turn, the strategic positioning incorporates the two most important components of the firm's activities: innovation activity and adaptability, which together define a competitive strategy of its development. Moreover, it becomes apparent that the basis of adaptability of the firm lies in active innovation, influencing all areas of its operation and related to all innovations, providing savings in production costs, as well as product promotion and additional profit creation. In addition, we propose a formalized expression of the exogenous transaction function of the company that allows us to evaluate the transaction costs of the interaction of firms.

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1 Introduction

It is probably easy to agree with the postulate that any firm represents a complex socioeconomic system, and it is an open system it actually constitutes and forms. Operating in the market, the firm is immersed in an environment that requires consideration and resolution of many different issues relating to the conditions of its activities. These conditions are directly related to the following factors of production or, more generally, the production resources available today:

- detailed analysis of the social environment within which the company interacts with government agencies;
- the environment, which determines the possibility and necessity of natural resources consumption;
- managerial regulation of marketing, exploring the transition of resources costs to resources results with the aim of further optimization of this process (Krivorotov 2017).

The organizational and economic potential of a company is successfully realized in order to achieve leadership positions in the market if it has competitive advantages that need to be created, strengthened, maintained, and constantly improved (see Strielkowski and Čábelková 2015; or Koudelková et al. 2015). Solving this task of prime importance requires special attention and consideration when formulating a company's development strategy since competition implies an ongoing struggle of competitors to improve their economic positions.

2 Some Basics of a Firm's Competitive Strategy

The competitiveness of companies is the integral component, and its level depends on many factors. However, in our opinion, these factors can be grouped into two fundamental blocks (Krivorotov 2007).

The first block, being a reflection of the system of determinants in the theory of competitive advantages of Porter (1986), is a combination of factors based on the characteristics of a country where a company is located. The second block, characterizing the influence of factors of the competitive environment in which the firm operates, corresponds to the Porter's Five Forces Framework (1979). These two groups of factors are in close dialectic unity. Influencing each other, flowing one from another, the marked blocks of factors form two sources of a firm's competitiveness: operational efficiency and strategic positioning.

Operational efficiency incorporates a comprehensive assessment of the implementation by the firm of different activities that allow it to make more efficient use of its production factors. At the same time, the level of the company's operational efficiency largely depends on the factors of its location. The strategic positioning of the company is mainly dictated by the factors of the competitive environment and is

aimed to create a unique and advantageous position, predetermined by a combination of activities that are different from those of competitors. Both noted sources of the firm’s competitiveness, which form it, are a direct reflection of the action of the factors mentioned, the controlled change of which suggests the possibility of strategic management of the firm’s competitiveness (Strielkowski and Čábelková 2015; Čábelková and Strielkowski 2013).

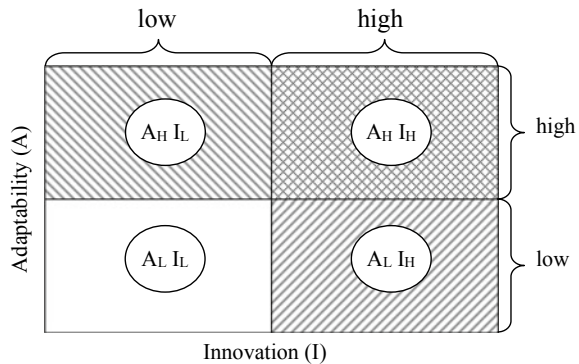
The content of strategic positioning as one of the sources of competitiveness and market leadership, in our opinion, is filled with two key components. One of them is a form of expression of the relationship of the company with the external environment and can be interpreted as its ability to adapt to this environment, reflecting the effectiveness of the updating processes. This component characterizes the adaptability of the company to the external environmental conditions, the flexibility of its response to the surrounding changes. The basis of adaptability is constantly flowing innovation processes, the directional impact of which ensures the introduction of innovations in all areas of the company (Gerasimova 2011; Tychinskiy 2006; or Vegera et al. 2018). Innovation, thus being the key to the success of a firm in competition and its leadership in the market, is a source of adaptability. And together they form the key conditions for the strategic positioning of the company.

Thus, the effectiveness of the market positioning of the company can be analyzed in the coordinates “adaptability—innovation” (see Fig. 1).

A high level of adaptability of a company implies the ability to rhythmically implement a targeted solution to the problems of selling goods and providing services, taking into account a particular buyer, his individual needs, and the ability to choose from a variety of competing subjects on the market according to his own preferences scale (Anisimova 2014).

These preferences, all of them built up earlier on criteria that mainly reflect the consumer performance of goods and services, their price and quality, have today changed significantly in the direction of deeper diversity and complexity. The external environment has become more homogeneous in terms of the intensity of competitive relations. Products interesting to buyers are not local any more: today, almost any product can be purchased in any region. A well-established advertising industry,

Fig. 1 The degree of effectiveness of the strategic positioning of the company.
 Source Own results



fully raising the awareness of customers, further contributes to the expansion of the choice of products (Shvetsova et al. 2018).

This state of things gives potential consumers new expectations about goods and services with regard to individualization of requests, additional services, and various after-sales service schemes. Of course, in this context, those firms that, on the one hand, are capable of quickly mastering the production of a variety of goods of the same class as competitors, and on the other hand, can offer their customers new products and services, taking into account changing market demands or initiating the formation of higher-level needs that look more preferable (Mil'berg 2003).

The degree of solving the problems mentioned above is correlating with a firm's position on the market. High adaptability corresponds to an adequate share of the market, mistakes, and miscalculations, delayed actions to maintain the required adaptability inevitably affect market positions.

As it was already mentioned, a source of high adaptability of the company is a systematically established innovation activity, reflected in the ability to develop and implement:

- technical innovations associated with the constant desire to improve the technological sphere of production;
- social and technical innovations relating to the scientific organization and humanization of labor and especially to ecological properties of production;
- social innovative technologies that form creative activity, entrepreneurial behavior, corporate values, and organizational culture.

The above-mentioned areas of the innovation activity of the company together give that synergistic effect, in other words, bring hope for some add-on advantages arising from the interaction between the components of innovative activity and increasing competitive advantages (Prikhach 2005). The noted competitive advantages of the company, in fact, follow from the motivational considerations of its employees, which are the highest level of motivation, reflecting self-expression, and self-actualization of staff and serving as a starting point for increasing labor discipline and participative management of the firm as a whole (Reznik and Igoshina 2009).

Taking into account the above arguments, let us return to the consideration of a possible combination of options that characterize the positioning of the company in the market.

Presented in Fig. 1, there is a coordinate system, and the matrix space in the $A_L I_L$ quadrant is occupied by firms with low indicators of adaptability and innovation. Such firms because of the lack of a clear strategic development plan can be classified as problematic. And their further existence on the market with a constant attitude toward innovation management is a matter of time (Lisin et al. 2014).

The space in the $A_H I_L$ quadrant reflects the position of firms that, in spite of passive innovation, keep their market adaptability at a high enough level. Often it is the result of the efficient development of the product range together with a well-developed technology. At the same time, this is usually a short-time situation that is limited to a period of time during which the production equipment allows maintaining the status quo.

Unfortunately, the adaptability of the company in the market does not always correspond to the indicator of its innovativeness. There are cases when active innovation activity does not bring adequate returns due to insufficient and ill-conceived market ideology, in connection with which the processes of production renewal are not brought to their realization in mass-produced items. As a result, miscalculations in strategic marketing “erode” the high innovativeness of the company, making it ineffective. Such firms on Fig. 1 are allocated in the quadrant $A_L I_H$.

And finally, the matrix space in the $A_H I_H$ quadrant. In this space, there are firms whose strategic positioning allows them to dominate the market. This situation is facilitated by ongoing large-scale innovative activities that penetrate the production structure, people management, and marketing promotion.

The most important, and perhaps decisive, factor supporting the high innovativeness of leading firms and shaping the required market adaptability is the clear operational effectiveness of their actions. Relying on the rational use of home factors, such firms are able to transform the capabilities of their technical and technological base toward commercially successful products quickly and painlessly.

Innovative processes, continuously and rhythmically flowing and covering all aspects of the company, are demanded by the influence of factors of the competitive environment. Active innovation of the company, in turn, increases the degree of its compliance with market requirements, i.e., raises the level of its adaptability. Adaptability, in fact, acts as a form of expression of the relationship of the company with the external environment, characterizing the effectiveness of the updating process. And together, the innovativeness and adaptability of a firm determine the effectiveness of its strategic positioning—one of two sources of competitiveness (see Voronov 2014).

Another key source of competitiveness is the operational efficiency of the company, the possibilities of which are shaped primarily by the factors of its location. On the one hand, it reflexes the flexibility of technological equipment, the ability to produce a wide range of products, including those with novelty, and creates conditions for improving the market adaptability of the company, and on the other hand, characterizes the profitability of its production activities.

Thus, the presented scheme and its elements are nothing more than a system of interaction of external and internal factors that influence the formation of a firm’s competitive advantages in the conditions of operation on the market and allow to change the firm’s competitive strategy.

Evaluation of the costs of interaction of firms in the market can be carried out on the basis of the transaction function of the firm.

3 The Transaction Function of a Firm

The analysis of the published studies on the introduction of transaction function shows that, apparently, explicit representation of the form of such a function can be based on classical definitions of the essence of transaction costs with subsequent verification of the developed correlation.

The classical definition of transaction costs belongs to Eggertsson: (1990) “*in general terms, transaction costs are costs that arise when individuals exchange property rights to economic assets and secure their exclusive rights.*” However, he also notes that a clear definition of transaction costs does not exist, as in the neoclassical theory, there is no correct definition of production costs. Matthews proposed the following definition (1986): “The fundamental idea of transaction costs is that they consist of the costs of drawing up and concluding a contract, as well as the costs of supervising the observance of the contract and ensuring its fulfillment as opposed to production costs, which are the costs of the actual implementation of the contract.”

These definitions allow us to distinguish three key dependencies of transaction costs on the parameters of economic systems. According to Eggertsson (1990), transaction costs are directly proportional to the number of economic agents entering into contracts with each other. And in accordance with the definition of R. Matthews, the transaction costs are inversely proportional to the number of contracts concluded and the established norms that ensure the implementation of these contracts.

If by contracts we mean formal institutions (institutions are well-established norms of interaction between economic agents), and by norms, that ensure the implementation of these contracts, we understand informal standards, then we can model at a qualitative level the dependence of transaction costs on the basic institutional parameters of economic systems (Popov 2014; or Popov et al. 2018).

In this case, the exogenous transaction function of the company will be as follows (see Popov 2008):

$$C = BN^\lambda / (F^\mu + I^\nu) \quad (1)$$

where C is the transaction costs of the firm (the economic agent in the general case);

B —proportionality coefficient, measured in cost units;

N —the number of economically active agents (actors) that have entered into institutional agreements with the firm (or a specific agent);

F —the number of formal institutions (contracts);

I —the number of informal institutions;

λ, μ, ν —elasticity coefficients of the use of actors, formal, and informal institutions for the formation of the institutional environment.

In Eq. (1), formal and informal institutions are presented as additive terms, as they complement, but do not overlap with their norms the various lines of economic activity. In other words, in each specific situation, contractual relations can be defined in the form of formalized (classical and neoclassical) norms, or in the form of informalized (implicit) agreements between economic agents.

Therefore, the construction of the transaction function ensures the formation of forecast estimates in the study of the institutional environment of the company. Moreover, the representation of the explicit form of the transaction function determines the difference in maximizing output and minimizing the corresponding transactions.

4 Conclusions

Overall, our results suggest that strategic competitive advantages of a firm are embedded in its active innovational behavior that effects all areas of its operation and is connected to all its innovations, provides savings in production costs, as well as fosters product promotion and ensures additional profit creation. All of the above combine for achieving the firm's leading position on the market.

One can see that our paper formed and analyzed the proposed conceptual framework for the formation of a competitive strategy for the company development, ensuring its dominance and leadership in the market, take into account the key sources of competitive advantages, which are the operational efficiency of the company, its innovative activity, and market adaptability.

Each of these sources can get a quantitative assessment, and this assessment can be commensurate with similar indicators of competitors, which, in turn, allows to undertake an in-depth analysis of the positive and negative aspects of the company. Such an analysis encourages the search for new opportunities to achieve competitive advantages, correcting the development strategy of the company and adjusting its operation taking into account the latest and advanced trends in market positioning.

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Leading the Labour Market by the Laws of Supply and Demand



Galina Petrova, Elena Posadneva and Tatiana Morozova

Abstract Our paper aimed at revealing and pinpointing the fact that labour market is guided and led by the laws of supply and demand. Moreover, it postulates on a quite obvious fact that the relationship between employers and employees is correlated with the relationship among consumers and producers. Consequently, there is a contract system in any organization or a business company that represents a written obligatory document binding by law which exposes the relationship among an employee and her or his employer. We show that a well-balanced and a healthy labour market is based on thorough and transparent competition as well as on the good and symbiotic relationships between the employer and employee. Human Resource Management (HRM) represents a leading tool in balancing these relationships and creating a win-win situation for both parties of this contract. Our results might be helpful for HRM specialists, business owners as well as state officials and stakeholders who seek to establish sound labour market rules and regulations in order to enhance social cohesion, wealth, well-being and economic development.

1 Introduction

What skills and qualifications should a given person have to be qualified for a certain job? An economist would typically ask another question related to the first one: How hard is the person able or prepared to work? The answer to these questions might be too complicated at times (Holmström 1999). Finding the right answers is a dilemma that uncovers all necessary skills that might be useful for a potential employee. Unfortunately, some of these answers are not included in the recruitment

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or the work placement procedures. We think they better should be because they would make eliciting employees' skills and abilities visible and easy to tap.

It is often said that money is able to play the most decisive role in the employee and employer relations (Boxall 1996; Chamberlin 2015; or Adam Cobb 2016). The way the money influences working hours might be quite compound. It can be divided into two actions: (i) the income effect and (ii) the substitution effect. The income effect works like this: any person's personal time represents a unique resource. If she or he gives up this resource for working for a salary, she or he would logically be wanting some fees. These fees represent the wage for the working hours. The more fees she or he gets for each working hour, the less she or he needs to work. People that have enough wealth tend to work less with higher rates or higher salaries, since they are able to afford more leisure time than people that have lower rates of payment (Schultz 1961; or Ehrenberger et al. 2015).

As their rates for each extra working hour increases, the cost of a working hour also raises. It means that as the salary rates increase, most people would like to work more hours. This is called the substitution effect, but it becomes obvious that the substitution effect also has its limits. Eventually, people will not work more hours, no matter how good the salary is. There are physical and other (e.g. social) constraints for that (see e.g. Abrahám et al. 2015).

One would agree that a proper salary rate would clearly attract more employees and might encourage them to work longer hours. However, the strength of this relationship depends on how elastic the labour supply is. Sometimes it is difficult for companies to find a certain kind of an employee (Kalyugina et al. 2015; or Strielkowski et al. 2016). Perhaps, there are not many people with the necessary skills. Another reason for that would be that the labour supply is inelastic. In the contrast situation, when it is easy for companies to find employees, the labour supply becomes elastic (Čajka et al. 2014; or Friedman 2014).

Another issue related to the labour market and employer and employee relations is the occurrence of references and recommendation letters. It should be noted that nowadays references are typically required for the majority of job interviews. Most employers will expect a potential job seeker to provide references from someone who is related to her or his previous job. Moreover, there is an issue of breaching the personal security space. Some state jobs in Russia (as well as in the other countries) may require a criminal document in order to find out whether or not the person in question have committed any criminal offences. For instance, if one's work would require some interactions with children or students, then the employer would be obliged to do a criminal record check in order to make sure that the employee is suitable to look after children or to teach students. However, the employers must ask employee's permission before running a criminal record check on him or her. Revealing some personal information would therefore become an inevitable step for someone seeking for a well-paid job. Some companies are reported to spy on their potential employees using social networks such as Facebook or LinkedIn (Van Dijk 2014).

Some interesting example of how these things are carried out might be found in the United Kingdom. If an employee needs to apply for permission to live and work

in the United Kingdom, she or he would need to appeal to the UK Border Agency. There is also a need to apply for a work visa or work permission before coming to the UK to work. If an employee is a national of one of the European Economic Area (EEA) countries, it means that an employee does not need to apply for permission to work in the UK. Czech, Hungarian, Latvian, Lithuanian, Polish, Slovak or Slovenian nationals, just to name a few, do not need to gain official permission to work in the UK. Most UK employers may claim a Criminal Records Bureau checking in order to make sure that an employee is a right person for their company. However, it is difficult to do in case of the citizens of EEA countries—in their case a proof from their home country is required which might take a long time. Most often, the UK employers would simply rely upon their future employees' word in that issue. The same stories can be found with other labour migrants in other countries worldwide (see, e.g. Strielkowski and Weyskrabova 2014). Thence, one can see how free mobility of labour might be selective of distortive toward certain people of different nationalities and citizenships.

Typically, there is a contract system in an organization or a company that is a written obligatory document defined by laws which exposes the relationship among an employee and her or his employer. Employers are required by law to provide a written contract of employment for any employees who ask for it. All the matters described above are typically a part of the contract and constitute certain safeguards for both parties which lead to the well-balanced and functioning labour market.

2 Links and Relations on the Labour Market

In many ways, the relationship among employers and employees is related to the relationship among consumers and managers: employees offer a service (the labour they provide), employers buy this service at a price they are able to afford (the wages they will pay). Good managers are the ones who are capable of attracting good consumers. In a way, they are the leaders of the market that are the ones to follow (Giachetti and Torrisi 2017).

The economic theory shows that on any markets for products and services, the consumers are trying to get the maximum expedience, or satisfaction, from their purchase. We think that it is the same on the labour market. With regard to the above, the following questions arise: What do companies need from their purchase of labour? What expedience do they gain? The answers to these questions are to increase the output or the quantity of commodities or service a given company manufactures. If there is an increase in demand for their goods, they will need to increase the output. It is noted that there is a way to do is to employ more qualified staff. Furthermore, there is another way to ask the staff that they have already got to work more hours. In both cases, the company is always buying more labour.

Consequently, the labour market obeys the laws of supply and demand. The demand is the employers' need for labour. Supply is the labour that employees provide. Despite the commodities, there is a relationship between price and demand.

The suppliers in the labour market are the employees who supply their labour as a service. Despite the suppliers, they would like to charge a higher price for greater supply. In other words, as supply of labour increases, they would like to claim higher wages. The wage that workers get for their labour is a trade-off among what they would like to need and what companies are able to pay in order to stay competitive on the market (Wachsen and Blind 2016).

However, the labour market is also a volatile one. There may be shifts in demand, and these shifts are able to cause the overall demand for labour in order to increase or decrease at any wage rates. For example, if there is an increase in the demand for the end product or service, there will be an overall increase in demand for labour. However, provided that new technology is able to replace employees, then there will be an overall decrease in demand for labour. It should be noted that there is one more thing which affects the demand for labour that is the employees' efficiency. The labour efficiency of an employee is that how much they produce in a certain time.

There are certain forms of work that do not require payment for services. One of them is the so-called pro bono work which is the work placement of, for example: lawyers, advertising agencies, recruitment offices, and professional services that donate their staff's time to good causes that are free or for reduced fees. Although employees perform pro bono work for selfless causes, then their good deeds are able to be rewarded in terms of their career. Nevertheless, pro bono work usually brings together people from different parts of departments within the company who might have never met before. Moreover, pro bono work is able to be rewarding in other ways that are more creative with work done for charities. It is much easier to see overall results and understand the positive effects of what the team is doing, so partnership projects tend to be really interesting marketing for this employment.

One of the interesting examples of this is the Centre of the FIFA World Cup Volunteer 2018. The Centre was created on the 10th of December in 2015 from the Centre of Social Initiatives (CSI) and became a key milestone in the development of the volunteer movement in Plekhanov Russian University of Economics. The aim of this volunteer movement is not only participation in the events on the Confederations Cup and the FIFA World Cup 2018 but also to conduct some quality training for holding the large-scale sporting events in Russia in the future. In the Plekhanov Russian University of Economics, the labour of volunteers has a long tradition and is appreciated by the students and faculty. There are some sweeping events, personal growth training, and the exit forums to SOL "RUZA," the exchange trips of the volunteers' experience. The main feature of the Volunteer's Centre of Plekhanov Russian University of Economics is the team leader programme which consists of about 50 students. The programme teaches its participants how to lead team and how the leader programme differs from a simple volunteering act. It demonstrates that there is the responsibility for the team in the case of sport events—each volunteer is able to solve problems, she or he gains enormous practical experience and communicative skills.

In general, it appears that the future team leaders obtain some knowledge of business processes and the functioning of the labour market. Therefore, she or he is

able to make decisions independently and applied to numerous events and trainings (Bordean and Sonea 2018). All in all, it appears that the team leader represents the hub of various skills and qualifications and she or he should be able to get on well with the people of different ages and nationalities, as well as with various authorities and other members of the team (Naushad et al. 2018). Being a well-prepared leader creates numerous benefits for the labour market.

3 Unemployment and Its Dreadful Implications

It is known that there is always a certain amount of unemployed people in the economy which is considered natural and healthy. In another words, not everyone wants or is prepared to work (even though the reasons might differ). When scientists are discussing these issues and their implications for business and trade, the issue referred to the workplace they consider that people who are able to work and would like to work they have to have got a job. Skilled workers that are not working or that are not satisfied with their wages that they are offered (Bordea et al. 2017).

However, economy is rarely able to achieve the full employment. There are a number of reasons for this event, so there are a number of different types of the unemployment. One of these is called the “cycle unemployment.” This type of the unemployment is able to vary, so there is the recession cycle of the economy. Provided that the economy may grow, the demand for labour will grow and the unemployment falls. If the economy has contracts, the unemployment is suddenly growing (Nordhaus 1975).

A second kind of the unemployment is called the “structural unemployment.” It is known that public is becoming changeable with its tastes or there is an advanced technology that can cause a fall in demand for some types of work. For instance, the computer technology has advanced some industries; so many traditional jobs are becoming outdated. Nevertheless, the whole regions of a country are suffered from the high structural unemployment. For example, despite the fact that British shipbuilding industries were outstanding for many years, it is commonly known that many dockyards were forced to be closed in case of the competitors from abroad. This fact is able to cause the huge unemployment in the region. Therefore, it should be noted that such cases of the structural unemployment are able to be repetitive in many countries. Provided there are new stated laws that are against it, the employers are able to open new vacancies for their employees, so the situation may be recovered (Jackman and Roper 1987).

How long the structural unemployment actually lasts might depend on a plethora of things and factors. However, the main issue actually is how easily the subordinates are able to retrain for new workplace. This may be difficult for other employees who find it hard to learn new skills. There has been up also the question that who is able to pay the training for these employees. Another issue of this problem is their mobility. If the employees are able to relocate themselves to another part of the country, they will find new jobs more quickly (Martin and Sunley 2015).

Perhaps, we should also mention that there are other kinds of the unemployment that are less serious, but they are still difficult for government tackle. The first is called the “frictional unemployment.” This is a kind of the unemployment that causes when someone leaves a job and is going to look for another one that suits better. The frictional unemployment often happens because people would like to leave their job in order to be promoted in their careers, but there are only few people who are able to leave their working place straight away. Therefore, when the economy of the country is in recession, it is said that the frictional unemployment will be more common because workplace is difficult to find (Clark and Oswald 1994).

The second kind is the “seasonal unemployment.” Some industries and farmers have got the seasonal periods that are very active and busy in summer and the dead periods where there are not any jobs at all. Some unemployed farm workers are able to get their work in spring and in summer periods. Despite the structural unemployment, the seasonal unemployment is able to work up the whole regions of a country (Behera 2015). These areas that rely on summer tourism can be suffered from serious unemployment during the autumn and the winter months.

All in all, unemployment, albeit it is a natural thing, might distort the labour market and prevent it from delivering the best results and benefiting to a greater good. The laws of supply and demand do not always work as envisaged.

4 The Leading Function of Human Resource Management

When the managers who are responsible for personnel matters are asked to rate management–employee relationship on a seven-point scale that is ranging from very good to very poor, they usually tend to select similar issues (Jaworski et al. 2018). Different aspects of the Human Resource Management (HRM) model are the following:

- the role of the manager
- industrial relation procedure
- payment systems
- work flexibility
- employee involvement
- status of the workforce

One can see that the system which links the payment to the performance of any the individual employees or the individual company has grown rapidly in the past few years. Nowadays, workplaces are having the job evaluation schemes and merit pay. In addition, half of them have some form of profit sharing or employee sharing ownership scheme. This often occurs despite the fact that there are other systems capable of improving the employee–management relationship. Usually, all employers must pay their employees at least the national minimum wage. If the employer does not pay an employee the minimum wage, she or he will have the right to complain to an employment tribunal. HRM personnel is responsible for these and

other employees-related issues. It is their duty to protect and to take care of the workforce in the interest of the labour market.

It becomes clear that HRM workplaces are more likely to appeal to their manual and non-manual employees in a similar way which is centred around the “single status” policies. There are different aspects of such policies covering, for instance, pay, clocking-on, the availability of free or cheap meals, and pensions, perks. One can see that there is one of these indicators of single status when companies are able to treat with them, they have got worse industrial relationship than those that they have not (Newell and Scarbrough 2017).

With regard to the above, the survey described in the paper published in the *Journal of Management Studies* demonstrated how union is able to be strength and the structure influences the relationship among management and labour (Guest 1987). There are workplaces with strong unions and those that are without any unions, but they both have better relationship than workplaces where management simply recognizes the union for collective bargaining.

5 Conclusions and Implications

Overall, our paper summed up and described in detail the unemployment issues and made it possible to connect them with the leading tendencies on the labour market. Based on the facts mentioned and analysed in the paper, the main outcome we might highlight is that the labour market definitely obeys the laws of supply and demand and these are the leading laws that cannot be reversed. The demand is the employers’ need for labour. Supply is the labour employees provide. Despite the commodities, there is a relationship among the price and demand, provided that the price of labour increases, the demand will decrease.

Moreover, we scrutinized and described several studies related to the labour market policies and the human resources management (HRM) which became an alpha and omega of today’s employer–employee relations in any modern business and state company. Our overview and our results show that the system which links the payment to the performance of the individual employee or the individual company has become the leading and prevailing one in modern-day labour relations. The results show that the quarter of all workplaces have the job evaluation schemes and merit pay which represent a good and practical solution for leading and managing the labour market by the laws of demand and supply.

In our view, the labour market is very important for the social and economic growth of any given country, Russia or any other country in the world. After all, people, or human resources, constitute the great wealth and power in any economy and they should be treated as such.

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Selling Life Insurance Products Through Commercial Banks in Terms of Leadership



Tatyana Odinkova

Abstract Our paper focuses on the role of the banking channel in the sales of life insurance products. Life insurance is one of the most dynamically developing types of insurance and is definitely a leading trend nowadays. Within this research, the author graphically demonstrates the development dynamics of life insurance. Our results show that positive dynamics of this type are due to the influence of many factors but according to our findings they are primarily caused by engaging banks as intermediaries in the sale of insurance products, including life insurance products, and by stimulating the financial interest thereof. Moreover, the paper scrutinizes the pros and cons of life insurance product sales through the banking channel because the dominance of these components might determine the future of life insurance products and sales thereof through the banking channel, as well as the development prospects of the life insurance market in Russia as a whole.

1 Introduction

One would probably agree that the agricultural and industrial (agro-industrial) complex represents the most important part of the Russian national economy system. The necessity of its strategic development is in its production that makes about 80% of consumer goods (Tyaglov et al. 2017). The level and quality of development of agro-industrial complex in many respects define and influence country welfare as a whole. Besides, development of agrarian and industrial complex is the important economic factor necessary for Russia as a whole. Political factors influence development of national economy in macro-, meso-, and microlevels. The agro-industrial complex was affected directly with political factors and has cardinally changed a vector of its development because of sanctions restrictions with a high level of economic development (Bychkova et al. 2018).

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Russian commercial banks, as well as foreign commercial banks, make a significant insurance distribution channel, because they offer a wide customer base and opportunities to implement cross-selling. In the present stage, because of a change in the sales of banking products (credit activity reduction) in Russia, bank policies offering alternative products have also changed (Kalyugina et al. 2015). This situation may result in the emergence of a financial supermarket, where a customer will be able to select financial services (insurance, investment, and banking products) (Konova et al. 2012; Zlyvko et al. 2014; Lisin et al. 2015). Positive changes in the life insurance market have been conditional and dependent on different factors, such as

- interest of commercial banks in cooperation with insurance companies and their participation in the marketing of insurance products;
- establishment of uniform (the so-called box) insurance products;
- development and introduction of the investment insurance products providing wider financial capacity than the existing alternative financial instruments (deposits and investment funds), which, in a positive scenario, can bring a significantly higher income;
- shrinking obligatory social insurance system, which, unfortunately, does not guarantee the financial security of citizens in the future, as it is dependent on today's "infusions" from the State and its ability to ensure a balanced budget for extra-budgetary funds in the future;
- failure of the entire system of guarantees for the protection of citizens' rights and the value of a person's "life" for others, that encourages to have life insurance agreements as a guarantee to receive certain benefits (services), etc.

2 Banking Sales Channel and Insurance Market

The banking sales channel has become especially important for the life insurance market. As a result, from 2012 to 2016, the share of product sales through the banking channel increased from 61 to 84% (Fig. 1).

Dominance of the banking sales channel did not take long to have an impact on the sales of life insurance products. The dynamics of insurance premiums collection and payment is depicted in Fig. 2.

3 Development of Agricultural and Industrial Complex

The analysis of the dynamics and structure of life insurance product sales has shown that the interest of commercial banks was the starting point for the rapid growth of the life insurance market. But why are banks interested in these sales? Causes stimulating commercial banks to sell life insurance products include:

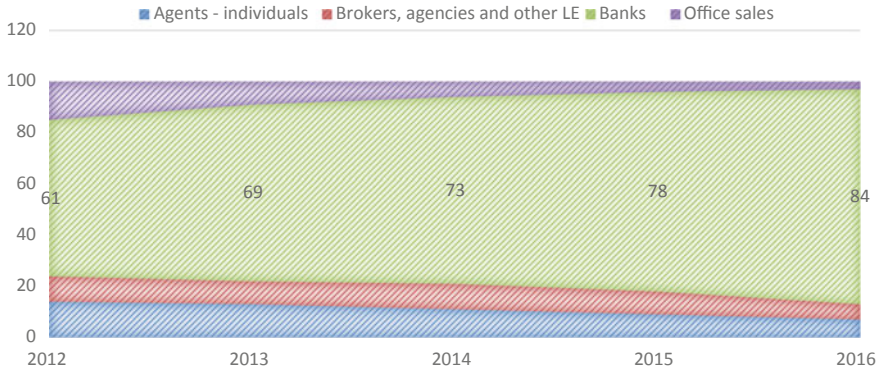


Fig. 1 Life insurance market distribution channel structure in 2012–2016, in %. *Source* Own results

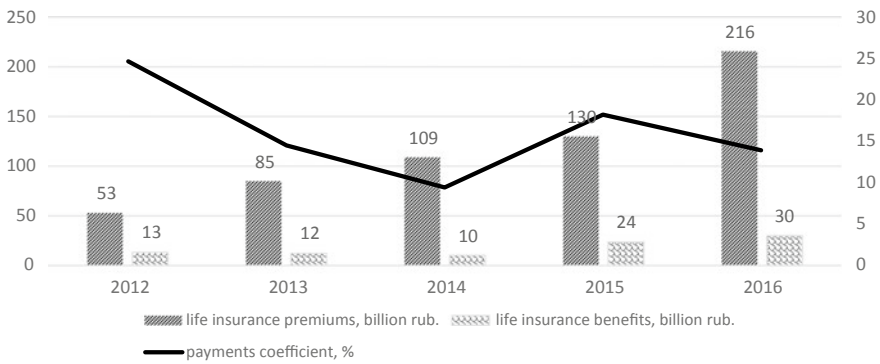


Fig. 2 Life insurance market key development indicators. *Source* Own results

- the need to maintain profitability amid the slowdown of the lending segment;
- business diversification and getting regular additional income, including in the form of remuneration from sales. For large banks, the development of this line is the ability to “hand over” the savings of individuals attracted by the reputation of the Bank to insurance companies for solid reward with minimal cost to the bank. For small actors, it is a way to survive because of the need to accumulate additional resources due to the low possibility, and sometimes inability, to attract funds from the ICB market (interbank loans) and/or receive saving liquidity flows from a regulator;
- the need to reduce banking risks in the course of activities, including the risk of failure to collect the loans;
- the desire to provide the clients with integrated services (crediting–insurance–investment);

- strengthening relations both within the financial or financial and industrial group, since many banks are dependent on the parent company and with partners in the financial market.

Thus, the improving relationship between insurance companies and banks, “*first and foremost, has a positive impact on the development of the banking sector and the insurance market; secondly, it has positively effects on the growth of the country’s economy by attracting additional resources and improve the quality of insurance safety for the public*” (Kolesnikova and Khitrova 2016, p. 47).

In Russia, life insurance products have always been considered passive demand products and the changing dynamics of the life insurance market speaks of changes in the attitudes to this tool, primarily due to the availability of life insurance products for citizens. However, it should be noted that the “availability” should be understood less in terms of affordability, than in terms of the ease (related to the time spent) in acquiring insurance products (Orlova et al. 2018). We are not talking about days or even hours, it takes five to ten minutes for a citizen to receive advice and sign a life insurance agreement. Sales in this area and the time frames have both advantages and disadvantages. The advantages include the following:

- the possibility of a broader outreach to potential customers, which is implemented through:
 - (a) priority of the instrument in relation to other savings instruments. Once a person has obtained an expected sum of cash, he/she begins to think of where to invest it. The first answer is that people will take it to the bank. This confidence is due to both historical and modern savings conditions (state-guaranteed, always near at hand, the transparency of investments);
 - (b) the priority of the Institute addressed by the public with a view to borrowing funds;
 - (c) the desire to reduce the risk of the loss of funds when settling accounts with one another (by con-trolling the movement of the client’s funds, the bank has the opportunity to become the first to be aware of their clients’ latest acquisition of a certain type of property);
- the ability to incorporate the mandatory insurance of the borrower’s own property interest associated with the loan into the terms of the loan agreement. To select an insurance company, a borrower is offered a list of 5–10 insurers that have received the official accreditation of the bank;
- the opportunity to convince the client of the need to supplement the package of banking services with insurance coverage, which in most cases relates to life insurance agreements (Bystrova and Danilevskaya 2016);
- maintaining loyalty to the Bank (Zubets 2010).

Moreover, it is possible to identify the following main disadvantages (cons) of selling life insurance products through the banking channel:

- relatively high cost for insurance companies because:

- (a) the banks require large deposits or high fees in lieu of sales;
 - (b) it is necessary to have staff to handle insurance transaction paperwork, because in many cases, banks do not cater to the client (do not draw up policies, deliver documents, etc., which is done either by employees of insurers or other mediators, who want to retain the client);
 - (c) must develop and continually monitor the bank employees' motivational system, so that they serve the "debtor" enthusiastically, especially in those cases where the bank possesses a large deposit of the specific insurer;
 - (d) for the opportunity to serve the Bank as an affiliated insurance company, the latter is required to place part of its insurance reserves into that bank's accounts, that, amid the deteriorating banking market environment, leads to the risk of "losing" funds;
- mismatch between prices and the quality of the insurance product (quality refers to the number of covered and excluded risks, the availability of deductibles, speed and the quality of servicing the insurance consumers), because high expenses incurred by insurance companies may lead to the loss of business, so they either:
 - (a) should reduce their obligations to consumers of insurance services by lowering, among other means, the quality of insurance products and insurance coverage;
 - (b) should raise premiums, which increases the cost for consumers of insurance products, especially when it comes to the conclusion of the prescribed (credit) insurance;
 - commercial banks may "sell" their customer databases for previously concluded insurance agreements;
 - poor quality of advice on products purchased, resulting from the allocation of a small amount of time per client and inability of a client to make a well-informed decision due to various reasons, especially when it comes to life insurance (endowment, investment, or critical diseases insurance);
 - quick disappointment among the consumers of insurance services with the products they have purchased and a decision to not purchase insurance products in the future. In making such a decision, the public relies not upon the experience of buying through the bank, but upon the claims settlement experience with the insurance company. As a result, looking forward we will see a decline in sales through banks (we are talking not about obligatory insurance, but about voluntary insurance), which will be due to disappointment in these instruments, thus, there will be a reverse outflow of savings into the accessible, transparent, and simple instruments, i.e., deposits;
 - prevents changing the "mentality of Russian citizens" (Yuldashev and Panova 2014), including assigning responsibilities to insure civil and occupational liability of individuals providing services to the public and entailing the risk of harm to health, employment ability and life.

Therefore, commercial banks both in Russia and worldwide perceive the insurance market as their great potential and opportunity. One can see the leadership opportunity in exploring this market by the banks and financial institutions.

4 Conclusions

Overall, when considering the disadvantages and advantages of selling life insurance products through banks, it seems to be appropriate to define the degree of the relationship between banks and insurance companies and the impact on the development of the life insurance products themselves and future demand among the consumers of insurance services being bank clients.

Our results show that the dominance of these components might be decisive in determining the future of life insurance products and the sales thereof through banking channel, as well as the prospects of the life insurance market in Russia as a whole. Our findings might be useful for financiers and bankers not only in Russia but also abroad, especially with regard to the life insurance products being the channels of leadership and helping to increase profits and sales of banks and financial institutions.

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Digital Warehousing as a Leading Logistics Potential



Vera Borisova, Khasan Taymashanov and Tamila Tasueva

Abstract Digital transformation of business processes in various sectors and spheres of life radically changes the concept of “warehouse logistics.” Leading modern logistics systems in warehousing are a combination of digital communication platforms equipped with automated and robotic technologies. The priority is to accelerate the turnover of stocks. Flexibility, mobility, speed and smart analytics determine the competitiveness of warehouse logistics. In the logistics management system, the focus shifts towards information flow management. Conditions are created for the implementation of methods and tools for processing structured and unstructured data from various information sources and the optimization of diverse information flows using artificial intelligence technology. In Russia, the level of digital activity in this sector of the economy is still low. Among the main reasons, the following ones come through as significant: the decline in the growth rate of the logistics services market, the high cost of digital products, information risks and the lack of specialists with digital competencies. We associate the implementation of reserves of digital potential of warehouse logistics with the development of the infrastructure of access to the Internet system; the growth of Internet users; the development of online commerce; connecting state authorities to solving digitalization problems. We propose to provide state support for digital-type warehouse logistics systems based on the implementation of cluster-type technology platforms. Their institutional support can be implemented on the basis of a public–private partnership mechanism.

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1 Introduction

One of the main trends in the development of various industries and fields of activity has been the massive penetration of digital technologies into key business processes. This issue is devoted to publications, programme documents, and other regulatory documents (CSDE 2018).

The dialectic interaction of digital transformation of business processes in various industries and areas is a prerequisite for using reserves of digital potential of warehouse logistics which determines the relevance of our research topic. Digital potential of warehouse logistics is associated with the ability to generate and reproduce digital innovations represented by the software products, platforms, cloud computing, and artificial intelligence technologies within the logistics system. An analysis of foreign experience has shown the active development of robotization and automation in warehouse logistics, the use of artificial intelligence, cloud services, big data processing tools and technology platforms.

Russian bibliographic information system RIN listed more than a thousand publications on this subject only in the first half of 2018. Many new definitions have appeared, such as “digital economy,” “digitalization,” “digital transformation,” “digital twin,” “digital footprint,” etc. Another area of activity such as warehouse logistics is no exception (Ciešlik et al. 2016; Orlova et al. 2018).

Our analysis shows that with all the variety of terms related to digitalization, their meaningful content boils down to the prevailing use of digital technologies, new technical and communication tools, software products in business practice. There is an opinion that digitalization is a modern stage in the development of informatization, characterized by the use of digital technologies, generation, processing, transmission, storage and visualization of information, new hardware and software solutions (Lisin et al. 2014; Plotnikov 2018; Masiulevičius and Lakis 2018). This statement is also consonant with our conclusion that the digital transformation of warehouse logistics is due to the intensification of information flows serving the flow of material, financial and service flows in the supply chain.

With a certain assumption, one can say that digital logistics is a new stage in the development of information logistics. At the same time, digitalization in logistics can be viewed in two ways: as a supporting function (within the framework of the logistic system) or as an independent digital logistic system.

The tasks of digital transformation of warehouse logistics are refined and supplemented. A theoretical understanding of the newly emerging concepts and phenomena in this area of management is required. It should be recognized that theorists and practitioners fully underestimate the digital potential of warehouse logistics. Meanwhile, entrepreneurship in warehouse logistics cannot develop effectively without realizing the reserves of digital potential.

2 Problem Statement

Warehouse logistics is objectively characterized by a number of features that should be considered when designing modern logistics systems (Tasueva 2013). Let us briefly recall some of them:

- features of the internal state of the logistic flow (discontinuity of the flow in storage, which ensures the accumulation of internal energy due to transformations of its physical, cost and other characteristics);
- warehouse logistics has acquired the role of a key link in the supply chain (it ensures the availability of goods at the right time and place, in the required quantity and quality, at a competitive price);
- features of the service filling of the logistic flow in warehousing and provision of additional service benefits (bringing stocks closer to the market and creating a presence effect on it);
- consideration of resource saving parameters and environmental factors in the implementation of storage functions;
- features of legal regulation, standardization and unification of business processes in warehousing.

Nowadays, these features of warehouse logistics are complemented by such a new phenomenon as the digital stream. In practice, we are dealing with a single commodity distribution system that organizes information and telecommunication coordination of economic flows. Digital flow is defined as a virtual form of organization of the economic flow, including end-to-end communication technologies, digital transformation regulators, networks, messengers, cloud technologies as well as platforms (Afanasenko and Borisova 2018; McKinsey 2018).

The impetus to the development of digital formatting of logistics flows in warehousing was the work of leading foreign scientists, revealing integration processes in supply chains and mechanisms for the strategic management of key logistics activities (see, e.g., Stoke and Lambert 2005; Bowersox and Kloss 2008; Christopher 2011; Grant et al. 2015).

3 Setting a Research Question

It becomes quite obvious that flow processes can only be managed within a logistics system. The combination of individual warehouses cannot be called a logistics system. In modern logistics systems, its elements links are interconnected and integrated by a digital stream, the focus of which is directed to the synergy of elements links of the system, united by a given target setting. In such systems, the integration connectivity of elements occurs on technological platforms. The digital platform as a communication and transactional environment (virtual operator) provides participants with the benefit of productive interaction with each other.

The well-established information technologies and new models of supporting communication interactions of partners are a tool for interaction between partners in the digital-type system: supply chain management (SCM), materials resource planning (MRP), distribution requirement planning (DRP), enterprise resource planning (ERP), quick response code (QR), just-in-time (JIT) и just-in-sequence (JIS), door-to-door (DTD), effective customer response (ECR), vendor management inventory (VMI), and others.

Digital warehouse logistics assets include the following: software for managing business processes and workflow; analytical models and tools to track the movement of commodity masses and optimize the cycle of product distribution; work automation and robotization systems. The launch of digital warehousing logistics assets and their empowerment provide cloud technologies and associated intelligent services. Warehouse logistics becomes the logistics of digital flows in the supply chain. Global spending on public cloud services in 2018 reached \$120 billion.

The scientific community provides this the following explanation: the collection and analysis of data in real time is becoming standard practice; there is an intensification of information exchange between the participants of the logistics system; big data (Big Data) are formed, analysed and put into practice; value chains are globalized; cooperation and integration is increasing; increases the flexibility and mobility of the product distribution system; new standards of interaction of partners are being formed; RFID tags, unmanned transport technologies, contactless identification of objects; an international automatic identification system and a global object identification number (Rodkina 2016; Pustokhina and Rodkina 2016) are being introduced.

Moreover, digital potential of warehouse logistics is considered in conjunction with some specific terms. We associate the implementation of digital potential with the use of new communication cloud computing, artificial intelligence and virtual reality technologies, using interactive interfaces.

Advantages of digital technology over analogical technologies should be recognized. This is confirmed by expert estimates, in which it is noted that the use of digital technologies helps to reduce costs in the distribution system, optimizes the full logistic cycle, reduces operating and operating costs, contributes to resource saving, increases the load on storage space, etc. on the development and introduction of digital technologies. According to estimates, by 2020, these expenses will amount to \$8.9 trillion compared to \$4.8 trillion in 2012, the market for virtual and additional reality will grow to \$162 billion by 2020. In Russia, the segment of the information and telecommunications sector of the economy in 2017 exceeded 1.5 trillion rub. and amounted to 3% of the gross domestic product of the country. By 2020, the amount of data generated worldwide will be 44 zetabytes [in 2013, that number was 4.4 zetabytes (see IDRussian 2018)].

New digital technologies are accompanied by additional risks. Thus, the level of dependence of the logistics system on digital technology increases, and as a result, the probability of risks from the failure of digital technology increases. This technique becomes a critical resource, which increases the requirements for standardization, harmonization and regulatory issues of digitalization. The state's role in supporting the digital economy is growing.

Technologies for launching the Digital Economy of the Russian Federation programme include: cloud services, robotization, digital products, cloud computing, big data, neuro and quantum technologies (CSDE 2018). Among the priority directions of this programme are the following spheres: the development of personalized production and consumption on the basis of new information platforms and services; knowledge mobilization through sharing; increasing the overall efficiency of economic activity; creating a digital infrastructure and introducing a network-centric management model. From our point of view, measures to digitize the Russian economy should be incorporated into government functions related to supporting digital transformations in the country.

4 Purpose of Study

The target installation associated with the development of recommendations for the implementation of reserves of digital storage logistics potential predetermines the need to study the evolution of warehousing logistics in a changing external environment.

From the standpoint of the general theory of logistics, the digitization of logistic processes in warehousing is valuable only to the extent that it allows improving the efficiency of the logistic system. It is accompanied by the solution of both economic and social, resource saving, environmental tasks. Therefore, the reserves of digital warehousing logistics potential mean not only the introduction of certain technologies, but above all, the solution of the issues of increasing the efficiency, flexibility, optimization of the logistics cycle and distribution costs.

In terms of content, digital transformations in warehousing logistics are due to the introduction of information technologies and the transformation on this basis of logistics supply chains. There are new logistic organizational forms of the cluster type, based on the digital platform model of interaction of partners.

5 Research Methods

The organizational issue of enhancing the digital potential of warehousing logistics, in our view, lies in the plane of interaction between business and the state. For state institutions, such interaction “acts as a tool to help make research and innovation policies more receptive to the changing nature of innovation, as well as to social and global challenges.” For business, partnership with the state will allow developing new markets and creating value through mutually beneficial cooperation (CSDE 2018).

Transformations in this direction may be evolutionary and revolutionary; it will be based on the use of planned and market methods for building cooperative structures in the form of clusters and virtual technology platforms. In Russian practice, such experience exists in the industry, where a state information system is being cre-

ated that unites market participants in the framework of a new digital environment. Successfully established in itself and a single-type information system that would coordinate the activities of the participants of the Russian government procurement market is in place and operating. In addition, there is a single digital space being formed on the platform of and within the Eurasian Economic Union.

6 Main Findings and Outcomes

Overall, digitalization of warehouse logistics was found to yield both positive and negative effects. Today, this process is considered in conjunction with the use of integrated class software—warehouse management system (WMS) and transport management system (TMS), cloud services, robotization, digital products, big data processing tools (Big Data). In the Russian market of logistics services, WMS systems optimize routes for movement of goods in a warehouse and allow for the ability to interact with robots.

Warehouse management is reflected in digital technologies used in logistics systems. Remote cargo management, analysis and control of operations using mobile devices allow you to optimize logistics costs and helps to strengthen competitiveness. For example, information technologies ROADLOGISTPRO, developed by S2BGroup, ensure the rationalization of intra-warehouse cargo movements, uniting information platforms of suppliers, intermediaries and consumers in real time.

Robotic warehouse complexes without attendants are becoming a reality; goods to such warehouses bring cars without drivers. Warehouse management based on big data (Big Data) in remote mode is performed by the operator from the control centre.

Robotic warehouses in Europe and the United States replace costly labour and significantly optimize logistics costs. Distribution received robots KIVA, which produces the company KIVA systems. They are also able to move the racks in a given direction in the warehouse, as well as rationalizing the process of picking goods. Although automation and robotization of warehouse functions has been carried out for a long time, in the last decade, robots have radically become “smarter.” They are increasingly entrusted with complex tasks, for example, robots in the warehouse of the Ocado company (Hightech 2018).

Let us note that often in research reports and scientific reports, it is not the Russian, but the foreign experience of the digitalization of logistics that is more often analysed. The events of recent years still demonstrate examples of Russian digital developments. One of them is the start-up SYNGERA and its technological platform SIMPLATE. Working with a large data array (Big Data) increases the flexibility of supply chain coordination by reassigning management decisions to software. At present, the introduction and support of such digital supply systems are performed by large logistics operators, and in the near future, these systems will become available to most market participants.

The Russian company RoboCV which concentrates its efforts on the production of fully automated tractors and loaders is engaged in the robotization of warehouse

operations. This technique is able to work autonomously with any goods placed on the pallet. In addition, the company has developed and put into operation unmanned warehouse equipment, which is already in use at Samsung and Volkswagen factories. A pallet truck was also developed and put into operation, which independently carries cargo and lifts it to a height of up to two metres. They are implemented on the premises of the French warehouse operator FM Logistic. They were interested in the companies: IKEA, Philip Morris, Nestle, Russian Post, Magnit. The difference between robots produced by RoboCV is that they can work effectively with people. They are called collaborative robots (CoBot). They feel confident in the warehouse with people (Hightech 2018).

Prospects for the development of warehouse logistics robotization in Russia are associated with high growth rates (over 20% per year) of the e-commerce market. In 2017, the volume of this market exceeded 1 trillion Russian rubles. Russian logistics operators of online stores see no significant obstacles to the use of warehouse robots in their operations. However, in the economic situation in the country, cheap labour becomes preferable to the use of expensive robots. In such conditions, the status of robotic warehouses in Russia is somewhat reduced, while Europe and the United States are actively introducing robots into logistics practice.

The results of our analysis show that digital technologies that have successfully proven themselves abroad are not always adaptive to the conditions of the Russian economy. Experts note that the prospects for total digitalization of logistics processes in Russia in the next 2–3 years are not very high.

In practice, most Russian warehouses use the principle of a conveyor belt and are oriented towards increasing labour productivity by reducing redundant functions and links. Acquisition of expensive robotic equipment is promising only under favourable market conditions. Currently, there is a decrease in the growth rate of warehouse logistics services. In addition, the payback period for robotic technology is about 5–10 years, which increases the investment risks associated with investing in these warehouse assets.

Therefore, the innovative accents of the Russian warehouse logistics operators are shifting towards the automation of the warehouse management system. In the first place are issues of implementing WMS-management systems, bar coding and targeted customer service. In this context, a positive factor is that WMS systems, interacting with robots, optimize the movement of goods in the warehouse. A new information technology of supply and inventory management by supplier (Vendor Management Inventory, or VMI) is also used, which allows to transfer the supply and management of consumer inventory to the supplier's competence.

Radio frequency readers of the identification of goods marked with RFID tags have become widespread, although this phenomenon has not yet become widespread in warehouse logistics. The reason is simple—the inconsistency of the actions of the participants in the supply chain. From our point of view, reserves of digital potential of warehouse logistics can ensure the use of the SCOR-model (Supply Chain Operations Reference-model “Recommended model of operations in supply chains”). This model is applicable both for simple forms of organization of the economic flow, and for complex logistic entities. It allows you to standardize diverse

business processes; structure the relationship of partners within these processes; develop standard metrics to measure their effectiveness. As a result, incomparable industries and areas of activity can be integrated into the supply chain in accordance with a given business strategy (Afanasenko and Borisova 2013).

Ensuring the security of digital processes is becoming one of the key areas of cooperation of the participants in the logistics system to ensure the sustainability, continuity, and reliability of its infrastructure. By 2020, about 50 billion devices will be connected to the Internet. Combining these devices in one information space forms a huge repository of information, which, on the one hand, opens up many opportunities for managing logistic processes, and on the other hand, it creates new threats and dangers.

When designing digital-type logistics systems, it is important to identify critical digital infrastructures (shared and supporting integration processes), to develop a general procedure for ensuring their security, including (if necessary) the creation and implementation of international security protocols and procedures for sharing digital platforms. Conceptually, a set of areas should be defined that ensure the sustainability of the digital logistics space in relation to the impact of external threats and internal adverse factors.

7 Conclusions

All in all, we have to note that digital technologies in warehouse logistics, truly representing a leading trend, are already out of the inception stage. The prerequisites for their further improvement are associated with the implementation of the digital logistics strategy and the innovative development of the country's economy. As our analysis shows, the task of digital logistics is quite concretely defined: it is necessary to create a new intellectual–analytical information platform for the configuration of logistic flows embedded in the global digital space.

The issues of public policy in this direction are becoming topical: the creation and implementation of common IP standards that eliminate the restrictions on the number of available IP addresses for connecting devices; the proliferation of wireless connectivity and increased battery life. Optimization of the logistic flows involved in the integrated digital space will contribute to increasing productivity, introducing best practices through ecosystems of people and technologies, increasing the level of security and resource conservation. We can conclude that associating the digital potential of warehouse logistics with the ability to generate and reproduce those or other innovations in the logistics system become crucial. Moreover, it becomes obvious that its specificity is to expand the practice of managing digital flows in logistics systems of a new type with the expanded use of digital technologies, methods and tools.

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Leading Expert Quality Management Systems in Industrial Enterprises



Yekaterina Vinogradova, Valery Dubrovsky and Aleksander Mokronosov

Abstract Our paper describes the principles for constructing the leading expert information systems for managing the quality of an economic entity and its products based on the example of an industrial enterprise and its products. Expert quality management systems represent a unique solution for optimization and improving the operation of any company. However, their role in industrial enterprises is indispensable and should not be underestimated. Within the framework of our research and its main findings, we provide and scrutinize the systematization of modern scientific ideas about information technologies for building expert systems in the context of highlighting the subject field of their application. Our results show that the implementation of expert quality management systems in the industrial enterprises in Russia (as well as in the other countries) would lead to the considerable improvement in product quality with the reduced costs for these products. We also note that the enterprise productivity rises, and cost recovery period of invested funds shortens as a result of the deployment of these systems.

1 Introduction

Economic transformation of the Russian Federation coupled with the profound changes on its market, as well as increased competition as a result of the world market globalization and the transition of the industrial complex to innovative development models significantly influence the formulation and resolution of new issues in the production management system (Vinogradova 2012; Narkunienė and Ulbinaitė 2018). The technical possibilities for enterprises to use various combinations

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of methods, models, and planning tools are being developed and improved under such conditions, and the existing management methods are being intensively modernized (Popov 2012; Konova et al. 2012; Zhu and Sarkis 2004; Batkovskiy et al. 2018).

The process of developing an effective unified methodology for creating and implementing an intelligent automated product quality management system, characterized by the ability to configure orders and provide technical support to customers, adapt to the company's activities in a particular industry, take into account product specifics, the ability to change the system as soon as possible, and focus on strategic company's goals remain underdeveloped (Zhang et al. 2017). Next, a scientific justification is proposed for automatizing the model for solving problems of managing the quality of products of an industrial enterprise. It should be done by developing a method of forming and developing an integrated system of economic planning and management based on algorithms for applying neural networks (Vinogradova and Galimova 2017). Its feature is the reorganization of business processes in production management, and the dependence of control on the nature and condition of enterprises is studied. The financial structure must comply with the activities of the company. This approach will allow to evaluate the results of the enterprise's activity in each area having its own budgets, ensuring their efficient management.

2 Classification of the Creation of Corporate Information Systems

An integral part of the software product is the construction of a structural as well as functional model aimed at and designed for solving planning and management problems with differentiation of business processes. This is the task and the prerogative of the complex and elaborate management process that can be described as the creation of the corporate information systems (CIS) (Aleksandrov and Anikin 2014; Carberry et al. 2017).

One can see that these processes are typically classified into primary and secondary ones. Moreover, it becomes apparent that core processes create new product quality (Kubeš and Rančák 2018). In the same time, auxiliary processes create enterprise infrastructure. The person responsible for the process has the right to change and improve it and is the owner of the process. The boundaries of the process are determined by the interval from the moment preceding the first operation (the boundary of the "input") and until the moment following the last operation (the boundary of the "output") (Forkmann et al. 2017).

The process interface is an organizational, technical, and informational mechanism, using which interconnection between processes is carried out. Therefore, optimization of the enterprise's activities should be organized around business processes in order to overcome their fragmentation to achieve significant improvements in the main indicators aimed at creating different types of products (Belyaev 2013).

Each company represents a complex social and technical system, and there is a plethora of internal and external factors that influence its performance and operation (Koudelková and Svobodová 2014; Fomina et al. 2014; Koudelková et al. 2015; Abrahám et al. 2015). Moreover, no company is operating in a vacuum—there is competition as well as regulation one has to consider when building a company plan and its strategy (Janda et al. 2013; Vodopyanova 2014).

When applied and used in modern practice, the concept of “system” has many semantic nuances and meanings. In this regard, it is necessary to determine the values that are directly related to the system analysis of the enterprise. Below there are the most appropriate definitions. With regard to these definitions and their meaning, one can see that our typical system should have the following integrative yet important and crucial properties:

- diversity and distinction of components is due to their functional specificity and autonomy;
- properties, absent in individual components, may be present in the system as a whole;
- the structure that implies the existence of established links and relationships between the components of the system, their distribution across the levels of the hierarchy.

Contrasting the system with the environment is its original characteristic. The environment is everything that is outside the system. The environment is the totality of all systems with the exception of the investigated part of the surrounding world. In this regard, we can conclude that the system is a finite set of objects isolated from the environment by defining the boundaries of the system. Between the external environment and the enterprise, there are many relationships as a tool for interaction between the system and the environment. The exchange of material, financial, energy, information, and other elements between the system and the environment is carried out through the mutual transfer of input and output links. Resources are the elements that are transferred to the system from the environment, and the final product of the system’s activity is the elements that the system transfers to the external environment.

Achieving and maintaining the desired result of the behavior of the system is its main goal. Interpretation of the system’s goal as applied to an enterprise is striving for an optimal result, which is the maximization of the value of capital, provided that the established level of liquidity is permanently maintained, and the achievement of production and realization goals taking into account social objectives.

The main task of the system is to describe how to achieve the goal, fixed by the expected numerical characteristics. A set of interrelated goals is their system. There are several classifications of target systems, which include the following:

- short-term (being fulfilled within a year or earlier) and long-term (within a period over one year) goals;
- tactical and strategic goals;
- financial, industrial, social goals, improving product quality, and others.

Overall, the system analysis and design make sure that the process of examining and evaluation of the business situation is performed at the best and most optimal speed and level. Moreover, it allows to improve the existing procedures and methods used in corporate information systems that are aimed at producing software solutions leading to optimization of business and marketing.

3 Stages of the Process of Creating Corporate Information Systems

One would probably agree that in many practical tasks related to investment and planning, production and distribution, as well as optimization of results and outcomes, the available knowledge can often be either incomplete or inaccurate. In such situations, probabilistic reasoning is the tool that can be used for eliminating these mischiefs. The use of the probabilistic reasoning employs artificial intelligence (AI) systems and allows them to work in conditions of uncertainty delivering the best and the most optimal results.

Hereinafter, we would provide a generalized description of the stages of the process of creating an expert system for managing the quality of an industrial enterprise's products on an example of industrial enterprises. Our main results and outcomes are presented and analyzed in Table 1 that follows.

Looking at Table 1, one would notice the five stages and the functions (marketing, design, production, and other functions) used in the process. The complex structure of stages with appropriate functions attributed to each of them ensures an effective process of creating an information management and planning system that would deliver the most optimal results.

All in all, it becomes clear that only by following these stages, one would be able to create a competitive information management planning system that would satisfy the needs of a company and provide valuable results that would be both useful and applicable in its everyday operation, functioning and interaction with other companies and clients on the globalized and complex markets of today.

4 Conclusions

Overall, we might conclude that expert quality management systems become a necessity for the leading industrial enterprise in both the Russian Federation and elsewhere. Their widespread use brings cost reductions, increase in both effectiveness and quality of products, as well as improves logistics of enterprises considerably. Last but not least, they create a system of internal and external controls that make sure the enterprises perform at their best.

Table 1 Stages of the process of creating an information management and planning system

No.	Stage name	Functions being implemented (achieved) in the aspects			
		Marketing	Design	Production	Other functions
00	Planning	Clarification of market conditions and opportunities. Definition of market segments	Choosing the platform and architecture of the future product. Evaluation of new technologies	Identification of production constraints. Strategy Development	Research: demonstration of available technologies. Financial: setting planned targets
01	Concept development	Identifying user needs. Defining key users. Identifying competing products	Studying the feasibility of the proposed concepts. Creating a design concept. Creating and testing models and prototypes	Estimation of the cost of production. Evaluation of the feasibility of production	Financial: facilitating economic analysis. Legal: patent research
02	System design	Development of a plan for the release of additional accessories and expansion of the product family. Setting targets for sales prices	Consideration of alternative product architectures. Definition of the main subsystems and interfaces	Definition of production scheme. Calculation of planned costs	Financial: participation in the analysis of the feasibility of self-production. Service: identification of possible problems in service
03	Working draft	Development of a marketing plan	Determination of product geometry. Setting tolerances. Creation of project documentation	Definition of manufacturing processes. Definition of quality control processes	

(continued)

Table 1 (continued)

No.	Stage name	Functions being implemented (achieved) in the aspects			
		Marketing	Design	Production	Other functions
04	Tests and fine-tuning	Development of promotional materials. Participation in operational trials (consumer testing)	Performance tests. Making changes to the design. Obtaining the necessary certificates	Facilitating the transfer of production to the operating mode. Development of manufacturing processes. Training of production personnel. Improving quality control processes	Sales: developing a sales plan
05	Putting production into operation mode	Distribution of test samples	Assessment of test samples	Start of operations to start production	

Source Own results

Moreover, it should be noted that the use of such technologies in the management of an industrial enterprise will lead to an increase in enterprise productivity and a reduction in the cost recovery period of funds invested in the development of information technologies to support strategic and managerial decision-making. It will also lead to the solution of the problem of improving product quality while reducing its cost.

All in all, we highly recommend information management and planning system that are embedded in the expert quality management systems for the large-scale usage at industrial enterprises. The importance of AI-based decision-making and planning algorithms is becoming a leading technology that can capture and envisage those small traits and details that a human mind would never be able to register.

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Part IV
Leadership in Higher Education:
Commercialization of R&D

Development of Leadership Skills of University Students in the Educational Process



Anna Artamonova, Anna Tarasova and Viktor Blaginin

Abstract Development of leadership skills has been an issue of many discussions for a long time. A number of sources in management, psychology, and sociology emphasize the role of a leader for economic sustainability and social well-being. Many scholars have been developing and classifying leadership evaluation models. These models differ in their basic criteria of leadership—professionalism, personal motivation, responsibility, initiative, and cognitive abilities. Development of leadership skills is a long and painstaking process, for which training and educating will play a crucial role. Having analyzed the long-term experience of teaching humanities at a university of technologies, the authors have elicited a significant potential for developing leadership skills within the Daniel Goleman’s concept of emotional intelligence, methodological recommendations on knowledge management by Nonaka (The knowledge-creating company. Harvard Business Press, Boston, 68 p, 2008), and practical recommendations on the development of leaders by Adizes. In addition, the authors have described the principles of methodological support for the processes of creating and developing leadership skills in the educational process.

1 Introduction

In general, one can see that there have been two parallel trends in modern education. The first one is formal. It relies on quantitative characteristics (scores, ratings), which are an indicator of students’ performance, while qualitative and informative characteristics are neglected. An attempt to pursue the quantity (scores and/or diplomas

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are issued, and professions are achieved) has a marginalizing effect for a graduate (employee), since she or he may have a diploma, alas, she or he may not have the necessary knowledge and competencies that employers need. This is happening in many countries, and the prerequisites for jobs and the required skills might differ (see e.g. Naushad et al. 2018; Naushad 2018). Quite often, the selection to jobs is done based on very different criteria than it used to be once (see, e.g., Kohoutek et al. 2017; Radwan 2018; Strielkowski 2018; Strielkowi et al. 2018; Volchik et al. 2018). Formal education model assumes that “that the main purpose is how many students (i.e., products) can be driven through the system, and what grades they will be given, but not the quality of what they are taught, and what experience they acquire” (Ritzer 2009). This is very important with regard to labor migration too, when migrants with required skills might distort local labor markets (see, e.g., Stojanov et al. 2011; Strielkowski and Rausser 2013; Čajka et al. 2014).

In a McDonaldised society (Ritzer 2009), even universities are transformed into industries that should be subordinated to the four main paradigmatic principles of the McDonaldisation process: efficiency, risk perception, predictability, and control. Each of these principles demolishes the educational process, formalizes learning, and its results. This model infers that getting formal education means taking all the training courses—assessment through testing, the main thing is to get the necessary scores—efficiency and risk perception. Any independent work can be ordered/purchased; distance, online courses reduce communication between the teacher, and the student to a minimum, the main thing is to clearly follow the instructions for obtaining the expected result—certificate, diploma—predictability. Deviations from quantitative criteria jeopardize the quality of education—control.

The second trend is the personality oriented (student centered) and individual learning path, which is based on the knowledge and development of competencies through practically oriented training courses. Such an approach to education is impossible without meaningful contact between a teacher and a student, a well-thought-out teaching methodology, and a joint work of a student and a teacher. This can still be found in some elite educational institutions, while in mass education enthusiastic teachers who do not approve of formalized and routine work support the approach. It makes the development of students’ leadership possible in the educational process.

2 Educational Process and Leadership Skills

Famous American psychologist Goleman asks a fair question—“What makes a leader?” According to his concept, emotional intelligence is an indispensable condition for good leadership (Goleman 2011). He considers self-awareness, self-regulation, motivation, empathy, and social skills as the key components of emotional intelligence (see Table 1).

This five-step system of components of emotional intelligence is promising for its consideration as a combination of five leadership skills that can be developed in students in the educational process. In authors’ opinion, the humanities and social

Table 1 Critical components of emotional intelligence

	Definition	Hallmarks
Self-awareness	The ability to recognize and understand your moods, emotions, and drives, as well as their effect on others	Self-confidence Realistic self-assessment Self-deprecating sense of humor
Self-regulation	The ability to control or redirect disruptive impulses and moods The propensity to suspend judgment—to think before acting	Trustworthiness and integrity Comfort with ambiguity Openness to change
Motivation	A passion to work for reasons that go beyond money or status A propensity to pursue goals with energy and persistence	Strong drive to achieve optimism, even in the face of failure organizational commitment
Empathy	The ability to understand the emotional makeup of other people Skill in treating people according to their emotional reactions	Expertise in building and retaining talent Cross-cultural sensitivity Service to clients and customers
Social skill	Proficiency in managing relationships and building networks An ability to find common ground and build rapport	Effectiveness in leading change Persuasiveness Expertise in building and leading teams

Source Adapted from Goleman (2011)

disciplines have the greatest potential to use educational process as a tool for developing these leadership skills. Empathy and social skills are, in fact, the results of training, where the most attention should be paid to self-awareness, self-regulation, and motivation. To master it, the teacher needs to abandon the so-called nutritionist concept of education, where the learner is a person whose consciousness is a space intended to be filled or nourished with knowledge (Freire 1985). With such an approach, a person (a student) is the object, not the subject of learning. However, psychological and managerial studies on development of leadership (Adizes 2004; Drucker 2008; Collins 2001; Strielkowski and Chigisheva 2018a, b) emphasize that the leadership skills should be developed by the subject her/himself, while they do not exclude external guidance. Therefore, a teacher who aims at developing students' leadership skills should be in a position of a tutor or a coach, but not an educator.

The methodological principle of the “knowledge spiral” (socialization—externalization—combination—internalization) proposed by Nonaka (2008) can be useful in the concept of knowledge management (Nonaka 2008). Socialization means the process of transferring non-formalized (hidden) knowledge directly from one person to another (e.g., teachers' advice on how to do certain types of work). Nonaka (2008) calls externalization the transition from non-formalized knowledge to formalized (explicit) (lecture). Combination is the connection of separate parts of explicit knowledge into a new (independent work of students). The process of “internalization” is enriching one's hidden knowledge with the help of new explicit knowledge

(use of learning results in research work). One can observe some features of the knowledge management model at Volga State University of Technology. In the above context, the process of adaptation of first-year students starts with the pre-module, which anticipates training on the educational program of higher education (socialization); continues as a part of the educational process with the use of tutor support mechanisms (externalization and combination—classroom work and extracurricular independent work, including e-learning technology). Later, students are involved in research work (internalization) via mechanisms of elite and project education. Gradually, the university develops a system of effective knowledge management, which contributes to identifying and developing leadership skills among students. However, only a few teachers in the humanities and social disciplines refocus their courses on subject-to-subject training, as this makes teachers work harder in terms of personal, research, and professional development.

3 Methodical Principles of Development of Leadership Skills

The teacher of social and humanitarian courses, those who have decided to switch to the process developing the students' leadership skills in the educational process, should review the content of assignments for independent and class work, focus more on interaction with students, rather than re-education. It is essential to clearly state the learning outcomes and develop practical assignments that contribute to the development of students' leadership skills while studying a given training course.

The main methodological principle can be learning through understanding and through activity; it is important to initiate a student's independent interest in developing their leadership skills. Within the Goleman's concept of emotional intelligence (Goleman 2011), leadership skills are self-awareness, self-regulation, motivation, empathy, and social skills. Let us share our own example from the experience of teaching philosophy and a philosophical course on management. The basis of philosophy is reflection, which includes self-awareness and self-regulation, especially if the object of reflection is a human being. For a comfortable consideration of the question of a person, we consider "a human being in general" at a classroom, and for independent work, we advise students to analyze themselves by the same criteria. The authors have analyzed independent work of fifty 3rd year undergraduate students of Volgatech of a technical profile for the 2017–2018 academic year. The most vivid emotional response and systemic self-reflection provoked the study and discussion (in the group and in personal essays) of the chapters "On duties in relation to oneself in general" of the second part "Metaphysics of morals in two parts" by Kant (2017). The students were rethinking the issue of projective human nature based on the analysis of the works by Sartre's "Existentialism is a Humanism" (Sartre 2007) and Fromm's "Man for Himself" (Fromm 2013), examples from the works by Adizes (2004) and Drucker (2008) were used as cases for small groups discussions. To monitor knowl-

edge acquisition, students were proposed to apply a SWOT analysis to themselves (i.e., to describe their own strengths, weaknesses, threats, and opportunities); only four out of fifty students could not fully complete this assignment, they were not ready to evaluate their opportunities and failures. The subsequent final discussion of the results of the course proved that the majority of students wanted to continue the process of self-reflection, they were interested in the development of leadership skills (the results of the experiment showed that the most underdeveloped were self-awareness and motivation). Many students expressed the idea that only in the process of studying a subject did they first think about themselves, their objectives, and life expectations, although most of them were already 20–21 years old.

The second and the third important methodological principles are consistency and realism. It is impossible to create and develop leadership skill among all students and with the help of only one course. There should be a well-designed system of social and humanitarian training, with coherent and consistent conditions for creating and developing students' leadership skills. Learning Languages can be a basis for the most important social skill—communication, Psychology may develop empathy, History and Sociology may help with motivation. It takes a little of methodical effort to use an amazing capacity of social studies and humanities to develop and educate students-leaders.

4 Conclusions

All in all, it becomes obvious that social sciences and humanities may help develop emotional intelligence, capacity to foresight, leadership, and may broaden horizons. We perceive the development of new models of behavior with the methodically right organization of the educational process. This is possible when practice-oriented training, case studies, and game education technologies are employed. Such promising leadership development opportunities of humanitarian courses impose increased responsibility on teachers and university administrators to implement the mission of a university—“to educate” a person, introduce him/her to the modern culture, open up the modern world in which a person should organize his/her life in such a way as to gain authenticity (Ortega y Gasset 2014).

Thus, we might conclude that the diversity of modern concepts of leadership, assessment matrices, and identification of leadership skills can be used and put into practice in the educational process. In our opinion, this will be a basis for self-development of leadership skills upon graduation from a university; the students will enjoy the knowledge acquired further on in their professional career.

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Research and Academic Leadership: Gaming with Altmetrics in the Digital Age



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Abstract Our paper aimed at contemplating over the novel measures of research functionality and efficiency used for measuring academic leadership from the point of view of internationalization of academic publishing and introduction of global research career paths. For instance, we argue that there is an interesting idea behind altmetrics such as PlumX but its technical deployment seems to have certain loopholes that might involve the use of altmetrics, for example, gaming with metrics using the Dark Web, and that need to be fixed. The recent addition to Scopus is the PlumX metrics originally designed by Plum Analytics. Its purpose is to measure the “societal impact” of science by monitoring the social media such as social networks, personal pages, and blogs. The question remains, however, whether academics need yet another metrics for proving to themselves and to the society that their research output has some value. Moreover, it appears that recent attempts to measure the “societal impact” of science remain unclear and need more polishing up before they can start to be widely accepted by the research community.

1 Introduction

Recent developments in research functionality and academic publishing that are marked by the growing importance of scientometrics and academic research databases envisaged to measure the productivity and output of academics as a proxy of their academic leadership went hand in hand with the development of online resources and social networks. The pressure to multiple research indicators as well

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as to increase the research output led to the appearance of the constantly increasing number of journals and publishers (Tian et al. 2016).

“Publish or perish” paradigm becomes a dangerous game for researchers who are applying for a research grant or an academic promotion. In the academia, the proxy measures are becoming increasingly important for assessing researchers and advancing their careers (Brotherton et al. 2018; Kun 2018). A good example of that is the citation index for academic papers, a scientific citation indexing service invented by the Eugene Garfield’s Institute for Scientific Information in 1960 as well as an “impact factor” (IF) also designed by Garfield in 1975 for helping the librarians to make their acquisitions (Heckman and Moktan 2018). It was then incorporated into the Web of Knowledge, a scientific citation indexing service run by the US company Thomson Reuters, that run it until 2016 and sold it to a Clarivate Analytics.

The IF was originally devised as an advisory system for library purchasing decisions but after several decades, it has progressed into an assessment system of scientific productivity of individual researchers and academic institutions widely used in many fields. The “impact factor chase” has become the essence of academic careers in many countries and led to the attempts to game with publishing metrics. One can therefore see that the purpose of publishing research articles has changed over the centuries (Banks 2018).

There is a plethora of research metrics used by scientists and government science-funding bodies to assess and monitor indicators of academic publishing. Apart from the IF mentioned above, there are now SCImago Journal and Country Rank introduced by Elsevier’s Scopus and research metrics offered by Google Scholar in the 2000s.

Even though the peer review remains the Holy Grail of the academic publishing and the citations of one’s work in other academic journals and publications constitute the widely accepted measure of academic output and relevance, the rise of the Internet and information technologies is slowly but gradually changing this. Social media platforms became deeply embedded into the system of scholarly communication and serve as the important base of novel altmetric indicators (Sugimoto et al. 2017; Starbuck and Purtee 2017). Altmetrics is starting to be used as the measure of faculty research, creativity and engagement (Wong and Vital 2017).

Last year, Scopus, an academic database run by Elsevier and a trend setter in the field of academic publishing, is coming with the new metrics called “PlumX.” According to Elsevier, PlumX Metrics was designed to assess the ways people interact with individual pieces of research output (articles, conference proceedings, book chapters, and many more) in the online environment (Champieux 2018). It is expected that PlumX Metrics will soon become the primary source of article-level metrics on Scopus (Ortega 2018). However, the question is: do we need yet another research metrics? And if so, what new is it going to offer beyond what is available nowadays (or beyond what the competition is offering)?

2 Another Useful Academic Metrics?

Plum Analytics, a scientometrics data aggregating company, was founded in 2012. In 2014, it was acquired by EBSCO, and in February, this year it became a part of Elsevier. The company gathers all the altmetric data for a special purpose to be able to use it to support researchers to answer their questions.

PlumX Metrics on Scopus was designed to offer a new insight into how metrics around research is being used. According to Elsevier, this new metrics would soon become the new standard both for the science funders and for the scientists. Science funders will use PlumX Metrics for monitoring the online environment with the purpose of deciding where they should invest and what research they should support. Scientists will be using the new metrics to justify the return of the research money. Moreover, the metrics can be used to identify the “rising stars” among the early career researchers.

In August 2017, Scopus and Plum Analytics bibliometricians held a joint webinar entitled “*How PlumX Metrics on Scopus help tell the story of your research*” (PlumX 2017). The webinar provided a number of very interesting ideas: First of all, the PlumX metrics project seems to be very ambitious. However, it is still unclear why we need another research metrics. Moreover, it seems that PlumX Metrics is not much different from Google Scholar, an automated Google service that tracks citations and mentioning of academic papers and books from all possible sources. Many scientists wonder that their Google Scholar citations are always higher than Scopus or Web of Science citations. The explanation is simple: Google Scholar uses the machine code to track all possible academic databases as well as blogs, personal websites, Twitter, Facebook, Instagram, etc. It is embedding the Web of Science (a very small and elite database), Scopus (which intersects with the Web of Science), and all possible sources beyond that (Martín-Martín et al. 2018).

Lots of scholars would probably agree that Google Scholar is a very open database and has fuzzy edges (Dorsch et al. 2017; Flatt et al. 2017). Machines are determining what to index and they might index a blog, a personal website, and put it into the Google Scholar citations. On the contrary, Scopus is highly curated and maintains the quality level. Surely, this was true when we were dealing with citations in other Scopus journals and using SCImago and SJR. However, as soon as we are going to count citations and mentions beyond the curated databases, we might run into a problem.

3 Altmetrics and Dark Web

Academic publishing is keeping up with the digital age. Academic papers are read online and shared via social networks. Moreover, they are pirated online just like the songs and latest Hollywood films used to be pirated two decades ago using Napster and torrents and the knowledge of digital technologies becomes a very valuable asset

(Himmelstein et al. 2018). Therefore, PlumX Metrics also provides a competitive advantage to scientists who are more familiar with IT and web technologies and therefore can engage in gaming in social platforms in order to increase the significance of their research.

The implications of automated Twitter accounts (e.g. bots and cyborgs) and their possible use in politics (e.g. socket puppets and troll factories that are claimed to be used during the recent presidential campaign in the United States), works on gaming in altmetrics represents the new topic in the scientometrics and library information literature (Haustein et al. 2016).

Moreover, there is Dark Web (or Darknet) that makes it possible to game in the new altmetrics and abuse it through the use of the social media platforms. Dark web represents a small section of the Internet which is encrypted and allows to carry out data transfers and transactions with total anonymity. It was originally designed by the US Navy for the stealth operations but was eventually given to the public and adapted by hackers and all those who seek anonymity on the Internet. The whole thing became known to the general public with the story of the Silk Road, a Darknet website that was designed to buy and sell drugs using the tools and precision of Amazon or Craigslist (Maras 2014).

One can use the Dark Web to boost her or his citation score in the online environment. If one is using Tor browser, she or he is completely anonymous, so the person can create blogs and Twitter accounts claiming to be maintained by different people in different countries. Using these blogs and accounts, one can praise her or his research to show that it is more important for the society and the general public than the research of others.

PlumX experts (Andrea Michalek, Research Metrics) and Marianne Parkhill, Plum Analytics) admitted during the webinar in August 2017 that PlumX would be vulnerable to the attempts of gaming in their new altmetrics. Here is the transcript of our discussion taken from the webinar:

Mariane Parkhill

“We have a question I have never seen before...” (laughs)

Andrea Michalek

“Exciting. Marianne and I have done a lot of these webinars. So, this is kind of fun. What is it?”

Mariane Parkhill (reads the question out loud)

“Can you track citations, mentions, links, etc. if someone is using the Tor browser or otherwise interacting with the article via the Dark Web?”

Andrea Michalek

“Well, certain things do not require end user interactions. We are going to get these from the citations’ sections of the articles. Metrics from the providers. Personal identifiable data do not mind. PlumX does not

watch anyone's browser data. If you tweet in private, PlumX does not include it at all".

Clearly, many Twitter or Facebook accounts created under fake names (so-called sock puppets that are extremely difficult to locate, trace, and catch) in order to praise one's paper might work (Yamak et al. 2018; Veerasamy and Labuschagne 2018). Tor browser hides user's location and IP address or assigns it to other countries and place around the globe. If research grants are to be allocated using "societal impact" measured by the PlumX metrics only, under the current state of the art and technical deployment this research metrics offers, there exists a way for boosting up one's score. PlumX creators and Scopus that promotes it alongside with its "traditional" metrics, such as SJR and CiteScore, will inevitably have to deal with this issue before academic worldwide are going to be pushed into presenting more "societal impact" when applying for academic promotions or research grants.

All these issues coincide with the popularity of scholarly Open Access publishing. The rise of Open Access movement was inevitable due to the increase in research output and the expansion of the Internet. However, the traditional publishing models seemed to lag behind. Academic publishing system which was established after WWII is economically highly unsustainable. In general, the system works as follows: (i) governments pay the scientists to do their research; (ii) scientists publish their results in academic journals; and finally, (iii) governments pay again for the scientific results to be published in academic journals (and to be accessed afterwards through numerous journals indexation databases) (Strielkowski 2017). The scholarly Open Access can become the solution to that economic conundrum but the increasing number of publications and journals (most of them available solely online) need to be curated using a reliable and stable system.

4 Implications

Overall, it seems that measuring the "societal impact" of science becomes a new fashionable trend. Science funders want to see beyond the traditional impact factors and h-indices and to get the good value for their money. Nevertheless, how exactly to measure this remains unclear and needs more fine-tuning before it can be accepted by the research community. Truly, the PlumX Metrics is a step in the right direction, but it is currently far from perfect. Scopus and the creators of PlumX Metrics might want to consider some improvements to their otherwise very interesting idea and the new academic metrics that might change the entire way how we perceive the relevance of academic publications and their importance both for science and for the general public. Many countries (e.g. the Netherlands) have started to encourage their scientists to publish more in non-academic sources and to attempt to open up the meaning of their research to the public. PlumX has been designed to do just that.

What can probably help academic functionality and measuring academic productivity in a very effective way is probably big data analysis based on the data obtained from such journal indexation databases as Elsevier's Scopus for a plethora of countries and research domains. Scrupulous analysis of the data that cannot be played with might help the scientific community to categorize the links between global research productivity and various internal and external factors.

5 Conclusions

All in all, one can see that there are many recent changes in academic functionality and efficiency with the new journal indexation databases taking the place of the old established ones and with the new metrics (or altmetrics) taking over the place of the long-established measures of academic performance. This is the case of the Web of Science, once the world's highly ranked bibliometric database, which is now losing its importance as well as its customers and markets to Elsevier's Scopus.

Furthermore, there are more implications to the academic community that are brought about by the recent initiative of Science Europe, a group of national research funders from eleven European Union countries that forged "Plan S," a requirement to for public universities and research institutions to publish their work only in Open Access journals by 2020. In our view, Plan S would change the academic publication market as we know it, luring away the customers from the traditional subscription-based journals and world's top publishers with the largest shares of academic literature (the so-called Big Five lead by Elsevier and Springer Nature).

Moreover, one should not forget the immense potential of preprints, a new form of disseminating academic research in a form or non-peer reviewed papers available online for free access and download. They can also change the "publish or perish" game and increase the societal impact of the academic research.

In general, it is still not clear whether we need yet another academic metrics with so many of them currently in existence. However, an attempt made by PlumX and Scopus is surely a step in the right direction—the one where the powers of global digitalization and interconnectedness should be exploited and promoted.

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Entrepreneurial Intentions of Students as the Future Business Leaders



Jaroslaw Korpysa

Abstract The main objective of this paper was to diagnose significant determinants of students' entrepreneurial intentions which condition the process of creating their own company. This is a very important endeavor, since today's students will become the business leaders of tomorrow. In the first part of the paper, we review characteristics of the most important theories concerning determinants of creating entrepreneurial intentions on the basis of relevant literature. In the second part, we present empirical findings in the subject aspect. We employ the data from the questionnaire survey conducted in 2017 with a group of 624 students of the University of Szczecin and the University of Rzeszów. Our main research tool used in our paper was a questionnaire which included thirty proper questions as well as socio-demographic questions. Our results showcase some relevant research items which best illustrate the formation of entrepreneurial intentions among our respondents.

1 Introduction

Contemporary entrepreneurship in the research discourse relates, among other things, to the entrepreneurial process, which is connected with spotting and utilizing so-called entrepreneurial opportunities by an individual (Frese et al. 2014; Klotz and Neubaum 2016). From such a perspective, the essence of entrepreneurship is ever more often examined through the prism of entrepreneurial intentions which condition the processes of emergence and creation of a new reality (Kurczewska et al. 2016). Therefore, the intention is an indicator of the extent to which people want to commit themselves as well as the effort they want to make in order to create their own business.

The above properties have determined the main goal of the study, which is the analysis of the factors conditioning the formation of entrepreneurial intentions among the students. Due to numerous interpretations and definitions of entrepreneurial inten-

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tions, some selected conceptions and aspects of the analyzed subject matter were presented in the first part of the study. Thorough presentation of contemporary theories on the formation of entrepreneurial intentions has been presented there. In the second part, the most significant research findings concerning the formation of entrepreneurial intentions among students, highlighting opportunities and barriers of the development of entrepreneurship among the young generation, from the perspective of the achievement of the goal of this article were presented.

2 Essence of Entrepreneurial Intentions

In the contemporary scientific discourse, entrepreneurial intentions are most often defined as particular attitude or behavior of a person willing to create new economic activity. Such a way of recognition of intentions is chiefly based on the characteristics of an entrepreneur, particularly on: his need for getting motivation, inner disposition of control, willingness to take risk, and personality factors (Tshikovhi and Shambare 2015; Kot et al. 2016). There are many theories elucidating the essence of entrepreneurial intentions. One of them is the theory of perceived locus of control (Fayolle and Gailly 2015). Rotter basing on two types of perception of control, i.e., cognitive properties of an individual and personality factors (Prakash et al. 2015) distinguished two groups of so-called future entrepreneurs, i.e., individuals characterized by internal and external perception of control. These individuals whose sources of entrepreneurial intentions were reflected in their actions were included in the first group. People whose entrepreneurial intentions are a result of mimicking the behavior and actions of others were included in the second group. In the context of our consideration, the theory of Ruef and Lounsbury (2007) is also important. The researchers analyzed entrepreneurial intentions from four angles, i.e., contextual, behavioral, constructivist, and environmental (Ruef and Lounsbury 2007; Kozubíková et al. 2017). The first aspect assumed the influence of material-cultural determinants of the formation of entrepreneurial intentions. The behavioral aspect analyzed the relationship between entrepreneurial activity of an individual and the structure of population in which it functions. In this aspect, the researchers focused on the influence the entrepreneurial intentions have on particular stages of creating and functioning of an organization and also on the influence it has on shaping the identity of this activity. The third aspect illustrated the influence of entrepreneurial intentions on creation and functioning of interpersonal networks in the organization. The last related to the influence of the environment on the formation of the willingness to create own business (Jennings et al. 2013).

Among the theories utilized in explaining entrepreneurial intentions Theory of Planned Behavior plays a major role. According to this theory, entrepreneurial intention is equated with general motivation to perform a particular entrepreneurial behavior (Ajzen 1991). The assumptions of this theory show that an individual's behavior depends on his intention, which in turn is determined by attractiveness of an object/action, social norms, and control over behavior (Engle et al. 2010: 35–57).

The attractiveness of an object/action is connected with assessing benefits and costs resulting from a given behavior (the bigger the difference between costs and benefits, the faster entrepreneurial intentions are created). Social norms are an assessment of pressure of performing or abstaining from performing an act, which an individual perceives from the direction of individuals significant for him (Ajzen 2015). However, the perceived control over behavior determines the degree of difficulty or easiness with which an individual expects to perform a given action (Cheon et al. 2012).

Theories concerning entrepreneurial intentions which are connected with skills and characteristics of an individual also deserve attention. According to Audretsch et al. (2017), entrepreneurial intentions condition creativity, motivation to act, confidence of behaviors, responsibility for the consequences of own actions, as well as awareness of succeeding and failure (Audretsch et al. 2017). In such an approach, these intentions influence the level of heuristics of entrepreneurs. In this context, three types of heuristics can be distinguished, i.e., representativeness heuristic, availability heuristic, anchoring heuristics (Audretsch et al. 2017). The first of them is related to the observation of a given situation and formulating opinions by an entrepreneurial individual without utilizing external information. The second focuses on the assessment of the most distinctive and expressive occurrences. The last is based on the influence of the obtained information in the entrepreneurial individual's initial phase of action. Possessing these skills distinguishes entrepreneurs from the remaining part of the society, due to the fact that they become more responsible for the choices they make. Moreover, they learn from their experiences, acquiring information and knowledge on the probability of realizing a given task. It ensures them the achievement of both success and satisfaction from completing tasks in risky conditions. Another theory explaining the influence of characteristics and skills on the formation of entrepreneurial intentions is Leibenstein's conception. According to this concept, the formation of entrepreneurial intentions should be linked to characteristics or skills an entrepreneur possesses, including in particular: (1) seeking and discovering opportunities and possibilities in the surrounding; (2) abilities of organizing and running a company; (3) acquiring funds for the company activity; (4) ability to act in the conditions of risk and uncertainty; (5) responsibility for motivating employees to creative action; (6) access to market information, technology resources, and the ability to harness it (Leibenstein 1968). Timmons (1979) distinguishes slightly different entrepreneurial characteristics in the process of creating entrepreneurial intentions. He defines the following parameters: dynamism of action, leadership skill, ability to perceive opportunities, ability to act in the conditions of risk and uncertainty, creativity, independence and an individual's ability to adapt to the conditions, as well as internal motivation (Ge et al. 2016; Bilan 2008). The first feature characterizes the entrepreneur as an actively operating individual demonstrating initiative, seeking new solutions in the ways of improving the methodologies or processes. Apart from that, it is very important for an entrepreneur to possess leadership skills and ability to cooperate with others. Other characteristics distinguished by Timmons (1979) is the ability to perceive opportunities (McMullen and Kier 2016). It is reflected in an individual's constant search for new possibilities in the surroundings in order to make the situation better. Furthermore, according to Timmons, the ability to act, especially

to fight risk and uncertainty connected with every activity of an individual, is also important. Adaptation to changing conditions of environment and surroundings is also important. The last of the analyzed features—internal motivation is necessary for the entrepreneur's constant and successful action in order to acquire benefits.

Different entrepreneurial features are characterized by Costa et al. (2008) and in his later works and papers. He analyzed entrepreneurial intentions of a given entrepreneur through the prism of the following characteristics of an individual: extraversion, neuroticism, agreeableness, conscientiousness, openness for experience (Costa et al. 2008; Bartos et al. 2015). The first feature describes people who are characterized by optimism and easiness in contacts. The second analyzes individuals characterized by high mood volatility. The third describes people for whom it is easy to adjust to the rest of the society. The fourth illustrates the compliance with existing legislation of actively operating individuals. The last shows a person's openness for the lessons derived from experiences and their application in solving problems. Each of the presented personal characteristics influences the diversity of entrepreneurial intentions, in particular, the ability of risk taking, getting motivated, and the locus of inner feeling of control (Carvalho et al. 2015).

Taking into account the above described characteristics, it is appropriate to develop the analysis of the factors shaping entrepreneurial intentions among the young generation, and to define the ones which condition to greatest extent the willingness of young people to create a business venture and to consciously plan this process in the future.

3 Main Results

The main objective of our research was to analyze students' attitudes toward entrepreneurship. The main research tool was a questionnaire which included thirty proper questions as well as socio-demographic questions. The survey was addressed to 624 students studying economic and non-economic specializations at state higher education institutions in Poland. Random sampling was used to select target population. The survey was conducted in the second and third quarter of 2017.

In order to present the data acquired in a more effective way, the surveyed population was seen in the context of sex, course of study, and source of income. Among the surveyed population, 59.5% were women, 40.5% men. 48.2% of the respondents gained education in the field of economics, and 51.8% outside the field of economics. About 72.8% of students depended on their parents, 20.4% were partially dependent on their parents. The percentage of students who were totally independent was 6.8%.

Due to the achievement of the research objective, in the first place the students were asked to determine the features describing and characterizing entrepreneurial individuals while simultaneously determining entrepreneurial intentions. The study showed that, according to the respondents' declarations, the most common trait characterizing an entrepreneurial person selected by the participants was diligence (63.82%), easiness in contacts (53.46%) and responsibility (52.30%). In the next

order, the students chose punctuality (44.7%), integrity (43.78%), and creativity (40.32%) as well as resistance to stress (40.09%). When analyzing the characteristics which poorly describe an entrepreneurial person, it should be noted that intuition (4.38%), conscientiousness (4.15%), and loyalty as well as the ability to predict (3.23%) were the choices characterized by the highest percentage.

By studying the structure of answers from the perspective of differences between particular surveyed groups, one can notice that the biggest discrepancies occurred in case of the survey data broken down by gender. In this regard, women in majority selected the following traits best characterizing an entrepreneurial person: diligence (65.15% of choices), responsibility (51.87%), and easiness in contacts (51.85%). In case of men, the hierarchy of importance was different because they marked easiness in contacts in the first place (62.18%), responsibility in the second place (52.85%), and perceptiveness in the third place (49.22%). While characterizing the least important traits, it should be noted that the women in majority selected integrity, conscientiousness, and punctuality, whereas men included creativity, loyalty, and intuition into this group of determinants. The presented results may also be analyzed by means of average values for each of the answers.

On the basis of an analysis of mean rank values for each variant, the following groups of character traits characterizing an entrepreneurial person may be distinguished:

- Character traits of high relevance: diligence, easiness in contacts, responsibility, striving to gain new knowledge, commitment to achieving the assumed goals;
- Character traits of average importance: creativity, resistance to stress, punctuality, integrity;
- Character traits of minor importance: conscientiousness, willingness to take risk, intuition (i.e., factors whose mean rank exceeded the value of 4 were considered of high relevance; factors of moderate importance scored mean rank higher than 2 but lower than 4, factors of minor importance scored mean rank below 2).

Besides indicating the traits that, according to the respondents, characterize entrepreneurial people in the best way, the participants were also asked to determine which ones they have and how well developed they are. The obtained results have been presented in Table 1.

The most developed entrepreneurial trait characterizing an entrepreneurial person the respondents have were conscientiousness (46.77%) and punctuality (41.71%). Moreover, responsibility (39.63%), loyalty (38.48%), diligence (38.71%), and integrity (37.33%) were selected by the respondents quite often. Among the least developed traits, the following were characterized by the highest percentage: resistance to stress (5.99%) and punctuality (3.00%). An entrepreneurial person's character traits which the respondents did not have that deserve special attention are: willingness to take risk, striving to gain new knowledge.

The performed analysis of mean ranks confirmed that the most developed trait they have is responsibility (mean rank value of 4.18), conscientiousness (mean rank value of 4.07), and punctuality (mean rank value of 3.57).

Table 1 Entrepreneurial traits (in %)

Character traits	I do not have	I have a very under developed trait	I have a poorly developed trait	I have a moderately developed trait	I have a strongly developed trait	I have a very strongly developed trait
Creativity (resourcefulness, industriousness)	0	1.15	5.99	40.78	41.47	10.60
Conscientiousness	0	0.46	1.38	4.15	26.96	46.77
Integrity	0	0.46	0.46	1.84	12.44	37.33
Diligence	0	0.92	3.23	17.74	39.40	38.71
Easiness in contacts	0	1.84	4.61	20.51	36.18	36.87
Willingness to take risk	1.15	1.38	11.98	35.02	26.27	24.19
Striving to gain new knowledge	1.61	1.84	5.99	24.88	42.86	22.81
Intuition	0.46	0.92	11.06	37.33	38.02	12.21
Commitment to achieving the assumed goals	0	2.07	5.30	28.34	45.39	18.89
Resistance to stress	0.69	5.99	14.52	33.87	29.26	15.67
Perceptiveness	0.0	1.61	5.53	27.42	47.93	17.51
Punctuality	1.61	3.00	5.53	14.52	33.64	41.71
Loyalty	0	0.46	1.84	13.59	45.62	38.48
Responsibility	0.46	0.00	2.53	14.06	43.32	39.63
Ability to predict	0.23	2.07	8.99	35.71	43.09	9.91

Source Own results

In the following part of the study, an analysis was carried out which allowed the respondents to determine whether they consider themselves an entrepreneurial person. Over 70% of the respondents gave a positive answer, and only 22% believed they were not entrepreneurial. It seems interesting, present the structure of the given answers according to distinguished distribution criteria of the study group. By means of an analysis of the obtained results, distinguished by the prism of the criteria established before, it may be observed that in the surveyed population, there is a significant stratification. There are more entrepreneurial people among men (81.3%) than women (72.3%). The discrepancy is even wider between students of economics and non-economics. Nearly 85% of the respondents from the first group stated that they are an entrepreneurial person. Among the people studying non-economics 69%

stated the same. However, the biggest differences occurred in case of the analysis of replies according to the criterion "source of income." The students who are totally independent from their parents in 88.3% claim that they are entrepreneurial people. In case of the respondents who are partially or totally dependent on their parents, this percentage equals 69.1 and 62.3%, respectively.

In the context of our consideration, interesting results are also provided by the respondents' answer to the question: "Would you to start up your own business if you knew how to do that?" About 59% of the students responded affirmatively to this question, and 41% negatively. While analyzing the acquired results according to the distinguished criteria of the division of the studied group, very similar results were obtained. Simultaneously, in order to complement the above question, the respondents who expressed willingness to start up their own business were asked to provide an answer concerning the most important issues connected with the entrepreneurial process connected with the creation of a new company.

In the first question, the students were supposed to determine whether they are willing to face risk of losing capital in return for making profits of a proper level. A decisive majority (88%) responded affirmatively, and only 12% of students do not want to create a threat of the loss of their savings. Besides capital, the owner's commitment to work is a key factor determining the future and prosperity of each company. Therefore, another question was asked to the respondents: "Are you willing to devote yourself entirely to your work?" The majority of students (64%) believes there is no other way to create their own business. Without diligent and responsible work, there will be no results. The owner must devote himself entirely to his company, get involved to such an extent to enable it to exist and achieve its goals. No other than him knows which strategy to use and which objectives the company aspire to are to be achieved.

Acceptance and support of immediate environment is another important factor shaping the development of one's own business. In order to study the above issue, the students were asked to provide answers to the following question: "Do you have a group of people (family, friends) who is going to support you in your projects?" Almost all the respondents (94%) responded positively. Only 6% of the students cannot count on such help. The fact that future company owners can count on support, not necessary of financial nature, from other people, is highly satisfactory. This is important because providing social stability by acceptance of activities and simultaneous constructive criticism, as well as guiding the owners to change certain objectives planned before will ensure an adequate level of company capital development.

Another question concerned the time when the students were willing to start a business on their own. The majority of respondents (68%) replied "at once, why waste time?," and only 31% indicated the need of gaining proper experience and professional position. Women (79%) are more determined than men (55%) to start their own business at once.

The last question addressed to the people who are going to work in their own company after graduation was: "In what time after starting your own business are you going to make first profits?" The replies to the question show that the majority of people (42%) expect profits after a year of operation, 26% of students count on it

a bit earlier—after half a year. The same percentage of the study population (15%) responded that they expect profits instantly and the same percentage after a few years of their company existence.

Knowing the main determinants of the formation of entrepreneurial intentions, it was appropriate to define the main barriers related to starting one's own business. Based on the results, it should be stated that the key determinant selected by the students is lack of financial resources (98.3%) together with lack of knowledge concerning necessary formalities one must face while starting one's own company (86.1%). Moreover, the vast majority (72.1%) do not know the order of magnitude of capital needed to develop one's own company and they do not know how it could be obtained (75.3%). They are also convinced (64.3%) that the present situation on the labor market does not encourage to start up one's own business. According to the respondents, the smallest obstacle is an idea for their own start-up company. About 57.9% of the respondents declared that they know what their own company would do in the future while 42.1% of the students have no idea yet.

In the analysis of the survey population from the point of view of distinguished criterion of the course of study, quite significant differences between the answers given in the respondents group distinguished by the course of study may be noted. The students of non-economics (60.4%), to a greater extent, compared with the students of economics (39.6%), admit that they have no idea on their own start-up. A quite significant stratification exists in the structure of answers concerning the knowledge on the formalities connected with starting one's own company. About 92.8% of the respondents who are students of non-economics do not know the required procedures compared with 81.8% of students of economics. Smaller discrepancies may be observed in case of the lack of knowledge on how to acquire financial resources on starting up one's own business (students of non-economics 74%, students of economics 76.1) as well as in case of the assessment of the current situation on the market—respectively, 63.6% for the first group and 65.5% for the second. However, it is not surprising that regardless of the course of studies, the respondents gave similar answers to the question concerning the capital they had for their own start-up.

4 Conclusions

While attempting to diagnose the important determinants of entrepreneurial intentions of students, it should be stated that one of the key factors are personality traits of an entrepreneurial person. In this regard, conscientiousness, responsibility, loyalty, diligence, and integrity are the ones which should be emphasized. Moreover, students' own belief of being entrepreneurial as well as their willingness to start up their own business (over 50% of the respondents expressed willingness to start up their own business immediately after graduation) also has influence on the process of creation of entrepreneurial intentions of students.

What is more, students' awareness in the field of losing their own capital but also of the fact that their company will require their exertion and work also have influence

on the process of creation of entrepreneurial intentions. Acceptance and support from people who are their family and friends are also of key importance. In the context of our novel research, it has been determined that financial resources the students have, their knowledge on creating and running their own business, including the knowledge on acquiring external financing for their company (outside banking system), as well as the situation on the market also affect entrepreneurial intentions. In light of these considerations, it has to be concluded that tasks of the university internal and external stakeholders include creating and ensuring the conditions facilitating the creation of entrepreneurial intentions among students. For that purpose, it is appropriate for the universities to create an entrepreneurial culture aimed at spotting and harnessing business opportunities by the young generation. This task becomes, besides educating and doing research, an important mission of the contemporary universities.

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International Academic Student Mobility as a Factor for Enhancing the Leadership Potential of the University



Tatyana Monastyrskaya and Natalya Medvedeva

Abstract The academic leadership of universities is shown in various ratings to a great extent. The university rankings may differ in their KPI systems. The leading and the most popular academic rankings, in particular, the QS World University Rankings (QS), take into account the share of international students and teachers in the university as an indicator. Times Higher Education (the ranking that separated from QS) includes such an indicator as international cooperation both for teachers and for students. These rankings consider the international academic mobility only as an “input,” i.e., engaging students and academic staff from abroad. The young students perceive the university leadership from a different angle; they consider how the university could assist the student to become a valuable employee. The students are interested not only in the share of international students who study together with them but in their own opportunities to obtain knowledge from the best educators at the university they study in as well as at the international universities. The opportunities the university provides within the framework of outbound student academic mobility make it more competitive in the educational market and enhance its leadership position in the region. This paper provides a short summary of trends in the development of international academic mobility for students as in the case study of Russian and foreign universities. The authors attempt to demonstrate the opportunities of outbound international academic mobility of students in forming the university leadership potential basing on the data of a sociological research.

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1 Introduction

One would probably agree that the role of cross-border higher education is increasing in the globalizing environment. The processes of scientific and academic exchange become one of the main priorities of universities striving for leadership in the world market of educational services (Strielkowski and Chigisheva 2018).

The discussion concerning the opportunities of international academic student mobility within the European educational space has been going on since the moment of signing the Bologna Declaration by a number of universities. The creation of unified educational space on the territory of the European Union has not been completed so far. However, the advantages of some universities in the organization of international academic student mobility are obvious (Chvátalová 2016). The most successful ones are the universities of certain European countries which have a high academic ranking and image as well as long-standing traditions in the area of international academic mobility. The Eastern-European model of international academic student mobility which CIS countries are following is characterized by the prevalence of outbound mobility over the inbound one as well as unequal participation of universities in international academic student mobility (Sergeeva 2010; Koudelková and Svobodová 2014). The unsteadiness of participation and unequal contribution to the international academic mobility is also characteristic of Russian universities at the moment.

Taking into account some imbalance in the inbound and outbound international academic mobility, a new assessment index appears in the ranking parameters of Russian universities in order to stimulate the development of outbound mobility. Therefore, the largest credit ranking agency in Russia Expert RA (RAEX) has undergone the international audit IREG Observatory on Academic Ranking and Excellence, i.e., RAEX Agency has obtained the confirmation that the methodology of Russian universities ranking meets the quality standards. One of the ranking criteria “Conditions for getting a quality education” comprises “International integration” group which includes four indices. The parameter “The share of daytime students who are educated at the bachelor, specialist and master program and took their training abroad at least one semester (term) in the total number of students” assesses the outbound international academic student mobility (University rankings by RAEX 2018). The Department for International Cooperation in the Ministry of Science and Higher Education of the Russian Federation has been actively promoting programs of outbound international academic mobility by providing a free access to the program of outbound international academic mobility (the Program of Outbound International Academic Mobility 2018). The development of outbound international academic student mobility decisively depends on the allocated finance which results in unequal conditions to ensure the functioning of this process in different universities.

With regard to the above, Wells (2014) expresses an opinion that the term “student mobility” turned into “umbrella term” meaning various reasons for being educated abroad. Promotion of outbound international academic mobility is based on both objective factors (institutionalization of international academic mobility, financial

support, efficient functioning of informational processes) and subjective ones. The objects of international academic mobility are students, and consequently, the successful implementation of international academic mobility would be determined by their subjective wishes and efforts. In this connection, the practical study of students' readiness for international academic mobility and the restrictions which they envision for the moment is absolutely relevant because it allows envisioning a new picture of the development of the university leadership potential.

2 Literature Review

International mobility for students is a particular generator of principally new academic culture in the process of cultural hybridization which is happening globally. There appears a need for searching and promoting efficient strategies of international academic mobility for students. The development of academic mobility for teachers is also of strategic importance for organizing such mobility and creating international academic and research networks (Volchik et al. 2018; Strielkowski et al. 2018; Li 2018). The objectives of international academic mobility can be absolutely various and specific for different categories of the academic community. While the teachers aim at participation in scientific events and projects within the academic mobility, the students' target would be studying at a foreign university. In this period, as a rule, students polish their foreign languages, participate in research, and attend training courses (Ferencz 2018).

International academic mobility possesses its own distinctions and similarities in different continents. In Australia and New Zealand, the models of academic activity have many similarities, and the very academic mobility between the former colonies and "old Britain" started to develop actively as early as in the nineteenth century with the creation of new models in the British academic world (Ziguras 2018). International academic mobility depends on different conditions. A number of researchers in their works pay attention to the inequality in the academic system. In particular, in the course of their experimental study Gerhards et al. (2018) found that the applicants from American universities receive more positive and interested feedback from professors when they asked them to become their research supervisors within international academic mobility compared to other applicants. The experiment indicated the importance of national scientific reputation of universities. Moreover, the authors report that the status of a capital university is of greater significance than that of a periphery department. The creation of educational systems can be the key direction for the achievement of the educational equality. Organization of Economic Cooperation and Development (OECD) offers several practical solutions for the governments to ensure the educational equality, i.e., international academic mobility for students (virtual, physical, inbound, and outbound) (OECD Observer 2018).

The research of academic mobility in Africa highlights that the international mobility prevails over the regional mobility. Within the latest twenty years, the interaction between China, Korea and Japan has strengthened in this direction, and also

the European programs for international mobility have developed substantially. The authors point out that the development of informational and communications technologies provide many opportunities for international academic mobility, whereas there are a lot of constraining factors. The authors refer to the commercialization of the higher education, growth of poverty, political turmoil, terrorism (Knight and Woldegiorgis 2017).

Tran (2016) from Asia-Pacific Universities highlights the importance of critical approach to international mobility which takes into account not only the students' willingness to obtain the cultural and institutional knowledge but above and foremost it considers how various aspects of mobility influence their learning experience (Tran 2016). The strategies which governments and host universities opt for outbound mobility are of an utmost importance. Within the European educational space, students are the objects of much attention (Erasmus programs and others). That is, Brazilian students have been actively searching for opportunities to be educated in Portugal. On the background of migration decrease from Brazil to Portugal and the decrease in demand for the workforce, the flow of student outbound academic mobility from Brazil to Portugal has grown up greatly. Such activation of academic student mobility was helped by the policy, adopted by the Brazilian government in order to stimulate the international mobility of their students as well as strategies developed by the Portuguese universities to attract Brazilian students. Here one can refer to institutional reorganizations which facilitate mobility, studying the mobile students' experience (Fonseca et al. 2016).

Nedelcu and Ulricha (2014) stress that the association between the theory of human capital and academic mobility is often seen in "brain drain." According to the authors' opinion, the students who participate in academic mobility enhance their human capital while studying in the universities of other countries and for this reason they cannot be considered as "brain drain." There are a lot of factors which do not let the students to stay in the host country: social and family ties, comfortable cultural and language environment, lower living cost in the native country (Nedelcu and Ulricha 2014).

Bologna declaration covered such basic aspects as academic mobility for teachers, students, researcher, administrative staff. By analyzing the directions of modernization of Russian education since the moment of signing the Bologna declaration by Russia, and in particular the contemporary round of the Bologna process, Grebnev (2018) points that mobility has never been the center of attention neither at the ministry level nor at the university level (Grebnev 2018). Comparing different approaches to the organization of students' mobility in Russian and international practice, Vatolina and Fedotkina (2015) come to the conclusion that the inbound mobility has received greater development in the universities of Russia. Short-term student mobility is implemented to a lesser extent. It is based on cross-university cooperation. It is this type of mobility according to the authors' opinion required the state support and elimination of existing obstacles.

The comparative analysis of the international academic mobility development in Russian and German institutions of higher education is given in the work of Yushkova and Neborskaya (2016). The authors think that in Russia, the share of high

ranking universities activity in internationalization differs from that of periphery universities. The outbound academic activity of students is limited by the shortage of time allocated to the basic syllabus, low estimation of opportunities to participate in programs of international mobility due to the insufficient foreign language knowledge as well as weak motivation for participation in such programs because students cannot see the perspective of studying in foreign universities. The qualitative characteristic of the international activity state for the universities of the Asian part of Russia is given in the work by Melikyan (2016). The author states that for this work direction, the universities of the Siberian Federal District have the highest rankings among the institutions of higher education in the Asian region. However, the given monitoring data cover only inbound academic mobility and the cooperation of teachers and researchers, but they do not provide the accurate picture of outbound international academic mobility (Melikyan 2016).

The researchers of academic mobility have been paying much special attention to the applied social studies. The researchers from the Lublin Technological University took the opinion poll among the computer science students (CS) aimed to show the attitude of students toward the opportunity of studying abroad within the period of one semester. Having analyzed the assessment of usefulness of such experience as well as associated risks, the researchers conclude that despite the general positive attitude to the international academic mobility program, only a small percentage of students were ready to participate in it (Milosz and Milosz 2017). The Russian researcher Soloviova (2017) on the basis of questionnaire data from the students of the Northern Arctic Federal University (NAFU) concludes that the Russian capital of student mobility includes such qualities as motivation for personal mobility, availability of mobility models in the university, quality and quantity of available skills for mobility. The result of their international mobility can be presents as a number of resources the students invest in (Soloviova 2017).

The research by Shageeva et al. (2017) analyzed the pedagogical conditions for the formation of social-psychological readiness for academic mobility (SPRAM) among the engineering students. Their readiness for mobility was considered by the authors as integrated personal characteristic which included in particular motivation, self-regulating mechanisms, professional competences and foreign languages, capabilities to individual work, communication skills. The authors conclude that the suggested pedagogical conditions to develop SPRAM are useful for the education of future engineers (Shageeva et al. 2017).

Based on several interviews, Machart took the opinion poll of Asian students who participated in international mobility programs. The discussion with students was built on the position of their readiness for international academic mobility. The author finds it very important what materials students have before they engage in the mobility programs (Machart 2016).

Universities grow up the opportunities for outbound academic mobility in the course of implementation of educational programs, i.e., in the Republic of Tajikistan. Tajik State Commerce University coordinated as many as four international cooperation programs in 2016 in partnership with universities of Spain, Italy, Great Britain, the Netherlands, Belarus Republic, Kyrgyzstan, Turkmenistan, and Georgia.

The development of international cooperation by the university is strengthening its positions in the global market of educational services (Delovaya Rossiya 2016). The administration of the international cooperation of Belgorod State Research University (NRU “BelGU”) in Russia offers the intense English courses in the partner institution of higher education, the Emerald Cultural Institute of Dublin, Ireland (Welcome to Ireland 2017). According to the rankings results of Times Higher Education World University Ranking-2019 NRU “BelGU” is one of the top ten universities in the world on the 14th place among 35 best Russian institutions of higher education (BelGU 2018). The educational programs of dual degrees gain popularity, i.e., the South Ural State University (SUSU) in Russia offer the joint program with the Clark university in the USA. The master students are educated two-three semesters at SUSU, and afterward, they continue their education abroad (Shestakova 2017).

Considering various aspects of academic mobility, most authors of the analyzed works are of similar opinion that the international mobile students have many advantages foremost in the area of cross-cultural communication and mastering foreign languages.

3 Research Methodology

As a theoretical basis, we have chosen the dialectic method which enabled us to use the development principle for our analysis. This principle makes it possible to consider the problems of international academic mobility for students with the future perspective. In addition, we have used the ad hoc principle and the principle of inconsistency which helps to find the sources for international academic mobility process optimization. At the second stage of our research, we carried out a social research. We used the questionnaire survey as a research technique. Our respondents were the students of different directions and years of study. The blocks of parameters and indicators included the awareness of students about the international academic mobility opportunities, the appeal of mobility programs for students, their readiness to be engaged in such programs, individual activity in achieving their goals, possible limitations on mobility, and the profile of international academic mobility program participant (personal characteristics). The study took place from May, 10 2018 to May, 30 2018. Six hundred and two students participated in the research, among them 48.67% were male students, and 51.33% were female students. At the time of this research, they were undergraduate students of Novosibirsk, Saint-Petersburg, Sochi, Volgograd, and Nizhniy Taghil universities. The primary objective of this applied social study was the analysis of opportunities for the development of out-bound international academic student mobility which benefits the growth of the university appeal for students and enhances its leadership potential.

4 Informational Component of International Academic Mobility

In order to promote the outbound international academic mobility, we should organize the informational processes in such a way for students to obtain the information about the educational services market regularly. Students were asked the question “Are you aware of opportunity to participate in the programs of international academic mobility?” About 35.5% of respondents are aware of this opportunity, 32.2% of students have a slight idea, and 32.7% respondents are not aware of such programs. The sources of information can be absolutely various.

The most active informants are teachers and international services’ and departments’ staff. A rather large part of students do not receive this information (41.6%). We believe that this big percentage of unaware students is due to fragmentariness of information on the programs of international academic mobility. Also students have not developed the skill of regular working with informational resources of the university in this area.

One interesting fact is that the information about such programs enters the student environment also from students who succeeded to implement this academic mobility (9.5%). In our opinion, this informational resource requires an active development and is of significance for the decision-making regarding mobility programs participation. In addition, students get the information about programs from the Internet (69.2%) and from their friends and relatives (38.3%).

5 Attractiveness of International Academic Mobility Programs and Readiness to Participate

We took it as a premise that international academic mobility is appealing to students. In this case, it is not only a stimulus in choosing the university. Students are actually ready for the mobility. Almost one-third of the respondents (28%) were ready to participate in the programs of outbound international academic mobility, 30% of respondents chose the answer “I need time to think about it,” 27% of respondents answered “I do not think so, I do not have time to get ready,” and 15% of respondents are not ready to participate in such programs. Therefore, students regard and maintain the outbound programs of international academic mobility differently. Students’ answers differ depending on their course year (Fig. 1).

The first year students show the largest percentage of readiness for international academic mobility. Then, the readiness goes down by their second and third course year and increases by the end of study period—the fourth course year. Although the programs of international academic mobility in most European universities are consistent with their curricula, the standards of Russian universities do not provide for this element as obligatory. International academic mobility should be appealing to students and stimulate their willingness to participate in the exchange programs.

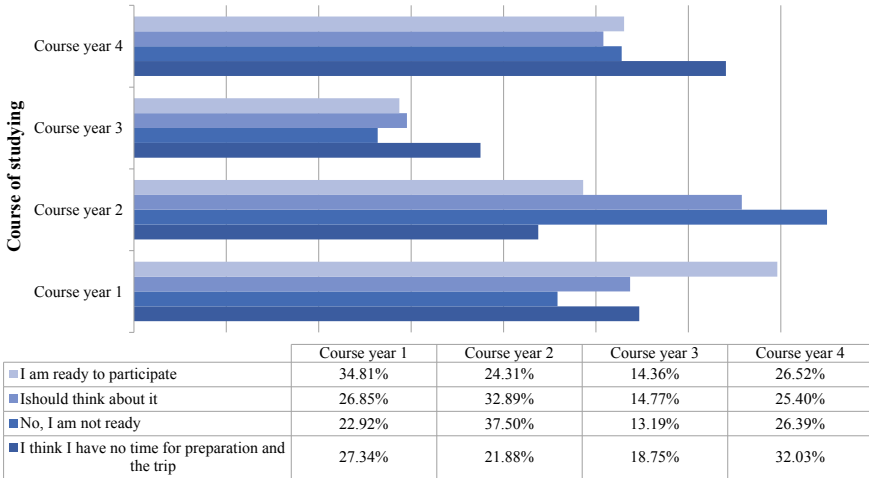


Fig. 1 Correlation between students’ readiness to participate in international academic mobility and their course year. *Source* Own results

Table 1 The attractiveness of international academic mobility programs for students

Why the programs are appealing	Answers		Observations percentage (%)
	N	Percentage (%)	
Learning the culture of other country	236	23.3	39.9
Learning a foreign language	313	30.9	52.9
Experience of communication with students from other countries	224	22.1	37.8
Additional professional knowledge in the institution of higher education of other country	241	23.8	40.7
Total	1014	100.0	171.3

Source Own results

The attractiveness of international academic mobility programs students estimated as follows (Table 1).

All the factors of international academic mobility programs’ appeal that we offered appeared to be meaningful for the students. The opportunity of learning a foreign language during their engagement in such programs is of a great value for students.

We compared the attractiveness of outbound international academic mobility in two groups of students. The first group comprised the students who were ready to participate in the programs; the second groups were the students who were not ready for international mobility (Fig. 2).

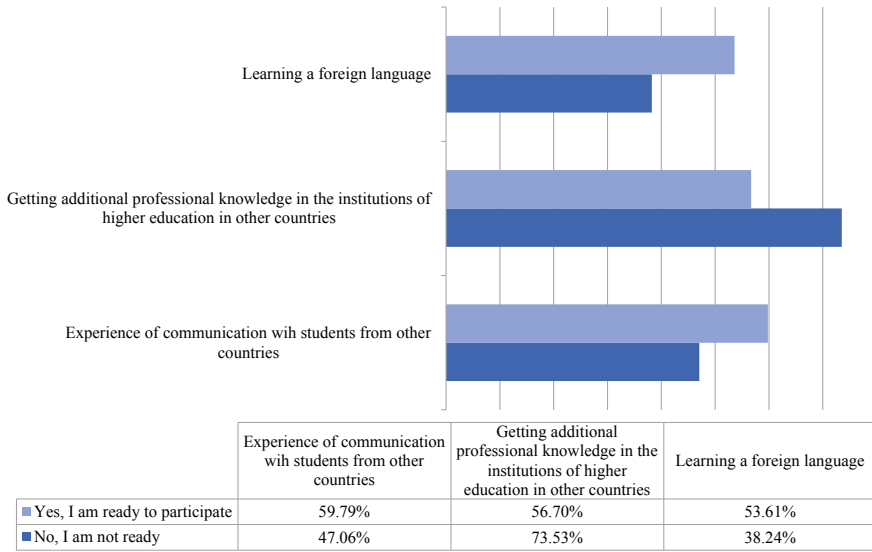


Fig. 2 Dependency of attractiveness of outbound international academic mobility programs on the degree of students' readiness to participate in the programs. *Source* Own results

The answers of students of these two groups differed from total answers. The most appealing factor of outbound international academic mobility programs for students was the opportunity to communicate with students from other countries. Gaining the additional professional knowledge at a foreign university was a significant factor for the group of students who were not ready to participate in the programs. The analysis of students' answers makes us assume that readiness of students to participate in the programs of outbound international academic mobility and attractiveness of these programs may depend on the extent of students' awareness about these programs as well as other subjective limitations.

6 Factors That Limit the Outbound International Academic Mobility

In this section of our study, we tried not to touch upon the factors that limit the international academic mobility such as availability of contracts on students' academic exchange programs, financial backup of outbound international academic mobility programs in general and concentrate on subjective factors which students can assess on their own (Fig. 3). Among the main factors that limit international academic mobility, students point out the high competition to participate in the programs (23.1%), need for extra self-financing (21.4%), insufficiency of information about programs (17.8%). About 16.7% of respondents envisage the absence of special training for

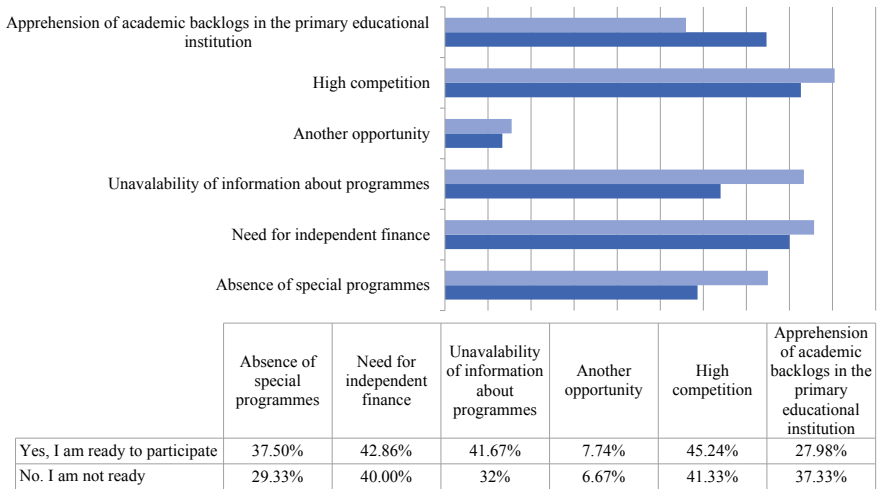


Fig. 3 Dependency of limitations on the opportunity to participate in the programs of international academic mobility on the extent of readiness to take part in them. *Source* Own results

such programs as a problem. The students are concerned about the differences in curricula of different universities, and they are apprehensive of academic backlogs at their primary educational institution (14%), 3.6% of respondents have never thought about factors of mobility limitations. It should be noted that students of all four course years see the limitations of mobility similarly. The fourth year students feel more confident about their educational process and worry about their academic good standing while they study at a foreign university much less than junior students. Figure 3 shows how students from the above-mentioned two groups (those that are ready to participate in such programs and the ones that are not ready) see the limitations on the international academic mobility.

As far as the students who are ready to participate in international academic mobility programs are more motivated, the obstacles to mobility for them are more significant compared to the group of students who are not ready for mobility. The “apprehension of backlogs” factor which is most significant for those students who do not have any plans for international academic mobility would be an exception.

7 Individual Activity in Preparation for Outbound International Academic Mobility

Readiness to participate in the programs of international academic mobility is determined not only by individual willingness and interest for the program but also the active approach students take to achieve their goals. In standardized answers, we

Table 2 Types of student's individual activity in preparing for participation in international academic mobility

Types of activity	Answers		Percentage of observations (%)
	N	Percentage (%)	
Learning a foreign language	289	27.7	48.6
Searching for additional information about the host country	273	26.2	45.9
Obtaining information about the receiving university	259	24.9	43.5
Working overtime to finance the traveling and accommodation expenses during the program	221	21.2	37.1
Total	1042	100.0	175.1

Source Own results

Table 3 Personal qualities of participants of international academic mobility programs

Personal qualities	Answers		Observations percentage (%)
	N	Percentage (%)	
Sociability	309	25.8	51.8
Aptitude for learning fast	287	23.9	48.1
Comprehensive knowledge	208	17.3	34.8
Active approach	222	18.5	37.2
Stress resistance	174	14.5	29.1
Total	1200	100.0	201.0

Source Own results

suggested the students to describe what they would undertake to prepare for such programs. The distribution of answers is presented in Table 2.

All the options we suggested appeared to be in great demand among the students (informational support and activation of foreign languages). Students are also ready to share some part of the expenses concerned with the programs of international academic mobility and even take extra efforts to earn money for the trip to other country. Students think that the program participants should possess certain qualities (Table 3).

Students highlighted the sociability and aptitude for learning fast in the list of important qualities. In addition, students were offered to add the list with other important personal qualities for international academic mobility. The listed qualities can be referred to the following groups: (i) willpower, (ii) intelligence, (iii) sociability, (iv) morale, and (v) professionalism. The answers to these questions enable us to formulate some blocks of preparation in international academic mobility programs which also include personal growth trainings.

8 Conclusions

The data of our desk study let us conclude that despite the abundance of studies of international academic mobility, student mobility is not structured and described comprehensively. Together with a number of advantages the international academic mobility provides, there are also some meaningful limitations of both subjective and objective order. The objective limitations are associated with political situations in the hosting countries, allocation of financial flows, incomplete institutionalization of academic mobility, and inequality in the academic system. The subjective limitations are associated to the students' motivation, their academic potential, and readiness to be engaged in the programs of international academic mobility. Despite all listed restrictions, the universities all over the world take efforts to enhance their indicators of academic mobility.

Analyzing the social study results we came to the following conclusions: First of all, the informational component of the international academic student mobility process is of great importance. The informed students would learn to make their own trajectory of studying and reach their targets. The analysis of informational resources which help the students to be aware of the available international programs will help the universities to plan the outbound international academic mobility for students. The section about available opportunities for outbound international academic student mobility including grants and scholarships offers from various funds offers from foreign universities to study one or two semesters, own international programs of the university would be very beneficial. Second, the motivation for international academic mobility should be sustained especially with the second and third year students because they have more opportunities to take part in programs offered by various funds disregarding the contract between universities. Third, universities can help their students in international academic mobility by creating special programs of preparation for international academic mobility. The main blocks of such programs could be:

- Intensive language courses
- Informational seminars (cross-cultural trainings devoted to the functioning of certain universities which could help the students to adapt to the receiving country)
- Additional opportunity to earn within the university (projects, science, and practical work)
- Psychological trainings to develop sociability, stress resistance, leadership, competitiveness, project activities.

If the university has not dealt with such challenges as concluding contracts about international cooperation between the universities, financing programs of international student exchange, providing grants for international academic mobility, supporting students who strive for independent international academic mobility will create an additional appeal to the student for the university. Participants of international academic mobility programs will be able to influence the processes of education quality management in the university and create the positive image of the university

during their employment. All these factors will benefit both increasing the university ranking and forming its leadership potential starting from the regional level.

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Academic Leadership: Students' Willingness to Work During Studies



Andrzej Niemiec

Abstract Academic leadership can be perceived as a social process that engages everyone within the community. The main remaining problem is the role of students in the creation of academic leadership. This very problem is still outside the mainstream of research. The aim of this paper was to identify the determinants of the willingness to work during studies by stationary students of Poznań University of Economics and Business. Identified determinants allow to better describe academic leadership process. The methodology of research was survey and interviews. The survey was conducted in May 2018 with 120 stationary students of the last year of their studies. In addition, in order to identify the determinants for the surveys, interviews with a sample of 15 students were conducted. Our results show that 93.4% of stationary students have worked during their studies. Almost all master's degree students work during the studying and additionally take language courses or other activities, for example, volunteering and similar activities. Our findings show that the main reason for this appears to be their self-conscious. They expect student-as-customer treatment. Our results also show that in case of Poznań University of Economics and Business, such initiative undertaken by the students is influencing academic leadership in a positive way.

1 Introduction

Many research studies show that leadership is a complex interaction between the designated leader (see e.g. Jankurová et al. 2017; Kalyugina et al. 2018) and the social and organizational environment (Spendlove 2007). Leadership should be seen more widely, and next to formal prerequisites for leadership work, it is useful to examine how a leader manifests themselves by specific and typical leadership activities. Significant is what the leaders actually do in everyday practice, because the leadership is expected to achieve concrete and useful progress (Jankurová et al. 2017).

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This is the reason, that leadership can be understood as a social process that engages everyone in the community. In this way, each person is considered a leader, and leadership becomes an emergent property of effective systems (Day 2000). In this context, persons engaged in academic leadership are not only the leaders, but also other groups that create the system itself. In most cases, it means empower staff members in schools, with a change in the roles of principals (or head teachers) and teachers.

The role of student entrepreneurship in this process is still outside the mainstream of research. Entrepreneur student is more self-conscious and expects student-as-customer treatment. According to many researches, academic leadership has been undermined by the emphasis placed on meeting student-as-customer demands (Hartley 1995; Dillard and Tinker 1996; Franz 1998; Newby 1999; Beatty 2004; Gross and Hogler 2005; Lomas 2007; Svensson and Wood 2007; or Laing and Laing 2016). On the other hand, understanding academic leadership as a social process that engages everyone in the community also should have an impact on students' role in it.

The aim of this article was to identify the determinants of the willingness to work during studies by stationary students of Poznań University of Economics and Business. Identified determinants should allow to describe better role of the students in academic leadership process. The methodology of research was survey and interviews. The survey was conducted on May 2018 on 120 stationary students of the last year of study. To identify the determinants, interviews on sample of 15 students were conducted.

2 Willingness to Work During Studies as an Element of Student Entrepreneurship

Defining the term “entrepreneurship” can be systematized with three homogeneous definition groups (Piasecki 1997, p. 33; Kunasz 2008):

- constructed on the basis of a functional description of entrepreneurial activities; in this case entrepreneurship is the process that involves the ability to see and use opportunities in a profitable (Kunasz 2008);
- definitions referring to the entrepreneur's personal characteristics, through the prism of personality traits and the nature of entrepreneurial people, pointing to its subjective nature, thus expanding its scope to various areas of activity [Dictionary of the Polish Language (Szymczka 1988, p. 968)];
- definitions that treat entrepreneurship as a specific way of managing; Stevenson, Roberts, and Gronsbeck see entrepreneurship as such a kind of managerial behavior, which is characterized by the pursuit of opportunities, bypassing the currently controlled resources (Piasecki 1997, p. 37).

Cruz Sánchez-Escobedo et al. (2011) describe first approach as economic focus, where relative aspects are applied to economic rationality and the supposition that entrepreneurship happens solely for economic reasons (Audretsch and Thurik 2001;

Audretsch and Keilbach 2004; Parker 2004; Wennekers et al. 2005). The second is the psychological approach. The last one is institutional perspective.

Student activity will be understood in terms of economic approach. Entrepreneurship is a special type of people's activity, acting individually or within an organization, based on taking advantage of opportunities that arise in the surrounding environment, through the implementation of undertakings (introducing innovations, creating new organizations, or renewing existing ones) that bring economic or non-economic effects of their entities and the environment (Kraśnicka 2002, p. 14).

3 Willingness to Work During Studies as an Element of Student Entrepreneurship

Polish research on stationary student entrepreneurship shows that 73.2% of them consider themselves as entrepreneurial persons (Kunasz 2008). In comparison with the students from different countries from East and Central Europe—higher result is noted only in Latvia (Kopycińska et al. 2009). According to Kopycińska et al. (2009), about 51.5% students work during the study in Poland. Results of Kunasz (2008) identified 48.2% of students working during the study and 58.7% taking additional activities. Stationary student activity is relatively high. Polish students want to work in a private sector. However, work for an institution/state company or own company in Poland is assessed also as an attractive alternative (Bernat et al. 2009). Choosing the job, Polish stationary students value the possibility of self-fulfillment, job satisfaction, higher earnings, and the opportunity to raise their qualifications (Kunasz 2008).

The largest sample research ($N = 33,272$) was conducted by Jelonek (2011). She was analyzing students from different field of science. She discovered that work during the last 12 months depends mainly on the field of study:

- the highest (46%) is in social sciences, services for the population, transport services, artistic faculties (46% of all students who study in these fields),
- relatively high (42%) in pedagogy, humanities, economics, and administration,
- relatively low (36%) in law, biology, medicine, and environmental protection,
- and the lowest (32%) in mathematics, statistics, agriculture, forestry and fishing, protection and safety, and veterinary.

Jelonek (2011) found out that willing to work by students is also geographically diverse. The highest is in Poznań (47%) and Gdańsk (46%).

4 Methodology of Research

The aim of the research was to identify the determinants of the willingness to work during studies by students of Poznań University of Economics and Business. The research was conducted on the students of economy field of study. Both the field of study and geographical characteristic came through as highly correlated with the

willingness to work during studies. The methodology of research was survey and interviews. The survey was conducted on May 2018 on 120 stationary students of the last year of study. To identify the determinants, structured interviews on sample of 15 students were conducted.

5 Results

Like the other researches, sex and age had not a significant impact on the willingness to work during studies by stationary students of Poznań University of Economics and Business. Only 6.6% of stationary students did not take a work during the study. The number of students on bachelor level is a little bit higher (8.8%) than on master's degree (3.8%). It means that 93.4% worked during their studies. Moreover, stationary student activity was also relatively high (see Table 1).

Additional activity during bachelor stationary studies, measured in months, shows that statistically by about 2/3 of the studying time stationary students are taking additional activities (Table 2). This relationship for master's degree students is even higher. They work during the study and additionally take language courses or other activity, i.e., volunteering. The structure of additional activity is also different between bachelor's and master's degree. Bachelor students work mostly for the money, while master's degree students take work connected with the field of study.

Structure of financing sources is comparable to longitudinal 10 years of studies conducted by Jarecki (2011) for stationary students in West Pomeranian province. The work is a main source of financing for master's degree students. For the bachelor's degree students, it is the family who sponsors their studies.

To identify the determinants of student activity, interviews on sample of 15 students were conducted. The most important comment was that student of Poznań University of Economics and Business are more self-conscious than the others. They value not only the knowledge, but also experience in the profession. The repeated argument was to gain practical experience, which is very willingly seen among

Table 1 Number of months for additional activity

Number of months	All students	Bachelor's degree	Master's degree
Work connected with the field of science	8	3	15
Work not connected with the field of science	9	12	6
Additional language courses	4	5	3
Other activity (i.e., volunteering)	3	2	3
Sum	24	21	28

Source Own results

Table 2 Structure of financing sources (in %)

	Bachelor's degree	Master's degree
Work	37	56
Loan	0	3
Scholarship	4	9
Parents	52	29
Corporation	0	0
Other	8	4

Source Own results

employers. Another reason may be the opportunity to check if such a path of professional activity suits them and whether this is what they would like to do professionally.

The possibility of personal development and the completion of studies within the practical framework of work reduces gap between the theory and practice, especially due to the lack of obligatory practices during the studies. This element was also important for future plans of the students in other researches (Bernat et al. 2009).

The other argument for working during the students is the material situation of students. A large percentage of students come from smaller towns. Studying is their chance for personal development. Students start working, due to the need. Working students get additional income, which will allow them to pay for accommodation and cover current expenses. This is also important aspect for future acceptations (Bernat et al. 2009).

With a well-designed class schedule, they are able to take a part-time job. The schedule is arranged this way that always one day and often even 2 days are free from classes, which allows students to go to work these days. Stationary study are organized without dividing them on day and evening studies, which also allows to take additional activities also before noon. In addition, location and lowest unemployment rate is an important factor. In Poznań, it is relatively easy to find a job with a flexible half-time graphic for a student.

6 Discussion and Conclusions

Entrepreneur student is more self-conscious and expects student-as-customer treatment. Chung and McLarney (2000) observed that in this system, student needs must be fulfilled by developing effective educational programs and this in turn carries an expectation that faculty staff will engage in continual improvement and customize educational experiences. It also increases the pressure on teaching staff to take the responsibility and improve the quality of their teaching (Zell 2001). The character of services and consumer relationship necessitates the involvement of students in the service provision creating a number of challenges and tensions (Chung and McLarney 2000). Most of them have their source in understanding of academic

leadership. If it can be understood as a social process that engages everyone in the community, then are the students an element of this community or not? What is their role in the academic leadership creation?

Ngoc-Tan and Gregar (2018) argues that administrators of university must know how to deploy organizational knowledge in resolving problems and achieving competitiveness. Analyzing such a system of Poznań University of Economics and Business, the key element seems to be self-conscious of the students that are developed between the academic theory and economic practice. Number of concerns raised by academic or general staff in Universities globally (Zell 2001; Martin 2008; or Halbesleben and Wheller 2009) could be eliminated by increasing self-conscious of the students. The others can be eliminated by the strict rules and contracts (Jensen 2016). Under formulated conditions and due to formulated opinions, students are, in fact, interested in their own intellectual pursuit what is opposite to Zell (2001) findings. But they can fulfill this need in different ways. If they will choose university offer for further personal development, it will mean that they interact in the social process of academic leadership.

Student-as-customer system encourages academics to engage in continual improvement in order to improve service encounters (Yeo 2008; Koch and Fisher 1998). This is the reason for Poznań University of Economics and Business to be worldwide recognized and second-best economic university in the country. This is the fact to be proud of for both sides. In this context, higher quality is an obligation for both groups.

In conclusions, one has to state that students' role in creating academic leadership can be surprisingly high. Surely, it depends on the level of self-conscious of the students. In order to describe better academic leadership of this case, further researches need to be taken. Further dimensions of analysis should cover the academic and administration staff and an impact on job satisfaction and stress levels according as well as routine level.

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Innovative Entrepreneurship in Russian Universities: A Case of Regional Strategic Leadership



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Abstract Nowadays, innovative companies provide the leading positions in the industry of countries and regions. The leading role in the generation of innovative entrepreneurship is played by universities, as a place where science, education, intelligence, and the commercial initiative of young people are concentrated. However, in Russia, the opportunities and resources for creating, producing, and applying innovations at universities are undervalued, which actualizes the problem of developing innovative entrepreneurship at universities. The purpose of the study was to analyze the state of innovative entrepreneurship of Russian universities and determine the vector of its strategic development in the context of the new regional industrial policy formation. The methods of dialectics and comparisons, analogies and statistical measurements were used for this study. Methodological aspects of the study are considered in the context of the resource and system approaches. The article analyzes the performance of innovative entrepreneurship in Russian universities based on the use of indicators characterizing the presence and effectiveness of university small innovative enterprises, the quality of their entrepreneurial functions and orientation for industrial leadership. The factors affecting the development of innovative entrepreneurship in Russian economic universities are highlighted, and the conditions for the complex development of university research and practice are developed. The study is descriptive and constructed with the methods of discursive analysis. The conclusions summarize the directions proposed by the authors for the development of innovative entrepreneurship at Russian universities to ensure the strategic leadership of the regional industry. The results of the study can be used while working out the strategic directions of industrial and innovative development of regions, the development strategy of universities.

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1 Introduction

Nowadays, global competitions between countries that aspire to be, or in fact are, the world leaders have been in the field of high technologies including information technologies. “Innovation” of territories, industrial enterprises as well as individuals all together determine their competitiveness in the new globalized world where information becomes the new precious resource (Zielińska 2016; or Astrauskaitė and Paškevičius 2018).

Russian Federation is not a leader in the creation, dissemination, and commercialization of innovations. According to the global innovation ranking (Global Innovation 2018), one can easily look up that the top three leading countries in this traditionally include Switzerland, the Netherlands, and Sweden. Russia occupied only 46th place out of 127 countries in 2017. For 2016–2017, the position of the country has deteriorated. However, Russia lost 1 point of ranking position comparing to the previous year, while China went up from 22 to 17 position of the ranking.

Among the leading world rankings, one can mention the innovative economies ranking (Bloomberg 2018), which is prepared by several large research centers in Germany, including the German Academy of Technical Sciences and the Federal Union of German Industry. While compiling this rating, experts have analyzed 38 indicators that are gathered into groups: economy, science, education, state, and society. Russia occupied only the 25th place (out of 35 countries), scoring 66.6 points out of 100 possible. The country’s neighbors in the ranking are Malaysia and Iceland. The leader of the study was South Korea (89.3 points) in 2018.

If one would carefully scrutinize the trends toward digitalization, then in a separate ranking of the economy digitalization (ICT Development Index, or IDI) Russia occupied only 43rd place (Measuring Information Society Report 2017).

Thus, the economy of the country, despite the pinpoint development of innovative industries that are competitive throughout the world, continues to be raw materials. However, one can speak about the progressive trends of innovative development. Innovative development is largely estimated by the amount of research and development (R&D) expenditures. In Russian Federation, they are at the level of 1.1% of the country’s gross domestic product (GDP). Moreover, innovative development in the country is traditionally funded by the state. In 2016, the ratio of public investment and expenditure of companies was in a ratio of 66:34.

In 2017, the share of spending on public innovations in relation to the previous year fell; therefore, the share of innovatively active companies is unlikely to grow. In the high-risk economy of Russia, private investors do not want to take on additional risks, so the innovative activity of organizations has sharply decreased to 8.4%, including small ones—to 4.5% of their total number. This is reflected in the volume of innovative products. This indicator has decreased in both absolute and relative terms. The share of innovative goods, works, services in the total volume of goods shipped, work performed, services of small enterprises dropped from 2.07% in 2013 to 1.64% in 2015. In the future, this value will probably remain.

Leading the country in the field of innovation is possible only in conditions of system development, when the processes of creation, production, commercialization, and replication of innovations will be supported by the state at all stages of the life cycle (Zlyvko et al. 2014; Radovic et al. 2017). Therefore, it becomes urgent to solve the problems of increasing the innovative activity of the industry by strengthening the role of the small innovative business sector. Small business is more adaptive, it quickly responds to changes in a dynamic external environment, actively contributes to the development of the innovative potential of industry, the commercialization of scientific research and the introduction of innovative technologies (Koudelková and Svobodová 2014; or Newbery et al. 2018). Particular attention should be paid to the development of innovative entrepreneurship in Russian universities, improving the mechanisms for its support and integration with industry, forming society's positive attitude.

2 Analysis of Innovative Entrepreneurship Efficiency of Russian Universities

Most recently, the role of Russian universities has changed—they are viewed not only as educational institutions, but also as innovators, organizations that concentrate creative ideas and embody them into a kind of materialized product, although not yet a serial one.

The problems of development of small businesses at universities were studied by Nikolaeva and Rubcova (2012), Seregi et al. (2014), or Skvorcova (2012). Questions of organizing research activities in the framework of small innovative enterprises were thoroughly examined in the works of Kozhitov et al. (2009) and Nikitenko and Goose (2015). At the same time, it is extremely difficult to analyze the demand for and orientation of the developments of high school small business enterprises by the subjects of the economy real sector, the relevance of solving this problem increases annually. It is important to realize that the entrepreneurial approach of the students is one of the key factors to that (see Naushad 2018; or Naushad et al. 2018).

According to official statistics, in 2017, the volume of R&D performed by universities amounted 52.4 billion rubles, 36% of which was targeted at the needs of the real sector of the economy. The technological and product innovations are mainly scientific projects or prototypes that are transferred to industrial production (Dvoryadkina and Efimova 2018).

One would probably agree that the innovation activities of universities are carried out mainly with the direct financial support of the state. Thus, an innovative environment is formed within universities, and through the creation of an innovative infrastructure (business incubators, technology parks, technology transfer centers, and commercialization centers), innovative entrepreneurship is developed (Čábelková et al. 2017; Kohoutek et al. 2017; Aristarhova et al. 2018; or Strielkowski 2018).

Created on the basis of federal and regional universities, small innovative enterprises are the necessary link that provides a strong link between science and the economy real sector. They undertake the implementation of innovations that are distinguished by a heightened risk level, thereby contributing to the formation of a modern type of industrial enterprises producing goods of new technological structures. The share of university small innovative enterprises in their total number in Russia is only 2%, and in developed countries of the world, it is 57%.

The situation with the development of innovative entrepreneurship in Russian universities is improving annually. Thus, for the period of 2013–2017, the number of small innovative enterprises created at Russian universities increased by 20%, the volume of work and services performed by them increased by 60%, the number of created new jobs increased by 77%, and the number of students, graduate students and professors—the teaching staff employed in such companies increased from 23.0 to 36.5 thousand people.

When many foreign universities have well-established process of exercising an entrepreneurial function through the creation of small enterprises and their further interaction with real business entities, then for the majority of domestic universities, business development is still not a priority.

Let us describe the problems of the innovative entrepreneurship development in economic universities. We have chosen this particular example due to the special status of this particular type of the universities (Gokhberg et al. 2009). They constitute a special sort of universities in Russia boasting with most innovative approaches to learning and studying and being open to the new leading ideas and innovations.

3 Factors Influencing the Development of Innovative Entrepreneurship

Despite the relatively high incomes of Russian economic universities from the educational services, revenues from the development of science remain at the level of 1–3% of total income, exceptions are the Financial University under the Government of the Russian Federation, Baikal State University, Samara State Economic University. Moreover, the volume of R&D performed by them does not depend on the number of innovation infrastructure facilities available at the universities. The inhibitory effect on the processes of R&D development and the formation of highly efficient small innovative enterprises at universities is exerted by a number of factors:

- lack of experience and history of work in the R&D market, high barriers for entering the established market;
- formal approach to the creation of small innovative enterprises. Most of the innovation objects are non-working innovation companies, and enterprises that exist only on paper or are in an intermediate state;

- insufficient financing of research and development activities, which are the basis for conducting commercial research and development or are offered on the commercial development market;
- initial “fundamentality” of researches or their commercial unattractiveness. Intellectual property available at universities (copyright certificates and patents) is mainly aimed at defending candidate and doctoral dissertations;
- low level of creative activity of university staff. Specialists determined that such activity on average in Russia is 1/40, i.e., 40 specialists are granted only one patent. As for innovation efficiency, it amounted to 1/1600 in the field of R&D—there is one invention per 1600 specialists. In the USA, the creative activity of scientists is five times higher;
- weak interest on the part of venture investors and various industrial enterprises (for example, most defense enterprises do not plan the cost of conducting research in the field of economics) in the introduction and implementation of innovation results and other factors.

Following the course toward the creation and efficient functioning of small innovative enterprises is complicated in many aspects by the fact that the development of new technologies and products is usually a long and laborious process. It can take up to two years from the appearance of an idea to the creation of a commercial product, and then, the process of creating the company itself takes about a year and a half before entering the market.

Obviously, solving the problems of improving the efficiency of university innovative enterprises requires an integrated approach, covering all support measures at all stages of the creation and commercialization of innovations. In addition, the subjects of innovation and the “creators” of university small innovative companies should change their attitude to these enterprises. It is important to understand that it is not only a special mechanism—a source of additional monetary resources, but, above all, a real opportunity to test and implement the results obtained in the course of R&D into the regional industry and turn them into high-tech competitive goods and services.

4 Conclusions and Discussions

In general, in modern society, including Russian, there has been a development of university science and innovation, focused on the real sector of the economy, in particular, industry. Universities perform three missions: education, research, and innovation. Thus, they become fully legitimate participants of the high-tech market.

Based on our results and our discussions, we can single out the following positive aspects of creating small innovative enterprises not only for a particular university as an innovator but also for the industry in general and a particular region—the territory where the particular university of other institution of higher education is presents and is operating providing its educational services:

- development of innovation activity and formation of high-tech industry sector;
- restoration of the “education-science-production” chain, which allows for the advance industrial development of the territory;
- additional financial result in the form of profit;
- maintaining a highly qualified faculty, attracting progressive, and creative personnel into industry and universities;
- increasing the level of competitiveness of the region, industry, and universities.

All in all, it appears that the stimulation of small innovative enterprises created by the state and universities should be considered as a key link in the development of regional innovation infrastructure. At the same time, it is important to enhance the effectiveness of not only educational, but also consulting and expert activities of the regional higher education institution, and rationalization of the processes of promoting and introducing the results of scientific researches into the region’s industry. Gradually, the strategy for the development of small innovative business in universities should become one of the elements of the regional industry leadership strategy.

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Measuring Academic Leadership Using Research Performance



Viktor Blaginin, Maria Volkova and Wadim Strielkowski

Abstract There is a ubiquitous question lurking over the researchers and academics: how can one effectively measure academic leadership? Should they be assessed based on how many lectures they deliver or whether they are popular among their students? Or should they be promoted based on the grants and funds they secure for their universities and research institutions? Over the past few decades, one single measure of academic leadership has crystalized, and that measure is the research performance based on the number of publications and citations in research journals that are indexed in prestigious academic databases. However, the question of what actually the “prestigious” academic database is, might differ from country to country. There is a plethora of academic databases (e.g., Scopus, Web of Science, Directory of Open Access Journals) and research metrics (e.g., SCImago journal ranking, impact factors, or h-index, just to name a few), yet large publishing companies and houses keep on introducing new metrics. Our paper focuses on the ways how academic leadership is measured through research performance that is based on publications and citations. We demonstrate that this measure is probably the best one invented so far and provide our arguments and reasoning for that. Moreover, we show how the influence of fraudulent academics driven by the unfair motives as well as mass media mercenaries might distort academic leadership. Our findings might be of a special importance for stakeholders who are preparing and implementing academic and research policies.

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1 Introduction

Nowadays, academic leadership is marked by the growing popularity of Internet search engines and online academic indexation databases envisaged to measure the productivity and output of academics that also goes hand in hand with the enormous pressure to multiple research indicators. In turn, this leads to the increase in the research output where a demand for new publishing outlets creates a supply of constantly increasing numbers of journals and publishers.

A “publish or perish” paradigm becomes a dangerous game for researchers who are applying for a research grant or an academic promotion. In the academia, the proxy measures are becoming increasingly important for assessing researchers, advancing their careers, and measuring their level of academic leadership (Kun 2018). A good example of that might be a citation index for academic papers—a scientific citation indexing service produced by the Eugene Garfield’s Institute for Scientific Information in 1960—as well as an “impact factor” (IF) originally designed by Garfield in 1975 for supporting library acquisitions (Heckman and Moktan 2018). It was later incorporated into the Web of Knowledge, a scientific citation indexing service run by Thomson Reuters, that run it as a part of its Intellectual Property and Science business until 2016 and later sold it to Clarivate Analytics. The IF was originally devised as an advisory system for library purchasing decisions but after several decades it has progressed into an assessment system of scientific productivity of individual researchers and academic institutions widely used in many fields. The “impact factor chase” has become the essence of academic careers in many countries and even led to the attempts to game with publishing metrics. Thence, one would probably agree that the sense of publishing research articles has dramatically changed over the centuries (Banks 2018).

Modern academic publishing, as we know it, was invented by Robert Maxwell, a Czechoslovak-born British research publishing tycoon right after WWII. Maxwell founded Pergamon Press, the first large academic publishing house and stumbled upon a wonderful idea of creating numerous research journals in various fields in order to generate profits on library subscriptions. Over the years, the system has grown to the enormous proportions and the appearance of Internet broadened the horizons even further. It was the Internet that also pushed the whole system to the Open Access (OA) model of publishing and preprints that are getting more and more popular nowadays.

Our paper argues that academic publishing has always been and should forever remain the alpha and omega of research productivity and academic leadership. Publishing in prestigious academic journals has an important impact on institutional rankings and helps to obtain research funding even though the issue of “where” to publish became more important than “what” to publish.

Most recently, the academic rat race led to the appearance of the phenomenon of so-called predatory journals that allegedly publish scientific “nonsense” for money without proper peer review (Strielkowski 2018a). This phenomenon was eagerly used by the mediocre and less-productive researchers in order to destroy the established

system of academic publishing and to bring chaos to the evaluation of research performance. What more, it was also picked up by the media which preyed on the ignorance of the general public and served it speculative stories of fraudulent academics. In some cases, it even resulted in devastating academic wars and “witch hunts” that did not end well for any parties involved (Strielkowski et al. 2017).

2 Measuring the Research Performance

As far as academic leadership and research performance are concerned, one can distinguish three main types of academics:

- *Lecturers*: typically engaged in delivering lectures to students, several lectures a week, several days a week. Some lecturers are good speakers and are popular among students. However, many lecturers do not have time for writing and publishing research papers and quite sincerely loath this activity. Most (but not all) of the lecturers often use the same (often outdated) material (Power Point slides) for many consecutive years.
- *Researchers*: usually writing and publishing many research papers and monographs. Researchers know all about the publishing process, bibliometrics and how this system works. Many researchers are terrible speakers and prefer not to lecture wherever possible (sometimes they “buy out” their lecture times by the co-authored research papers (e.g., “guest authorship”).
- *Businessmen*: the rarest type of academics. Businessmen are the directors of research centers, professors, deans, and chancellors. They used to be lecturers or researchers before but discovered their leadership skills. Businessmen rarely lecture or write papers (although they often enjoy “guest authorship” due to their senior status).

In general, it is very rare that a given academic would absorb the traits of all three types, even though some individuals are evolving and progressing over their lives to shift from lecturing to research, or from research to doing business in academia. Very often, assuming a leading position within a university or a research institution (e.g., based on the results of the elections) might spark the change within and make the newly appointed academic official a new-born leader.

Nevertheless, the “businessman” type often represents the top of the food chain in academia. In order to reach it, one has to demonstrate that she or he is worth a promotion. Here is where measures of research performance come in. Quite often, there might be a situation when a more experienced or more talkative “lecturer” can overpower a taciturn but potentially more gifted “researcher” and make it up on the promotions waiting list. In order to reserve the leading places for people with talent and potential, research evaluation should be performed flawlessly. Academic publishing should be able to ensure that.

Surely, there are many mediocre researchers or mundane lecturers who want to be seen as star performers. Unable to deliver in terms of academic output, they engage

in various sorts of protest movements against academic publishing and spread their agenda over the social media.

The best way of demonstrating how some academics are attempting to change the rules of the game during the game for their own benefit, profit and career advancement, is to use some recent examples. One of these examples is the so-called Stöckelová controversy from the Czech Republic. Tereza Stöckelová is an Associate Professor at the Faculty of Humanities at Charles University in Prague and a researcher at the Institute of Sociology of the Czech Academy of Sciences. She is also an Editor-in-Chief of the English edition of the *Sociologický časopis (Czech Sociological Review)*, an academic journal indexed by Scopus and Web of Science databases and published by the Institute of Sociology of the Czech Academy of Sciences. Stöckelová considers herself to be something like a watchdog of Czech science but does not have any moral scruples over publishing her own “open letters” as articles in the journal she edits bypassing the peer review and using it for her personal agenda. In a way, this proved to be as a successful strategy and gained her career promotions based on her publication output (see Vershinina et al. 2017).

Another example, also from the Czech Republic, was the alleged controversy involving Dr. Alice Němcová Tejkalová, a current Dean of the Faculty of Social Sciences, Charles University in Prague. In 2015, Dr. Tejkalová (then a Head of the Mass Media and Journalism Department) was accused by her adversaries led by a “whistle blowers” Dr. Václav Štětka and Dr. Irena Rejřová, of publishing two papers in the journals indexed in Scopus database but considered to be “predatory” according to the so-called Beall’s List. Beall’s List was a private blog of the zealous Colorado librarian Jeffrey Beall who led a crusade on Open Access publishing (see Beall 2017; Strielkowski 2018b). The blog existed from 2012 until 2017 when it was deleted from Internet. In March 2018, Jeffrey Beall his job at the University of Colorado after a research-misconduct investigation was started against him by his own university. The University of Colorado stated that no pressure was put on Mr. Beall to take down his list and the decision to leave was entirely his own (The Economist 2018).

Even though Dr. Tejkalová did not violate any rules (publishing in the journals indexed in Scopus and Web of Science was the only valid academic criterion set by the Czech government at the time), a small group of protesters led by Dr. Štětka (due to the fact that he had more publications in journals indexed in Scopus and Web of Science than all his comrades combined) demanded Dr. Tejkalová’s resignation. In spite of Academic Senate of the Faculty of Social Sciences’ resolution to keep all the debate on campus, Dr. Štětka and Dr. Rejřová reported the whole story to the media and brought havoc upon themselves (Molchanova et al. 2017). Rector of the Charles University in Prague, Professor Tomáš Zima backed up Tejkalová stating that Beall’s List was an indicative aid and the mere fact that someone had published a paper in a journal listed in it did not provide an automatic evidence of unethical conduct (Zima 2017). Eventually, Dr. Štětka was expelled from the Charles University and left for the United Kingdom, while the group of protestors quietly dissolved and Dr. Tejkalová was elected a Dean of the Faculty of Social Sciences in 2017. This story clearly shows that not all whistle blowers act in good faith and this is something one should always remember.

3 Media and Academic Publishing: A Case of “Rychlik Journalism”

In general, the issue of assessing academic performance seems to bother Czech academics more than anyone in the world. This small nation seems to be particularly preoccupied with academic evaluation, promotion, and tools and way how to achieve it (Grancay et al. 2017). However, many Czech academics do not always play by the rules set up by their government. According to the estimates made by Věda žije (“Science Lives”), a public initiative, between 2009 and 2013, the majority of Czech universities and research institutions engaged in a scheme that allowed them to make about 2 million US dollars on incentives for publishing papers and monographs in “predatory” publishing outlets (Věda žije 2017). According to a Czech journalist Jan Novotny, publishing recent graduates’ diploma theses as research monographs with Lambert Academic Publishing, allegedly a “predatory” and “vanity press” outlet, was also highly popular and some top university officials even encouraged their students to do so in their e-mails (see Novotny 2015).

However, the most troubling issue is that the academic debate spilled over from the university campuses to mass media. Czech mass media excessively report on “predatory journals” scandals using the ignorance of the general public and its lack of knowledge about research databases and the established rules of academic publishing. After all, according to the CT24 (2018), about 44% of Czech citizens have very low level of media literacy and are often unable to tell right from wrong in the news or within the Internet content (e.g., the phenomenon of the so-called fake news).

Many researchers (see, e.g., de Beer et al. 2015; or Čábelkova et al. 2015) show that journalists in the Czech Republic, a formerly authoritarian country, perceive substantial influence of media owners and other business people on their work. On the other hand, the influence of business people over mass media in the Czech Republic is associated with more freedom for journalists in emphasizing certain aspects in news stories and in the frequency the journalists participate in newsroom coordination (Tejkalová et al. 2015). Unfortunately, sometimes these journalists tend to overstretch this freedom and get themselves involved in the areas they are not quite qualified to be writing about in an eager pursuit of more stories and more articles that would increase their wages.

A living example of this is a Czech journalist Martin Rychlik who graduated from the Faculty of Philosophy of the Charles University in Prague with a degree in Anthropology. Rychlik is a prolific traveler, photographer, and writer who lived with the cannibals of Polynesia, as well as an expert on tattoos, beards, and hairstyles [his most recent book is entitled “Hair History—Hairstyles, beards, hair, and caring for them” (Rychlik 2018)]. An expert in facial (and other) hair, Rychlik, decided that he was qualified enough to judge the research performance of academics regardless of their research disciplines. A self-appointed expert, he has never published a paper in a journal indexed in Scopus or Web of Science databases (even though he produced an array of papers in the unknown Czech journals with fancy Latin names such as *Culturologia* or *Anthropologia Integra*). In 2015, Rychlik discovered his new passion

and a source of unlimited inspiration for his prolific writing—“predatory” journals. Even though the Beall’s List which coined this term was deleted from the Internet in January 2017 (of which Rychlik promptly informed his readers in one of his articles), and Jeffrey Beall himself was fired from the University of Colorado a year later, Rychlik continues his writing on the topic frequently informing the general public of “predators” among (mostly Czech) academics and researchers.

However, the problem is that Rychlik is selectively targeting some Czech academics (e.g., the newly elected Vice-Chancellor of the Brno University of Technology, the Dean of the Faculty of Social Sciences of the Charles University in Prague, or a director of a research center from the Mendel University in Brno), while deliberately neglecting some larger (and far more debatable) cases. For example, during 2016–2018, he never even mentioned in even a single one from his two dozen articles and posts devoted to “predatory publishing” that many highly ranked officials of the most prestigious Czech universities and the Czech Academy of Sciences published their papers (e.g., Kalousova et al. 2015; or Retzer et al. 2017) in journals run by the MDPI, a once “predatory” publisher according to Beall (2015). What can one say about it? As Molchanova et al. (2017) put it in a piercing question: “Who will cast the first stone?”

Rychlik’s stories on academic publishing and research performance are typically delivered at an astonishing speed but at the price of lacking even elementary verification and soundness. In our view, it would seem appropriate to nickname this style of “fast-food news” he created a “Rychlik journalism.” “Rychlik journalism” can therefore be defined as “*producing a large number of impudent, unverified, (and often) biased newspaper articles and blog posts related to academic publishing and research productivity that are lack ethical grounds and professional validation.*”

4 Conclusions and Implications

Overall, one would probably agree with us that measuring academic leadership using research performance can be cumbersome. However, research performance based on academic publishing in respectful journals (i.e., journals that passed the evaluation of experts and were accepted to the world’s most prestigious journal indexation databases such as Scopus and Web of Science) remains the only meaningful criterion in the sea of chaos and an ocean of contradicting opinions.

Our findings demonstrate how academic leadership can be distorted by the existence of fraudulent players with concocted motives. Information represents a great power and source of freedom in the 21st century, yet this information can be abused and disfigured by those who know how to bend the truth. Fake news can now be found not only in politics but also in reporting on academic and research issues. One has to be very careful when assessing and processing this information.

All in all, we think that shifting from the world-renowned databases such as Scopus and Web of Science and creating local publication standards would inevitably put small but well-organized groups of mediocre academics in charge of assessing

academic publication, distributing research grants and funds, as well as having the final word in approving academic promotions. Clearly, this is not going to be the best outcome for promoting academic leadership. Even though they are criticized and ostracized by various groups of zealots, international academic databases such as Scopus and Web of Science offer some objectivity and therefore represent somewhat better and more transparent choice.

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Commercialization of Research and Education as a Factor of Leadership in the Global Educational Space



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Abstract Under the conditions of economic crisis, the development of the national economy becomes an urgent and essential problem. One of the ways how to achieve it is the improvement of the mechanisms for obtaining the leadership positions for higher education institutions in the field of commercialization of research and educational results. The purpose of the article was to study the scientific and applied principles of the functioning of the models of commercialization of research results by the institutions of higher education based on the example of Ukraine. We employ theoretical generalization and comparison of scientists' views in order to determine the content of the commercialization of research results. Moreover, we apply systematic analysis for analyzing the important tasks for the implementation of the inclusive education of people with special educational needs and the experience of the functioning of the Ukrainian universities that take leadership positions on the commercialization of scientific research. We identify the problems of commercialization of domestic higher education institutions. In addition, we substantiate the prospects of changing the relationships between higher education sectors, business enterprise sectors, the government sector, and the civil society sector as the elements of the Quadruple Helix model. Based on the usage of strategic and structural—functional analysis methods, we formulate the guidelines for providing leadership positions of higher education institutions in the context of commercialization of scientific research by justifying the possible ways of commercialization and the stages of their implementation. Furthermore, we draw an approach to the formation of an integrated model of commercialization of research results (from foresight to market)

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which allows to increase the perspective of innovative developments and leadership positions in the global educational space.

1 Introduction

In today's world, when any country's national economy is becoming increasingly integrated into the world's one, it is necessary to realize that the commercialization of education and research is the important factor of the leadership in the global educational space. The actuality of the leadership as a new management paradigm (the essence of which corresponds to modern realities, requirements, and challenges) is determined by existing social tendencies and transformations, in particular, valued and organizational ones. With its generic vocation to take on a major role in the implementation of the mission of development of human capital, higher education institutions must themselves be the actual generators of progressive changes and leaders of social progress. It concerns both the production and dissemination of advanced knowledge and the creation of innovative technologies based on them, as well as the substantiation of promising ideas that are effective in organizing the human existence in modern conditions and in the future (Strielkowski 2018; Upadhyayula et al. 2018; or Strong et al. 2018).

Due to the rapid growth of the market of scientific and technical products and the high level of competition in this market, the search of the ways to commercialize the research results of higher education institutions becomes an expedient solution. The commercialization of research results is an important source of the formation of the revenue part of the university budget, as well as the factor of attraction of investments in its research and teaching activity. The intensification of the processes of commercialization of research results will deepen the cooperation between the elements of the Quadruple Helix quadrilateral spiral ("government sector–higher education institutions–business–civil society sector"), reducing the "separation" between them, thus contributing to the convergence of academic science, higher education, and real business in order to obtain socioeconomic effects for the society and the state. At the national level, the aforementioned will create the preconditions for increasing the leadership positions of the higher education system in particular and the national economy as a whole.

2 Literature Review

The theoretical and applied principles of commercialization of scientific research are disclosed in many works related to the topic in question (see, e.g., Čábelková et al. 2015; Gryshova et al. 2017a; Naumov et al. 2017; Baimuratov et al. 2018; Kofman et al. 2018; Kholiavko 2018; Strielkowski et al. 2016; or Strielkowski et al. 2018). Various scientists offer different approaches to the interpretation of the essence of

commercialization of research results: as a method, as a process, as a financial instrument. Samilo et al. (2013) propose to consider commercialization of research results as a return of costs for the creation of scientific research results, obtaining additional revenues to the special fund of estimates in order to accelerate the introduction of positive results of the science in practice, the formation of favorable economic conditions for the development (Samilo et al. 2013). Mazur (2013) defines the commercialization of scientific developments as the way of transforming the object of intellectual property (innovative product, innovative technologies) into commodity, its embodiment in production and obtaining commercial result from this.

As Pavlenko (2010) notes, transfer technology and commercialize the research results are the main areas of activity not for all innovative companies. Some innovation centers focus only on socially important projects, while others, on the contrary, focus exclusively on the commercial side. Therefore education, which is aimed at democratization and humanization, necessitates the introduction of innovative technologies, in particular in the education of people with special needs. The inclusion is one of the main trends in the development of this type of education. The experience has shown that solving the problems of development of inclusive education should be based on the consideration of local peculiarities when using own resources; otherwise, such decisions will be unwarranted (Kogut 2016). This same view is expressed by Stabs (2002), who considers flexibility and the ability to respond to constant innovations as the main principle of inclusive education, since this creates a strong, dynamic, and living organism with the ability to adapt and develop in the global educational environment (Stabs 2002).

The results of the analysis of scientific research and the practice of domestic higher education institutions confirm the existence of a number of problematic aspects in the implementation of the process of the commercialization of research results, which sets for us the task of developing scientific and methodological principles and the mechanism of realization the commercialization of research results of higher education institutions. The main problem of the implementation of scientific developments is the lack of links between scientific and educational organizations, business, the government sector, and the civil society sector. According to the scientists, in particular Fedorov and Peshina (2012), a promising form of production of knowledge and scientific development should become “pentaspiral” (science–education–business–government sector–civil society sector), whose important task is the integrated management of the processes of innovation (production, transfer, and the use of scientific knowledge, the formation of science-intensive technologies) on their basis (Fedorov and Peshina 2012).

Therefore, in our opinion, the commercialization of research results is a comprehensive socioeconomic category, which covers the processes of the organization and implementation of the transfer of the objects of intellectual property, research results in the real economy on a contractual basis. The multidimensionality of this category requires the implementation of multidisciplinary research, the integration of different scientific approaches. The complexity of commercialization processes manifests itself in the existence of a number of problems faced by the education in the global socioeconomic environment: the underdevelopment of the economic and

legal mechanism of the implementation of these processes, the system of assessing the market value of research results, the relevant infrastructure, as well as the non-regulation of the provisions of the regulatory and legal framework, and the lack of highly skilled specialists on the issues of the commercialization of research results. In view of the above, the aspects of functioning of the models of the commercialization of results of research as a factor of leadership in the global educational environment require in-depth scientific study.

3 The Purpose and Methods

The purpose of our paper was to study the scientific and applied principles of the functioning of the models of the commercialization of research results of higher education institutions in Ukraine as a factor of leadership in the global educational space. In the process of research, general scientific and special research methods were used, in particular theoretical generalization, comparison, and morphological analysis—in the process of formation of the conceptual-categorical apparatus of the research; system analysis—to identify opportunities and justify the results of the functioning of Ukrainian universities that take leadership positions in commercialization of research; structural and structural–functional analysis—for the formation of the conceptual foundations of constructing the components of the model of the commercialization of research results of higher education institutions.

4 Results and Discussions

In the conditions of recognition and awareness of higher education as a prerequisite and the basis of socioeconomic progress, the development of the system of education itself and its management should be based on the account of the world trends and leading experience of social governance, and in particular, the transformation of the latter in the direction of the paradigm of the leadership. Speaking about the commercialization of the results of scientific studies of higher education institutions, it should be noted that this task is usually additional in comparison with the so-called main or traditional tasks. Among the traditional tasks the implementation of educational activities (the transfer of knowledge, the development of new disciplines and the new approaches to learning) should be distinguished. For example, it appears crucial to foster the organization of inclusive education of students with special needs and promote scientific activities (the generation of new knowledge, the performance of custom-made research work both for the state, and for the private sector, as well as the formation of new research teams for interdisciplinary research).

The issue of the introduction of inclusive education in higher education institutions deserves particular attention in the modern educational space which is a multifaceted problem, which requires a comprehensive approach to its solution, namely integrated

and simultaneous development of a specialized material and technical base and educational and methodical component. Indeed, an inclusive model of training involves the training of students with special needs in a single flow of students with special support, providing special educational conditions and supplying with a range of relevant services from a specially created unit within the structure of the educational institution (Strielkowski et al. 2016).

The economic essence of the scientific research results is that commercially attractive knowledge can acquire a commodity form, because the intellectual property protected by the law can bring significant profits to their owners. In today's market conditions, the knowledge economy, based on the research results, has become a key factor in the evolution of production processes, a key to the success and stability of the country's economic development. Taking into account such aspects, the European countries are working at creating a powerful transnational economy, based on modern technologies. Therefore, taking into account the orientation of the domestic economy to the deepening of constructive socioeconomic, normative-legal and scientific-technological relations with the European Union, the issue of formation and development of the national knowledge market becomes of special urgency. Ukraine is rich in its scientific and technical potential, which needs to be effectively used through the formation, popularization, and commercialization of research results of higher education institutions, which will contribute to a significant increase in the state's competitiveness on the world market of goods and services. In its turn, Ukraine's leadership on the global market is hampered by socioeconomic instability, chronic underfunding, and brain drain. Under the conditions of market economy, Ukraine did not pay sufficient attention to the development of scientific research. Having formally established new economic rules with the proclamation of independence, Ukraine continued its development on the basis of the mental approaches established in the Soviet period for a long time. Usually the customer and the owner of the results of scientific research was the state, in its turn, the work of the scientists was only marked by moral rewards. Therefore, the researchers did not have the necessity, and often the opportunity, to set themselves the goal of commercializing the results of their scientific achievements and present them on the market. As a result of this situation, modern scholars of higher education institutions do not know how to introduce their own product to market. The result of such tendencies led to significant decline in the scientific and technical potential of domestic industry.

The question of determining the owner of research results deserves particular attention since domestic legislation contains a number of differences in this respect. At present, two entities applying for their commercialization (directly the inventor and his employer) are involved in the formation of research results of higher education institutions. Such circumstances affect the important issues of the legal regulation of the material incentives of the scientists in the process of creating scientific products and inventions, as well as the peculiarities of evaluating the results of such activities. Scientific goods are generally understood to mean any scientific, educational, etc. products in the form of scientific monographs, dissertations, articles, reports, textbooks, teaching aids, deposited manuscripts, etc. The situation with scientific and technical inventions also remains unclear (Gryshova et al. 2017b).

The study of foreign experience as for the commercialization of research results allowed to identify the peculiarities of functioning the research universities, conducting an active policy of joint research with industrial corporations and government research laboratories, forming alliances, and participating in public–private partnership. Around these higher education institutions, an innovative infrastructure is formed, which is represented by such items as research parks, technology parks, science parks, technology transfer centers, the centers of the commercialization of research results, techno, venture capital funds, investment companies.

However, due to considerable formalism, bureaucracy, social, economic, and legal obstacles, the functioning of the commercialization of scientific research institutions of higher education in Ukraine is the path of least resistance. At present, the number of registered inventions is significantly lower than the number of applications for the utility models, which are simpler in design and execution, but also significantly lower in the terms of commercial returns. Significant steps toward commercializing of research results are implemented by the initiatives of higher education institutions themselves. These are mostly powerful technical universities with strategic orientations which include the achievements of innovative leadership positions and those which are tactically focused on solving financial issues through the development of their own business functions. The results of the conducted analysis of the scientific research of the leading universities of Ukraine engaged in its commercialization are presented in Table 1, which shows the existing infrastructure of the commercialization process of the scientific research in higher education institutions and its appropriate performance.

Therefore, there are all grounds for functioning of effective models of the commercialization of research results of higher education institutions in Ukraine, but it is necessary to take into account the lack of established links between the scientific and educational sphere, business, government, and civil society sectors. We propose to consider the models of commercialization of research results of higher education institutions as a set of elements of organizational structure and a complex of economic, managerial, motivational, and other methods, rules, procedures, provided by three functional directions (resource, commercial, and the direction of strategic planning of the process of commercialization of research results) in order to gain leadership positions in a global educational space.

Thus, to the main functional elements of the mechanism of commercialization of research results of higher education institutions, we suggest assigning: (1) the mechanism of resource management; (2) the mechanism of consolidation and regulatory protection of research results; (3) the mechanism for promoting the research results into the market; (4) information mechanism; (5) the mechanism of providing leadership positions in a globalized educational space.

In the framework of the systematic work on the commercialization of research results, the main subjects are higher education institutions, which interact with a number of other economically independent entities involved in this process. Such subjects can be both within the higher education institutions, that is, included in this internal environment (researchers, scientific groups, etc.), and external to the institution of education, that is, in the composition of the environment (the state as an

Table 1 Leading Ukrainian universities initiatives for commercialization of scientific researches

Higher Education Institution	The infrastructure of models of commercialization of scientific researches	Directions of model functioning	Indicators of commercialization of scientific researches in higher education institutions in 2017	
	Organizations that ensure the implementation of models		Applications made	Obtained patents and licenses
The Kyiv National Taras Shevchenko University	Corporation "Science park "The Kyiv Taras Shevchenko University, based on which: International technology transfer network—Enterprise Europe Network (EEN); Business incubator—Start-up Business Incubator KNY	Professional audit of educational and research activities. Development and implementation of the marketing complex. The services in professional communication and harmonization of terminologies. Financial and economic support of the implementation of innovation and investment projects. Research and development (technological) work	48	30
The Kyiv National Economic University named after Vadym Hetman	"Scientific Park KNEU." Center of Science and Innovation, which includes the Department of Intellectual Property and Technologies Transfer	Consulting services for state institutions, research work, the creation of information and analytical systems. It is the co-organizer of international conferences, forums, and fairs. The department of Intellectual Property and Technology Transfer carries out patent-licensing activities	21	17

(continued)

Table 1 (continued)

Higher Education Institution	The infrastructure of models of commercialization of scientific researches		Indicators of commercialization of scientific researches in higher education institutions in 2017	
	Organizations that ensure the implementation of models	Directions of model functioning	Applications made	Obtained patents and licenses
The National University "Lviv Polytechnic"	Technopark of the National University "Lviv Polytechnic," based on which is the accelerator of the academic enterprise "Incubator Center," which is a member of the National American Association of Business Incubators, (NBIA)	The production (repair) of furniture products; organization and conducting of courses, consultations, seminars, etc.; training and preparation of students and graduates of the University for conducting entrepreneurial activities in the Technopark area; development, maintenance (scientific, technical, legal, expert, etc.) and monitoring of implementation of investment and/or innovation projects, implementation of which is foreseen at the Technopark; design, development, and production of experimental samples and experimental parties; logistical and informational support of innovation and investment projects in the Technopark area	88	58
The Kharkiv National University named after V. N. Karazin	Innovation center	The preparation of business plans of the implementation of scientific and technical development. The search for investors. The formation of an application for the protection of intellectual property rights. Drawing up of license agreements. Information about grants, contests, seminars, etc. and forming applications. Promotion of the results of scientific research on the market	152	123

Source Own results

investor and controlling body, private investors, implementing organizations, consumers, competitors, etc.). The interaction with these subjects on the development, use, transfer of research results with a view to introducing them into commercial circulation is the content of the activities of commercializing of research results by higher education institutions. In its turn, the number of subjects of commercialization and their composition may be different. Regarding the analysis of the interconnections in order to ensure the commercialization of the results of research in higher education institutions, we consider it appropriate to propose a model of “Quadruple Helix,” which involves the association of such subjects as the government sector, higher education institutions, business, and civil society sector (Fig. 1).

At the state level, it is necessary to adopt legislative acts, to determine the priorities of science and technology, technologies, to develop foresight projects, the concepts of science, scientific and technical programs, road maps, etc. At business level, it is necessary to develop basic models of small and large business development; the implementation of cooperation between small, medium, and large businesses; the placement of orders; the formation of new structures, etc. At the level of higher education institution, it is envisaged: the coordination of activities of higher education institutions, research institutes; the formation of technology parks and small innovative enterprises; conducting of fundamental scientific researches and experimental approbation of their results in technological parks. The public forms various requests for the goods and services and other needs of the society up to individual orders of legal entities (Denisyuk 2006).

The strategic guidelines for ensuring the leadership positions of higher education institutions in the context of the commercialization of scientific research are to ensure the maximum inclusion in the commercial circulation of research results (potential objects of commercialization). Taking into account the peculiarities of

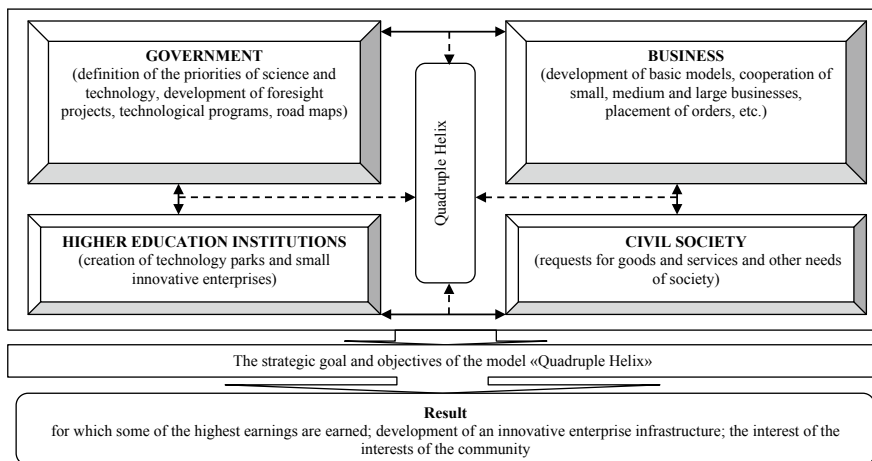


Fig. 1 The functional structure of subjects of the process of commercialization of research results. *Source* Own results

commercialization objects, it is advisable to use two approaches to commercialization, which are reflected in the structural and functional elements of the mechanism of commercialization of research results of higher education institutions, namely (1) transfer (transfer); (2) the commercialization by obtaining the income from its own use by a higher education institution (Kholiavko 2018). The peculiarity of functioning of domestic higher education institution is that they do not have the necessary financial resources to create a completed innovative product based on the research results that would have demand in the modern market. That is why the transfer of research results of higher education institutions in Ukraine should be considered as a key tool for their commercialization and serves as a benchmark for stabilizing leadership positions in the educational space. The comparative characteristics of the main ways of commercializing of research results are presented in Table 2.

In order to ensure the efficiency of the process of commercialization of research results as a factor in leadership in the global educational space, we proposed a set of stages: (1) The identification and updating of the directions of innovation activity of higher education institutions, which has the potential of commercialization (taking into account institutional, scientific, and technical and financial and economic factors; finding out the needs of the innovation market in accordance with the profile of higher education institution; the assessment of available scientific and technical resources and their comparison with competitors; spare and estimation of potential funding sources, identifying the need for additional resources for the formation of commercialized research results); (2) Planning and conducting activities for the creation of commercialized research results (marketing research, preliminary selection of methods for using planned research results, preliminary determination of commercialization methods, preliminary estimation of commercial potential, definition of available sources of funding, identification of potential customers of research results, planning on obtaining of research results; justification of the priorities for selection on research studies); (3) Management of research results in higher education institutions (accounting and inventory of research results; technical, economic, and commercial audit; classification of research results based on the criteria of novelty, competitiveness, commercial potential, and methods of commercialization; regulation of relations with authors, customers and partners in relation to the rights to scientific research results); (4) Legal protection of research results of institutions of higher education; (5) Obtaining a commercial result (evaluation of the results of scientific research, the choice of the method of commercialization, the choice of the method of transferring the rights of research results, the receipt of income from the transfer of research results, increasing leadership positions in the educational global space).

Consequently, as a result of our research, we grounded the need to form an integrated model of commercialization, which is a step-by-step action plan, combined with a continuous analysis of the results and their adjustment to optimize the commercialization process. At the same time, the initial stage should be Foresight (a long-term forecast in certain scientific and technical spheres), as a result of which researchers are working on the implementation of specific ideas, and their perspective is deliberately justified by Foresight. In addition, alongside with the imple-

Table 2 Comparative characteristics of commercializing of research results of higher education institutions

Commercialization	Advantages	Disadvantages
Transfer with full alienation of rights	Quick one-time revenue generation. There is no need to invest in the refinement and implementation of research. Increasing the leadership position of higher education institution	Lack of opportunity to earn long-term revenues. Increasing the position of competitors
Sale of licenses	Getting regular income from royalty. Ability to refine and implement the results of scientific research. Increasing Developer Leadership	Relatively not significant income. Costs associated with monitoring the use of research results. Increasing the position of competitors
Formation of small innovative enterprises	Increasing the efficiency and reducing the timing of the formation of an innovative product at the expense of reducing the internal costs of higher education institutions, obtaining state benefits, access to the sources of venture financing and diversification of resources. Accelerating the output of research results on the market. Ability to participate in the proceeds from the sale of research results	Additional costs due to the formation and operation of small innovative enterprises. The need for the distribution of rights to the results of scientific research
The development of research results on the basis of partnership	Increasing the efficiency and reducing the timing of the formation of scientific research results. The possibility of co-financing research	The need for the distribution of rights to the results of scientific research. Strengthening the position of competitors
The use by higher education institutions	The use of constant income from the use of research results. There is no need for additional investment in refinement and implementation of research results. Ability to reuse	Relatively not significant revenues from the use of scientific research results. The lack of image winnings

Source Own results

mentation of design work with technological trends and the search for promising opportunities for the development of technologies and their applications, it is necessary to analyze the tasks set by the leading world companies, that is, to conduct the research of market needs from the side of business. Namely these aspects (foresight system and marketing analysis) we propose to take into account in the integrated model of commercialization as a factor of leadership in the global educational space.

5 Conclusions

Our results allow us to draw conclusions about the relevance of the intensification of the processes of commercialization of research results of higher education institutions. The implementation of innovative scientific developments in the real sector of the national economy is capable of providing the innovative development of the country and raising the leadership position at the world level. The functioning of domestic models of commercialization of research results encounters a number of endogenous issues due to imperfections in current legislation, declarative character, and inconsistency of certain normative provisions, underdeveloped models of financing innovative projects, imperfection of tax incentives of the economic subjects for scientific research and innovation activities; the lack of effective economic, and legal mechanism, etc. Solving the identified problems requires the development and implementation of a model for commercializing research results that, unlike the existing ones in the world and domestic practice, integrates appropriate measures, and relevant tools that provide leadership skills in the globalized world.

The proposed approach to the formation of an integrated model of commercialization of research results (from foresight to market), which allows to increase the prospects and the demand of research based on new ideas, and is confirmed in practice through the formation of units in higher education institutions with a developed innovative infrastructure of the units responsible for conducting marketing and foresight research. The interrelation of marketing elements (such as the assessment of the market potential of the project, the development of a marketing plan, the formation of a marketing strategy) with foresight elements (forecasting of technological trends) will allow to ensure the effectiveness of the conducted research and to enhance the leadership qualities of higher education institutions in the global educational space. Among the promising directions of the functioning of the integrated model, one can distinguish the promotion of the development of innovative culture in the society, accelerating the development of the market of scientific and technical products in the country, ensuring the protection of intellectual property rights, diversifying funding sources, developing the innovation infrastructure, expanding cooperation between the subjects of higher education sectors, government sector, business enterprise sector, and civil society sector (on the concept of Quadruple Helix), etc. The prospects for further research include the study of the best practices of the world universities on the commercialization of research results of the scientists with a view to its further adaptation to the domestic socioeconomic realities.

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Leadership Competences: Implications for the Higher Education Quality Management Curriculum at the Regional Level



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Abstract Bologna process made the National Qualifications Frameworks compatible with the European Qualifications Framework three-cycle education and learning outcomes predominant to curriculum development (approval and reviewing) for new academic programmes in higher education in Russia. One of the previous initiatives on expressing learning outcomes was the TUNING Educational Structures in Europe project, which recommended writing learning outcomes in terms of competences. Since then Europe has been using learning outcomes to describe the educational programmes, while this notion is sometimes misunderstood and misinterpreted by Russian higher educational institutions. However, the more recent draft of National (Russian) Qualifications Framework employs a triangular set of descriptors, categorized as competences, skills and knowledge. This paper scrutinizes and discusses the changing definition of the concept of leadership competences and changes in categorizing learning outcomes in Russia and their probable impact on curriculum development in quality management at the regional level. The authors assume that any alterations in the definition of leadership competences and in categorizing the learning outcomes should be considered in the process of developing (reviewing and approving) of new curricula so that they may better associate with the appropriate levels of the National (Russian) Qualifications Framework.

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1 Introduction

The World's Financial and Economic Crisis of 2008–2009 was the first call, which was to make the Russian society to focus on important issues, one of which is the quality of education as a basis for creating and sustaining an innovation ecosystem. Investment in education and the development of the necessary competencies are crucial in improving the competitiveness of the country: these are the competencies of graduates that determine the potential productivity of the territory (Strielkowski and Chigisheva 2018a, b). Russia is facing the challenge of creating the type of economy that would enable attracting highly educated and skilled workers (Zlyvko et al. 2014). This initiative is reflected in the federal document—the Conceptual of the Federal Action Programme for the Development of Education for 2016–2020, which determines the quality and competitiveness of the Russian education as the prerogative of the state policy. The message of the document is stated in a very simple way: Russia, as well as other countries will only be able to overcome the effects of the financial crisis only in the case the system of higher education provides with the highly qualified workers with excellent innovative and entrepreneurship skills (Abrham et al. 2015; Čábelková et al. 2015; Gulicheva and Osipova 2017; or Popova et al. 2018). The latter requires transformation of the national educational systems, which today should employ the existing transparency tools, incorporating national qualifications frameworks and quality assurance systems.

Though today the Russian Federation is among those few countries where the process of developing the National Qualifications Framework (NQF) is currently underway, some work has been already done. In 2007, the Ministry of Education and Science, mainly responsible for the introduction of the NQA, in collaboration with the Russian Union of Industrialists and Entrepreneurs drafted the Project of the NQF. The Project has been publicly debated and discussed. Moreover, it has been used for evolving occupational (Ministry of Labor) and educational standards (Ministry of Education and Science of the Russian Federation). Currently, the Project of the framework is made up of nine levels, compatible with the eight levels of the EQF. The ninth supplementary level corresponds to the postdoctoral qualification. Levels six through eight are relevant to the system of higher education in Russia. The framework also describes the ways the qualification levels can be achieved.

Since 2003, Russia has been an active participant of the Bologna process, and the country has taken extensive efforts to align its national quality assurance system to the requirements described as standards and guidelines of quality assurance of the European Higher Education Area (European Commission 2018).

Russian higher education is characterized by a huge number of institutions and a relatively high extent of centralized regulation of the academic programmes' delivery, structure and learning outcomes.

The Federal Law 'On Education in the Russian Federation' No. 273 introduced and set the current multilevel structure for training of specialists with higher education:

- *Bakalavr* (Bachelor's level)—first cycle;
- *Specialist or Magistr* (Master's level)—second cycle;
- *Aspirantura* (Postgraduate studies)—third cycle.

Thus, a typical learning path of a graduate can be realized by the following scheme ‘Bachelor–Master–Training of highly qualified staff’ (for more information on qualification levels in Higher Education, please, refer to Article 10 of the Federal Law ‘On Education in the Russian Federation’ No. 273 [see Federal Centre for Educational Legislation 2018]).

Though the transition of the Russian HE to the three-cycle system is almost complete, there are still approximately one hundred programmes in the specified majors (Medicine, Arts, etc.) that award the Specialist’s Diploma (which is an obsolete form of training Russia has inherited as a part of its Soviet legacy) (Ministry of Education and Science of the Russian Federation 2013).

2 The National Context

The National qualifications system of the Russian Federation (NQS RF) is a set of related documents liaising areas of higher education and labour market. The NQS serves as a tool for enhancing the quality of training specialists with higher education and increasing their competitiveness on the national and international labour markets. The system includes the documents listed below:

1. National Qualifications Framework of the Russian Federation (NQF RF)
2. Sectorial framework (recommended)
3. Occupational standards/qualification requirements
4. International standards and recommendations (recommended)
5. Federal State Educational Standards (FSES)
6. National system of assessment of learning outcomes and certification (recommended) (FGOSVO 2018).

The Russian National Qualification Framework is currently underway, being a subject for a vivid public discussion between the government, academic community, and business. In 2007, the Ministry of Education and Science in close cooperation with the Russian Union of Industrialists and Entrepreneurs proposed the project of the NQF. Since then, the project of the framework has been publicly debated and approved in the process of devising occupational (Ministry of Labor) and educational standards (Ministry of Education and Science of the Russian Federation). The project of the framework comprises nine proposed levels, compatible with the eight levels of the EQF. The ninth additional level corresponds to the postdoctoral qualification (a *Doktor nauk* degree). Levels six through eight are relevant to the system of higher education in Russia, where *Bakalavr* (Bachelor) corresponds to level 6, and *Magistr* (Master) and Specialist to level 7. The framework also specifies the ways of achieving qualification levels. Each of the qualification levels is characterized by the system of descriptors. Level descriptors fall into the categories of knowledge, skills and competences. These categories are further described in terms of autonomy and responsibility, degree of complexity and knowledge content of a professional activity. The Russian draft NQF mainly serves for the purpose of defining

qualification levels as well as for devising occupational standards. Therefore, when designing or reviewing an educational programme, it is advisable to make evident that programme/module learning outcome are aligned with appropriate occupational standards set by the Ministry of Labor of the Russian Federation.

Occupational standard (OS) determines the qualification an individual should achieve to perform specific kind of a professional activity. The document specifies types of professional activities, general labour functions and qualification requirements for chosen labour functions; moreover, it gives a description of knowledge, skills and competences a person should have to occupy a specific position.

Since the NQF still exists as a Project, the only document that the national quality assurance system relies upon is a set of learning standards, i.e. the Federal State Educational Standards (FSES). The FSES are prerequisites for all state accredited educational programmes of all levels of education. The set of standards and requirements clearly describes the contents of education and establishes the required quality of the content of education (curricula and syllabi); the teaching and support staff; the information provision of the teaching and research process (modern sources of information and different types of available support—printed and electronic—which correspond to the content of course programmes as well as means of information transmission, storage and use); the actual knowledge and skills of graduates (minimum requirements in regard to the level of knowledge and skills of graduates) (FGOSVO 2018).

Russian HEIs have used the third generation of standards since 2009, but we are gradually moving to further generations. It is assumed that the ‘generation 4’ FSES will be more labour focused as the part 7 of the Article 11 at the Federal Law ‘On Education in the Russian Federation’ suggests ‘...*the Federal state educational standards should be aligned with provisions of relevant occupational standards in terms of professional competences*’ (RG 2012).

3 The Institutional Context

Volga State University of Technology (Volga Tech), established in 1932, is a nationally recognized public university under the jurisdiction of the Ministry of Education and Science of the Russian Federation. As a state-run establishment, Volga Tech follows the national guidelines for higher education development policies set by the national (federal) legislation on education, which, in turn, includes Russia’s obligations within the framework of the European Higher Education Area and the Bologna process (ENQA 2018).

As most of the Russian state universities, Volga Tech is still in the transition to the three-cycle system (Bachelor–Master–Training of highly qualified staff), and to academic credit system required by FSES ‘generation 3’. Since 2011, Volga Tech has developed its model of the European Diploma Supplement to promote mobility of its staff and students; however, it is still issued on demand at the costs of an applicant (like in most of HEIs throughout Russia).

The issues of academic programme (AP) design, approval, revision and operation are described in the “Regulation on developing new educational programmes of higher education in the Federal State Budgetary Educational Institution of Higher Professional Education ‘Volga State University of Technology’”. The quality assurance policies imply ongoing monitoring of aligning learning outcomes (LOs) of AP to fit, at first, the FSES and occupational standards, with the first checking at the department level (Methodology Committee), and then at the institutional (Academic Council of the University and the Rector) and national level (state accreditation of AP). Aligning procedures are thus integrated into every stage of the process of AP design and performance.

Postponing of the NQF adoption made some universities, especially industry-oriented schools of engineering seek for compromises by developing sectorial qualification frameworks by their own. Thus, Volga State University of Technology initiated working out a QF in Forestry compatible with several national sectorial frameworks in the EU (Austrian, Finnish, Greek, etc.). The draft Qualifications Framework in Forestry was approved by the consortium of the Tempus SUFAREL project (implemented in 2011–2014) of eight Russian and eight European HEIs providing academic programmes in Forestry (Sector Specific Qualification Framework in the Field of Forestry 2018).

While trying to describe the leadership skills students of Volga Tech will need for their professional career the Volga Tech team of experts analysed the scope of normative documents they would have to refer to. They came up with the idea that the least difficult part would be European regulative area; the EQF and The European Standards and Guidelines for Quality Assurance in the EHAE are approved documents, publicly available and even provided with translation into the Russian language. Although the Federal Law ‘On Education’ is a recently adopted and later amended document, which is well written, understandable, and clear as to educational cycles, types of educational institutions, etc. A more challenging part was lying within the new generation of the federal state educational standards, and, especially, the occupational standards, that are yet to be approved (the Ministry of Labor, responsible for developing the occupational standards approved 900 occupational standards only by the end of 2016).

The challenge with the FSES was that the new educational paradigm was changing from knowledge-based to competence-based approach in training, from teacher-centred to student-centred learning. New generation of the FSES described the requirements for learning outcomes (an absolutely new notion for the Russian academic community). The standard characterized the generic cultural competences (e.g. ability to think in an abstract way, to analyse, to synthesize, to act in unfamiliar situation, etc.); general professional competences (would describe wider and more common competences for the chosen professional field) and profession specific competences (depend much on the chosen type of professional activity that the academic programme pursues). The most difficult part was to understand how those learning outcomes could be achieved; what teaching methods and assessment tools should be applied to help students attain such a learning outcome at either basic or advanced level. The challenge was tackled by introducing a new tool, which provided teach-

ers with general guidance on course/module teaching methods, assessment tools, requirements for core literature, levels of competence attainment, etc.

Another problem (and that would be true for all RU HEIs) is the lack of approved National Qualifications Framework. Since 2007, in the result of a number of public debates and discussions, the Russian Federation enjoys the project of the NQF. Nevertheless, the project has been actively used, namely in the process of developing the occupational (by the Ministry of Labor) and the Federal state educational standards (Ministry of Education and Science of the Russian Federation). In the current situation, the Volga Tech team made decision to improve its procedures for aligning AP LOs with the FSES and the OS. The true results of the alignment work can be seen in the Competence-Based Model of a Graduate.

The Academic Department at Volga Tech proposed a revised Regulation for developing and reviewing educational programmes. The initiative was supported by the University community and approved by the Academic Council in June 2015. The document prescribed a new procedure for approval and review of educational programmes (Ministry of Education and Science of the Russian Federation 2014). The Regulation stressed the role of employers and other stakeholders' involvement in the process at:

- the early stages of programme development: initiating and reasoning for a new programme, developing a key competence model of a graduate, defining learning outcomes aligned with programme's objectives and the occupational standards; establishing the requirements to the level of achievement of competences, coherence and cohesion of the learning process, number of modules, with the description of intended learning outcomes and number of credits; establishing appropriate assessment and quality assurance systems; writing a guideline for developers of course/module syllabi;
- the middle stages, when the programme is implemented, employers can deliver courses or be advisors during students' internships;
- the closing stages of internal and external programme evaluation. These quality assurance procedures should involve all stakeholders of the educational process: representatives of professional associations, employers, including those from the working team, who set the basic rules of aligning the educational programmes with qualification requirements of occupational standards; representatives of student community (students, postgraduate students) and alumni; representatives of the academic community, from those who are involved in the process of educational programme implementation (Government of the Russian Federation 2013a, b).

4 Graduates in Quality Management as Leaders of the Economic Sector

Russia's joining the World Trade Organization (WTO) in 2012 caused a growing demand in expertise on the new rules of trade and production from Russian manufacturers of goods and providers of services. The availability of quality management

systems complying with modern standards has become a condition of Russia's full membership in the WTO, and gave it access to global market. It was especially the case with the EU as Russia's leading trade partner. Therefore, in order to improve the competitiveness of goods and services, Russian companies started to actively implement the quality management systems in enterprises. Despite some reputable Russian firms have already had quality assurance and control departments, they started to certify on a voluntarily base not only goods, but also production lines. The actual demand from the labour market causes the necessity to adopt the existing curricula at the Faculty of Management and Law in order to design the new master's degree programme in Quality Management, with a special focus on food industry and agriculture as the key branches of the regional economy in the Republic of Mari El, and already existing cooperation links between Volga Tech and the leading businesses in this field.

The mission of the academic programme is to train specialists in quality management and quality assurance of goods and services, where quality serves as a material basis to meet production as well as individual needs, thus determining unique public, economic and social values. The higher the quality of product or service, the greater values and physical resources a society has for its further progress.

One can see that in order to provide evidence for programme alignment with the higher education qualifications and the Dublin descriptors, the academic programme was adjusted to meet the following expectations formulated as follows:

- The academic programmes are properly titled and lead to awards at the appropriate level, consistent with European and national qualifications for higher educational qualifications and the Dublin Descriptors for Master's awards.
- The academic programmes are informed by and consistent with occupational standards where appropriate.
- The aims of the programmes are appropriate for the student intake and can be realized through students' attainment of the programme/module learning outcomes.
- All learning outcomes at module level are at the appropriate level and are assessed through fair, valid and reliable student assignments/tests.
- The teaching and learning activities employed within the modules are informed by reflection on professional practices, and designed to enable students to develop the knowledge, skills, abilities and professional competencies that will enable them to achieve the modules' learning outcomes.
- The structure of the programme ensures the progression of students' learning and provides appropriate opportunities for student choice.
- The credits ratings (national and ECTS) for modules are properly aligned with the designated student workloads for the modules.

Table 1 Roles and responsibilities in the academic programme development, approval and monitoring

Position at the university	Role and responsibilities
Rector	– Approves academic programme
Vice Rector for Academic Affairs	– Considers an academic programme for approval
Dean of the faculty (director of the institute, head of the department)	– Approves substantiation of necessity for developing a new academic programme; – Generally monitors the development, approval of a documentation package for developing ... an academic programme
Academic programme director	– Organizes the development of documentation package described in Sect. 2 of the guidelines
Chairman of the methodological commission of the Faculty (Institute, Center)	– Organizes and assesses the documents required for developing ... an academic programme
Academic Department	– Organizes and assesses the documents required for developing ... an academic programme
Monitoring and Quality Center	– Assesses the documents required for official licensing procedures – Packs a set of documents for the Federal Service for Supervision of Education and Science of the Russian Federation

Source Own results

5 Alignment of Quality Assurance Processes at Volga Tech

Volga Tech has developed and introduced the quality assurance system which guarantees that the developed mechanisms and policies for aligning academic programmes with national qualifications frameworks or Dublin.

Table 1 describes the roles and responsibilities of people involved at each stage of an academic programme cycle.

The external review held by the international expertise panel elicited the following results. Moreover, Volga Tech quality management system is based on a typical model of QM for higher educational institutions. The university has introduced and implemented the Quality Management System (QMS) of educational services of higher education in compliance with ISO 9001-2008 and relevant federal state educational standards. The university has the Compliance Certificate of its QMS for academic programmes of higher education, research and innovation activities.

Volga Tech has a set of regulations ensuring that professional standards, external expertise and the FSES are used for academic programme design, development, approval and monitoring:

The Guidelines on developing new academic programmes of higher education in the Federal State Budgetary Educational Institution of Higher Professional Education 'Volga State University of Technology'. The guidelines emphasized the importance of the demand from the labour market; stressed the need for aligning the content of an academic programme with mission of the university, consequently aligning the academic programme with priority fields of science development, technology and engineering in the Russian Federation; prioritized the relevance of the FSES and OS in the programme development process.

The quality system, while commendable, is too much 'top-down'. There is too much focus on quality control and management, rather than quality improvement. Teachers, staff members in general, alumni, students and employers should participate more actively. There should be an interface between the central system and the programmes, through improved cooperation with the Academic Department. The use of external expertise, as for programme reviews, etc., is not clear. There should be more use of external expertise not only when developing programmes, syllabi, etc. but also when doing self-evaluations.

6 Conclusions and Implications

Overall, it appears that Russian Federation should be able to recommence its growth through higher input and supply of skilful employees. In order to achieve these positive and plausible results, ministries and other authorities responsible for the educational and training systems should make reforming the obsolete and rather immutable structure their priority. External reviews (held by international panels) already provided solid analysis which should serve as an impetus to the Russian government, higher educational institutions, university professors, business community and other stakeholders alike to admit national circumstances and advocate amendments in laws.

Our results show that the purpose of Russian HEIs is seen in ensuring that the contribution of education and investment in leadership skills is fully expressed in the regulatory documents that universities use while developing, reviewing and approving the academic programmes of any cycle. HEIs should use every possibility and find instruments to implement the priorities identified in this paper.

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Part V
Leadership, Energy, and Sustainable
Growth

Leadership for Critical Infrastructure Protection



Manuela Tvaronavičienė

Abstract Security of a society has become one of urgent issues in contemporary world. Too frequently we started encountering one or another form of malicious behaviour, criminal activities or terrorism. New and complex threats highlight the need for further synergies and closer cooperation at all levels. Awareness, preparedness and resilience of societies emerge as key preconditions of further secure and sustainable economic development and general well-being. A special attention in those conditions has to be paid to development of theoretically grounded approach to protection of critical infrastructure (CIP), damage or disruption of which can be immensely harmful to unprepared and therefore vulnerable institutions and society. The aim of this paper was to lay theoretical foundations for theoretically grounded approach towards research in CIP area, in order to formulate, ultimately, a roadmap of action, which, employing leadership societal stakeholders would allow to enhance awareness of society actors about the threats, for example to develop ability to recognize, prevent, and, in case of disaster, to resist to consequences of critical infrastructure infringement. Hence, enhanced resilience of society to critical infrastructure infringement is and ultimate goal of fostering of leadership for critical infrastructure protection.

1 Introduction: Insights into State of the Art

Critical infrastructure protection is getting lots of attention nowadays. The topic is not newly emerged, alas, still extremely urgent, especially for some European countries, which appear to be at the very start of this long marathon. European Commission indicated those hazards a decade ago. Hence, in the Directive 2008/114/EC—identification and designation of European critical infrastructures and assessment of the need to improve their protection Critical infrastructure is defined as: “*assets or systems essential for the maintenance of vital social functions, health, safety, security,*

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and economic or social wellbeing of people. European critical infrastructure (ECI) is critical infrastructure in EU countries whose disruption or destruction would have a significant impact on at least 2 EU countries (e.g. electricity power plants or oil transmission pipelines)” (European Council 2008).

The related documents are Communication from the Commission to the Council and the European Parliament—Critical Infrastructure Protection in the fight against terrorism (COM(2004) 702 final, 20.10.2004), Green Paper on a European programme for critical infrastructure protection (COM(2005) 576 final, 17.11.2005), Communication from the Commission on a European Programme for Critical Infrastructure Protection (COM(2006) 786 final, 12.12.2006), Commission Staff Working Document on a new approach to the European Programme for Critical Infrastructure Protection: Making European Critical Infrastructures more secure (SWD(2013) 318 final, 28.8.2013) (see EUR-Lex 2005; or European Commission 2004, 2006, 2013). The Commission has funded over 100 diverse projects under the Prevention, Preparedness and Consequence Management of Terrorism and other Security-related Risks programme (CIPS), during the 2007–2012 period (European Commission 2018a). The programme was envisaged to protect citizens as well as important key infrastructures from the possibility of terrorist attacks and other security incidents. This protection is to be conducted via the means of prevention and preparedness. One of the ways how to achieve it can be through improving the protection of critical infrastructures and addressing crisis management. Hence, the most important objective is to support CIP policy priorities by offering expert knowledge and a scientific basis for an in-depth comprehension of criticalities and interdependencies at all possible levels.

Despite all those efforts and activities, CIP remains urgent unsolved issue, and there are a lot of known unknowns and unknown unknowns, especially when we talk about such actors of society, as universities, NGOs, small business companies, which is not directly related to CIP and therefore even more ignorant and vulnerable. Due to the lack of understanding of origin and symptoms of the attacks, those actors can become easy targets and transmitters of hazards, e.g. related to cyber deceptions. Attacks on citizens, small companies, public companies due to lack of well-developed and well-communicated strategies can cascade into consequences, which could appear to be harmful ultimately to infrastructure, which is described as “critical” by the European Commission (EC). Here we want to point out that description of critical infrastructure, provided by the EC just point attention to the most vivid examples of critical infrastructure, while in the reality the scope and spectrum of this infrastructure might appear much wider. According Ambassador Francesca Tardioli, Deputy Assistant Secretary General of NATO’s Operations Division: “*to face such wide-ranging threats and challenges, no single organization can work in isolation,*” says. “*A comprehensive approach, involving a myriad of international and national organizations, public-private partnerships and academia, is required*” (NATO 2012).

The project aims to contribute to CIP by involving actors, which do not directly act as critical infrastructure protectors, alas, can contribute by formulating a ROADMAP to research and innovations in critical infrastructure protection area, which would

embrace foreseeing of threats, monitoring of polymorphous changing environment, preventing the threats identified and responding in organized and efficient way to mitigate to consequences if case critical infrastructure was infringed.

The main goal is to contribute to resilience of society against threats related to attacks on critical infrastructure. A resilient society cannot merely be a governmental responsibility. It can only be achieved by combining governmental capabilities with those of private partners and individuals. Main aim is to create a shared understanding of Critical Infrastructures, the consequences of disruption and how European cooperation can contribute to enhancing resilience society to Critical Infrastructures infringement. This aim can be reached through intense and innovative learning experience together with colleagues from various organizations, disciplines and countries. The activities focus on cooperation in order to bolster the protection of Critical Infrastructure by bringing together relevant stakeholders in this field.

2 Progress Beyond the State of the Art

While direction of European and NATO strategy is clearly defined, implementation of it is still is not sufficiently discussed and approaches are not devised. There are a lot of roadblocks, which have to be indicated and discussed. We will focus particularly on the following facets of such complex task as CIP.

First of all, we aim to create a theoretically grounded approach towards CIP implementation research, which we will call later a ROADMAP. The aim or the research is to indicate specifically all areas, which could be considered as critical infrastructure and, hence, indicate full spectrum of objects, which have to be protected. Here we need to point out that in current perception critical infrastructure issues are basically perceived as primarily cybersecurity issues (e.g. Protecting Critical Infrastructure in the EU 2010; Limba et al. 2017a, b; Šišulák 2017; Limba and Šidlauskas 2018; Prause and Atari 2017), energy networks (Shakhovskaya et al. 2018; Banerjee et al. 2018), including electrical power grids (Weaver et al. 2018) water distribution system, e.g. is being considered as critical infrastructure, and “assess the detection of attacks and vulnerabilities” remains an issue under discussion (Palleti et al. 2018). Here, we need to point out, protection of that natural resources, such water (lakes, rivers), forests, infrastructure as food reservoirs, etc. are not being included into critical infrastructure perception, despite their significance for society cannot be underestimated (e.g. Tireuov et al. 2018; Arbidane and Mietule 2018; Cardoso et al. 2018; Muniz et al. 2018; Monni et al. 2018; Iorio et al. 2018).

In order to achieve organized reactions of society members, well thought through strategies of management and scenarios of resilience have to be devised. In order to implement this ROADMAP of CIP task, short-, mid- and long-term research goals have to be distinguished. Here we feel, employment of expertise provided by representatives of social sciences, which currently is underemployed in this area, would contribute with full force of available competence. We aim to pool the diverse perceptions, knowledge and experience in order to come to novel approaches, insights,

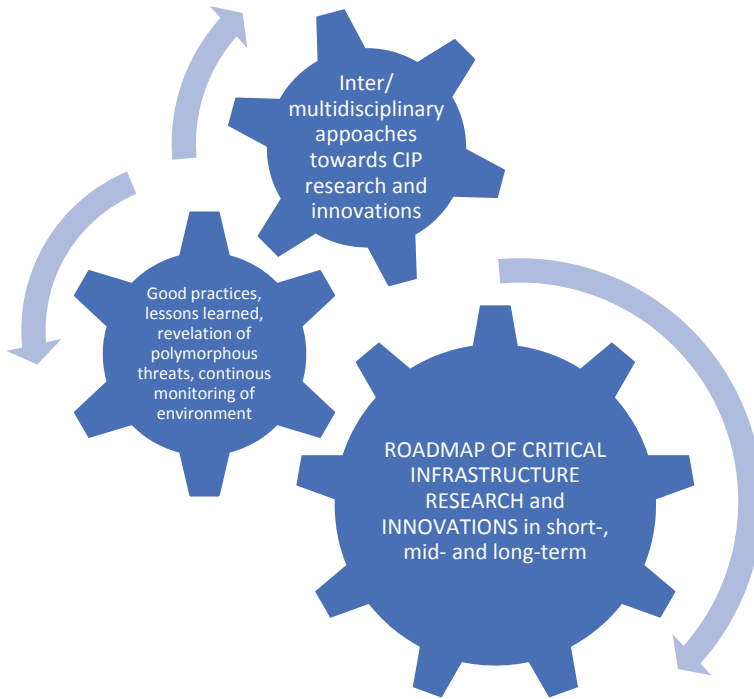


Fig. 1 The approach towards development leadership towards critical infrastructure protection.
Source Own results

reveal unknown unknowns, which will facilitate developing resilient societies. Interaction of inter and multidisciplinary approaches, we believe, would foster creative out-of-box thinking environment leading to unconventional ideas and solutions, allowing to reduce fragmentation of efforts and increase of efficiency in using of resources (Batkovskiy et al. 2018; Žižka et al. 2018; Fomina et al. 2018; Oganisjana et al. 2017) (see Fig. 1 that follows).

Moreover, we aim to build CIP Competence Network, which had potential to expand sequent and establish cooperation with other relevant networks.

In addition, we aim to increase resilience of societal actors to critical infrastructure infringement through enhanced awareness, which would serve as precondition to develop preparedness and ability to prevent and respond to infringements of critical infrastructure, in case such occur. Some attempts in this area can be found in the resent contemporary literature (method of critical attack area identification according to community detection is proposed by Wang et al. (2018) in the area; interdependent power and gas system in Wuhan, China is taken as the example). Continuous interconnection between the ROADMAP of CIP research and innovations and CIP Competence Network is presented in Fig. 2.

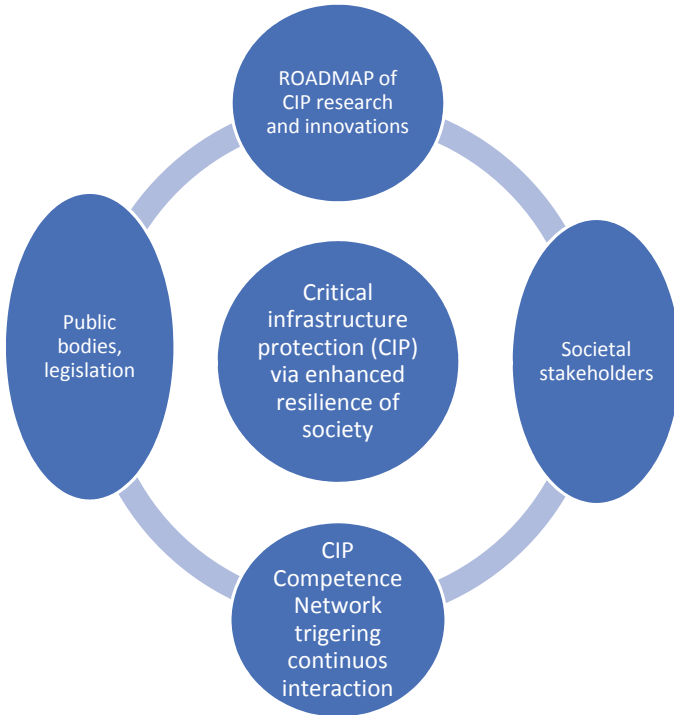


Fig. 2 Continuous interconnection between the ROADMAP of CIP research and innovations and CIP Competence Network. *Source* Own results

The following objectives can be identified:

Research Coordination Objectives

The following coordination objectives are raised:

- Objective 1. Create a networked governance for advanced CIP research and innovation in Europe
- Objective 2. Define and sustain an EU-wide ROADMAP of CIP research and innovation
- Objective 3. Build sustained collaborations with academic, industrial, governmental and community stakeholders
- Objective 4. Enhance awareness and training capabilities and develop CIP skills and resilience of society

Capacity-Building Objectives

We aim capacity building via technology transfer, which will ultimately lead to building of one of world-leading CIP Competence Network. Though research, expertise sharing, good practices, cases, scenarios building and active community engagement,

CIP Competence Network aims at increasing awareness, expertise and resilience across wide array of domains. Hence, capacity-building objectives are:

1. Bringing together relevant organizations, both on the national level and in the EU and beyond.
2. Strengthening awareness of:
 - The need for cooperation for protecting Critical Infrastructure.
 - The need for joint exercising of academic, i.e. research and technology organizations (RTOs) and other stakeholders, such as NGOs, business companies, decision making bodies etc. for more efficient protecting of wide range of critical infrastructures.
3. Enhancing ability of international societal actors to recognize, prevent and react to infringements of Critical Infrastructure including mitigation of cross-border effects.

3 Added Value in Relation to Existing Efforts at European and International Level

There were a lot of efforts put already for the solving issues related to critical infrastructure protection. Besides already above-mentioned documents, some other relevant actions can be mentioned. For example, there is the action by the European Commission which set up a Critical Infrastructure Warning Information Network (CIWIN). CIWIN offers an Internet-based multi-level system that allows to circulate and exchange critical infrastructure protection ideas, reports, studies as well as good practices with the intention of enhancing mutual learning (European Commission 2018b). The CIWIN portal designed especially for these matters was established in mid-January 2013. Apart from its other functions, the portal represents a repository for CIP-related information. It becomes obvious that the above initiative is aimed at increasing the awareness as well as contributing to the protection of critical infrastructure in European Union. Moreover, a European Reference Network for Critical Infrastructure Protection (ERN-CIP) was also set up in the same fashion by the European Commission with a key goal to enhance the “*emergence of innovative, qualified, efficient and competitive security solutions, through networking of European experimental capabilities*” (European Commission 2018c). ERN-CIP aspires to connect the existing leading European facilities and labs with a purpose of conducting critical infrastructure-related security experiments and testing new technologies such as detection equipment.

The presented approach towards leadership for CIP would be a sequent continuation of already implemented activities leading to creation of a new network of international stakeholders contributing to solving of wide spectrum issues related to critical infrastructure protection and enhancement of resilience of international community to the possible disasters.

4 Conclusions

Overall, despite critical infrastructure, protection is not a new topic in the political, scientific and practical landscape of the EU and other countries, a systematic approach towards this contemporary threat of huge scale has not yet been developed.

One would probably agree that there are a lot of rather fragmented attempts to tackle this issue, alas majority of them concentrate to cybersecurity threats to energy supply, water distribution, transport disruptions, etc. Despite those valuable efforts frequently supported by the European Commission and NATO guiding documents and funding, there is still a lot of room for further elaborations in the area of Critical Infrastructure Protection.

We are able to claim that leadership in this domain is crucial, since can lead to collaboration of internationally scattered stakeholders for commonly joint actions directed to development of ROADMAP of Critical Infrastructure research and development, involvement of wide range stakeholders and creation of Critical Infrastructure Protection Competence Network. Those attempts would allow to consolidate gradually fragmented competences and, with active involvement of wide range of societal actors would ultimately allow to develop resilience of society to wide array of known and unknown threats (e.g. insecurity of small actors, which could transfer threats in myriad way to other, e.g. servicing companies, what is probability of such risks, what is level of interdependency of societal actors, etc.). Essence of such resilience would lie in the permanence of interaction of members of Critical Infrastructure Protection Competence Network, involvement of new stakeholders with their unique expertise and experience, accomplishing of legislation and continuous transforming of the ROADMAP of Critical Infrastructure Research and Innovation. Only alive, constantly learning framework of CIP can facilitate development of resilient societies, which were able to continue their path to sustainable development and affluent and safe future.

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Leadership for Achieving Sustainable Development: Social and Environmental Concerns



Luz Dary González Cortés

Abstract The last fifty years have seen an environmental crisis caused by absurd political, economic and technological models which slowly bring ruin to society and the environment. The United Nations Organization (UN), as part of its United Nation Development Program (UNDP), fosters global sustainable development, specifically focusing on the need to address climate change. Additionally, international agreements and congresses have been trying to offer compensation alternatives for environmental protection. These efforts, however, have not been effective. Recent generations have caused mayor environmental impact, and we are now left with a huge rupture between governments, businesses and consumers who pass responsibility among each other. The global population generates with everything from everyday habits to complex production processes. Even though some people accept social and environmental responsibilities, this does not lead to any environmental recovery. This paper offers strategies for environmental recovery. Firstly, through strong public policy, secondly through accounting regulation obliging companies to take into account environmental impact and finally through education and the creation of curriculums that will promote more responsibility.

1 Introduction

Over the last fifty years, an environmental crisis has exploded caused by the industrialization of human society, the dependence on modern polluting industrial techniques, and the expansion of a dependence on fossil fuels which began with the industrial revolution. Add to this the throw-away nature of our technological culture, and there seems to be a recipe for disaster that effects the human environment, societies and economies in a negative way. Porto-Gonçalves and Leff (2015) affirm that by saying “*the environmental problems irrputed in the 1960s represent a crisis of civilization*”

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horizons in the perspective of sustainability. This divergence in the course of history called for the merging of nature and culture that was divide by ontological and epistemological dualism that founded the modernity.”

One big issue, according to the Paris Agreement (United Nations 2015): “*Climate Change is now affecting every county on every continent. It is disrupting national economies and affecting lives, communities and countries dearly today even more tomorrow.*” This generation’s biggest source of greenhouse gas emissions, in terms of human activity, is due to complex industrial processes. The United Nations (UN) has recognized these things and offered sustainable development goals as a blueprint for achieving a better more *sustainable future for all* (United Nations 2018). These are connected to environmental problems but also deal with the linked issues of poverty and education.

The issue of leadership for sustainable development, which focuses on climate change, refers to adjustments in process, policy and good practices. While the sustainable targets do not legally bind, governments are expected work towards their achievement; each country has a responsibility to follow up and review the progress through leadership strategies in order to achieve their goals (United Nations 2016). As far as everyone knows, the United States is not currently on board with this agreement.

Currently, despite a wealth of available information, the adoption of necessary measures privately and through government policies is limited. Economic costs and lost benefits are given as the main reasons. There are important roles to be played by all and at every level, from the individual through communities, corporations, governments and transnational groups to improve and apply knowledge, in terms of constraints that must be faced and opportunities for the enhancement of adaptive capacity (Smit and Pilifosova 2003).

The cause involves insufficient public policy, accounting regulations and a need for strong education. In the case of Colombia, statutes have been produced for the taking of preventative measures. However, it is always stated that these could lead to economic loss for certain companies. The international context is generally similar.

2 Leadership in Public Policy

Public policy is clearly an essential tool in the academic and practical exercise of public management, currently the government promote the resolution of political, economic, social and environmental conflict. There are some big issues on which success in development and implementation depend: Firstly, the personal of the central state government (Schmidt 1996), secondly, connected to bureaucracy and political power relationships and the implanting of public policy and promoting institutional agreement as ways of attaining specific objectives (Oszlak 2006).

The “participation meaning any type of inclusion of none state actor, as members of the public or as organized stakeholders, in any stage of governmental policy making include implementation” (Wesselink et al. 2011) according with Bishop and Davis

(2002) “it is rarely clear what counts as participation, and how the many practices loosely bundled under the label should be understood.”

Leadership in creating public policies must connect with and take advantage of the results of research, according to Saetren (2005), the idea that publications on the theme of policy implementation have stagnated since the 1980s is completely erroneous, despite being commonly asserted. What is true is that research on such matters is frequently put to one side and ignored. For example, Saetren (2005) referenced, among other, by Alexander (1985), Lester et al. (1987), Linder and Peters (1987), McLaughlin (1987), Ingram (1990), Goggin et al. (1990), Matland (1995), Hill (1997), Lester and Goggin (1998), Leon (1999), Hill and Hupe (2002), deLeon and deLeon (2002), May (2003), or Barrett (2004). All of them made important contributions and offered valuable advice for the improvement of public policy.

There are complex reasons for this failure or unwillingness to use research results (Spiel et al. 2018); according to Spoth et al. (2013): “intervention research and implementation research have not yet been connected systematically, and there are still problems in translating programs into the wider” community because of difficulties with implementation (Spoth et al. 2013) Additionally, researchers often receive more than requests from politicians to take over and continue with existing plans.

Currently, failure of initiatives is common, because of the wide gulf between ideas and reality, in other words, which leads to failures of implementation (Fixsen et al. 2013). As a result of a literature review, Spiel et al. (2018) proposed research into both intervention and implementation summarizing the relevant action to take and the areas and issues for consideration. This offers an increase in the probability of sustainability, implementing evidence-based programs of intervention following the six steps procedure model: (1) mission-driven problem recognition; (2) ensuring the availability of know-how on dealing with problems; (3) identification of reasonable starting points for action; (4) establishment of a cooperation process with policy-makers; (5) coordination and development of intervention and implementation; and (6) program implementation transfer.

Another proposal for a successful implementation model by Meyers et al. (2012) consists of 25 frameworks, 14 dimensions grouped in six areas: Assessment strategies, decisions about adaptation, capacity building strategies, creating structures for implementation, ongoing implementation support strategies and improving future application.

However, despite research and many studies into the implementation of public policy, “the evidence-base is insufficient” (Ogden and Fixsen 2014) and does not cover the cause of the social and environmental problems. Climate change, environmental risk, pandemic risk and poverty must be a central political and business priorities in the coming decades (Epstein 2018). There must be a promotion of “the scientific study of methods to promote the system uptake of research findings and evidence-based practice into the professional and public policy” (Forman et al. 2013).

The European Union (EU) has intergraded the environment objectives into its development policies through the Development Cooperation Instrument and the European Development Fund, as well as the Global Public Goods and Challenges program (GPGC). However, despite changes in EU development policy and practice

over years, there remain difficulties in integrating environmental considerations into practice (Adelle et al. 2018).

Considering climate change, Smit and Pilifosova (2003) proposed a public policy initiative and the undertaking of directly influencing governments to propose in an adaptation plan and evaluation of policy options: Rationale and objectives for plan adaptation, identification of adaptation policy option, evaluation of adaptation option and adaptation cost, public adaptation decisions, uncertainty and risk management. This initiative may be direct or indirect with the goal of encouraging private action (Leary 1999).

3 Leadership for Implementing Accounting Regulations

In 2014, a central framework was published as a first international standard for environment-economic accounting by United Nations committee of experts. “Handbook of National Accounting: Integrated environmental and Economic Accounting” is a multipurpose conceptual and statistic framework for detailing economic and environmental interactions economy and environment. The information was organized into the various stocks and flows in a series of tables; however, the implementation does not require completion of every table and account for all environmental assets or environmental themes (United Nations 2014). In summary, it is an inventory of natural resources and statics per country. These reports are applied depending on the availability of data and the statistical capacity of each country.

The accounting regulation was created to provide, promote and develop high quality, integrity and transparent information (IFRS 2018), the financial stability board reiterated its support for a single set of high-quality accounting standards (FSB 2015). The global accounting standard is supporting by G20, international organizations, investors and members of worldwide accountancy profession for modern economic. (IFRS 2018). The IFRS has entered into the cooperation agreements with the international and regional organizations. They do not include explicit regulation to measure the environmental impact produced by the normal activities of the companies.

In general, all transactions include in the international standard a prepared rational financial statement detailing economic and financial information; however, environmental information is not within the scope. In the light of the Kyoto agreement, the governments have to develop processes to encourage reductions in greenhouse gas emission; in order to do this, the IFRIC 3 was prepared, and the IASB withdrew in June 2005. As a way to create additional categories to intangibles measure such as fair value through profit and loss, EFRAG presented a paper proposing to include emission rights within a hedge accounting model that would use the principles of cash flow hedging to deal with this issue. There was support from a number of IFRIC members; however, many expressed reluctances to take the project further until the IASB had been explicitly consulted as whether they considered this an appropriate project to pursue, as it could be inappropriate for the government or the companies? (IASB 2005).

Leadership in accounting regulation will be improved if organizations follow good practice, for reducing cost and environmental management strategies are made obligatory, relating this to competitive advantage and measuring corporate environmental performance (Epstein 2018).

According to Epstein (2018): *“with growing sensitivity towards social and environmental issues and shareholder concerns, companies are increasingly striving to become better corporate citizens. Executives recognize long-term economic growth is not possible unless that growth is socially and environmentally sustainable. A balance between economic progress, social responsibility, and environmental protection, sometimes referred to as a triple bottom line, can lead to competitive advantage.”*

Recently, many big companies have initiated policies for the improvement of environmental outcomes; nevertheless, these efforts are not clearly realized. Some companies confuse social responsibility with marketing and do not include the environmental issues within Financial Statements.

With the capitalist mode of production, modern economy abandoned the Physiocratic principle which affirmed that nature was the source of wealth through the reproduction of seeds. With this oblivion of nature, economic rationality externalized nature and abandoned the inquiry on the ecological conditions for the sustainability of the economic process. The economic process became an increasingly a process of production mobilized by fossil fuels (coal and oil) that slowly but irreversibly and in complex ways generated ecological decay and the environmental planet's degradation. (Porto-Gonçalves and Leff 2015)

4 Leadership in Environmental Education

Education faces huge challenges at a global level: economic crises, climate change, desertification, deforestation, environmental degradation, inequality, wars and the eradication of poverty (United Nations 2012). The idea of sustainability is gaining recognition, focused on enhancing quality of life, environmental health and *equity across generations* (UNESCO 2009). At the UNESCO conference, an action at policy level was proposed by member states. Among some of the most important points are: Promoting education for sustainable development contributions; re-oriented education and training systems to address sustainability concerns through coherent policies; re-orienting curriculum and teacher education programs to integrate education for sustainable development.

Sterling (1990) introduced education for sustainability: *“the global issues facing us are crucial and if education has a role in addressing them, we need to be clear about what that role is... It will pay to be clear if we want to translate them into the most appropriate and effective form of action”* support and education as a tool to improve education for sustainability could address more than one issue the communities have; *the education is the solution for poverty* and environmental issues. Based on the above ideas, it is necessary to develop a technical solution looking forward for ways to live sustainably, with a good practice through education to improve sustainable development. Tilbury (2011) and Wals (2010) put forward the idea that

both individuals and communities will need to participate in significant “learning” and “unlearning” specially with the propose goals for the area of formal education.

Some universities signed up to the international declaration and are committed to sustainability across multiple areas (Wright 2004); however, some have a huge distance between the theory and the practice: “*thus, it has been difficult to move from theory to action*” (Cotton et al. 2009) with the focus to demonstrate the positive practices or “part of stories of transformation,” without allowing for such things as resistance and blocks on progress (Corcoran et al. 2004).

Furthermore, there are huge barriers to education achieving the goal of educating for sustainability, some authors like Ferrer-Balas et al. (2008) referred to academic culture, academic freedom, disciplinary working environments or a lack of interdisciplinarity. In the case of the public universities in underdeveloped countries, problems relate to resources and lack of funding to create strategies in research, professional development and for project funding.

According to Cebrián (2018), each university has complex systems, also “the university activities and their independence need to be taken into consideration in order to embed sustainability holistically” (Sterling et al. 2013) “This implies that the curriculum, pedagogy, structure, organization and ethos are shaping dimensions of education, therefore embedding sustainability involves a cultural change rather than an add-on to existing curricula and structures” (Sterling 2004).

A number of key issues arise, especially from the culture and working environments; however, there are strong chance that the proposal of this paper is completely connected with the 13-development goal “climate action” as a global challenge that affects everyone, everywhere (United Nations 2018) propose as an action “educated young people on climate change” to put them on a sustainable path early on.

The university of Southampton in the United Kingdom (UK) developed and embedded a I3E model Education for Sustainability, integrating components are: inform the university community about sustainability; engage the different university stakeholders in the change process towards sustainability; empower individuals and groups to make change happen within their sphere of influence and action; and embed sustainability within existing university structures.

In a study carried out by (Marc et al. 2014), it was proposed, through the examination of the most recent decade’s published attempts at environmental education, that there are serious difficulties faced by environmental education programs that are not faced by more traditional programs. However, programs can lead to positive changes in student knowledge, awareness, skills, attention, intention and behaviour.

5 Conclusions

Overall, environmental problems in general and climate change in particular are global issues, to be tackled by the United Nations and other global organizations Therefore, it is important to analyse and create systematic and unified public policies across countries and recognize how these are involved in an integrated solution.

There must be participation towards the objective of sustainable development from government, companies, and all parts of the education system and effective measures must be legally binding. The proposed multi-pronged solution is necessary because everything has an environmental impact, for good or for bad. Educational programs must recognize this and be designed to raise awareness of it.

Leadership of public policy can be supported by the results of Ph.D. dissertation taken to account there was huge studies. The policies must be strong and try to be inclusive of all sections of society; covering that whole range of issues it is necessary to tackle. They must especially take into account education, as an educated community is the only community that is able to deal with the serious problems, both environmental and of poverty that face the world.

Furthermore, to achieve environmental goals, companies must include environmental impact within Financial Statements. Their activities must be documented and evaluated on an environmental impact basis. They must show that their actions have positive environmental effects.

One can conclude that corruption frequently means that objectives are starved of resources or trivialized; this also happens because no one wants to accept responsibility. These dual ills must be combated if we are to have any chance of avoiding global catastrophe.

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Leading Ways to Increase the Shelf Life of Meat Products



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Abstract Our paper focuses on the leading ways of storing shelf products as a means of prolonging their shelf life for increasing business profits and gains. We describe how a biosoluble antibacterial film for meat semi-finished products can be used just for these purposes. In the formulation of the film, agar was used as a structurant, plasticizer—trihydric alcohol—glycerol, universal solvent—distilled water. The biologically active components in the form of metabolites of bifidobacteria and lactobacilli, enclosed in a suspended solution of Eufloirin-Plus, are introduced into the basic formulation of the film, as an antimicrobial drug—class 1 bacteriocin (lowlands). A technology has been developed for the production of a film that includes the following stages: heating distilled water, introducing glycerin with continuous stirring at 100–500 rev/min for 10 min at a temperature of 75 °C, cooling the solution to a temperature of 60 °C, adding the probiotic preparation Eufloirin—Plus or nisin bacteriocin to the cooled solution, homogenizing the solution for 5 min at a temperature of 60 °C in the “stirring” mode (100–500 rpm), pouring the cooled solution into molds, temperature control, and cooling. The organoleptic, structural-mechanical, and physicochemical properties of the film, and the degree of water absorption were studied, which indicates the biodegradability of film materials. Our results show that the organoleptic and microbiological indicators of chilled meat semi-finished products packed in biosoluble films using nisin comply with the requirements of regulatory documentation after 10 days of storage. Consequently, the use of nisin in the formulation of the film allows to increase the shelf life of meat cooled and packed in a biosoluble film. All together these steps constitute a leading technology that might make considerable impacts on the food sector.

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1 Introduction

Generally, the production and consumption of meat and meat products has a steady leading upward trend in the Russian Federation. According to statistics from the Ministry of Agriculture of the Russian Federation, the amount of consumed meat and meat products in 2017 is 74.0 kg per capita, while in 2016—73.8 kg, in 2015—73.2 kg.

However, meat and meat products are treated with perishable foodstuffs and an important task of the food industry is to increase the shelf life of the above-mentioned food products while maintaining the quality characteristics. To increase the shelf life of meat and meat products, chemical, biological, biochemical, physical, and other methods are used. In addition, their combinations are also used (Esteve et al. 2009; Moskalenko and Yevsieieva 2015). Chemical methods of preservation are based on the suppression of the vital activity of microorganisms and, in some cases, inactivation of enzymes when exposed to chemicals in doses harmless to human beings. The chemical methods of canning include salting, pickling, smoking, processing of raw materials, and products with antiseptics (Bogatyryov 2009).

Physical-chemical methods of canning include drying, canning with salt and sugar. Biological methods are based on the use of biologically active substances with bacteriostatic or bactericidal action.

Physical methods involve exposure to temperature (pasteurization and sterilization) or exposure to cold (cooling, freezing, freezing). Research (Beaufort et al. 2009) has established a high efficiency of supercooling technology (partial freezing), when the meat is brought to a temperature just above the freezing point and stored at its values by 1.4–4 times more compared to traditional cooling methods. A positive temperature deviation from the freezing point by 1–2 °C allows slowing down or stopping the reproduction of microorganisms and does not affect biochemical processes. However, there are a number of drawbacks in the method of partial freezing due to the formation of ice crystals during their recrystallization—while thawing—microstructural changes occur in the tissue, which leads to cell degradation and weight loss.

The above-listed technologies are traditional; however, at present, the introduction of new methods of canning, non-traditional, is the most interesting. The advantage of the majority of non-traditional technologies is that they are based on, as a rule, physical mechanisms (in addition to thermal effects), which allow maintaining the nutritional and biological value of the processed product at an appropriate level. Such technologies include ultra-pasteurization (aseptic pasteurization), extrusion, microwave—vacuum drying, the use of pulsating electric fields, ionizing radiation, high pressures, etc. (Hartyáni et al. 2011).

In recent years, more and more research has begun to appear in foreign literature aimed at extending the shelf life through the use of high-voltage arc discharge (HVAD-high-voltage arc discharge) and low-temperature plasma (CP-cold plasma). The HVAD technology uses electrical discharge to achieve the effect of pasteurizing liquids by rapidly removing electrical energy through the gap between the electrodes,

induction of strong electromagnetic waves and electrolysis, leading to inactivation of microorganisms (Patras et al. 2009).

One of the most important features of this technology is the injection of powerful dynamic shock waves generated by an electric arc (Boussetta et al. 2012). An arc discharge leads to a variety of physical and chemical effects. High-pressure shock waves can cause the phenomenon of cavitation, cavitation bubbles, in turn, for quite a short time can create strong secondary shocks. The shock wave concerns the cell membranes, which causes their mechanical rupture and release of the cell contents. The voltage of the arc discharge contributes to the formation of highly reactive free radicals (most often of the oxygen contained in the chemical composition of the medium being treated). Therefore, the use of an arc discharge is a threat to human health, as evidenced by the conclusions of the authors (Jayaram et al. 1991).

The use of an arc discharge for the treatment of liquid products is highly unsafe, since electrolytic decomposition occurs during the processing, when harmful electrolysis products and highly reactive chemical compounds, free radicals, are formed. The use of low-temperature plasma to preserve food is an innovation in the processing industry. At its core, plasma is the fourth aggregate state of a substance (in addition to liquid, solid, and gaseous). From the point of view of physical chemistry, plasma is an ionized gas. Cold plasma is a plasma containing neutral particles (atoms and molecules) and particles carrying a charge (electrons, cations, and anions), products of plasma chemical reactions (free radicals). The accumulation of charged particles can cause damage to the cell membranes of microorganisms, and oxidation of lipids, nucleic acids, and amino acids can occur under the action of the active forms of the gas molecules—nitrogen and oxygen (Laroussi 2004). The technology of using cold plasma is still not well-studied, which makes it impossible to fully appreciate all the risks of its use. It is known that cold plasma has been used in the food industry to disinfect agricultural products (apples, lettuce, almonds, mangoes, and melons), the surface of eggs, meat, cheese (Deng et al. 2007).

One of the promising methods for increasing the shelf life of meat and meat products is to use pressures up to 1200 MPa. Processing food products with this pressure does not lead to the destruction of covalent bonds, but leads to the destruction of weaker bonds, which causes inactivation of microorganisms and enzymes that affect the deterioration of products. Research by Qin et al. (2001) suggests that the barometric effect on food entails an increase in their antioxidant activity, due to the intensification of the extraction processes of biologically active compounds, in particular vitamins, localized in the cells of the processed product.

Currently, there is information about the use of various materials of different nature for the production of edible coatings and films for perishable food products, in particular for meat and meat products. Various biologically active substances are used as prescription components of films with antimicrobial action: antioxidants, antimicrobial compounds, probiotic preparations, essential oils, and others. The matrix basis for the film can be polymers of plant, animal, microbial, or synthetic origin, containing a large number of hydroxyl groups. Examples of hydrocolloids include alginate, carrageenan, carboxymethylcellulose, pectin, and xanthan gum. Due to the composition of the polymer chain, polysaccharide films show excellent gas permeability,

contributing to the formation of the desired modified gas medium, which contributes to an increase in the shelf life of the product without creating anaerobic conditions. In addition, polysaccharide films and coatings can be used to extend shelf life of muscle parts of meat products by preventing dehydration and oxidative rancidity, but their hydrophilic nature does not allow them to remain good barriers to water vapor (Chiumarelli and Hubinger 2012).

The feasibility of using biopolymer food films and coatings to increase the shelf life of food products is justified by the fact that there are no allergens and toxic components in the formulation; ensures stability and antimicrobial protection of the food product, the equilibrium state of the gas environment of the package, etc.

For nutritional value, edible films and coatings can be subdivided into digestible and non-digestible. Digestible materials are integrated into the metabolism of the human body in the form of nutrients and energy. Indigestible but harmless compounds that do not carry nutritional value are consequently removed from the body in the form of a sludge (Kasyanov 2015).

The basis of digestible films and coatings are carbohydrates, proteins, and fats. The basis of the indigestible are synthetic and natural gums, cellulose derivatives, natural waxes of various origins—mineral, vegetable, and others.

When solving the problem of developing and implementing innovative technologies, it seems reasonable to abandon chemical methods in favor of the physical and most advanced biotechnological methods. The creation of edible biosoluble films and coatings with desired properties, including antimicrobial activity, based on natural compounds—biopolymers—represents a new trend in the field of the food industry. The edible film can be defined as a packaging material, which is a thin layer of a given recipe, placed on the food product, being in the solid phase (dried form). While, the edible coating is applied to the food product, being in the liquid phase, after which it is dried (solidified), and it acquires a solid structure.

In connection with the above, the purpose of our research is to develop a new way to increase the safety of chilled meat semi-finished products, by using an edible bio-dispersed film.

2 Materials and Methods of Research

We applied different stages of work with the objects of research being as follows: agar-agar (GOST 16280-2002 “Food agar. Technical conditions”); food glycerin (GOST 6824-96 “Distilled glycerin. General technical conditions”); biologically active additive of probiotic action “Euflorin—Plus”; nisin (GOST R 57646-2017 “Microbiological products. Food additive nisin. Technical conditions”); distilled water (GOST 6709-72 “Distilled water. Specifications”); chilled meat semi-finished products (GOST 7724-77 “GOST R 52675-2006 Semi-finished meat and meat-containing products. General technical conditions”).

The film in question was made by casting a film-forming solution (composition) in Petri dishes with a diameter of 89 mm. Drying was carried out in a BinderED-

115 brand thermostat at 50 °C for 24 h. When choosing the optimal prescription composition, the quality of the produced films (organoleptic, physicochemical, and structural–mechanical properties) was evaluated. To measure the thickness and density of the films, micrometer MK 50-1 and the method of direct measurement were used. Ten parallel measurements on 3 different parts of the film were carried out, and the average value was calculated as output. The degree of water absorption studies—according to GOST 4650-80. Square-shaped samples of 3 × 2 cm in size were dried in a thermostat (50 °C) for a day and then cooled in a desiccator to 23 °C and weighed (W_1). Then, each sample was placed in a test tube (50 ml) containing 10 ml of distilled water. Samples were stored for 24 h at room temperature and periodically slowly mixed. After that, the solution was filtered, and the residues remaining on the filter paper were dried in a thermostat at a temperature of 105 for 1 day, after which the samples were weighed and the amount of dry matter (W_2) was determined. Solubility was calculated by the formula (1):

$$P = (W_1 * W_2) / W_1 * 100\% \quad (1)$$

where

P is the solubility (%);

W_1 is the mass of the sample dried in a thermostat before filtering;

W_2 is the mass of the sample dried in a thermostat after filtering.

Chemical resistance was determined by cutting squares (10 × 10) mm in size and then lowering them into chemical environment and determining the time of decomposition of the sample. Strength (PP) and tensile elongation (L) were measured at the facility—Instron 3343 electromechanical testing machine. Specimens of 35 * 50 mm were investigated. The maximum force required to break each film was read from the device's digital display. Strength was calculated by dividing the maximum breaking force (F) by the cross-sectional area of the film sample (S), which was obtained by multiplying the width by the average thickness of the film strips. The strength was calculated by the formula (2):

$$PP = F/S \quad (2)$$

where

F is the maximum breaking force;

S is the cross-sectional area of the film sample.

The tensile elongation (L) was calculated by dividing the increase in the length of the film strips at break (b) by the initial length of the film strips before loading (a) (formula (3)):

$$L = b/a * 100\% \quad (3)$$

where

b is the increase in the length of the film strips at break;

a the initial length of the film strips before loading.

While running our model, the conventional, standard, and original methods of organoleptic, physicochemical, and microbiological analysis were used.

3 Results and Discussion

Overall, it appears that the main prescription ingredients of the film were a structurant of a polysaccharide nature (agar-agar), a plasticizer (trihydric alcohol—glycerols), distilled water. The biologically active components in the form of metabolites of bifidobacteria and lactobacilli, enclosed in a suspended solution of Eufloirin-Plus, bacteriocin class 1—nisin, are introduced into the basic formulation of the film. The production technology of film samples in the laboratory consisted of several consecutive stages:

At the first stage, the following technological operations were carried out: loading distilled water into a ThermomixTM 31 mixing bowl, setting the “soft stir” mode (40 rpm) and “soft start” speed (over 60 °C); transfer of speed to the mode of “gentle heating” (gradual increase in temperature) and “stirring” (100–500 rpm); bringing to a temperature of 95 °C, making a sample of polysaccharide; establishment of continuous stirring (100–500 rpm) for 10 min.

At stage 2: lowering temperature to 75 °C for 12 min, adding 1 glycerin (glycerol) to solution (solution 2), and continuous stirring in the “stirring” mode (100–500 rpm) for 10 min at a temperature of 75 °C.

At stage 3: cooling the solution 2 to a temperature of 60 °C. Adding probiotic preparation “Eufloirin—Plus” to the cooled solution or bacteriocin nisin; homogenization of the solution for 5 min at a temperature of 60 °C in the “stirring” mode (100–500 rpm).

At stage 4: filling the cooled solution 3 into forms (stainless steel trays) until the solution is evenly filled and distributed; the next 24 h—temperature control at 50 °C and cooling.

A study of the organoleptic, structural–mechanical and physicochemical properties was carried out; moreover, the degree of water absorption was studied, which indicates the biodegradability of film materials.

Table 1 presents the results of the study of the structural–mechanical characteristics of the developed films (thickness, tensile strength, and relative elongation at break).

We find that the thickness of the films ranges from 31.5 to 52.0 microns, depending on the concentration of agar and glycerol. Increasing the concentration of agar ensures the dissolution of a larger number of solid particles in the liquid phase, which leads to the formation of thicker film materials. The increase in film thickness due to an increase in the concentration of agar is associated with its unique colloidal properties,

Table 1 Structural and mechanical characteristics of the developed films

The content of agar-agar in the film (g)	The glycerol content in the film (ml)	Thickness (mkm)	Tensile strength (PP) (MPa)	Elongation at break (<i>L</i>) (%)
2.0	1.5	31.5 ± 0.7	19.2 ± 6.3	16.3 ± 2.1
	2.0	33.0 ± 2.0	21.0 ± 6.0	14.3 ± 3.8
	2.5	38.0 ± 1.2	23.5 ± 7.0	15.0 ± 3.0
4.0	1.5	47.0 ± 1.2	32.2 ± 5.2	24.8 ± 2.3
	2.0	48.0 ± 3.2	34.5 ± 4.2	31.7 ± 5.0
	2.5	52.0 ± 2.3	25.9 ± 5.5	27.5 ± 1.0

Source Own results

in particular, high gel-forming ability. The increase in thickness due to the addition of glycerol to the formulation is due to the fact that the molecules of triatomic alcohol fill the free voids between the polymer chains in the film matrix, between the macromolecules and increasing the distance between them.

Our findings show that the strength of the film is inversely proportional to the concentration of glycerol and directly proportional to the concentration of agar, due to the formation of a large number of hydrogen bonds between the polymer molecules. A decrease in strength with an increase in the concentration of glycerol is possible due to a decrease in the interaction between water and agar molecules. In addition, an increase in the concentration of the plasticizer leads to an increase in the moisture content of the film due to its high hygroscopicity, which helps to reduce the interaction forces between adjacent macromolecules.

The concentration of agar is directly proportional to the relative elongation at break. Increasing the concentration of agar in the forming solution of the film increases the water-holding capacity, which contributes to an increase in the relative elongation. Increasing the concentration of glycerol leads to a decrease in the strength of the intermolecular interaction, which increases the mobility between the molecular chains and leads to an increase in the relative elongation at break.

We conducted a study of the chemical resistance of film samples to aggressive chemical medium, in particular, with regard to the resistance to acid and alkaline. Sulfuric acid (H₂SO₄) and hydrochloric acid (HCl) are used as the acidic medium. The alkaline medium was represented by two compounds—potassium hydroxide (KOH) and sodium (NaOH). The results of studies on the chemical resistance of the samples film are presented in Table 2.

From the analysis shown in Table 2, it can be seen that samples No. 5 and No. 6 have the greatest resistance to concentrated sulfuric acid, dissolution occurs after 21 h. In the medium of concentrated hydrochloric acid, samples No. 5 and No. 6 also have the highest destruction time (40 min).

Decay was not observed in alkaline medium of potassium hydroxide (2.0 M) and sodium (0.1 M) for all samples. In the case of potassium hydroxide, the film swelled due to the saturation of the polymer particles of agar with alkali molecules.

Table 2 Resistance of films to chemical medium

Agar-agar (g)	Glycerol, (ml)/sample number	Sample decay time			
		H ₂ SO ₄ conc. (h)	HCl conc. (min)	KOH, 2.0 M	NaOH, 0.1 M
2.0	1.5/1	16	25	Swelling of polymeric particles was observed, dissolving did not occur	Decay did not occur
	2.0/2	17	25		
	2.5/3	18	33		
4.0	1.5/4	20	39		
	2.0/5	21	40		
	2.5/6	21	40		

Source Own results

Table 3 The degree of biodegradation of the film

Agar-agar (g)	Glycerol (ml)/sample number	The average proportion of the mass loss of degraded samples, in %				
		3 days	7 days	14 days	21 days	28 days
2.0	1.5/1	52.0	57.0	58.0	62.0	63.3
	2.0/2	54.3	56.4	59.3	62.1	63.6
	2.5/3	52.1	57.0	59.2	60.2	64.0
4.0	1.5/4	52.6	57.3	58.0	61.0	62.5
	2.0/5	55.3	58.4	59.5	61.3	62.9
	2.5/6	55.2	57.9	59.3	60.2	63.1

Source Own results

One of the most important characteristics of the developed films is the ability to biodegradation. During the study, the degree of biodegradation of the samples was monitored for 28 days. The results are presented in Table 3.

From Table 3, it can be seen that the degree of biodegradation of all the studied films is above average, which can characterize them as bio-soluble. It is established that the increase in the concentration of agar is inversely proportional to the solubility of the film. This is due to an increase in the content of dry agar and an increase in the number of bonds between molecules in the film solution, as well as the hydrophilic nature of agar. Whereas an increase in the concentration of glycerol led to an increase in the solubility of the film, which can be explained from the standpoint of the hydrophilic and hygroscopic properties of glycerol as a plasticizer. The plasticizer increases the dry matter content converted to a solubilized state by dissolving in an aqueous medium, which increases the solubility of the film material. The increase in the solubility of the films due to the increasing concentration of glycerol can be explained by its hygroscopic properties. Glycerin molecules attract and bind water molecules to absorb moisture. The high solubility of the film with a glycerin plasticizer is due to the fact that glycerin has a strong affinity for water molecules, as well as a low molecular weight, which facilitates the entry of alcohol

Table 4 Microbiological indicators of samples of chilled meat semi-finished products, packed in a developed biodegradable film after 10 days of storage

Name of the indicator	Group		
	Control	Experimental no. 1 (nisin)	Experimental no. 2 (“Euflo-rin—Plus”)
Norm according to TS TR 034/2013	No more than $1 * 10^4$		
QMAFAnM, CFU/g	$3.40 * 10^4$	$0.01 * 10^2$	$0.02 * 10^2$
Norm according to TS TR 034/2013	Absent		
CGB (g) is not permitted in 0.1 g of product	–	–	–
Norm according to TSTR 034/2013	No more than $1 * 10^3$		
Yeast, CFU/g	$2.02 * 10^3$	$1.33 * 10^1$	$1.62 * 10^2$

Source Own results

molecules between the polymer chains of agar and increases the volume of free space between them.

The results of the organoleptic analysis of the control and experimental samples of chilled meat semi-finished products packed in the developed biodegradable film were studied after 10 days of storage at a temperature from 0 to 4. Samples of the control group had signs of stale meat, while samples of the experimental groups had rather high organoleptic features characterizing them as a fresh meat product.

Samples of meat of the second group, packed in a film with the addition of “Euflo-rin—Plus,” had a slightly sour, specific smell characteristic of the probiotic preparation, which is part of the developed package. After 10 days of storage, microbiological indicators of meat quality were examined (Table 4).

The results shown in Table 4 demonstrate that the microbiological indicators of the control samples of chilled meat semi-finished products packed in the developed biodegradable film after 10 days of storage do not meet the requirements of TR TS 034/2013 (Customs Union Technical Regulation on Meat), while the test samples of meat semi-finished products do not exceed the normalized values.

4 Conclusions and Implications

Our findings show the new and truly leading method of increasing the shelf life of chilled meat products packed in a developed biosoluble antibacterial film, including agar-agar, edible glycerin(-rol), a biologically active additive of the probiotic action “Eufloirin-Plus,” nisin, and distilled water. The technology of biodegradable film includes the following technological operations: loading distilled water into a mixer, heating, setting continuous stirring (100–500 rpm) for 10 min, reducing the temperature to 75 °C for 12 min, adding glycerin(-rol) or agar-agar to the solution, continuous stirring in the “stirring” mode (100–500 rpm) for 10 min at a temperature of 75 °C, cooling the solution to a temperature of 60 °C, with the “Eufloirin-Plus” probiotic additive or nisin bacteriocin; homogenization for 5 min at a temperature of 60 °C in the “stirring” mode (100–500 rpm), pouring the cooled solution into molds, temperature control at a temperature of 50 °C and cooling.

Our results demonstrate that the thickness of the developed films ranges from 31.5 to 52.0 μ and depends on the concentration of agar and glycerol. Increase in the concentration of agar ensures the dissolution of a larger number of solid particles in the liquid phase, which leads to the formation of thicker film materials. The strength of the film is inversely proportional to the concentration of glycerol. Increase in the concentration of agar in the forming film solution increases the water-holding capacity of the film. The degree of biodegradation of all the studied films is above average, which can characterize them as bio-soluble. It was established that the organoleptic and microbiological indicators of chilled meat semi-finished products packed in biosoluble films using nisin comply with the requirements of regulatory documentation after 10 days of storage. Consequently, the use of nisin in the formulation of the film allows to increase the shelf life of chilled meat packed in the developed film.

All in all, the proposed technology and its implications might bring in the novel and leading insights into the field of processing and packing food products with the purpose of increasing their shelf life. Our results might have long-going implications for the leading producers and retailers both in Russia and around the world.

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Ranking-Based Municipalities' Leadership: Quality of Life Evaluation Technology and Management



Inna Kulkova, Anastasia Ragozina and Alla Golovina

Abstract The article is devoted to the management of sustainable development of municipalities based on their ranking in terms of the life quality of the population and identifying a leader. The aim of the study was to modernize the methodological approach to assessing the quality of life of the population within the municipality to find ways of improving it. In the article, the authors reveal the features of assessing the quality of life at the municipal level. The use of an insufficient number of indicators at the municipality level to fully characterize it; the lack of considering indicators that take into account the highest level in the hierarchy of needs (political freedom, ecology, the possibility of self-realization), and the underestimation of the development characteristics of various territories and factors affecting the quality of life—are those main features. The necessity of expanding the quality of life indicators for municipalities through the introduction of new ones into the assessment is justified. The methodology for ranking the quality of life at the level of municipalities is described. The proposed methodology makes it possible to assess the quality of life at the level of the municipality taking into account the statistical indicators that are determined in the municipality, to rank the territories by the quality of life of the population. It also helps to conduct comparative inter-municipal analysis and identify reserves for raising the quality of life. The proposed methodology was tested by comparing the three similar municipalities of the Sverdlovsk region (Russia). Based on a comparative analysis of objective and subjective assessments of the quality of life of the population areas, the steps for improving the quality of life of the population are identified. This was conducted for the Serovsk, Severouralsk, and Krasnoturinsk municipalities in the field of labor relations, employment, education, health, culture, sports, housing policy, transport and communications, as well as the income policy which all can be used for developing a strategy for the development of a municipality.

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1 Introduction

The issues of determining the leader among municipalities were raised regarding various aspects: for example, Leyva Lopez et al. (2017) ranked Mexico's states by their marginalization, Sun et al. (2017) compared municipalities by the level of transport system development, and Bernard (2011) or Cieřlik et al. (2016) compared the level of endogenous development potential of small rural municipalities in Central and Eastern European countries.

However, the concept of leadership is much more often associated with measures for the sustainable development of municipalities, the search for competitive advantages (Wereda 2012) or the fight against depopulation of municipalities (Bjorna and Aarsaether 2009). There are studies of municipalities management efficiency (Bronkhorst et al. 2015; or Kalyugina et al. 2015; or Vasylichak and Halachenko 2016).

However, the comparison of territories according to the quality of life indicator is so natural at the level of countries and large regions and is rarely carried out at the level of municipalities (Kaklauskas et al. 2018) due to the lack of statistical information on the real situation.

The indicators used to assess the quality of life of the municipality population are very limited; their number is much less than at the level of the region and the country (Ramke et al. 2017). The assessment of the quality of life at the municipal level, in contrast to the assessment of the quality of life at the regional level, is based only on the analysis of indicators (Romanov 2017) and does not reveal the possibility of their development, a transition to a higher level in the hierarchy of population needs.

The quality of life at the municipal level is assessed in accordance with certain principles of territorial management, without taking into account the transformation and interdependence of the material welfare of various social groups in the municipality.

A time series of indicators of the quality of life at the level of the municipality, in contrast to the indicators of the quality of life at the level of the region and the country, is constructed without taking into account the assessment of public opinion about the quality of life (Čábelková et al. 2015; or Bordea et al. 2017).

The information system underlying the monitoring of quality of life at the municipality level, based on the principles of statistical observation, should be transformed and based on the principles of openness, flexibility, adaptability, and a clear hierarchy, when each level of management should be fixed starting from the municipal level to the regional and state. This provides for the construction of the basic blocks of quality of life monitoring, which should be most fully reflected and reconstructed at the informational level of a conditions and factors set to meet the needs of the population and assess the social well-being of people living in municipalities.

2 Methodology for Assessing the Quality of Life and Ranking of Municipalities

A systematic list of indicators characterizing the quality of life of municipalities population includes the following indicators: (i) the level of working and living conditions, (ii) level of income, level of housing security; (iii) quality of health care—the availability of quality medical care for different population segments, (iv) the level of provision of the population with quality medicines (taking into account the characteristic structure of the incidence of the population), (v) the degree of spreading radical treatment methods, (vi) reduction indices of the main types of diseases, etc.; (vii) indicators of health (sanitary) culture of the population—indicators of the prevalence of habits harmful to life and physical longevity (statistical indices); (viii) the level of prevention of public health—the level of clinical examination of the population, (ix) the level of diagnosis of health, the level of physical culture development of the population, etc.; (x) quality of the population—demographic indicators (average life expectancy for different categories of the population, mortality rate, birth rate, indicators of “aging” or “rejuvenation”, etc.), (xi) indicators of vocational qualification structure, etc.; quality education system. The extended list of indicators characterizing the quality of life of municipalities population includes the following blocks of indicators:

- (1) Indicators of housing provision for the population of the studied municipality: provision with a total area; provision with living area (space); the number of apartments in cities and urban-type settlements and in rural areas; total area of dilapidated housing stock; total area of emergency housing; the total area of capitally repaired residential premises; the proportion of families in need of better housing conditions.
- (2) The level of housing comfort in the municipality in the reporting year. Indicators—the share of housing in cities and working settlements, equipped with water supply, sewage, central heating, baths, gas, hot water; in rural areas—water supply, sewage, central heating, baths, gas, hot water.
- (3) The number of general education schools and childcare facilities in the municipality in the reporting year: the number of educational institutions per 1,000 inhabitants; number of students, thousand people; number of students in the 1st shift, thousand people; number of students in the 2nd shift, thousand people; places in schools, per 1,000 inhabitants; student graduation, people; number of technical schools; number of students, people; student enrollment, people; graduates, people; kindergartens and nurseries per 1,000 inhabitants; places there; number of preschool children per 100 places.
- (4) The provision of health services for the municipality population in the reporting year: doctors, nurses, and the number of beds in hospitals and other medical institutions per 10,000 people in the population.
- (5) The level of satisfaction of the municipality population with the quality of life (based on the survey): provision of housing; the degree of housing improvement; quality of education, provision of educational institutions; the level of medical

care, the provision of medical facilities and medical staff; in general, the quality of life in the city.

- (6) The demographic situation: indicators of natural movement of population, migration, situation on the labor market.

The authors proposed the following new indicators for a more complete assessment of the quality of life of the municipalities' population:

1. The index of improvement of the housing stock is defined as the average of the specific weights of the total area equipped with running water, sewage, heating, gas, hot water.

This indicator is very important for determining the quality of life, since the comfort of housing and the technical availability of public services for consumers ensures the level of improvement of the housing stock.

An analysis of the dynamics of the housing improvement index allows monitoring the maintenance, operation and repairing of a building, as well as the quality and volume of housing and communal services provided, which will facilitate the organization of activities for building and repairing the housing facilities communications.

At present, the housing improvement index as an indicator characterizing the quality of life is not calculated by municipalities and is not included in the passport of municipalities.

2. The amount of pollutant emissions from stationary sources per territory unit was calculated taking into account the population density.

This indicator will assess the risk for public health. The level of "response" of the population to the growing emissions of pollutants, a decrease in the level of environmental friendliness is actually manifested in the growth of diseases of the respiratory organs of the adult population and especially of children in technologically disadvantaged areas of the municipality. Emissions are correlated with the level of population density.

To a greater extent, this is a socially determined indicator, rather than ecological, because in municipalities with a predominance of industry due to the high population concentrated on a relatively small territory, both the habitat and the entire population, including every single person, are subject to powerful aerogenic impact.

3. The index of political freedom enjoyed by the population represents the number of those who voted at the last local elections measured as a ration to the whole population of the city.

The proposed index of the use of political freedoms of the population shows the level of political literacy and activity of the population of the municipality. The lack of political freedom forms an insurmountable barrier to economic growth, social development, human security, and the country.

The essence of the proposed methodology is in the ranking of cities according to the main indicators characterizing the level of socioeconomic development and satisfaction of urban residents with the quality of life. The specific conditions of the municipality are maximally reflected in the indicators for monitoring the quality of life.

The purpose of the methodology is to assess the dynamics and quality of life of the municipalities population in order to identify opportunities for its improvement. The assessment is supposed to be carried out in several stages:

Stage I. Collection of statistical information. Information reflecting the quality of life is a set of values that characterize the activity, the structure of the needs and living conditions of an individual (population group, society), people's satisfaction with life, social relations, and the environment.

Stage II. Calculation (selection) of the indicators of the QL ranking.

This phase involves the selection of a limited number of QL indicators. The selection eliminates the primary indicators, which practically do not carry additional information about QL. The parameters that cover all spheres of human activity and the factors that influence them are used.

The methodology includes the calculation of the following groups of indicators: an indicator of the income level of the municipality population; indicators of the provision of housing for the population of the studied municipality; the level of comfort of housing in the municipality; indicators of municipal education institutions; the provision of medical services for the population of the municipality; culture quality indicators; labor market indicators; indicator of the level of public safety; trade infrastructure development indicators; environmental indicators; and indicators of political activity of the population.

Stage III. Sociological research. The study of the quality of life (content analysis) is carried out according to the program of a sociological survey using the developed questionnaire.

The questionnaire includes the following main questions: duration of residence in the municipality, satisfaction with the level of housing, degree of improvement of housing, quality of education, level of medical care, demographic situation, security.

Stage IV. Ranking of municipalities based on the results of ranking calculations.

Ranking is a procedure of ordering objects performed by a decision maker or expert. On the basis of a comparative analysis of statistical data and sociological research data, conclusions can be made about their sameness or discrepancy. If discrepancies are found, there will be a need for additional research on the causes of the deviations obtained.

Stage V. Analysis of the reasons for the leadership of the municipality. The key indicators and factors that contributed to the achievement of a high ranking of the quality of life of the municipality population are analyzed.

The information based on this methodology helps to identify the main problems and proceed to the development of measures aimed at improving the living standards of the municipalities' population.

Stage VI. Development of a set of measures (programs) to improve the quality of life of other municipalities population. The program of measures to improve the quality of life of the population of the municipality with lower ranking scores includes development of necessary infrastructure and new technologies, achievement of an appropriate level of human capital that is in demand in the labor market.

Table 1 Ranking of districts by main indicators characterizing the quality of life level of districts' residents, place (according to statistics)

Indicator	Serovsk district	Krasnoturinsk district	Severouralsk district
Average salary, thousand rubles	25,589	33,518	29,531
Frequency rate of the average salary to the subsistence minimum, times	2.5	3.2	2.9
Provision, m ² per person:			
Total area	19.5	20.8	25.9
Living area, houseroom	14.9	15.9	22.9
Number of apartments in cities and urban-type settlements and in rural areas, units per 1,000 inhabitants	392	457	783
Total area, m ² per 1,000 inhabitants:			
Dilapidated housing stock	376	88	400
Emergency housing stock	129	82	400
Overhauled living spaces	102	85.6	113
The share of families in need of better housing conditions (%)	3.0	4.0	2.0
Index of improvement of living conditions in cities and large settlements	79.2	90.3	79.68
Number of educational institutions per 1,000 inhabitants	0.2	0.3	0.4
Preschool educational institutions per 1,000 inhabitants	0.4	0.5	0.5

(continued)

Table 1 (continued)

Indicator	Serovsk district	Krasnoturinsk district	Severouralsk district
Number of preschool children per 100 places	104	101	101
Number of cultural facilities per 1,000 inhabitants	0.35	0.56	0.33
The number of registered library users per 1,000 inhabitants	235	245	333
Number of registered crimes per 1,000 inhabitants	6.6	4.1	9
Accounted for 10,000 people:			
Doctors	20.6	25.3	17.7
Nursing staff	92.0	115	93.3
The number of beds in hospitals and other medical institutions per 10,000 people	78	115	71
The emissions of pollutants from stationary sources per unit of territory, <i>t</i> per km per person	397	346	32.5
The index of political freedoms of the population (the share of those who voted at the last local elections in the number of citizens)	67.5	69	49
Trade area per 1,000 inhabitants	1,059	921	710
The level of tension in the labor market	2.8	1.5	17
Unemployment rate	1.2	2.1	7.3
Income level, rank	3	1	2

(continued)

Table 1 (continued)

Indicator	Serovsk district	Krasnoturinsk district	Severouralsk district
Housing security (provision), rank	3	2	1
The degree of improvement of housing, rank	3	1	2
Education quality, rank	3	2	1
Cultural quality, rank	3	1	2
The level of public safety, rank	2	1	3
Quality of medical care, rank	2	1	3
Birth rate, population growth, rank	1	2	3
The environment conditions, rank	3	2	1
The level of political freedom of the population	2	1	3
The level of development of trade infrastructure, rank	1	2	3
Labor market status, rank	2	1	3
Overall rating, rank	3	1	2

Source Own results

3 Testing the Proposed Methodology

The methodology proposed by the authors was tested on the example of the cities of the Northern Administrative District of the Sverdlovsk Region. The analysis allows drawing a conclusion about the coincidence of the data obtained on the basis of a survey of the municipality residents and statistical data on indicators of the quality of life level in municipalities (Table 1). Rankings may be applied to other municipalities.

Thus, according to the ranking results of the analyzed municipalities in terms of the quality of life, the leader is the Krasnoturinsk urban district.

The information obtained using this methodology helps not only to identify the leader, but also to rank the municipalities according to the standard of living, to identify the main problems of other municipalities and to proceed to developing measures aimed at improving the standard of living of the municipalities' population.

4 Management of Improving the Quality of Life in the Studied Municipalities

In order to solve the selected problems of the quality of life (Ragozina 2018) of the cities of the Northern Administrative District of the Sverdlovsk Region, the authors suggest the following ways to improve the standard of living.

From the point of view of the labor relations and employment development, the creation of additional jobs at the city's enterprises, quotas of workplaces, the organization of public works at industrial enterprises, the creation of temporary jobs, retraining of personnel, etc., are necessary.

The development of education requires the following measures: the development of innovative forms of preschool education, primarily in rural areas; widespread use of health-saving education technologies, increasing the level of education in rural schools, the creation of effective mechanisms for the interaction of the vocational education system with organizations—customers of personnel. At the local level it requires the development of the program “Health education technologies”. It also requires the development and implementation of new standards for the upbringing and development of children in preschool institutions. In addition, development of a unified program with planning the “kindergarten—school” transition might be also needed. Expansion of preschool education programs (music and art) is also a must. So is the development of a complex of programs for teaching foreign languages in kindergartens and elementary schools. Furthermore, there might be a need for the development of programs of moral and economic education, civic (public) education, and the in-depth study of certain subjects (including computer science). Last but not least, there is a need for the development of a mechanism for the retraining of teachers.

Improving health care is possible through the development of voluntary medical insurance, which should attract more employers to insure employees. At the local level, efforts should be put into the development of program aimed at the attraction of medical personnel to the city hospitals. Activities: provision of housing for young specialists, “elevating,” ensuring decent wages for the new wage system in public institutions, stabilization of the development of hospital beds indicators, and the number of doctors and nurses serving the population.

The directions of development of the municipal culture sphere are: the development and preservation of historical and cultural heritage, the continuation of the development of national culture, the creation of conditions for the personality comprehensive development, its spiritual and esthetic needs, creative growth, the development of segments combined with the latest methods of processing and using audio-visual information—digital media, cable and satellite TV, Internet cafes, computer games, etc.

For the effective development of transport and communications, it is necessary to introduce safety standards for transport, the impact of transport on the environment and to ensure control over their implementation; ensuring minimum social standards of transport services for all segments of the urban population, increasing the availability of transport services, as well as ensuring compliance of the trans-

port infrastructure with the development of productive forces, which requires the development of competition in the market of transport services for passenger traffic, development of municipal programs to support transport enterprises.

The income policy should be aimed at increasing the main sources of income: wages, pensions, and various additional payments (monetary and natural) to the vulnerable groups of the population. At the regional level, the retirement age population employment is encouraged, those who want to contribute to economic development.

In the area of housing policy, the following should be envisaged: the construction of low-rise municipal housing for low-income people who need to improve their living conditions at the expense of the local budget, providing it as commercial and municipal employment; a differentiated approach to increasing the payment of housing and communal services, enhancing the social protection of the low-income strata of the population by providing targeted subsidies and compensations.

5 Conclusions

Thus, the authors have developed an approach to assessing the quality of life at the municipal level based on building rankings that include economic, social, and demographic aspects of its formation.

In contrast to the existing methods that are well suited to the assessment conditions at the state or region level, the proposed methodology allows assessing the quality of life at the municipality level, taking into account the statistical indicators that are defined in the municipality, ranking the regions by the quality of life of the population. In the process of drawing up the ranking of the quality of life of the municipalities and their population, the parameters that cover all spheres of human activity and the factors that influence them are used. The methodology allows having both intra-municipal assessment and comparative analysis at the inter-municipal level.

The results of intra-municipal and inter-municipal comparative analysis can be used to make effective management decisions, to develop a comprehensive social development plan that will cover all the structural elements of a municipality.

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Leadership Excellence in Management of Sustainable Development of Meat-Processing Enterprises



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Abstract Characteristic features of the functioning of domestic meat-processing enterprises are discussed in this article in the context of socioeconomic and political instability. Prospects for achieving sustainable development have been substantiated in detail by authors. In addition, a sustainable development strategy was developed. In this regard, the structure and mechanism for implementing strategic planning, the ultimate goal of which is the achievement of leadership excellence of the enterprise in all the angles of this concept, is analyzed in this paper. The mechanism for developing a sustainable development strategy for a meat-processing enterprises consists of the following steps: monitoring of the implementation of plans; the development of an effective methodology for the economic evaluation of the enterprise; processing and systematization of the received data with the subsequent formation of the analytical and statistical database; ensuring the prompt collection, processing and transmission of information with the mandatory use of innovative information technologies; the use of effective motivational techniques.

1 Introduction

The problem of developing an effective strategy for managing the sustainable development of food industry enterprises in the realities of modernity is becoming widespread. Being in indissoluble connection with actual social and economic transformations, the solution of this problem requires the creation of necessary living conditions for the population. First of all, it means the need for nutrition (according

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to the established medical standards and the real need to preserve the health of the population), as well as the need for activation of positive demographic processes in the country (Stojanov et al. 2011).

A number of studies (see, e.g., Ponomarenko et al. 2002; Gurov et al. 2011; Grosul and Mamaev 2012; Gavriš and Bychko 2012; Vasutkina 2014; Moskalenko and Yevsieieva 2015; or Markina et al. 2017) state that the current crisis in the economy and social sphere in Ukraine, as well as the risks associated with the implementation of business processes, and the revival of competition in traditional markets give rise to the undeniable fact that it is extremely important for domestic enterprises to be in a state of systemic growth in order to effectively implement the existing potential and develop effective methods for developing optimal approaches to sustainable development (Niño-Amézquita et al. 2017).

It is common knowledge that, depending on the specific conditions of the enterprise's functioning, its competitive status and position in the market, three standard competition strategies can be distinguished (outsider, an enterprise with a strong competitive position, the market leader). We are convinced that the achievement of leadership excellence is impossible without the effective implementation of the sustainable development management strategy.

2 Overview of the Main Factors

In our opinion, further progressive development of the meat-processing industry in Ukraine is impossible without realizing the existing potential and moving to the principles of sustainable development in order to reduce administrative and economic risks. To achieve high economic indicators, it is necessary to effectively organize the production process, the final stage of which will be the production of competitive products and the introduction of innovative energy-efficient technologies (Hošťovecký and Poláčik 2016).

All these factors, being coherently conditioned, should lead to an increase in the profitability of the enterprise and its socioeconomic efficiency (Janda et al. 2013; Markina et al. 2017). The most effective means of achieving stable development of the meat-processing industry in the context of the current business environment is the strategy of sustainable development. The mechanism for ensuring the management of sustainable development should be realized as a result of the implementation of an effective strategy for sustainable growth and development of the meat-processing industry.

In the course of the study, we analyzed the aggregate of financial, economic, production, technical, and managerial indices of the development of an industrial enterprise, on the basis of which we came to the conclusion that nowadays there is an urgent need to introduce innovative methods of strategic planning, as well as another targeted programs (departmental, targeted, and sectoral ones) into the existing management system. The listed approaches, according to Vertakova et al. (2014), *“should be based on the principles of strengthening the potential for sustainable*

development of meat processing enterprises in space and time in order to achieve high, and most importantly, long-term competitive advantages” (Vertakova et al. 2014).

The purpose of the proposed scientific research is to develop a practical mechanism for implementing a strategy for managing the sustainable development of the domestic meat-processing enterprises, which is considered by the authors as one of the primary factors of achieving leadership excellence in the industry. The declared goal determined the following tasks:

- to analyze scientific sources devoted to the main problems of the sustainable development strategy, and to offer their own understanding of the concept of “sustainable development strategy” in the context of obtaining the status of industry leader by an industrial enterprise;
- to consider the main stages of assessing the socioeconomic potential of the meat-processing industry and to develop a step-by-step mechanism for developing a strategy for managing the sustainable development of an industrial enterprise;
- to point out the problems and risks that arise in the process of implementing a strategy for managing sustainable development and to suggest possible ways to minimize their manifestations.

3 Strategic Planning: An Analysis of Sources

Leading meat-processing enterprises that became the object of our research showed that most of them have significant problems related to the mismatch of real production and economic opportunities to the required level of their effective functioning. In this regard, there is a need to enhance existing capacity and to develop new strategic solutions for achieving sustainable development. It should be noted that the above-mentioned strategic planning methodology is precisely that important mechanism that is called upon to ensure monitoring and qualitative selection of management solutions from the arsenal exactly those that are necessary to ensure efficient productive and economic activity. Thus, it is possible to ensure unhindered implementation of innovations and organizational changes that will be used in the process of building a strategy for the sustainable development of industry-leading enterprises.

In general, strategic planning is designed to provide four important functions, which are as follows: (1) to allocate available resources; (2) to adapt to the conditions of the environment; (3) to coordinate resources; (4) ensure the development of organizational strategies. At one time, many economic theorists understood the whole prospect of such a scientific approach. Thus, in particular, Draker (2006), the founder of the empirical school, suggested that the absence of a leading development strategy makes it impossible to determine the concrete actions and decisions needed to achieve the desired results.

An analysis of the scientific literature on this issue has shown that two approaches to understanding the strategy of sustainable development are priorities today. Within

the framework of the first approach, the end result should be achieved after a certain period of time by implementing a stable algorithm of actions. Supporters of the second approach emphasize that the strategy of sustainable development of the enterprise should be considered as the long-term development of the business entity exclusively in interaction with the external environment, that is, as the ratio between the individual part and the whole. In the context of the second approach, sustainable development emerges as a method of selecting an effective scenario for the operation of an industrial enterprise. In the scientific environment, some researchers are guided by integrated, and some of them, by differentiated approaches. Thus, G. Mintzberg (Mintzberg et al. 2006) insists on the existence of ten vectors for the development of modern management and, accordingly, interprets the strategy as a process, way of thinking, purpose, plan, culture, ideology, politics, education, and power. According to the researcher, the strategy of sustainable development depends on environmental conditions, as well as a number of secondary factors (place, situation, time, etc.). In turn, Gavrish and Bychko (2012) consider the strategy as a triad of prospects, adaptation, and means of achieving the goal. However, under the conceptual strategy of sustainable development by Ponomarenko et al. (2002) understand the totality of planning, forecasting, control, accounting, variation, and adaptation processes. A number of authors propose to consider sustainable development as a dynamically progressing process of targeted changes in the directions of the company's activities, under which the main development criteria are specified in the economic, environmental, and social components, which allows, on the basis of their consolidation, to achieve the goals of sustainable development (Markina et al. 2017).

As far as one can see, the interpretation of the concept of “sustainable development strategy” is very diverse, which indicates the fact that the opinions of scientists have not yet reached a common denominator, because they are guided by opposing approaches to understanding the significance of the components of such a multifaceted phenomenon. Summarizing the above material, we can conclude that the strategy of sustainable development is an integrated effective mechanism aimed at achieving some goals (ensuring the competitiveness of the enterprise, optimizing the use of available resources, and developing an effective tool for implementing social and economic measures), the ultimate goal of which is to obtain leadership excellence by an enterprise.

4 Basic Principles for Sustainable Management

In this context, we consider it expedient to say about the existence of a set of basic principles for managing the sustainable development of meat-processing enterprises. These principles include the following ones: planning, efficiency, hierarchy, transparency, randomness, elasticity, certainty, and linearity. With the help of these principles, it is possible to objectively assess the specifics of a certain industry and the market positioning of any enterprise. By the specifics we mean simultaneously several aspects, which include the next ones: initial conditions to improve the process of

selecting a strategy for sustainable development; combination of management and self-management forms; the corporate orientation of personnel to achieve adaptation to external and internal conditions of the enterprise; a set of methods of direct and indirect influence on the object of control; development and approbation of competitive sustainable development strategies; definition of the stage of the life cycle of an industrial enterprise, which precedes the stages of the development, testing, and implementation of the strategy; the selection of approaches necessary to find compromise solutions for minimizing risk changes, that often arise in the process of solving problems of a strategic nature.

However, practice shows that a number of approaches can be used to develop a sustainable development strategy for a leading enterprise. That is why the system of methodological substantiations was formed, which allows not only to objectively evaluate the current strategic position, but also to plan further development for a short or longer period of time. This kind of strategic tool for evaluation and planning can be applied in different enterprises. However, different methods are used to identify the advantages of sustainable development depending on the specific situation. The application of these methods is due to the implementation algorithm in production systems and the specificity of individual business objects. Monitoring of scientific researches of domestic and foreign authors specializing in issues of strategic management made it possible to develop a practical mechanism for implementing a sustainable development strategy for Ukrainian meat-processing industry enterprises.

It becomes obvious that the proposed mechanism can be structured into five main stages: (1) assessment of current socioeconomic potential of the enterprise; (2) determination of the additional strategically important directions of the enterprise's activity; (3) development of the strategy as a whole; (4) the development of a "scenario" according to which a sustainable development strategy should be implemented; (5) approbation of the strategy and evaluation of its real effectiveness.

Thus, at the first stage, internal and external factors are analyzed, from the correct definition of which the ratio of the processes of progressive and regressive development largely depends. In the context of this stage, due to the analysis of the micro- and macrolevels, there are problematic and promising moments of the enterprise's functioning. A multidimensional assessment of the factors of the external and internal environment of the enterprise ensures the identification of economic, social, and environmental aspects of activities. Ultimately, this determines the prospects for development and possible threats. The analytical stage of creating a strategy for managing the sustainable development makes it possible to assess not only the organizational, production, economic, technical, and social indicators of the development of an industrial enterprise, but also the current market environment and the direction of state regulation.

As a result, it is possible to obtain an informationally detailed analytical description of a particular enterprise and to track the direction of its sustainable development, through which the given object can make full use of the available potential and minimize the risks that can arise at different stages of achieving sustainability.

The second stage of the mechanism is also multidimensional one, since it consists of several items: the definition of strategic development objectives; the assessment of the current socioeconomic state of the enterprise and its competitive advantages; the identification of promising strategic directions for sustainable development; the implementation and testing of tools for the realization of the developed strategy. The formation of these industrial activities, which are coherently linked to the goals of sustainable development, is extremely important, because in this way the sustainable development strategy is implemented and its final structuring takes place (Vertakova et al. 2014; or Fomina 2011).

In this context, it should be emphasized that socioeconomic strategy for managing sustainable development must be effective and conceptually weighted one, so it is extremely important to make it specific and clear as a whole. Undoubtedly, this will allow to successfully implement the entire set of goals. In particular, the procedure for formulating goals should be accompanied by the development of the necessary criteria for assessing their achievement. The descriptive part of the strategy should contain a concise list of prognostic indicators, measured by using various scales (quantitative scale, relationship scale, etc.). In this regard, experts note that the tactical goals that the enterprise sets in the context of achieving sustainable development must meet the start-principles (the possibility of measurement, concreteness, attainability, relevance, chronological regulation).

During the third stage, a comparative analysis of options for achieving sustainable development takes place, and on the basis of a set of sub-strategies, a basic strategy for managing the sustainable development of meat-processing enterprises is developed.

The fourth stage stipulates the direct development of a mechanism for managing the implementation of the sustainable development strategy and consists of the following stages:

1. Formation of a system of rules for the adoption of strategically important decisions by top-management representatives of the enterprise.
2. Defining targets for the results expected from the implementation of strategic decisions.
3. Carrying out a number of special measures, but only after formulating a set of tasks and ensuring the financial underpinnings of their implementation.
4. Ensuring an appropriate level of control must necessarily contain the following conceptually important elements:
 - 4.1. A flexible and operative management of goals and problems (in this context, strategic management means that the desired goal is achieved through a set of measures driven by it).
 - 4.2. The coordination of programs and projects means that special attention should be focused on those departments of the enterprise, where the intersection of powers occur and the simultaneous dependence of decisions, goals, and results is recorded.

It should be noted that the development of an effective tool for regulating the implementation of certain programs is not an easy, but rather lengthy task, as it is usually accompanied by a number of obstacles (unstable financing,

- shortage of highly skilled personnel, changes in project implementation terms and regulatory support, etc.). In the opinion of the authors, the correction of the course of implementation of strategically important measures should primarily depend on the declared goals and the current situation, and not on the internal criteria for prioritizing certain managerial decisions;
- 4.3 Implementation of an effective control in the case of destabilization of some economic systems and minimization of business risks by prompt introduction of structural changes and adoption of organizationally expedient decisions;
 - 4.4 Control over compliance with new strategic resolutions (this sub-item means the persuasion of stakeholders to adopt a sustainable development management strategy and to take the initiative at the stage of the projects and programs evaluation.
5. System assessment of the results of the implementation of the tasks and correlation of strategic decisions that were adopted at the previous stages.
 6. Periodic analysis of the features of the external and internal environment in the context of strategic management of a business entity.

After the decision on the long-term implementation of the developed strategy was adopted, the enterprise begins a new stage, that is, its testing and practical implementation.

This time, the implementation of the strategy takes place due to earlier plans, projects, and plans that must be ideologically interrelated and also fully consistent with the content of the sustainable development strategy and the main vectors of the production and economic activities of the enterprises of the meat-processing industry in particular.

In general, the implementation of the strategy for managing the sustainable development of the analyzed enterprises is a process that is progressively progressive, which allows the implementation of strategically important multifunctional programs, as well as to provide the necessary financial and personnel support. We assume that in the implementation of this process, there may be some changes in the financial policy, corporate culture, organizational structure, and enterprise management.

Completion of the final stage is associated with the formation of a rational system for monitoring the implementation of activities, which allows a specific enterprise to establish a systematic evaluation of the effectiveness of the implemented strategy for managing sustainable development. However, such an assessment should contain the following components: an algorithm for carrying out this evaluation mechanism by comparing the studied indicators; the criteria for assessing results; the analysis of the revealed deviations; prompt introduction of changes (or adequate adjustments) into sustainable development management strategies.

Like any other stage of the mechanism under consideration, control (regardless of the results) has feedback, so it can be considered as a prerequisite for correlating the main purpose of an industrial enterprise specializing in meat processing. An equally important factor in assessing performance is the quality indicators of the strategy being implemented (Fomina 2011).

Consequently, as part of the strategy for managing the sustainable development of meat-processing enterprises, all the results of implementing strategic decisions (purely industrial, technical, socioeconomic, and environmental ones) should be objectively evaluated and monitored. In turn, the mechanism for developing and implementing this strategy involves the following stages: monitoring the implementation of strategic and tactical plans; economic evaluation of the performance of an industrial enterprise; generalization and systematization of the data obtained, which directly affect the achievement of leadership excellence; the formation of statistical and analytical information, which indicates reserves and risks, as well as the potential solutions and consequences of their adoption; the process of collecting, processing, and transmitting data with the mandatory use of information technology; application of methods of effective motivation of personnel, taking into account the results of achieving strategic and technical goals.

5 Conclusions

The fulfillment of the tasks of the presented scientific research led to the following conclusions, which can be structured into the following three points:

First, it is the analysis of scientific sources devoted to the topical strategic issues of management of sustainable development of the enterprise showed that nowadays there are two main approaches to understanding the sustainable development strategy essence. Thus, the supporters of the first (integrated) approach view it as the final result of the successful implementation of certain actions. Other authors who adhere to a differentiated approach to understanding the essence of the strategy of sustainable development consider the goal of such a strategy to be the choice of the most effective “scenario” by which an industrial enterprise will operate. In our opinion, the “sustainable development strategy” should be understood as a multifaceted mechanism aimed at achieving a number of set goals, one of which is to gain leadership excellence by the enterprise.

Second, the existence of a whole complex of basic principles for managing sustainable development has led to the emergence of many approaches to assessing the socioeconomic potential of the enterprise. Considering all this, we have developed a practical mechanism for implementing a sustainable development strategy for domestic meat-processing enterprises, which consists of five stages: (1) assessment of current socioeconomic state of the enterprise; (2) identification of potentially important areas of its functioning; (3) formation of a sustainable development strategy; (4) the development of an algorithm for the implementation and management of the strategy; (5) approbation of the strategy and evaluation of its real effectiveness. Consequently, the proposed mechanism of the strategy for managing the sustainable development of meat-processing enterprises will allow industrial enterprises to obtain the status of industry leaders, to move smoothly from one level of market management responsibility to a qualitatively new one, which fully meets modern

social and economic needs and promotes the development considering the current political and the economic situation in the country.

Third, it is extremely difficult to successfully implement all the stages of the proposed mechanism in practice, especially in the conditions of a lack of financing, a shortage of qualified personnel, and an unclear timeframe for the implementation of the strategy. However, in order to minimize risks, it is still necessary at the initial stage to make an objective assessment of the factors of the external and internal environment of an industrial enterprise in order to identify all aspects of its activity. This will contribute to a real understanding of the socioeconomic sustainability of the enterprise, as well as to declaring the motivated goals of sustainable development and, as a result, to the successful implementation of strategically effective measures.

Thus, the high-quality strategic management of the sustainable development of enterprises of the domestic meat-processing industry is capable of providing continuous competitive advantages, satisfying the population's needs for meat products, and at the same time not only guarantee the food security of Ukraine, but also help the country to gain leadership in the world market. The proposed mechanism will allow forming a complex of strategically important decisions aimed at establishing a balance between the potential of the enterprise and its external environment.

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Ecologization of Land Use and Agricultural Leading Enterprises



Mykola Syomych, Iryna Markina and Mykhailo Kobchenko

Abstract Our paper develops an approach for the comprehensive analysis of types of agricultural land use by the leading Ukrainian enterprises of the respective regions which position themselves as industry leaders. Such an approach is necessary in order to evaluate the prospects for ecologization of the practices and business activities of these enterprises on the basis of a cluster analysis based on the territorial principle. The stages of preparation and evaluation of data and interpretation of the obtained results are determined by the authors. Our proposed model allows identifying typical characteristics of land use which determine the efficiency of activities and compliance with current trends in the development of the agricultural industrial complex of Ukraine and its leading enterprises.

1 Introduction

The expediency of realizing the tasks of reorienting the agrarian sector of Ukraine in an ecologically oriented direction is based not only on the need for obtaining environmentally safe products and preserving the environment, but also on the opportunities to achieve a sufficiently high level of efficiency of this type of management, because the prospects of organic production are demonstrated by studies of both domestic and foreign authors (Federation of Organic Movement of Ukraine 2008; or Legeza 2014).

Practical experience of scientists indicates that in case of using organic (Kisil 2000; Kupinets 2013) and environmentally oriented practices in agricultural production (Grabak 2011; Markina and Makhovka 2014), it will be possible to prevent the

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consequences of using chemical means. For its effective development, it is necessary to implement a set of measures that are reflected in various state and regional strategies and development plans (Federation of Organic Movement of Ukraine 2008; Verkhovna Rada of Ukraine 2010). Thus, the formation of a scientifically based economic system on the basis of the principles of environmental friendliness and the objective laws of agriculture with a minimum impact on the environment is an urgent problem that requires careful study.

The initial hypothesis is the assumption that the increase in the level of the ecologization of agricultural production is a result of transformational processes in the production sphere of the economy; therefore, a theoretical justification of the optimal level of environmental friendliness is acquired through the mathematical modeling of the production program and the baseline conditions. Therefore, the main task of the study is related to the typology of land use in different conditions of production and technological load.

2 Literature Review

In order to combine various environmental indicators into the integrated assessment system, the scientific literature suggests a combination of the following methods: expert scoring method or distance method; the all sums method and the method of means; a method of rating; variational method; correlation method; index method and others (see, e.g., Niño-Amézquita et al. 2017). At the same time, the question of the criteria and the number of factors in environmental friendliness remains to be discussed, which should be taken into account in each of the above-mentioned methods (Tarasova 2011; Markina and Makhovka 2014; Moskalenko and Yevsieieva 2015).

In general, most authors propose to introduce the structure of agricultural production, which has a justified minimal anthropogenic impact on the environment, that is, a methodology for assessing the socio-ecological status of the territory (Abrham et al. 2015). The complex index or its certain component, that is, the determinant of the level of environmental friendliness of agricultural production, can be based on various well-known classifications concerning environmentally oriented production, which affects the agroecosystem. The suitability of technology for use (including the provision of an appropriate class) is determined by measuring the deviation of actual indicators from normative ones (Makarenko and Makarenko 2008; Janda et al. 2013). Such indicators include soil fertility, phytosanitary condition, accumulation of harmful substances in the soil, migration of chemicals, soil biological activity, product quality and safety, productivity, and economic efficiency (Antonets et al. 2010).

Another approach to classification is the grading of farming systems according to the degree of their ecologization which was developed by Shikuli (2000). With the development of alternative systems of agriculture, scientists of the National University of Bioresources and Nature Management of Ukraine modified it into another

classification. A significant difference from the classification given below is the identification of biological farming with organic agriculture, that is, that completely excludes the use of mineral fertilizers, while ecological agriculture is oriented toward the appropriate rate of application of such fertilizers. On the contrary, Chaika and Bikbaev (2014) identified the state of organic farming with the ecological one, and the state of biological farming was characterized by a high degree of ecologization. In addition, the state of descending ecologization and the degree of using chemicals in agriculture are combined into industrial (technogenic and chemical) agriculture. The difference in levels of greening is the change in terms from “extensive” to “low.”

Many studies that formed the basis of classifications had a fragmentary nature, that is, they provided a comprehensive assessment of only one resource (the component part) used in the activities of agricultural enterprises. Most of all attention is given to land resources as the main means of agricultural production (Filipishyna et al. 2018).

The purpose of our paper is to identify the typology of agricultural land use to formulate a strategy for the ecologization of the development of agricultural leading enterprises. It is expedient to achieve the set goal by implementing a conditional classification of agricultural enterprises (on the example of the Poltava region) in order to determine the features that can form the basis for the development of stages and parameters for the gradual ecologization of farming systems of agricultural enterprises. In order to achieve the set goals, the following tasks were identified:

- Determination of the impact of agricultural enterprises on the development of the Poltava region;
- Identification of the method and parameters for classification of typical land use approaches
- Determination of generalized characteristics of land use for diversified agricultural and plant-growing activities of the industry-leading enterprises.

3 Problem Setting

Overall, one can see impact of the activities of leading agricultural enterprises on the balanced development of the Poltava region is quite high, since over 60% of gross output was produced by agricultural producers (See Table 1).

In 2016, the volume of production of gross output in agricultural enterprises in comparison with 2000 increased by 2.4 times and, in comparison with 2010, increased by 1.5 times. The share of crop production in the structure of gross agricultural output in 2000 was 60.7%; in 2010, this figure rose to 73.3%, and in 2016—to 77.8%. During 2000–2016, there was a decrease in the proportion from 39.3 to 22.2% in the livestock sector. The indicated statistical data testify to the corresponding established direction of the industry specialization of enterprises in the Poltava region, and this area is concentrated on the cultivation of grain and industrial crops, the production of milk and meat. In the context of agrarian enterprises, the share of these branches differs significantly.

Table 1 Indicators of the activity of agricultural enterprises of the Poltava region (2000–2016)

Indicators	Year										
	2000	2005	2010	2011	2012	2013	2014	2015	2016		
Gross agricultural output (constant prices in 2010), million UAH, including:	7038.7	10,307.6	10,999.2	14,922.5	13,399.8	16,022.8	15,520.4	16,660.7	17,212.6		
– Crop production	4275.7	7380.2	8064.7	11,877.2	9959.1	12,271.1	11,703.0	12,902.2	13,386.7		
– Livestock products	2763.0	2927.4	2934.5	3045.3	3440.7	3751.7	3817.4	3758.5	3825.9		
Structure of gross production (%):	60.7	71.6	73.3	79.6	74.3	76.6	75.4	77.4	77.8		
– Crop production	39.3	28.4	26.7	20.4	25.7	23.4	24.6	22.6	22.2		
Share of agricultural enterprises in total production of gross agricultural output (%):	77.8	63.3	64.1	61.1	59.7	63.6	61.7	64.5	63.2		
– Crop production	84.7	68.2	68.5	65.1	62.9	66.9	64.1	70.8	66.5		
– Livestock products	70.4	56.7	48.2	48.6	50.7	50.6	54.7	59.0	60.1		

Source Markina and Makhovka (2014)

The level of ecologization of farming has a great influence on the structure of commodity output. In the course of this study, we determined that the Poltava region has long-standing, centuries-old traditions of using of various ecologically oriented or alternative agriculture systems (as well as its individual elements). Practical activities in this direction have a strong scientific support for the research and academic environment of the region. The results of scientific researchers of the representatives of Poltava scientific school of Organic (biological or ecological) agriculture are known not only in Ukraine, but also beyond its borders.

A significant number of works, written by famous scientists of the Poltava region (Pisarenko 2008; Pisarenko et al. 2009; Antonets et al. 2010) is devoted to the development of an integrated farming system, which took into account all the best properties of alternative systems and at the same time would permit the application of mineral fertilizers and pesticides within reasonable limits. Such agriculture could correspond, on the one hand, to the requirements of intensive crop management with the use of modern achievements of science and technology, and on the other hand, the priority tasks of protecting the environment and maximizing the re-utilization of all agricultural waste. In general, this system of agriculture is oriented to partial successive replacement of agrotechnical measures with certain biological operations, but with the obligatory use of agrochemical methods (Lysenko 2004).

Taking into account the basic research and practical approaches to the formation and use of certain farming systems containing environmentally oriented elements, we consider it appropriate to analyze the effectiveness of the available approaches to the evaluation of the agricultural land use by the enterprises of the Poltava region for their effectiveness.

Nowadays, there are a significant number of approaches to the quantitative and qualitative assessment of the effectiveness of agricultural land use on the basis of a nature-oriented approach (Kupinets 2013; Man'ko 2009). Most of them unite the three main components of the balanced development—ecological, economic, and social one. Comparison of management models or efficiency of implementation of organic agricultural production in enterprises of various organizational forms requires a lot of time, additional research costs, and a clear definition of indicators, which greatly complicates or sometimes makes almost impossible the process of evaluation of these models.

4 Results and Discussions

Summarizing various systems of indicators on the efficiency of agricultural production, we have proposed a simple scheme that allows us to classify the general trend of land use of the relevant group. The most common signs of classification of environmental and economic indicators for evaluation and analyzing of the level of environmental friendliness of industrial production are: depending on the content—natural, natural-value, cost and local indicators; depending on the level of definition—economic, sectoral, regional, macrolevel indicators, and indicators of the level

of internal production units of the enterprise; depending on the time interval—retrospective, current, actual, operational, forecast planned indicators; depending on the object of evaluation—production as a whole, production of specific types of products that make up the production and economic activities of enterprises; depending on the nature of use—adjusting, indicator, and auxiliary indicators (Melnyk and Kapochki 2005; Tarasova 2008).

Using the well-known methodological principle of Occam's razor, which is based on not multiplying the essence unnecessarily, we can present the agroecological system of land use of the agricultural enterprise as a two-dimensional system for converting natural resources (land) into public goods. Ecological and economic level of industrial production in the region should be analyzed on the basis of a system of indicators that form the main components (or blocks) of the enterprise's environmental activity in conjunction with its production and economic activities.

The determining indicator of modern land use is the dynamics of humus content, and this information is contained in agrochemical passports in the implementation of soil restrictions and significantly affects the study of phenomena that occur in the fertile soil layer. As an indicator reflecting the commitment of agricultural land use, we have determined the profit per 1 ha of land for assessing agricultural activity in general, and for 1 hectare of arable land—for assessing the efficiency of the crop sector.

The proposed system of indicators was used to study the impact of approaches to the land use of agricultural enterprises in the Poltava region on the environmental factor on the final results of the activities of the agricultural enterprise. The Poltava region is characterized by a high level of agricultural development (about 75%) and specificity of accommodation in three natural and agricultural areas, which corresponds to the development of the agricultural sector.

The average annual loss of humus in the Poltava region reaches 1.44 million tons with a total mass of soil in the 0–30 cm layer are about 3600 t/ha. Changes in humus content in the soils of the region over the 30-year period of time were in the range from 0.3 to 27%. The content of humus significantly decreased in Chutove district, Karlivka district, Dykanka and Novi Sanzhary districts—by 1.46; 1.27; 1.05; 1.04%, respectively. Thus, a considerable part of the chernozems passed from a category with a high content of humus to an increased content of humus. Concerning the obtained economic results, according to the results of 2014, the total export of products and processing products of the Poltava region amounted to \$ 536.3 million, which is 25.2% of the total export volume of the region. The volume of exports of agricultural products in 3.7 times exceeded the volume of its imports. In the commodity structure of exports, products of vegetable origin were the priority—approximately 43.4% (or \$ 232.7 million), of which 38.4% were cereals.

In the system of agricultural and ecological conditions, which must be observed in the production program of the agricultural enterprise, the key place is played by the condition of observing the positive balance of humus. The level of humus in soils affects the formation of crop yields, and the smaller were its reserves, the greater would be the efficiency. However, it should be noted that the costs of organic matter

(humus) is not a regulated parameter, that is, its consumption is regulated by plants, depending on the existing agroclimatic conditions.

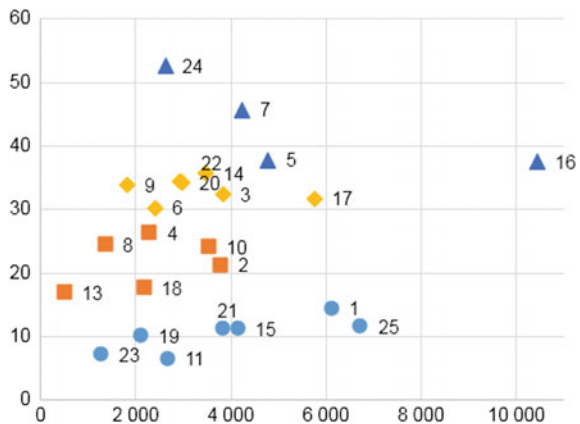
An agricultural enterprise in the process of its functioning can only regulate the overall ratio of the processes of formation and consumption of humus. Therefore, in this case, the costs of humus will be perceived as a process that accompanies a certain character of land use, and the planned profit is an adjustable quantity.

Using statistical data on the costs of humus per hectare and the profit per hectare of agricultural land by administrative-territorial units, one can carry out a classification of the nature of land use of enterprises in the Poltava region.

One can see that the most similar types of land use, that is, the consumption of humus when receiving the planned income, are inherent in the enterprises of Myrhorod and Semenivka districts in the first case, and Reshetylivka district—in the second case. Lokhvytsia district has the greatest discrepancy in the nature of land use, which, to a greater extent, reflects the specialization of agricultural production. As for the general division into groups, in our opinion, it is rational to divide the whole aggregate of territorial units into five groups only. Classification groups or clusters, reflecting the characteristic features of agricultural land use, are presented in Fig. 1.

Figure 1 shows the signatures of the data are the numbers of the districts of the Poltava region: 1—Velyka Bahachka district; 2—Hadiach district; 3—Hlobyne district; 4—Hrebinka district; 5—Dykanka district; 6—Zinkiv district; 7—Karlivka district; 8—Kobeliaky district; 9—Kozelshchyna district; 10—Kotelva district; 11—Kremenchuk district; 12—Lokhvytsia district; 13—Lubny district; 14—Mashivka district; 15—Myrhorod district; 16—Novi Sanzhary district; 17—Orzhytsia district; 18—Pyriatyn district; 19—Poltava district; 20—Reshetylivka district; 21—Semenivka district; 22—Khorol district; 23—Chornukhy district; 24—Chutove district; 25—Shyshaky district. Analyzing the data of the diagram, we have found that the main classification feature is precisely the costs of humus per hectare. There is a clear delineation of the areas with the costs of humus

Fig. 1 Clusters of agricultural land use of enterprises of the Poltava region by territorial units



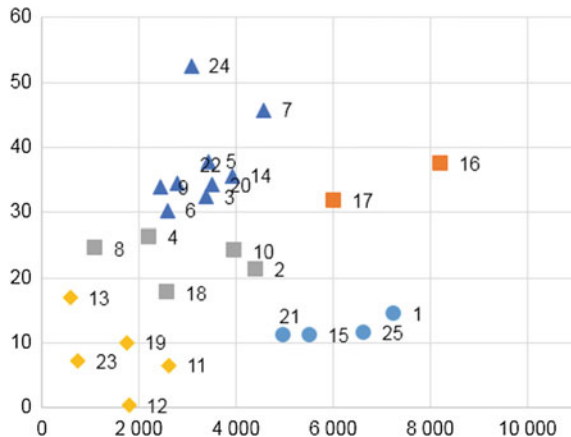
per hectare: Group I—up to 15 t/ha, Group II—from 15 to 30 t/ha; Group III—from 30 to 35 t/ha, and Group IV—with costs over 35 t/ha. Profitableness of activity is not a defining feature that can be clarified by the ability of systems to create conditions for increasing profitability without significantly increasing of the environmental cost of farming. In this regard, we can assume the presence of a buffer, which changes the typical relationship between losses and results, for example, the impact of livestock production with specific development conditions.

In the course of numerous studies, it was revealed that the greatest efficiency from the introduction of land use ecology is observed primarily in the crop sector of the agriculture. Thus, the long-term practical experience of agriculture production of the Poltava region testifies to the possibility of increasing grain yield by 97.0%, early grain crops by 110–116%, sugar beet by 64%, sunflower by 74% (Antonets et al. 2010). Therefore, we made a decision on the need to detail the current state of land use in the crop sector of enterprises in the Poltava region.

According to the general topology of the branches, one can state more fragmented types of land use. Thus, according to the dendrogram of the general type of land use when linkage_distance = 2, there are differences between five clusters, and according to the dendrogram of the land use of the crop sector, there is a difference between seven clusters. This testifies to the existence of various, both natural and market conditions of management. As for the grouping, the important difference is the remoteness of the first group of regions created by Velyka Bahachka district, Shyshaky district, Myrhorod district, Semenivka district, Novi Sanzhary district, and Orzhysia district. This composition largely repeats the first group of preliminary classification. This fact can be explained by the same type of agricultural technology and similar specialization. This classification can be represented in the form of a two-dimensional diagram (See Fig. 2).

A distinctive feature of this classification is related to the two-dimensional aspect of the division of a certain aggregate into groups. The delineation of areas with the costs of humus per hectare: Group I—up to 15 t/ha, Group II—from 15 to 30 t/ha;

Fig. 2 Diagram of clusters of agricultural land use of enterprises of the Poltava region by territorial units



Group III—from 30 to 35 t/ha, and Group IV—with costs of humus over 35 t/ha. With a small deviation, it repeats the groupings of general land use. Additional features of the nature of land use emphasize the division into groups of profit per 1 ha: a group of up to 4500 UAH/ha and the group with a profit of more than 4500 UAH/ha. This fact indicates the existence of transitional regimes from less effective to more efficient land use approaches. The first cluster, which is characterized by the most efficient land use regime, includes enterprises of Velyka Bahachka district, Myrhorod district, Semenivka district, and Shyshaky district. Additionally, the enterprises of the fourth cluster, which have small incomes with comparatively low losses of humus, can be characterized by the transitional regime. The fifth cluster is more characterized by traditional technology of agriculture with high costs of organic matter without the necessary reproduction and with mediocre incomes. The fifth cluster is more characterized by traditional technology of agriculture with high costs of organic matter without the necessary reproduction and with mediocre incomes.

5 Conclusions

Thus, the transition of the agricultural enterprise that becomes leaders in organic farming requires the fulfillment of a number of requirements and the corresponding organization of agricultural production. And for this, it is necessary to develop a scientifically grounded strategy for the development of organic farming and to build an organizational and economic mechanism for its implementation. Such a mechanism should take into account both the economic feasibility of agricultural production and its environmental aspect in particular.

The process of transition to an ecological mode of management involves two important aspects: technological (which establishes the difference between ecological and traditional farming) and ecological and economic one (which estimates the results of management in the process of ecological and traditional farming). For the transition of enterprises with traditional farming methods to the ecological way of management, it is necessary to have an understanding of the types of land use that are environmentally and economically effective in the current economic conditions. The ecological and economic aspect is reflected in the initial parameters of the proposed classification methodology, that is, the result of the process of modeling the agroecosystem, which determines the expediency of increasing the level of ecologization of agricultural production.

It is necessary to assess the environmental transformation of agricultural production comprehensively, as increasing the indicators of environmental efficiency ultimately leads to a decrease in economic indicators. The level of effectiveness of the ecologization of agriculture depends on the selected development scenario, which is based on the choice of agricultural technologies, and should take into account both the environmental feasibility and the economic effect as a whole. So, the transition of the agricultural leading enterprises from the traditional methods to the ecological or the organic ones should be based on the concept of sustainable development. The

level of environmental friendliness of agricultural production in the context of sustainable development of the region under investigation is expedient to be carried out according to official registers, and a more detailed description is based on analysis of farming systems according to certain criteria.

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Leading and Innovative Methods for Wheat Bread Production of Long-Term Storage



Natalia Zavorokhina, Olga Feofilaktova and Dmitriy Karh

Abstract Our paper focuses on the truly leading and innovative methods of developing the wheat bread recipe with an extended its shelf life and therefore economic and business gains. The authors justify the need for the development of this food product for the territorial extent of the Russian Federation with the complexity of logistic operations in difficult climatic conditions, the presence of a large number of remote settlements with a small number of inhabitants. We apply standard methods for determining the amount of amylose, gluten in wheat flour; humidity, acidity of the specific volume of the crumb. The paper sets three main research areas: (i) reducing the rate of bread staling; (ii) suppressing potato disease of bread during the 10 days of storage; (iii) analyzing traditional consumer characteristics for the developed wheat bread. Our results demonstrate that the use of wheat flour with a low content of amylose contributes to the preservation of the freshness of bread. One can see that on the 10th day of storage, the specific crumb volume decreased by 39%. Moreover, we investigate the effect of the betulin and nisin addition on the suppression of potato bread disease. We find that each of the components slightly affects the suppression of the potato disease and that the use of these additives in the complex leads to a synergistic effect of suppressing the development of the potato disease. Thus, the use of wheat flour with a reduced content of amylose and the simultaneous introduction of a complex additive consisting of nisin, betulin, and ascorbic acid in an amount of 0.05% of the flour weight allowed to obtain wheat bread with superior consumer characteristics and with a longer shelf life.

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1 Introduction

The development of wheat bread recipes that preserve the nutritional value and the complex of necessary consumer characteristics for 7–10 days is one of the truly leading and innovative areas of the food industry. The development of this direction is primarily due to the territorial extent of the Russian Federation and the complexity of logistics operations in harsh climatic conditions.

In Russia, bread is a product of particular importance. Russian population traditionally uses bread as a mandatory accompaniment to soups, main dishes, appetizers, and salads at any time of the year. Despite the fact that in the last decade, bread consumption in Russia has decreased from 66 to 49 kg per year per person, bread is a necessary product for every family, a strategic product for ensuring the country's food security. The decrease in bread consumption by the population is primarily associated with an increase in the standard of living and incomes of the population, its demand that is expanding in the bread range (Moskalenko and Yevsieieva 2015; or Hough and Sosa 2015). Today, people need not just cheap bread, but bread with high nutritional value, special organoleptic characteristics (Dziki et al. 2014).

Shelf life of wheat bread in the package is 72 h, after this time, the bread is removed from sale and sent for processing. In the conditions of the city, with a developed bakery production, this scheme works successfully. But what about the population living in remote small settlements? Today, according to the data of the Ministry of Agriculture and AIC, in the Sverdlovsk Region there are 1,158 remote or inaccessible settlements with a population of 1–1,080 people. Such settlements do not have their own bakeries, and the products are delivered there 2–3 times a month, or the trade is carried out using the “auto-shop on wheels” system.

In addition, in the Sverdlovsk region, there are settlements that are annually exposed to flooding during the flood period—these are the large cities of Irbit, Artemovskiy, Beloyarka, and others. In emergency situations, it is not always possible to produce fresh bakery products, so bread with an increased shelf life is a necessary resource for the sustenance of the population in emergency situations. Based on the above, the development of a wheat bread recipe with a shelf life of 7–10 days with the preservation of traditional consumer characteristics seems relevant and timely, which determined the purpose of further research.

2 Modeling Wheat Bread Recipes for a Long-Term Storage

The main task the leading bakers and food processing professionals are facing is to reduce the rate of bread staling (loss of moisture, reduce starch retrogradation), preserve the moisture of the crumb, and suppress the potato disease of bread caused by *Bac. Subtilis* is often after 2–3 days of wheat bread storage (Jamal et al. 2017). If the stale bread and the preservation of the softness of the crumb can be dealt with by using various packages made of modern materials, optimizing technological

processes and selecting raw materials, including making sublimated dry gluten, the suppression of potato disease is more difficult (Vanin and Kolpakova 2007).

It becomes apparent that potato disease affects the crumb of wheat bread, which loses its natural taste and aroma, becomes sticky, when the bread breaks, mucous, stretching threads with a sharp specific smell and unpleasant taste are observed (Matos and Rosell 2015; Foschia et al. 2016).

Nowadays, the professionals at the baking industry have the following methods to suppress potato disease of bread: increase the acidity and lower crumb moisture, increase the sugar and fat content in the recipe of products up to 15–20% by weight of flour, or use inhibitors of potato disease of bread (lysozyme and nisin) (Carocho et al. 2018).

The main characteristics of the dough, and therefore its final product, the bread, are affected by the quality of wheat flour gluten, since gluten proteins are hydrophilic, capable of swelling, which forms the qualitative characteristics of the dough and bread as a whole. Wheat flour contains about 10–12% of gluten proteins, whereas starch ranges from 60 to 70%. At the same time, the starch contained in wheat flour is a mixture of amylose and amylopectin polysaccharides (Román et al. 2018). Amylose is a soluble polysaccharide of a linear structure, while amylopectin is insoluble and has a branched structure. Wheat contains amylose in the range of 20–25%, amylopectin—75 to 80%. Since wheat flour with low amylose content has low dough viscosity and high-water absorption capacity, amylose retrogradation occurs faster than amylopectin, therefore using wheat flour with low amylose content can reduce the rate of staling bread (Barros et al. 2018).

In the process of these studies, the development of bread for long-term storage set three objectives: (1) reduce the rate of starch retrogradation by using wheat flour with a low amylose content; (2) use inhibitor ingredients that can suppress the development of potato disease, while having traditional consumer characteristics.

The real leading method that brings both food quality effects and economic and health effects is the use of birch bark extract. Birch bark extract betulin represents a natural antibiotic secreted by lactic acid bacteria nisin (E234), which inhibit the development of spores of *Bacillus mesenterius* and *Bacillus subtilis*, were used as inhibitor ingredients. Betulin is a birch bark extract which represents white powder and is odorless with a weak astringent taste. It consists of a mixture of natural triterpene compounds, the main of which is triterpene alcohol betulin (Šiman et al. 2016). Adequate consumption standards of betulin are included in the Unified sanitary-epidemiological and hygienic requirements for goods subject to sanitary and epidemiological supervision (approved by the Decision of the Customs Union Commission No. 299 of May 28, 2010) and constitute 40–80 mg per day (Veselova et al. 2014).

Our research results have clearly demonstrated that each of these ingredients individually reduces the rate of development of potato disease, and betulin also provokes the appearance and the development of mold. However, when nisin and betulin are applied and used in a ratio of 2:1, thence in the amount of 0.025 and 0.05% of the mixture to the mass of flour, this complex produced a synergistic effect and well suppressed the development of potato disease, as well as positively influenced the

development of bread porosity. Ascorbic acid as a component that strengthens the gluten of the dough, as well as slightly, but increases its acidity, was also used as part of a complex additive in dough kneading. Thus, the composition of the complex additive for the suppression of potato dough disease included: nisin—40 wt%:, betulin—20 wt%:, ascorbic acid 40 wt% (Anton et al. 2009).

3 A Study of Consumer Characteristics of Wheat Bread During Storage

The amylose content was determined by the standard photolorimetric method using a calibration curve according to GOST ISO 6647-1-2015 “Figure Determination of amylose. Part 1. The control method” on the spectrophotometer SF-46. To do this, skim flour was treated with sodium hydroxide solution, after which iodine solution was added, which forms an amyloid–iodine complex with amylose. Then, the optical density was determined on an SF-46 spectrophotometer at a wavelength of 720 nm. Table 1 presents data on the effect on the total crumb deformation (compressibility) of wheat bread from flour with different amylose content during storage.

Traditionally, it is believed that if the total crumb deformation (compressibility) is reduced by 40% or more, then the bread is stale. The table shows that the low amount of amylose in wheat flour starch significantly reduced the rate of bread staling, even for 10 days of bread storage, the total crumb deformation (compressibility) did not reach 40%.

Next, low amylose flour was used to knead the dough using the straight-line method from infected *Bac. Subtilis* wheat flour. A complex additive was added to the dough to suppress the potato bread disease. To determine the effect of nisin and betulin-based, ascorbic acid-based complex additives on the quality indicators of wheat bread, test laboratory baking of wheat bread (control) and bread made from wheat flour with the addition of a complex additive in the amount of 0.025 and 0.05% to the total weight of flour was performed (Lee et al. 2004).

Table 1 The total deformation of the crumb (compressibility) of wheat bread during storage of flour with different amylose content

Mass fraction of gluten (%)	The amylose content in flour (%)	The total deformation of the crumb (compressibility)				
		1 day	3 days	5 days	7 days	10 days
32.1	26.0	14.23	10.21	3.14	3.10	2.87
32.7	20.0	13.97	10.01	2.98	2.90	2.87
35.3	16.0	13.87	11.12	5.40	5.11	4.76
34.6	10.0	14.3	12.2	9.21	9.01	8.74

Source Own results

After baking and cooling, all samples were packed in paper and plastic bags and placed in a thermostat, where they were incubated at 37 °C. The quality indicators were checked on 1, 3, 5, 10 days of storage. The preservation of the freshness of wheat bread was judged by the change in the overall crumb strain (compressibility). The results of the analysis are presented in Tables 2 and 3 that follow.

Table 2 Microbiological indicators of wheat bread with a complex additive to suppress potato disease of bread during storage

Sample/additive content (%)	Colonies of <i>Bacillus subtilis</i> and <i>Bacillus mesentericus</i> in the studied samples after 5 days of incubation of the sample in a thermostat at a temperature of 37 °C	Mold, CFU/g			
		1 day	3 days	5 days	10 days
Control (without a complex additive)	Solid growth	0	7	24	112
Sample 1 (0.025%)	10	0	0	2	15
Sample 1 (0.05%)	Not found	Not found			

Source Own results

Table 3 Organoleptic and physicochemical characteristics of the sample with the introduction of a complex additive in the amount of 0.05% to the flour weight

Indicators	Quality of bread characteristics
Organoleptic characteristics	
Form	Correct
Crust surface	Smooth
Crust color	Light brown
Baking state	Well-baked, not wet when touched
Color	Light gray
Color homogeneity	Homogenous
Elasticity	Medium
Porosity	Medium uniform thin-walled, well developed
Taste and smell	Peculiar to wheat bread, without extraneous taste and signs of potato disease
Physical and chemical indicators	
Volumetric output cm ³ /g flour	14.2
Humidity (%)	43.5
Acidity, degrees	3.5
Porosity (%)	72.0

Source Own results

Table 2 demonstrates that the dosage of the complex additive in the flour weight amount of 0.05% is the most efficient.

The results showed that the number of colonies of *Bacillus subtilis* and *Bacillus mesentericus* in the samples after 5 days of incubation of the sample in a thermostat at 37 °C was not detected in the sample of wheat bread, including 0.05% of the complex additive to suppress potato bread disease, while in the control sample, obvious signs of a disease-specific odor, sticking to the pulp, partially having stretched filaments, were found. A sample with a complex additive in the amount of 0.05% retained good organoleptic characteristics without signs of potato disease.

4 Conclusions

Overall, leading technologies in food processing and preservation might take little efforts but with an innovative hint and touch. These technologies are then capable of delivering remarkable results that help to provide large masses of people with healthy and proper food, such as bread, that is consumed in Russia (as well as many other countries) with almost every meal.

On the basis of the conducted research, it can be concluded that the use of flour with a reduced amylose content together with the use of a complex additive based on nisin, betulin, ascorbic acid in a flour weigh amount of 0.05% allows to get wheat bread of long-term storage (up to 10 days) with traditional organoleptic characteristics—baked, with developed porosity, thin-walled, of the correct form and light brown color of the peel (crust) during the whole storage time.

These studies and approaches require continuation in order to establish the technological parameters of dough preparation using the sponge and straight method, determining the degree of influence of the complex additive on the lifting force of the dough, and developing the crumb porosity. Thence, we think that this topic should gain more attention and be pursued in further research.

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Practical Aspects of Leadership in Neo-Industrialization: Quality and Storage of Meat Products



Sergey Tikhonov, Michael Lukinih and Roza Timakova

Abstract The application of radiation technologies for the processing of chilled meat raw materials defines a new segment in leading as well as innovative technologies for preserving food resources for the agricultural and industrial complex of the country in the global dimension. These technologies fully fall into the scope of the sixth technological and innovational order that is being established in the modern globalized world. Our paper focuses on the leading methods in enhancing quality and improving storage of meat products. We report novel findings that show that following the results of experimental studies, the shelf life of chilled pork treated with different doses of ionizing radiation (3 and 9 kGy) was extended by 1.5 times. It was achieved while maintaining high organoleptic characteristics, nutritional value, and balance of the amino acid composition of proteins and fatty acid composition of lipids during the whole storage period. It predetermines ionizing radiation as a promising direction for the processing of food resources in the context of neo-industrialization. The safety of radiation-treated pork complies with the requirements of the technical regulations of the TR CU (Technical Regulations of the Customs Union) 021/2011 “On the safety of food products,” TR CU 034/2013 “On the safety of meat and meat products.” Thence, the practical aspects of leadership can also be applied to the sphere of food processing and storage.

1 Introduction

The impending challenges caused by globalization and the unprecedented development of the globalized world’s economy impose many burdens and restrictions on

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national economies. The sixth technological and innovation order that will be based on sustainable development and further fostering and supporting of innovations is slowly but gradually coming forward (Silva and Di Serio 2016; or Cieřlik et al. 2016).

Like any other large economy, Russia's entry into the sixth technological order requires an organic transition from the technologies of the fifth and fourth technologies to increase the competitiveness of the domestic economy. The use of modern industrial storage technologies in the food and processing industries, as the imperative of new industrialization, allows us to ensure high quality characteristics of food raw materials and food throughout the shelf life.

The treatment with ionizing radiation of cooled meat raw materials which represents a leading technique allowing to solve many problems of meat products has been allowed on the territory of the Russian Federation since 2017 is an effective tool for increasing its persistence and will ensure the manufacturability of production processes. Moreover, it constitutes leading techniques in food processing and storage that can be of a special interest for any stakeholders and entrepreneurs operating under the conditions of neo-industrialization and dealing with meat processing and storage novel technologies.

2 Literature Review

The use of radiation technology for processing raw meat with different radiation dose load criteria contributes to the destruction of parasitic protozoa and helminths that are dangerous to human health; due to the reduction in microbial contamination provided by extending the shelf life and reducing technological losses. This becomes crucial in the sectors of agricultural production, as well as product processing and other related technologies (Janda et al. 2013; Moskalenko and Yevsieieva 2015; or Bychkova et al. 2018).

As noted by several authors (Pan et al. 2017), the processing of food products with ionizing radiation, in contrast to traditional methods, preserves the nutritional value during storage and increases their shelf life. The Codex Alimentarius for food products sets the maximum dose of absorbed radiation to 10 kGy. At the same time, studies by foreign and Russian scientists have proved that it is possible to treat with lower doses of radiation, which ensures high microbiological safety of raw meat. Radiation processing of pig carcasses with a dose of 0.3 kGy allows inactivating the trichinae and pork tape larvae. It has long been known that a large number of parasites, and helminths are destroyed with a dose of less than 1 kGy without changing the taste of food (Josephson 1983) Low doses (0.25–0.5 kGy) of ionizing radiation inhibit the growth of mesophilic aerobic, optional aerobic microorganisms, *E. coli* bacteria, mold, and yeast (Waghmare and Annapure 2018). A dose of 3–10 kGy leads to inactivation of non-spore-forming bacteria (e.g., *Salmonella*, *Campylobacter*, or *Listeria*).

But at the same time, the irradiation of food products, in particular, high-fat slaughter carcasses, enhances the oxidation of fat and increases the accumulation of

peroxide compounds. The higher the absorbed dose and temperature of the food product are, the more likely the deterioration of physical as well as chemical parameters can happen due to oxidative processes (Timakova et al. 2016, 2018).

Irradiation of meat with high doses, according to a number of researchers, has little effect on the chemical composition (Kraybill 1958; Read et al. 1961) and contributes to the deterioration of organoleptic characteristics (Štajner et al. 2007; Norhana et al. 2010). The appearance of an irradiated pork's unpleasant smell is due to the splitting of sulfur-containing amino acids, rather than lipid oxidation has been found (Ahn et al. 2000). A number of researchers note that due to the presence of proteins with antioxidant effects, oxidative changes in lipids are insignificant (Diehl 1982).

But, despite studies of the irradiation effect on food products, many unresolved issues remain in this area. In particular, the mechanism for changing food nutrients under the influence of various radiation doses has not been found. In this regard, the purpose of the work is to study the quality indicators of pork, treated with various doses of ionizing radiation, during storage.

3 Research Methodology

For experimental studies, three groups of pork samples cooled at a temperature of from 0 °C to +2 °C were formed. Meat pulp was sampled according to GOST R 51447-99 (ISO 3100-1-91) "Meat and meat products and sampling methods." The first group was the control one (non-irradiated), the second group—experimental (irradiated with a dose of 3 kGy), the third group—experimental (irradiated with a dose of 9 kGy). The choice of radiation doses was determined by analyzing scientific and technical information to ensure the efficiency of the treatment. Radiation was performed on a linear electron accelerator UELS-10-10S2 with energy up to 10 meV. Indicators of freshness of chilled pork were estimated at 0, 10, 20, 30, and 39 days according to the requirements of MUK 4.2.1847-04 (Methodological guidelines) "Sanitary-epidemiological assessment of the validity of shelf life and storage conditions of food." During the experiment, in accordance with the standard documentation, the antioxidant activity of meat was determined by a potentiometric method, which indirectly indicates the prevention of oxidation processes (Brainina et al. 2007). Studies were performed in five replications. Confidence level $p \leq 0.05$ was in the study of acid and peroxide numbers, and $p \leq 0.001$ was in the study of the chemical composition.

4 Results of Experimental Studies

After 10 days of storage, samples of meat from the control group can be classified as fresh in terms of organoleptic characteristics: meat is moistened in places, light pink in color; the muscles in the incision are slightly wet and do not leave a wet

spot on the filter paper; the consistency is elastic, dense; the fossa, which is formed by pressing with a finger, is quickly leveled; the smell is peculiar to fresh pork; lard color—white, consistency peculiar to pork fat—soft, elastic; tendons—elastic, dense; the surface of the vertebrae is smooth and shiny; broth—fragrant, transparent. After 20 days of storage, the meat of the control group refers to meat of dubious freshness: meat of red and pink color; the muscles in the incision are wet, leave a stain on the filter paper, slightly sticky; the fossa when pressing with a finger evens out slowly; after 30 and 39 days of storage, the meat of the control group is stale: covered with mucus, gray in color with green areas; there are signs of the presence of bacterial microflora; muscles in the incision swollen, loosely adhering to each other, sticky; flabby consistency; fat has a grayish-matte shade, slimy consistency; connective tissue loose with signs of destruction; broth flavor unpleasant, sharp; the broth is cloudy, with a large number of flakes as a result of proteins aggregation.

Meat irradiated with doses of 3 kGy (second experimental group) and 9 kGy (third experimental group), after 10, 20, 30, and 39 days of storage, is organoleptic for fresh: meat is moistened in places, light pink in color; the muscles in the incision are slightly wet and do not leave a wet spot on the filter paper; the consistency is elastic, dense; the fossa, after pressing with a finger, is quickly leveled; smell—specific, peculiar to fresh meat, without the smell of salting; lard color—white, consistency peculiar to pork fat—soft, elastic; tendons—elastic, dense; the surface of the vertebrae is smooth and shiny; broth—fragrant, transparent, with a pronounced smell of benign meat. It should be noted that after 39 days, a change in color to dark pink is observed in the test samples, the consistency is less elastic, the fossa flattens more slowly after pressure with a finger, a loop of light oxidation appears, and the fat texture is soft. As a result of treatment with ionizing radiation in different doses, it was established that prototypes of pork in both groups after 10, 20, 30, and 39 days belong to fresh meat, while control samples after 10 days of storage belonged to fresh meat, after 20 days—to meat of doubtful freshness, after 30 and 39 days—to stale.

Coliform bacteria, pathogenic microorganisms (*Salmonella* and *Listeria*), and bacteria of the genus *Proteus* were not detected in the samples of chilled pork. The amount of mesophilic aerobic and optionally anaerobic microorganisms in the second and third experimental groups does not exceed the permissible level for TR CU 021/2011 “On food safety,” TR CU 034/2013 “On the safety of meat and meat products” over the entire storage period. Microbiological indicators have the lowest rates when irradiated with a dose of 9 kGy, which is consistent with Štajner et al. (2007). In the control samples of chilled pork at 30 and 39 days, the amount of mesophilic aerobic and optionally anaerobic microorganisms is 3.4×10^4 and 7.8×10^6 CFU/g (colony forming units), respectively, which exceeds the acceptable level.

Acid and peroxide numbers are indicators of the rate of oxidative and hydrolytic processes of lipids. Indicators of acid number and peroxide number in the control samples of chilled pork after storage for 20 days and in the test samples after storage for 39 days corresponded to the indicators of good-quality meat. After 30 days of storage, the acid and peroxide values in the control samples of the fat samples studied were 5.23 mg KOH/g of fat (mass of potassium hydroxide) and 10.93 mmol active oxygen/kg of fat, which is higher than the acceptable level for the fresh product.

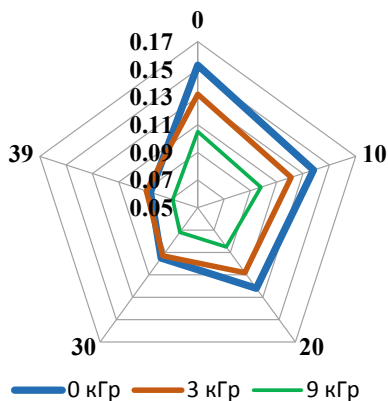
The experimental fat samples of the second and third experimental groups had an acid number of 1.71 and 1.94 mg KOH/g of fat. Similar results were obtained in studies of the peroxide number of fat of the second and third experimental groups after 39 days of storage—the acid number and the peroxide number of fat met the acceptable requirements for a fresh product. But at the same time, increasing the dose of radiation contributes to the enhancement of oxidative processes in the product, as the acid and peroxide values of fat in the third experimental group after 39 days of storage are higher by 17 and 19%, respectively.

The nutritional and biological value of meat is largely determined by the content of proteins and fats. It was established experimentally that during storage, there is a tendency for the water content in the samples of the experimental groups to decrease by 0.2% to 51.3% in the second experimental group and to 51.2% in the third experimental group after 39 days of storage compared to the beginning of an experiment. In the first control group, the amount of water is reduced by 0.4 to 51.2%. During storage, there is a decrease in protein content of meat. So, the most intensive decrease was noted in samples of the first control group by 2.5–13.1% after 39 days of storage, in samples of experimental groups, reducing the percentage of protein was insignificant—by 0.1 to 15.6% in the second group, and 0.2 to 15.7% in the third experimental group. After treatment with ionizing radiation, higher levels of protein are observed in the third experimental group compared to samples of the first control group due to an increase in the proportion of non-amino acid residue, in particular glycoproteins (as a result of binding aspartic acid, serine, and threonine to the carbohydrate component) and lipoproteins differing by hydrophilic and hydrophobic nature, and at the same time by lower content of water and fat, respectively, by 0.2 and 0.1%.

Amino acid protein score in control samples of up to 20 days of storage and in experimental samples of the second and third groups throughout the storage period of up to 39 days has a value of more than 100%, which ensures full coverage of the daily human need for amino acids. The highest amino acid score is found on tryptophan and lysine. The protein quality index slightly decreased during storage: in the samples of the first control group—from 5.781 to 5.481, in the second experimental group—from 5.807 to 5.757, in the third experimental group—from 5.821 to 5.765.

The study of fat content shows that the most intensive processes of destruction of ester bonds in triglycerides of adipose tissue with the accumulation of free fatty acids (Thayer et al. 1987) under the influence of lipolytic enzymes of microorganisms and lipase enzymes occurs in samples of the first control group—by 1.4 to 29.7%, while in the second experimental group—by 0.1 to 32.0% and in the third experimental group—by 0.3 to 31.7%. The biological value of fats is determined by the balance of fatty acid composition, and the concept of “ideal lipid” is investigated by analogy with the “ideal protein.” The study of the fatty acid composition allowed establishing the fact that the ratio of fatty acids is saturated: monounsaturated: polyunsaturated in the adipose tissue of pork is close to the optimum for the entire storage period (30:60:10). Pork fat is valuable primarily in the content of polyunsaturated fatty acids (PUFA). During storage, it was found that the content of PUFA in the samples of the first control group decreased by 2.45%, in the samples of the second and third

Fig. 1 Dynamics of changes in the concentration of antioxidants in control (non-irradiated) samples of pork and in test samples of pork during storage (after 10, 20, 30, and 39 days). *Source* Own results



experimental groups by 1.05 and 0.81%, respectively. Therefore, irradiation with a dose of 3 kGy of chilled pork samples of the experienced second and third groups ensures the safety of polyunsaturated fatty acids throughout the entire storage period.

In biological systems, there is a dynamic balance between the oxidative system (OS), represented by a set of organic hydroperoxides, hydrogen peroxide, nitrogen oxide, hydroxyl radicals, etc., and the antioxidant system (AOS), consisting of non-enzymatic and enzymatic subsystems.

As a result of the study, a high degree of correlation was established between the dose of irradiation of samples of chilled pork and antioxidant activity (AOA) over the entire storage period—0.99. In the control (non-irradiated) samples of pork, the AOA decreased from 0.153 ± 0.003 mM-eq to 0.086 ± 0.003 mM-eq, or 44.8% after 39 days of storage, in samples of the second experimental group—from 0.132 ± 0.005 mM-eq to 0.089 ± 0.003 mM-eq, or 32.6%, and in samples of the third experimental group—from 0.105 ± 0.001 mM-eq to 0.069 ± 0.001 mM-eq, or 34.3%, respectively (Fig. 1).

Thence, it becomes quite obvious that increasing the radiation dose leads to a decrease in the antioxidant activity of meat, that is consistent with the results of studies of acid and peroxide numbers during storage. The reduction in the AOA in the irradiated samples of chilled pork occurs due to antioxidants and can be considered as the most probable process (mainly due to sulfur-containing and aromatic amino acids of the protein and the peroxidation of PUFA). The antioxidants are spent on the reaction of “capturing” and neutralizing free radicals interrupting the chain reactions of complex formation radical systems.

5 Conclusions

As a result of organoleptic, physicochemical and microbiological studies reported in this paper based on our novel experimental study, it was established that the treatment of pork with different doses of ionizing radiation (3 and 9 kGy) increases its shelf life by 1.5 times (taking into account the safety factor) in comparison with unirradiated samples in accordance with the requirements of TR CU 021/2011 “On the safety of food products,” TR CU 034/2013 “On the safety of meat and meat products.”

During the entire storage period, meat samples irradiated with doses of 3 and 9 kGy are distinguished by the preservation of nutritional value and the balance of amino acid and fatty acid composition. Despite a slight decrease in the content of free amino acids and free fatty acids during storage, the protein quality index and amino acid score, which determines the balance of the protein amino acid composition, meets the daily needs of an adult in essential amino acids; the ratio of fatty acids in terms of the “ideal lipid” is distinguished by high rates and is close to the optimum over the entire storage period (30:60:10). In the process of storing meat raw materials, amino acids and PUFA are involved in the breaking of the chains of the free-radical process, which leads to a decrease in the AOA with an increase in the radiation dose to 9 kGy. Increasing the dose of meat leads to increased lipid oxidation in the product. These results might contribute to the leading trend of meat processing using modern methods and technologies.

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Part VI
Leadership, Sustainability, and Global
Security

Leadership, Economic Growth, and the New Industrialization



Yevgeny Animitsa, Natalia Novikova and Yury Klyuev

Abstract At the end of the 20th and the beginning of the 21st centuries, the leading scientific paradigm of new industrialization has replaced the paradigm of the post-industrial society. This happened due to the fact that economic reality has proved to be a failure for scientists who tried to explain the decline of industry in the national economy by new trends. An important step in the study of the processes of new industrialization in the economic space of the macro-region is the choice of the correct scientific research methodology. The goal of launching the processes of new industrialization in the whole country and in the territory of its regions is to achieve economic growth and advanced development. Therefore, the scientific methodology for the economic growth studies which is of particular interest for our study is what we call “the new industrialization.” The methodology of economic growth and advanced development in the framework of the study of industrialization (new industrialization) allows us to take into account a vivid manifestation of the new world trend of slowing economic growth in most developed countries and their regions. It is what they call “a new normal reality” (or “economic growth without growth”) because previously used growth recovery drivers disappeared. Our paper shows that there is a close relationship between the processes of industrialization and the achievement of a new quality of economic growth and advanced development of the country and its regions. Moreover, we show that there is a high degree of interconnection between the degree of leadership, as well as the level of industry technological development and the economic growth of the country and its regions.

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1 Introduction

The classic theory and scientific methodology of economic growth began their formation as independent areas of economic science in the 1930s and 1940s. The subject was identified as the definition of conditions for sustainable, balanced growth, and advanced development (Rostow 1959). The emergence of a new scientific approach (the theory of economic growth) was largely due to the needs of the economic practice of domestic and foreign scientists. In particular, the significance of research by Soviet scientists was later recognized in the world scientific community (see, e.g., Spulber 1967).

A new stage in the development of the economic growth theory was noted in the 1980s and 1990s. It was called the practical necessity of theoretical understanding of the phenomenon of high rates of national income growth in the leading Western countries in the 1950s and 1970s (Bulman et al. 2017). During the second stage, the theory and methodology of the study of economic growth were associated with the study of the imperfect competition, changes in the rate of profit, and the impact of scientific and technological progress as an endogenous factor in economic growth and advanced development (Watkins 1963).

Economic theory within the works of many researchers interpret the content of leadership and economic growth primarily from the standpoint of the macroeconomic process: economic growth (growth) is a process of long-term evolution, manifested in the growth of generalizing macroeconomics indicators and in the transformation of the society structures; it is a criterion of economic development, expressed in the growth of gross domestic product, gross national product, or national income in absolute value or per capita (see, e.g., Strielkowski and Čábelková 2015; Brodzicki 2016; or Belgrave and Seide 2018).

Based on macroeconomic interpretations of economic growth, our paper formulates the concept of economic growth in the context of the regional economy. We demonstrate that this is a process of long-term evolution, manifested in an increase in generalizing indicators of the regional economy and changes in its structure.

2 Characteristics of the Economic Growth Theory

It happened so that in world's theory of economic thought the priority in creating a theory of economic growth was assigned to Keynes, Harrod, and Domar. The Keynesian model of the theory of economic growth reflects the state of equilibrium growth of the entire economy of the country (Romer 2015). The central problem of macroeconomics for Keynesian theory is the factors that determine the level and dynamics of national income, its distribution.

An important element in the Keynesian theory of economic growth is the principle of multiplication. Investment multiplier (multiplier of economic growth) shows the impact of investment growth (public and private) on the increase in output and

increase in income. We have adopted the Keynesian principles in our study of the new industrialization. According to it, the wealthier the country is, the greater part of the increased national income is saved, and the smaller part is consumed. Therefore, in industrialized countries, the multiplier size is small and steady economic growth rates are observed. In underdeveloped countries, almost all increased national income will be consumed, causing a strong multiplication effect, i.e., the impact of changes in investment on the economy will be more significant (Białowas 2018).

Neo-Keynesian models of economic growth emerged on the theoretical and methodological basis of the Keynesian concept. The most famous of the models is the model of Harrod and Domar (see Domar 1944). According to the statements of these scientists, the main stimulators of economic growth are *investments* that put a multiplier into action, and growth takes the steady development. Development (growth) is considered as a quantitative phenomenon, as deep structural changes, covering the main sectors of the country's economy. Separately, we emphasize that Harrod–Domar framework is closely associated the development (growth) with structural changes. Meanwhile, the scientists argue the inability of the market economy to self-regulation.

The critics of Harrod–Domar neo-Keynesian model was do done by Solow who noted its main shortcomings—namely ignoring the ratio of capital goods and labor, the lack of influence of scientific and technological progress on economic growth (Solow 1956). In the economic model proposed by Solow (1956), constant technical progress and efficient use of resources are the determining factors of economic growth.

The “theory of stages of economic growth” by W. Rostow had an impact on the theory development. It proved the existence of five stages of economic growth: “traditional” society; the period of prerequisites creation for “take-off”; “takeoff”; movement to maturity; the era of high mass consumption (Rostow 1960).

For our study, the most interesting are the criteria for distinguishing stages, which are mainly of a technical and economic nature: the level of development of technology; sectoral structure of the economy; the share of production savings in national income; consumption structure, etc.

The theory of the stages of economic growth of W. Rostow had a significant influence on the creation of the theory of the “big push” of Rosenstein-Rodan (1943), whose ideas were continued by such scholars as Leibenstein (1957), Nurkse (1961), Hirshman (1961), Singer (1964), or Temple and Voth (1998). Their theories and works focused on the economic policy of the state, which aimed at increasing national income. The development (growth) of the supporters of the “big push” is understood as deep structural changes covering the main sectors of the national economy.

3 New Leading Theoretical Developments

During the 1960s and 1970s, a group of American researchers Chenery and Bruno (1962) and Chenery and Straut (1966) developed a “model of economic growth with

two deficits” which represents a system of medium and long-term regressive models in which growth rate is determined depending on the deficit of internal (savings deficit) or external (trade deficit) resources. The development (growth) is interpreted by scientists from the standpoint of the current Russian situation—the displacement of external sources of financing by internal ones, the replacement of imported goods by domestic ones, the creation of prerequisites for overcoming external financial dependence.

The theory of economic growth, which was based on the “theory of the dualistic economy,” was proposed by representatives of the neoclassical direction of Lewis (1954), Fei and Ranis (1961), as well as others. The dualism of a country’s economy is defined by two components: (i) traditional agricultural and (ii) modern industrial sectors. Development (growth) in the theory of the dualistic economy is understood as the overcoming of dualism between the traditional economy and the modern, between pre-industrial and industrial, between natural (barter) and market economies. Consequently, a developed industrial sector is considered as a source of economic development and economic growth in the country. This conclusion is very valuable from the standpoint of studying the processes of industrialization and new industrialization in the economic space of the macro-region.

Modern scientists working within the framework of scientific theories of economic growth pay special attention to the search for endogenous mechanisms of economic dynamics. One of the first models of endogenous growth was the model of Romer (1990), proving that investing in innovations can fluctuate depending on the ratio of R&D costs and profits from them. At the same time, an economy with a higher savings rate will grow faster, since it allocates more funds to R&D.

The positive impact of international trade on economic growth is associated with structural transformations. In particular, if a country makes the transition from low-tech to high-tech production, such as in the model of “flying geese” Akamatsu (1961). The search for endogenous mechanisms of economic dynamics is carried out by scientists working in the framework of the scientific direction “New Economic Geography” (“New Theories of Regional Economic Growth”), actively developed by Fujita and Krugman (2004). The influence of the factor of territorial uneven distribution of economic activity on economic development is investigated.

Analysis of the role of scientific-technological progress in economic growth has caused the need to distinguish the effects of small technological improvements and the introduction of “widespread technologies,” for example, a steam engine, electricity, computers (Bresnahan and Trajtenberg 1995). Technologies of wide application change the entire global growth trajectory, which becomes uneven: low rates at the beginning of development, then acceleration of growth and again slowing down of rates as the potential of the technology is exhausted.

The theory of economic growth is becoming a part of a more comprehensive theory of economic development (technical and economic development), and the question of the rate of the national income growth is becoming part of a more general question about the quality and degree of innovation in the national economy development. Within the framework of endogenous theories of economic growth, studies that consider structural changes as the most important factor of economic

dynamics can be singled out. The study of the role of structural fluctuations as a cause of economic oscillations is called the most relevant direction in the formation of the modern theory of economic growth.

The pioneering work in this direction is the study of Böhm and Punzo (2003). They presented a model of cross-mode dynamics, when the change in the mode of the economy functioning is prompted by structural changes. Thus, they form an endogenous model of economic growth, where the fluctuations of economic variables are based on profound changes found at the level of structural shifts in the economy.

The authors apply a systematic approach in which the economic dynamics are described not linearly, but with multiple attractors industries. Switching between attractor regimes in the model creates a picture of the multiphase dynamics of the economic system (Böhm and Punzo 2003). Technologies are recognized as a priority factor in economic development. Labor productivity, investments in capital accumulation are considered as flows, in which the similarity of (Böhm and Punzo 2003) approach with the category of flow and cumulative processes of Kondrat'ev is manifested. Thence, considering the economy as a complex dynamic system, (Böhm and Punzo 2003) argue that it is structural changes that give rise to economic oscillations that they study in flow indicators of GDP fluctuations.

Moreover, on the basis of the classification of sectors, Böhm and Punzo (2003) analyze the time series of France, Germany, and Italy, using the industry structure of the USA and Japan as a standard, while considering innovations as a provoking factor of economic oscillations. In their conclusions, the authors argue that structural changes are a “pervasive phenomenon,” while they are subject to cyclical fluctuations that vary from country to country. This means the importance of structural policies to ensure the competitiveness of each individual country. An important conclusion of scientists in the study of new industrialization is the following: economic growth is a function of its sectoral structure; there is no uniform growth rate for all economies; the fluctuations are unique for each country with its own production function.

4 Conclusions and Implications

Thus, the application of the methodology of economic growth and advanced development for studying the processes of new industrialization is justified by the following key arguments.

First of all, there is a vivid manifestation of the new global trend of slowing down the economic dynamics of developed countries and their constituent regions, called the “new normal reality” (or “economic growth without growth”). In addition, there is a “new normal reality” logically pushes an appeal to the methodology of economic growth in the research framework of the new industrialization processes in the macro-regions’ economic space.

The basic statements of the “New Normal” leading concept, formulated by its authors, are as follows: a new (post-crisis) state of the world economy which for a long time has been characterized primarily by low economic growth, high

unemployment, a constant threat of poverty for certain segments of the population. The reason is that the old incentives of economic dynamics have exhausted themselves. The scientific ideologue of the “New Normal” concept, El-Erian (2016) argues that the growth of income and welfare is not realizable on the scale of the expectations of pre-crisis time. The previously used drivers of recovery growth are a thing of the past: attracting reserves of excess labor, under-utilized production capacities, high prices for raw materials, the use of traditional instruments, and mechanisms of public policy—monetary, fiscal, and demand stimulation.

New industrialization of the country, including its constituent regions, covering the whole complex of interrelated production, social, institutional, and other aspects of the theory and practice of management, seems to be the most adequate and promising direction for the exit of the national and regional economy from the New Normal maze, the transition to a new growth path.

The consolidation of the strategic directions for the development of production based on the latest technologies of the fifth and sixth technological structures, capable of changing the established configuration of the economic space, is based on fixing the fundamentality of the new stage of the macro-regions and their industrial development. The close relationship between the processes of industrialization and the achievement of a new quality of economic growth advanced development of the country and its regions.

In particular, the main goal of launching industrialization processes in the 19th century was the achievement of economic growth and advanced development on the basis of new, progressive (for that time) technologies. The target installation of the new industrialization of the twenty-first century was similar. This target was formulated as the achievement of the new quality of economic growth and advanced development of the country and its regions based on the creation of the industrial production with advanced technologies of the fifth and sixth technological orders (the third and fourth industrial revolutions).

Scientific and technical progress and efficient use of resources are the main factors of economic growth and advanced development. It is the scientific and technical progress, the use of progressive technologies that are at the heart of the deployment of new industrialization processes. The search for ways of a new quality of economic growth and advanced development is the main task of the theory and methodology of economic growth. It is marked by the close relationship between the level of technological development of industry and the economic growth of the country and its regions.

The theory and methodology of economic growth proves that it is in the industrially developed countries of the world that steady rates of economic dynamics are observed. At the same time, the technologically developed industrial sector is considered as the main source of economic growth and economic development of the country and its regions. The development of high-tech industry in the country and its regions is the main condition for maintaining sustainable economic growth.

All in all, we would conclude by saying that economic growth as well as the advanced development of the country and its regions is achieved by displacing external sources of domestic financing, replacing imported goods with domestic ones,

creating prerequisites for overcoming external financial dependence. All of the above refers to the key tasks of the new industrialization of Russia and its constituent regions (macro-regions) but can also be applied to any other post-transition countries.

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Lobbying for Public Interests as a Democratic Social Leadership Factor for Reforming Legislation



Inna Gryshova, Tetiana Tielkiniena and Aida Guliyeva

Abstract The state, a priori, is not capable to voluntarily reform itself. In this case, there is a need for a civil society that will actively use the legal instrument of lobbying. The world experience is a good evidence for this. Currently, the further development of civil society and state–legal modernization should be carried out in parallel in Ukraine. Lobbying of public interests promotes a significant correction of the legal culture and the level of social activity of the population. We mean three tendencies: first, the gradual deprivation of illusion of the paternalistic understanding of the state and the formation of its perception as a “location of competitors”—concentration of interests of various groups, formed in society, which define the content of the state policy. Second, there is the approach of the perspective of overcoming legal nihilism and spreading the persuasion of the power of law in society. Third, practices of lobbying public interests promote the generation of social leaders of a democratic style and correlate with the increase in social activity of citizens. Our contribution to this field is to implement an approach of studying the concept of lobbying public interests as a form of social leadership of a democratic style by experts in the field of law. The emphasis has been paid on the role of lobbying public interests in reforming legislation within the historical and contemporary aspects. We use the world and national dimensions of this issue, in particular, employing the example of Ukraine. Review of lobbying public interests in the context of the theory of leadership would greatly contribute to further deepening and expanding relevant research discourse. Currently, the preference is given to the study of professional lobbying, which somewhat reduces the understanding of the relations of the legal impact of citizens on state agencies in order to consolidate own interests or the interests of third parties in

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the enacted laws. Our results can be the answer to certain questions that arise during discussions about the feasibility to legalize lobbying in Ukraine.

1 Introduction

Over the past three decades, Ukraine is a transitory state, when a gradual transition from an authoritarian state–political regime to a democratic one has taken place. At this stage of development, the national legal system requires significant reformation with orientation, in particular, on international standards in force. Any state, a priori, is not capable to voluntarily reform itself. In this case, there is a need for a civil society that will actively use all political and legal means of influencing the state authorities, for example, lobbying. The world experience is a good evidence for this (Clemens 1997). Currently, the further development of civil society and state–legal modernization are being implemented together in Ukraine (Mostenska 2015; Filipishyna et al. 2018).

Taking into account mentioned above, it is possible to conclude that it is extremely relevant both for Ukrainian society as a whole and for each citizen separately, the recognition of the state as a “location of competitors.” Furthermore, not only the legal culture of Ukrainians is needed to be changed. It is no coincidence that it were the modern German scholars who refused the idea of the state being a “general good” (Birney 2018). Instead, it is interpreted as the concentration of interests of various groups formed in society, which define the content of state policy. A logical continuation of this thesis was obtained in the statement given by Birney about the importance of lobbying for the functioning of the state. For today, the metaphorical terms of “silent power” and “the fifth power” introduced by them are popular in the literature on lobbying.

2 The Role of Citizens in the Process of Reforms

In our view, the wider involvement of citizens in the process of state–legal reform can enhance its effectiveness. For this purpose, it is necessary to improve the existing legal mechanisms and introduce new ones in the relevant sphere of public relations, for example, in the legislative process. One of such changes could be the introduction of legal regulation of the impact on the bodies of state power and their officials in order to consolidate certain interests in the normative legal acts that are adopted. It is important to give non-governmental organizations (NGOs) the status of subjects of the identified legal influence. In this paper, NGO is defined as public associations, firstly, the founders and members (participants) of which are individuals; secondly, which can carry out activities with the status of a legal entity or without such status; and thirdly, which can carry out activities with the status of a legal entity and are a non-profit company, which primary purpose is not profit (Law of Ukraine 2012b). Such

innovations would promote greater transparency in the procedures for the preparation and adoption of laws and enhancing the role of citizens in reforming the legislation. It is well known that the maximum transparency of the decision-making process in government bodies and the high level of social activity of citizens are inherent in sustainable democracies (Moiseyenko and Ryvak 2016).

Unfortunately, the four waves of attempts to legalize lobbying in Ukraine from the late 1990s to 2017 did not have a positive result. The discussion on the urgency of adoption of a special lobbying law is underway. This term has a negative connotation not only in broad public circles, but also among scholars, journalists, and public figures (Law of Ukraine 2012a).

One of the factors contributing to this situation, in our opinion, is the scientific development on the issue of lobbying. Currently, the preference is given to the study of professional lobbying (Strielkowski and Čábelková 2016), which may somewhat narrow the general understanding of lobbying in general. At the same time, primarily, the attention is paid to the protection of the economic interests of large corporations. For today, there is only one study, where attention is focused on the historical and legal justification of the legalization of lobbying in Ukraine. In this case, lobbying is regarded as an effective legal mechanism for seeking and reaching a compromise between state institutions of power and society for the effective resolution of societal problems (Tielkinienė 2017). Thus, the study of lobbying in the context of leadership theory will contribute to further deepening and expanding relevant research discourse. Furthermore, such a general approach as the study of the role of social leadership in state–legal processes has already been applied by various scholars (Strielkowski et al. 2016; or Baimuratov et al. 2018).

3 Materials and Methods

In this paper, we focus on lobbying of public interests, which, in our opinion, contributes to a significant adjustment of legal consciousness and level of social activity of the population. There are three social and legal trends:

- Gradual deprivation of illusion of the paternalistic understanding of the state and the formation of its perception as a platform for the transparent competition of interests of various social groups;
- Approach of the perspective of overcoming legal nihilism and spreading the persuasion of the power of law in society;
- Increase in social activity of citizens and generation of the social leaders of a democratic style.

We do hope that the proposed approach will contribute to the following trends in the scientific and informational space of Ukraine:

- Acceleration of the dissemination of understanding of “lobbying” in the scientific environment also as a nonprofit activity of NGOs to protect public interests through influence on public authorities;

- Popularization of the perception of lobbying as an institution of democracy.

In addition, this work can be a response to certain questions that arise during discussions about the feasibility of legalizing lobbying in Ukraine (Hart 2001).

4 Results and Discussion

In general, lobbying activities are carried out on a professional and public basis: (i) professional lobbying and (ii) nonprofit lobbying (lobbying of public interests, etc.). It should be noted that the definition of lobbying in the legislation of the European Union (EU) is somewhat wider than in the law of the USA. For instance, the Green Paper “European Transparency Initiative” defined lobbying as “all activities carried out with the objective of influencing the policy formulation and decision-making processes of the European institutions.” In the Lobbying Disclosure Act, the concept of lobbying is interpreted in a number of terms, such as “lobbyist,” “client,” “lobbying activities,” “lobbying contact,” “lobbying firm” (Tielkiniena 2017).

It should be added that the Supreme Court of the United States defined lobbying as the influence of professional lobbyists on members of the Congress for the passage or defeat of legislation (Franklin 1789; Kavelin 1974). However, both in the EU and in the USA, NGOs have gained the status of subjects of lobbying. The Green Paper states that lobbying may be carried out by “companies, civil society organizations, and other interest groups or firms working on behalf of third parties” (Law of Ukraine 2015). In the USA, there are types of NGOs, which lobbying activity is taxed on preferential terms under certain conditions, determined by the US Codes Title. Two of the four conditions for receiving tax benefits by the NGOs according to are as follows: firstly, “no substantial part of the activities of which is carrying on propaganda, or otherwise attempting, to influence legislation” (US Codes Title); secondly, “the organization does not participate in or intervene in (including the publishing or distributing statements), any political campaign on behalf of (or in opposition to) any candidate for public office” (US Codes Title).

The term “lobbying” is currently not legally regulated in Ukraine. However, the legislation regulates the social relations, which in their content may correlate with the definition of lobbying public interests of NGOs. Thus, according to the first part of Article 1 of the Law of Ukraine “On Public Associations” dated March 22, 2012, NGOs received the right to protect the rights and freedoms, to satisfy public, in particular economic, social, cultural, environmental, and other interests (Law of Ukraine 2012b). In accordance with Part 2 of Article 2, this law does not cover the interests of political parties, religious organizations, associations of local self-government bodies and their voluntary associations, self-regulated organizations, and organizations engaged in professional self-government. At the same time, the act does not specify the forms and methods of protection of rights and freedoms and satisfaction of interests.

Both types of lobbying can influence the reform of the legislation. However, we believe that the catalyst for adjusting legal consciousness toward the formation of the culture of legality and increasing social activity of citizens is precisely lobbying of public interests. The social and legal phenomena mentioned above are also reflected in the process of preparation and adoption of laws. Consequently, we have complex interactions between lobbying of public interests, legal consciousness, and the social activity of a person (Fig. 1).

Taking into account mentioned above, we will focus not on a professional lobbying, but on the lobbying of public interests, which usually means lobbying of nonprofit NGOs for the interests of the general public. In the English language literature, several terms are used, which indicate the corresponding activity, among them “lobbying of public interests,” “lobbying in public interests,” “public interests lobbying,” “nonprofit lobbying,” etc (Berry 1977; Center for Lobbying in the Public Interest 2018).

We can conclude that the attention is paid either on the public importance of the goal of lobbying or on the lack of commercial interest (nonprofit interest) of lobbyists. The term “public interest” in the English language is sufficiently wide and indicates, in particular, anything affecting the rights, health, or finances of the “public at large” (Tielkiniena 2017).

Our aim is to find out how lobbying of public interests stimulates the development of the social activity of the population and the emergence of the generation of the social leaders of a democratic style.

Individuals who initiate and organize lobbying campaigns or actively engage in such activities are unlikely to promote paternalism and rely exclusively or largely on the state to ensure their own legal status and welfare. Otherwise, in case of any problems, they would wait for their officials to help them with the realization of their

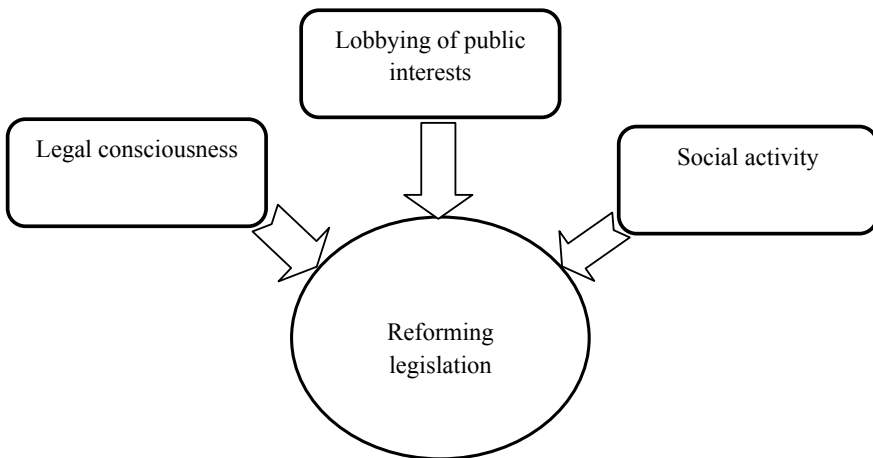


Fig. 1 Factors influencing reform of the legislation. *Source* Own results

own rights and freedoms. In the worst case, they would send complaints to the state authorities. Lobbying is different from the usual expression of dissatisfaction with certain actions of officials or with the general state policy, by the fact that citizens make specific proposals for amending laws that will improve their legal status.

We believe that there is a high probability that due to such activity certain changes in the legal consciousness of situational participants in the lobbying campaigns of public interests may occur. These are probably the majority. In transitive societies, like the Ukrainian one, such individuals are in a state of social and psychological discomfort. They are no longer apologists for paternalism; however, they have not perceived the state as a platform for the competition of numerous interests yet. Because of the lack of skills of the effective use of legal mechanisms for the protection of own interests by the majority of citizens, radical sentiment is widely spread in society.

Participants in lobbying campaigns will have the opportunity to observe the procedural mechanism for drafting the law and then discuss, review, and approve it. However, lobbyists not only observe but also actively influence the specified procedures through legitimate actions. Corresponding practices create gradual awareness among individuals about the need for a compromise with representatives of state authorities. The state probably will not be perceived absolutely by all the participants in lobbying campaigns as “father” or “servant” anymore; the state will appear as a platform for the transparent competition of numerous social groups. Consequently, there is a prospect of a gradual transformation of such a personal culture of communication with state authorities, which is only characterized by making claims and passive expectation of results. Instead, citizens will learn how to formulate clear proposals for improvement of their legal status, as well as for their adoption and implementation, and they will learn to make a legal impact on the state authorities and their officials. In this way, not only the level of the social activity of citizens will increase, but also its character will change: from confrontation to a dialogue. Thus, the public political and legal culture of conflict will be replaced by the social political and legal culture of compromise. The social and psychological focus on a compromise of an individual, a group of people, and most representatives of a particular social group is socially more comfortable and productive.

Numerous and massive practices of lobbying show that it is possible to persuade a part of citizens that there are legitimate means of protecting public interests in their country. In this way, radical sentiment in society can also be weakened somewhat. The participants in lobbying campaigns on their own experience can make sure of the effectiveness of compliance with laws rather than their violation to protect their own interests. Thus, if there are a special law on lobbying in the country and a clear legal liability for its violation, citizens will understand that it is more effective to use legal instruments of influence on state bodies than not to comply with existing laws or to try to defend their interests in an illegal manner. In order to increase the social activity of the population, the emergence of social leaders of a democratic style, not as single passionarians, but as typical representatives of certain social groups, is necessary. A well-known American researcher Bogardus (1924) based on a sociological survey identified the main features inherent in the social leadership of a democratic style:

- Increasing opportunities for the development of other people;
- Emphasis on promotion of the interests of the group he represents;
- Ability to choose the side of the weak, and not those who have power; people without rights, and not those who have privileges;
- Demonstration of unity with the group whose interests he represents;
- Consultations with the state authorities before committing certain actions, even if the group is in opposition to the current political power;
- Discussion on the expediency of one or other decisions before their adoption;
- Assistance without waiting for any reward for this (Bogardus 1924).

The features listed relate to the goal chosen by the leader to achieve; adoption and implementation of decisions in groups; and lifestyle of a social leader.

Lobbyists of public interests, *a priori*, operate with the goal, in particular, to expand legal opportunities for the comprehensive development of large groups of the population. The effectiveness of lobbying campaigns depends to a large extent on the persistence of advancing the interests of these social groups. It is unlikely that the necessary acts (laws) will be adopted without the dissemination of information about the need for their protection during communication with legislators, through the media.

A compulsory element of the quality management of lobbying of public interests is the process of making and adopting decisions, which takes into account the positions of the majority of the participants in the campaign. Achievement of the corresponding result is possible due to the preliminary discussion and achievement of a compromise if there were certain differences.

Both professional lobbying and nonprofit lobbying involve close communication with government officials. The desired result is the adoption of a law that will consolidate the interests of those social groups that lobbyists represent. Therefore, it is extremely necessary for them to establish a constructive relationship with the object of lobbying, during communication with an official, to perceive him not as an opponent, but as a partner in the protection of public interests.

The dissemination of the practice of lobbying public interests by NGOs promotes the development of the social activity of citizens based on the legitimate activities of individuals and organizations. At the same time, the insufficient formation of the indicated practices, their instability, and the weakness of the respective political and legal institutions increase the risks of the transition of the active part of society from radical, unlawful methods of coercion of state bodies to initiate a dialogue with citizens.

5 Conclusions

Overall, it appears that reforming the legal system of Ukraine (which is a transitive-type state) would require the broad engagement of citizens. One of the most effective legal instruments for this is lobbying, which is advisable to legalize in our country.

In the relevant law, NGOs should be identified as one of the subjects of lobbying. In the process of preparation and implementation of state–legal reforms in Ukraine, both legislators and citizens should be guided by the vision of lobbying as a legal instrument for the protection of primarily public interests and then the economic interests of large business groups.

Our thesis of the existence of complex interactions between lobbying of public interests, legal consciousness, and social activity of a person (lobbying of public interests is a catalyst for correcting legal consciousness in the direction of forming a culture of legality and increasing social activity of citizens) has been supplemented with the analysis of the nature of the impact of lobbying of public interests on the state of the social activity of the population. The features of lobbying of public interests are the following:

- Focus on empowerment for the full development of broad population groups;
- Lobbying of public interests is not an economic activity for the purpose of profit (entrepreneurial activity);
- Active informational work to attract public attention to those interests that are protected;
- Use of legal methods to protect the rights and freedoms of citizens;
- Awareness of lobbyists about the need for a compromise with representatives of state authorities;
- Discussion and adoption of a lobbying action program by the lobbying campaign organizers and its most active participants;
- Dialogue with officials of state bodies that constitute an object of lobbying.

All these of the above make it possible to see in it the manifestation of the social leadership of a democratic style. Thus, the statement about the correlation of the practice of lobbying of public interests by the generation of the social leaders of democratic style is logical. In addition, it should be noted that lobbying of public interests a priori directs citizens who are participants in lobbying campaigns to be socially active, which is legal. This influence is not of narrowly local character, but extends to rather broad social groups, because lobbying of public interests in comparison with professional lobbying involves considerably more people in the campaigns.

Both professional lobbying and lobbying of public interests are the factors that influence the reform of the legislation. This is evidenced, in particular, by a brief excursion into the history of lobbying of public interests, which is based on significant factual material contained in the papers of American authors and a dissertation study of one of the authors of this article. The legitimacy of lobbying was based on the right of the lawful persons to apply to the state authorities with requests, complaints, and proposals. In case of the absence of a special law on lobbying, the relevant social relations are of a political and legal nature. However, under these conditions, world and Ukrainian history have many examples of the effectiveness of targeted and organized public influence on state bodies for the adoption of a certain law. Furthermore, we consider it expedient to use the obtained scientific results in the process of dissemination of information about lobbying of public interests. For example, they can

be used during the preparation of training materials for journalists, civic activists, and scholars on an outlined topic for a better and deepened understanding of this process.

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The State as the Leader in Fighting International Terrorism in the Globalized World



Yuriy Voloshyn and Alina Zamula

Abstract This paper reviews the conceptual analysis of terrorism as a challenge to social development. Moreover, it considers the basic level and forms the features of the impact of global terrorism on the occurrence of conflicts between civilizations in the world today and analyzes the mechanisms to combat it that is led by the state as the leader in fighting the international terrorism. We determine the main geopolitical, socioeconomic, and religious factors of the escalation of terrorism at the present stage and consider the forms of its manifestations. In addition, we investigate the problems of national security which depend on solving the problems of organizing counteraction to contemporary international terrorism. Theoretically, it is substantiated that security policy should cover directly preventive activities to prevent the emergence and development of terrorism, the elimination of its destructive actions, serving as the main element of the global system of countering the phenomenon in all its manifestations. Thence, we analyze the perspective directions of combating terrorism at the global and regional levels in the context of the development of security concepts. Finally, we determine the system of priority (leading) factors and existing approaches to realization of anti-terrorist strategy from the leading countries of the world.

1 Introduction

The current state of international security is due to a number of factors, which are based on the globalization of the world economy and its associated revision of the entire system of international relations. Among the sources of existing and potential threats, one can distinguish: the dangerous actions of individual states, as well as non-state groups, aimed at violating the territorial integrity of other states, including

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the use of interethnic, interdenominational, and other internal contradictions to the satisfaction of territorial, political, and economic claims with references in individual cases to the lack of clear legal and contractual legalization of interstate borders; the policy of “double standards”; and so on.

Recently, there have been relatively new sources of external threats in the form of international terrorism and organized crime, drug trafficking, smuggling of weapons and military equipment, and the danger of environmental disasters that require adequate responses.

International terrorism has become a direct military threat to international security. The problem has already attracted the attention of influential international organizations and individual countries. Thus, the Charter of European Security, adopted on November 19, 1999, emphasized that international terrorism is an increasing threat to security and, in all its forms and manifestations, whatever its motivation, remains completely unacceptable (Charter of European Security 1999). However, the international community for various reasons has not yet succeeded in developing a generally accepted legal definition of international terrorism. His absence does not allow to create an international legal basis for effective counteraction to this threat.

Considering the causes of the spread of international terrorism, one should keep in mind the whole complex of mutually conditioned factors, among which the leading place is occupied by the general processes of globalization, a clear tendency of marginalization and impoverishment of a significant proportion of the world's population.

Europe is not adapted to new wars on its territory: about two hundred nuclear reactors, many chemical enterprises, oil and gas storage facilities, hydrosystems, filled with billions of cubic meters of water, unprecedented concentration of population in metropolitan areas—each of these objects in war conditions—the target for defeat (Charter of European Security 1999).

The purpose of the article is to analyze the complex of theoretical and practical knowledge about the phenomenon of terrorism in the conditions of globalization dynamics, determination of the features of determination, leading tendencies and dominant forms of existence of this phenomenon, content and the main components of a multi-level system of counteraction to terrorism.

Achieving the goal determines the need for solving the corresponding tasks: to provide a description of theoretical and methodological approaches to the concept of “terrorism” as a social phenomenon existing in the world scientific thought; find out the causes of global terrorism; to reveal its basic levels and forms; to explore the preconditions and causes of the intensification of terrorism in a globalizing world; to outline prospective directions of counter-terrorism at the global and regional levels; and to analyze the mechanisms of the fight against terrorism.

2 International Legal Developments in the Field of Combating Terrorism

The research of the problem of the definition of terrorism and its features was, to a greater or lesser extent, investigated and scrutinized in the works of many researchers (see, e.g., Reshetov 1983; Antonyan 1998; Dolgova 2001; Yemelyanov 2002; Antypenko 2002a, b; Hoffman 2003; Lipkan 2003; Zelinskaya 2006; Kancir 2009; Driomin 2009; Kartashkin 2011; Leonov 2012; Ryzhov 2012; Moskalenko and Yevsieieva 2015; Mostenska 2015; or Kalamkaryan 2016). The works of foreign researchers also dealing with this issue include a plethora of papers and reports (see, e.g., Ganji 1962; Buzan 1983; Pellet 1999; Kelsen 2000; Annan 2005; Heinz 2007; Bassiouni 2008; Nollkaemper 2010; or Werle 2011). In their writings, they uncovered and explored the main trends in the impact of global terrorism on the emergence of inter-civilizational conflicts at the present stage and proposed promising directions of combating terrorism at the international level.

It should be noted that today the tendency toward the inadmissibility of a simplified approach to evaluation, including the international legal possibilities of combating terrorism in the conditions of globalization, remains relevant (Stojanov et al. 2011; or Zielińska 2016). It is indisputable that the fight against terrorism must be rigid and uncompromising. However, to focus only on the force component by mistake, and in this case we can not count on success. On the contrary, such an orientation is dangerous because it can turn the state itself into hostages of its own terrorist concepts and methods of eliminating objective or subjective obstacles. The very principle of the protection of human rights should be the key factor in any counter-terrorism strategy.

3 Terrorism as a Factor of Security and the Leading Role of the State

Nowadays, terrorism became the most dangerous global phenomenon, which hinders the normal development of international relations, destabilizing the security of many regions and entire countries.

Terrorism (from the Latin “terror”—“fear,” or “intimidation”) is a form of political extremism, the use or threat of the use of the most violent methods of violence, including the physical destruction of people, intimidation of governments, and the population to achieve certain goals (Razzakov 2003). Originally existing as a kind of individual acts of organized crime, terrorism in our time deeply plunged into the shadow economy, took up arms, and actively used not only super-modern weapons, but also powerful technologies, primarily information. This made terrorism a very widespread and persistent phenomenon (Teleshuk 2005).

It is traditionally believed that “terrorism”—a phenomenon that puts fear, horror, and panic in the human environment, can cause a person—or people—physical harm.

Thus, “terrorism” can be defined as a practice of terror and similarly treats this phenomenon in the broad sense of the modern law encyclopedia, which defines terrorism as “the policy and practice of terror, the form of force crime” (Zajchuk 2010). However, this definition contains a very general notion that does not reveal the entire essence of terrorism as a phenomenon of social, political, and its legal content (Zajchuk 2010). Such an interpretation reveals the subjective aspect of the phenomenon on which the legislators of a large number of countries rely, establishing terrorism and terrorist acts as a crime, but this approach does not provide for the disclosure of all the characteristics by which it would be possible to classify acts of a terrorist nature as manifestations of terrorism, respectively, makes fighting it quite cumbersome and complicated.

In particular, American historian Hardman (1938) in his article provided one of the first definitions of terrorism. He interpreted terrorism as a term that describes the method by which an organized group seeks to achieve the goals that it has been proclaimed, usually through the use of violence that is aimed at people who hinder the pursuit of these goals. Hardman also argues that terrorism always aims to demonstrate to the people that legitimate power is not safe and that its actions are trying to bring the government or the entire nation away from equilibrium.

In works of Lipkan (2003), in particular, terrorism is viewed as a socio-legal phenomenon, or as a separate crime, as the core of terrorist crimes (Lipkan 2003). In addition, Yemelyanov (2002) notes that terrorism can be viewed from the three different angles: (i) as a criminal act; (ii) as terrorist groups (organizations); (iii) as terrorist doctrines (see Yemelyanov 2002). Moreover, Lambert (1990) points out that the definition of the problem is the main factor that contributes to the inconsistency of approaches to terrorism (Lambert 1990).

An important study was conducted by the Dutch scholars, Schmid and Jongman (1988), who synthesized 109 scientific and official definitions and analyzed their main components. The research showed that the element of violence was included in 83.5% of doctrinal definitions; 65% of political goals; 51% of the definitions emphasize the element of the caused horror (terror); 17.5% of the definitions include an element of attack on civilians, non-combatants, or third parties. The official definition of terrorism provided by A. Schmid and A. Jongman was quite similar. Most of them can be traced to three common elements: the use of violence, political goals, and intention to cause fear in a certain population group (Schmid and Jongman 1988).

A very successful definition of terrorism at the present stage was the definition formulated by the Ukrainian international lawyer Antypenko (2002b), according to which, “terrorism is a violent confrontation based on conflict and which, along with the task of harming the state, impinges on international security and the world order and is based on the differences in the political, economic, and cultural interests of groups of states, states, peoples, nations, social groups, and movements, provided that at least one of the parties uses terrorist acts as a means of influence with the aim to achieve political goals”. The scholar points out that it is necessary to distinguish between terrorism and terrorist acts, that is, criminal terrorist acts in creating conditions of influence on an international organization, the state and their representatives, or on legal entities and individuals, or a group of persons for the purpose of

coercion or refrain from carrying out a certain action, committed by intimidation in the presence of intent to cause death to innocent people” (Antypenko 2002a). The same opinion is maintained by Zelinskaya (2006), pointing out the delineation of terrorism and the terrorist act. A well-known international law scholar emphasizes that “the concept of terrorism should be used to refer to the generic concept (like genocide, crimes against humanity, and war crimes) which is disclosed through specific criminal acts” (Zelinskaya 2006). A well-known Ukrainian scientist in the field of terrorist research is a slightly different approach to the highlighting issue; according to researches, the terrorist act is genetically similar to the phenomenon of terrorism, but does not coincide with it. In many cases, their ratio appears as part and whole (Yemelyanov 2002).

In general, today there are dozens, even hundreds of different definitions of terrorism. In order to avoid indicating different examples of such definitions, four main characteristics can be distinguished, as indicated by the vast majority of researchers and practitioners on counter-terrorism issues: First, it is a violent basis of action; second, political objective definition and motivation; third, the use of intimidation as an instrument in achieving the goal; and fourth, the presence of guilty direct intent to cause innocent victims (Antypenko 2002a, b). For example, in his study “Terrorism—A Look From The Inside,” American analyst Bruce Hoffman considers terrorism in all its manifestations. What exactly changed the definition of terror and its technology, which are now the national and religious features of terrorists? What is the terror of the left different from the terror right? How do recruiters and inspirational actors? What is the effect of terrorism in the media and the reaction to it by the intelligence services? Scientist studies are very valuable. B. Hoffman answers these and many other questions on the example of the Palestinian, Northern Irish, Cypriot, and other conflicts that provoke new explosions of hell machines every day (Hoffman 2003).

Types and forms of terrorism are distributed according to goals, forms, methods, subjects, and objects. Terrorism also has several distinctive features. First, it is a transnational phenomenon that affects the interests of all states on the planet, whose development is at a looming pace. Secondly, terrorism is today a component of more complex global phenomena. Among them are the interstate, inter-ethnic, religious, political and socio-economic conflicts, as well as the organized crime. The implementation of large-scale terrorist acts represents a threat to the entire civilized world. There is an urgent need to solidify the efforts of the international community with a view to “countering international terrorism” (Dolgova 2001). The modern terrorism is distinguished by the following varieties:

- state (organized or supported by one state against another);
- international (carried out by international terrorist organizations);
- internally (an attempt is made on the basis of statehood), religious (embeds its religion);
- point (terrorist act on a separate object).

Taking into account the objects of the assassination, terrorism can be divided into:

- elitist (when attempting an attempt on officials of state authorities, politicians, owners and managers of banks, companies);
- functional (when attempting an attempt on employees of law enforcement agencies, tax service, mass media, etc.);
- industrial (in case of an attack on large enterprises, defense objects producing weapons, poisonous, or other chemical substances);
- transport (using explosive devices in airplanes, trains, buses, cars, sabotage on oil and gas pipelines) (Criminal Code of Ukraine 2001).

At the present stage of the development of international legal regulation of the fight against terrorism, there is an urgent need to develop effective measures to counteract this threat. It is the cause of all mankind, regardless of racial, religious, or social affiliation. The United Nations is actively involved in solving this problem. The UN and its bodies and organizations are working on a wide range of international instruments aimed at preventing terrorism. The success of the fight against terrorism in the international legal field is primarily ensured by an adequate regulatory response to international law on the perpetration of this crime, as well as the creation of appropriate anti-terrorist institutions. The fight against terrorism corresponds to the agenda of United Nation which is aimed at preventing, detecting, terminating, minimizing the consequences of the terrorist activities.

The level of global terrorism can be demonstrated by the example of the indicators of generally accepted international ratings. The ranking of countries included in the Global Terrorism Index for 2017 reflects the statistics portal Statista 2018. The Global Terrorism Index systematically assesses the countries of the world according to their terrorist activities. Iraq ranked first in the Global Terrorism Index with a score of 10, making it the country most affected by terrorism on Earth. In a ranking with ranking, Iraq suffered from the most terrorist attacks in 2015, with 2418 attacks and the most-deadly consequences of terrorist attacks in 2015 from 6932.

The Global Terrorism Index is an annual rating prepared by the Institute of Economics. The Global Terrorism Index covers 162 countries over four indicators collected over five years. These four factors are the number of terrorist incidents per year, the number of deaths from terrorist acts per year, the number of injuries sustained by terrorists per year, and the total property damage inflicted by terrorism per year. The top five in the ranking are Iraq, Afghanistan, Nigeria, Syria, and Pakistan (see Table 1).

Table 1 Global Terrorism Index in 2017

No.	Country	2017 indicators
1.	Iraq	10 points
2.	Afghanistan	9.44 points
3.	Nigeria	9.01 points
4.	Syria	8.62 points
5.	Pakistan	8.4 points

Source Global Terrorism Index (2017)

The UN High-Level Group in its November 13, 2006, report on the “Alliance of Civilizations” proposed a program of practical action for states to resolve conflict situations between Muslim and Western societies. Objectively acknowledging that addressing poverty and economic inequality is a task 132, designed for a decade, the center of gravity is shifting to political steps toward increasing the responsibility of political and religious leaders, media representatives for the inadmissibility of harsh and provocative statements about persuasion and sacred symbols of other peoples, which leads to Islamophobia, xenophobia, and anti-Semitism. The proposed action plan reflects one of the approaches to finding ways to counter-terrorism, based on an understanding of the need for a systematic approach (Global Terrorism Index 2017).

On this basis, the fight against terrorism should be based on the principles: the legality and strict observance of human and civil rights and freedoms; comprehensive use for this purpose of legal, political, socioeconomic, information-propaganda and other opportunities; priority of preventive measures; inevitability of punishment for participation in terrorist activity; the priority of protecting the lives and rights of persons who are at risk due to terrorist activity; a combination of vowel and tacit methods of combating terrorism; non-disclosure of information about technical techniques and tactics of anti-terrorist operations, as well as the composition of their participants; united command in the leadership of the forces and means involved in the conduct of anti-terrorist operations; cooperation in the field of counter-terrorism with foreign states, their law enforcement agencies and special services, as well as with international organizations engaged in the fight against terrorism (The Law of Ukraine 2003).

United Nations General Assembly condemned terrorism at its XXV session in declarations 2625 of 24 October and 2734 of December 16, 1970. By the end of the twentieth century, GA repeatedly considered issues related to the problem of terrorism. Under the heading “Measures for the Prevention of International Terrorism”, adopted: resolution 3034 (XXVII) of 18 December 1972, resolution 31/102 of 15 December 1976, resolution 32/147 of 16 December 1977, resolution 34/145 of 17 December 1979, resolution 36/109 of 10 December 1981, resolution 38/130 of 19 December 1983, resolution 40/61 of 9 December 1985, resolution 42/159 of 7 December 1987, resolution 44/29 of 4 December 1989. The aforementioned documents indicate that the international community is aware of the global nature and catastrophic nature of terrorism and defines, to a certain extent, the main focus of methods and actions in confronting this dangerous crime, which eventually became more and more used as a method of non-traditional warfare.

It should also be noted that in the fight against terrorism, criminal justice bodies and law enforcement mechanisms should be effective. In the case of an international terrorist invasion, military actions aimed at punishing a state sponsor or striking terrorist bases can cause an international conflict, a phenomenon even more dangerous than acts of terrorism (Wilkinson 1996).

With regard to practical tactics and anti-terrorism technologies, the USA, Israel, France, and other counter-terrorism services recommend:

- prevention, blocking of terrorism at the initial stage and preventing the formation and development of its structures;
- preventing the ideological justification of terror under the slogans “protecting the rights of the nation,” “protecting the faith,” etc.; the spread of terrorism by all media forces;
- transferring all management of anti-terrorist activities to the most reliable special services without interfering in their work with any other management bodies;
- the use of treaties with terrorists only by these special services and only to cover the preparation of a campaign for the complete destruction of terrorists;
- no acts of terrorists, no unpunished acts of terrorism, even if it is due to the lives of hostages and casual people, because practice shows that any success of terrorists provokes the further growth of terror and the number of victims;
- special psychological media operations that cover the suppression of a terrorist act as a tragic necessity, contrasting the “blackness” of terror with the “purity” of those who struggle with it (Safety of life 2005).

It should be noted that terrorist acts, apart from their “purely terrorist purpose,” contain another significant interpretation; namely, they serve as a means of psychological torture.

We note that today we are dealing with the industry of international terrorism, which has huge informational, financial, technological, and human resources. This suggests that existing collective security systems are inadequate in time challenges and require radical rethinking. In general, the situation looks paradoxical. The armies of the leading countries of the world, equipped with state-of-the-art weapons, are virtually powerless to counter-terrorism attacks that gradually spread their influence on new territories. Classic military schemes do not work in these conditions. In this regard, a separate analysis requires the improvement of the current international legal and regulatory framework for counter-terrorism operations involving peacekeeping or occupation forces. Even more urgent is the question of involving not only national armed forces, but also all components of the military organization of the state in the fight against terrorism in its own territory. In a democratic society, special attention is paid to this by strictly regulating and controlling similar measures (Yefimov 2007).

4 Conclusions

Despite the lack of a single definition of terrorism, this phenomenon is enshrined as a crime in the legislation of most countries and internationally. Creators of international law in the name of scientists–jurists offer their own definition and refer to it in the relevant regulations. This is necessary in order to effectively combat the terrorist threat and to prevent a broader interpretation of the notion of terrorism, because in light of recent events, this problem is quite acute.

Existing and generally accepted today qualifications of terrorism are the use of violence, intimidation, and political motivation of terrorists. However, with the devel-

opment of terrorism and the expansion of the capabilities of terrorists in their unlawful struggle for their interests, these features are not enough. Discussions of scientists about other signs of terrorist activity make it possible to improve the international legal framework for combating this crime and, in the long run, adopt a single common definition of terrorism.

In the twenty-first century, the global development of the world community has led to a huge gap in the capabilities of highly developed civilized countries with Third World countries. The impossibility of normal development, the absence of a minimum normal living conditions, and the inability to defend their interests by peaceful lawful means lead to the use of extreme means of struggle and resistance—terrorist acts and terrorism in general. In its understanding, terrorism is multifaceted, and it can combine various forms of terrorist activity—from political, ideological, separatist, religious to single bloody criminal actions. Quote often, it ranges from a fairly compelled struggle against oppression for survival to the elimination of innocent people in personal and political interest. Apparently, the most influential people are not even insured from terrorist violence, even if they are under constant protection. Thus, terrorism as a criminal phenomenon has existed in human societies for many millennia and is one of the forms of social protest, along with such as national liberation movements, protest actions, and other forms of resistance. All these manifestations are aimed at solving social conflicts, changing the situation in society. However, the distinctive features of terrorism are its illegal criminal nature, the use of violence and intimidation, the inadequacy of the methods used to achieve the goal, and its illegitimacy.

One of the key factors contributing to the development of effective mechanisms for countering international terrorism is the identification of modern trends in its formation, their research and the implementation of innovative approaches and approaches to the implementation of new international legal norms.

The international legal counteraction to terrorism remains ineffective, primarily because of the uncertainty of this international crime and the imperfection of the relevant conventional mechanism. But in modern conditions of globalization, it is necessary to confront terrorism with adequate international legal measures, without encroaching or sacrificing the institution of human rights. It is important to strike a balance between the controversial imperatives of securing and protecting a democratic society and guaranteeing democratic human civil rights and freedoms.

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Community-Based Tourism as the Leading Approach to the Rural Development



Jorge Alexander Mora, Olga Yamova and Taira Murtuzalieva

Abstract Rural development means an important endeavor for the leading sustainable development of any country. This paper focuses on community-based tourism as a leading approach to the rural development. We use a case study of Colombia as a particularly interesting country in light of the above aspects. Colombia faces a post-conflict process, and this has transformed the social dynamics of its rural environment. Our paper describes the principles of community-based tourism is, and how it is articulated in the country as the leading pathway to effective and sustainable rural development. It is analyzed in a process where the social dynamics of the Colombian post-conflict are being modified. For this, a literature review is made about three basic aspects, community-based tourism, Phoenix tourism, and rural development. In order to understand this dynamic, a case study was conducted in a rural community in the Sumapaz Páramo, and through a touristic orator, we can make a dialogue with the community, with the purpose of understanding the activities carried out by tourists in rural communities. Phoenix tourism can be a tool to make catharsis and restructure society and the memory of the country. For this to be achieved, the government must contribute to the development of these initiatives. There must also be solidarity cooperation of the communities.

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1 Introduction

Rural development is a complex process that constitutes the key essence of the regional economic sustainable development of any country. Community-based tourism, which is embedded into the rural development, represents a new approach to the amelioration and revitalization of rural areas using non-farm and non-agricultural methods.

One of the best examples for the concepts just discussed above is Colombia. The complex rural geography in Colombia plus the low presence of the government in these areas generate circumstances that favored the armed groups for many years. The Colombian internal conflict had a negative impact, especially on rural development in Colombia. This conflict generated a displacement of approximately four million inhabitants between 1999 and 2013, which affected the access to land and harmed small agricultural producers (Arias et al. 2014). This problematic impact in most rural communities impedes the economic development of their traditional and alternative activities.

After this conflict that took place in the country for more than five decades, peace agreements were signed in 2016. With the signing of these agreements, tourism appears as one of the most benefited activities (Esteban and Bonilla 2017). Due to the changed in the negative perception that the world had about Colombia. In addition, the country has had a fairly favorable economic situation, where tourism has been one of the most benefited activities (Brida et al. 2017). Tourism in the current world situation plays an important role in the world economy. This activity exceeds or equals the export of oil, including the production of automobiles. Tourism contributes 9.8% of the gross domestic product (GDP) and in employment matter contributes to one out of every eleven jobs in the world (WTTC 2016).

The changes that the country has had in terms of peace have allowed tourism to appear as an alternative for the development of many rural communities. Tourism has been established as an economic option for the inhabitants of these rural communities to have an option for additional income. This type of tourism is known as community-based tourism and has gained many followers in Colombia. The tourists who demand these activities are people that generally live in urban environments and seek to escape the “stress” generated by the pace of life in large cities.

2 A Brief Literature Review

The beginnings of the CBT go back to the 1970s, seeking to offer alternatives to mass tourism, and this was achieved through agencies that had experiences of community development (Suriya 2010). However, from the academic point of view it has been investigated since the 1980s (Murphy 1983). This type of tourism consists of self-management of tourism services by communities. The CBT is a form of business organization, supported by the ownership of the patrimonial resources, according to

democratic economic practices and solidarity in the work and in the distribution of the generated benefits (Maldonado 2005).

It is important to have a service provision on the part of the communities. If residents are afraid of tourism, their resistance can destroy the potential of the industry (Lai and Hitchcock 2017). This articulation must constitute practices in which the community associations achieve a collective relationship, highlighting the importance of empowering the system, fostering a sense of identity and self-awareness (Radovic et al. 2017; Chen et al. 2017).

The communities must have solidarity practices for the development of tourism, taking into account that this activity of developing on a small scale is successful as a source of income, important in the development of an economy (Ruiz and Brondizio 2017; Strielkowski 2018). To achieve this, it is essential to articulate the different economic agents (Guzmán 2017). CBT includes the use of comparative advantages in complex conditions, with opportunities and capacities that can transform reality or the environment in the communities involved (Malek et al. 2017). CBT also have initiatives in ecotourism despite that it aims to expand the social scope of tourism, giving local populations greater responsibility in the management of their destination and the development of tourism products (Sharpley 2018).

The World Travel Organization (WTO) considers this activity to be anchored as a participant in sustainable tourism and should give an optimal use to environmental resources, which are a fundamental element of tourism development. Tourism practices must respect social authenticity, preserve cultural heritage, and contribute to intercultural tolerance (WTO 2008). The Global Code of Ethics for Tourism (GCET) states in article fourth that communities have the right to the conservation of heritage, but also acquire specific obligations (WTO 2001). The tourist activity must have an equal participation with the communities, in terms of the economic social and cultural benefits that they receive, especially in the creation of employment, directly and indirectly (Masud et al. 2017).

Moreover, there is a concept of “dark tourism.” Dark tourism is the interest in inhuman acts, usually related to death and suffering, visitors are interested in knowing the details of these events, and an example of this is the concentration camps in Europe (Lennon and Foley 2000; Strielkowski 2017). Black tourism is about seeing contested stories of past conflicts and how this society emerges and acquires a special meaning (Braithwaite and Lee 2006). In addition, Phoenix tourism consists in society making catharsis and generating tourism proposals to replace dark tourism (Causevic and Lynch 2011). This type of tourism occurs after a political conflict and consists of generating a recognition of the normalization of social relations and landscape (Davis and Bowring 2011).

3 Colombian Rural Development

In the 1990s, the term “new rurality” emerged, this concept encompassed the territory and its inhabitants in the development of different activities, among which one can find, agriculture, crafts, industry, trade, services, mining, extraction of natural

resources, and tourism (Pérez 2001). The new rurality is a reevaluation of the rural, understood not as a return to the rural but as a change of vision in the rural (Wilches 2000). The new rurality shows the great transformations that the territory has had in the economic order. These changes in rural regions have modified the economy of the peasants.

Colombian agriculture has been a strategic axis in the development of the countries; however, in Colombia its development has not been very favorable because this sector depends on the progress from other sectors of the economy (Perfetti et al. 2013). In the country, the conjuncture for agriculture has not been very successful in recent years. This is evidenced in a study conducted by Fedesarrollo, where the result of the agricultural sector has lost share in GDP (Perfetti et al. 2013). The peasants have limited access to land, due to agricultural policies, and the allocation of resources in agriculture, have reduced the number of farmers (Becerra et al. 2014). Although Colombia has a great rural wealth, the traditional activities of the countryside, such as agriculture and livestock, have not been fully developed (Suarez et al. 2018). The actors of the conflict stopped the rural development (Pérez 2017). Besides that, this sector has lost participation in the public agenda, even economic policies have discriminated rural development, while favoring the activities of urban areas (Arias et al. 2014). In Colombia, rural activities have had a diversification, with an inclination toward different non-traditional income alternatives (North 2008).

4 Research Methods

Our paper uses a mixed research approach, although its features are mainly qualitative. For this purpose, literature review of rural development, CBT, Phoenix tourism, and black tourism was carried out, looking to describe this phenomenon in Colombia, in order to understand the CBT in Colombian rural environments, and its articulation with the Phoenix tourism CBT. For this, a case study was conducted in a rural community, in the Páramo del Sumapaz, which is located in Bogotá D.C., in the town of Sumapaz. This tourist corridor had to cancel the routes due to security problems (Sanchez 2018). This is considered a place of post-conflict, even one of the biggest problems facing is uncontrolled tourism (Esteban and Bonilla 2017).

The investigation has been carried out through a dialogue with the leaders of the rural community, where they offer tourist services. In addition, in this community, traditional activities of the field are performed, such as agriculture and agricultural activities. A research was also made about what government initiatives are for post-conflict tourism, and how it intends to address this opportunity.

One of the alternatives of the community is tourism. The dialogue was with a travel agency called Yachay, and the guides and community leaders answered questions through a dialogue and semi-structured interviews (Robertt and Lisdero 2016). The research methodology has taken into account the approach of the participatory action research—IAP (Martí 2017). Three visits to the site were made. The first was an observation, after that, a structured interview was conducted, and the last fieldwork

was accomplished with the leaders of the community. There was a touristic journey in the Sumapaz Páramo, called the largest in the world (Sandoval and García 2018).

5 Results and Discussion

The development of agriculture has been a strategic axis in the development of the countries; however, in Colombia its development has not been complete because this sector depends on the progress of other sectors of the economy (Perfetti et al. 2013). In addition, the absence of rural policies in the country has led to a waste of rural territory and a concentration of these properties by a few (Guzmán 2017). It is evident that before and after the Colombian internal conflict, the rural sector has not had an appreciable rural development, due in large part to the lack of incentives and policies.

Some Colombian tourist destinations have already faced the post-conflict process, even before the signing of the peace accords; the largest páramo in the world is one of these. Many tourists visit this wonderful destination, since it is an ideal scenario for the community to generate memory of the conflict and turn it into heritage and part of its history (Esteban and Bonilla 2017). This tourist destination has existed for 10 years without the scourge of war, which has allowed the development of tourist activity, mainly managed by the community. It was even called red zone. The local population of this region is happy for the end of the conflict in the area, and what they did not expect was the excessive amounts of tourists who walked on nature trails.

The presidency of the republic promotes tourism in the post-conflict through the campaign “sure you’ll love” led by the Ministry of Post-Conflict and the Ministry of Commerce, Industry and Tourism—MinCIT; the departments where this initiative is carried out are: Cauca, Santander, Cauca, and Meta (Presidency of the Republic 2017). The government of Colombia through the Ministry of Commerce, Industry and Tourism (MinCIT) has focused the proposal of tourism toward a peace scenario; in fact, the tourism sector plan (2014–2018) is called “Tourism for the Construction of Peace” (MinCIT 2017). In the same way, the MinCIT together with the WTO agreed to develop infrastructure projects, in order to promote tourism and the formation of companies in the communities located in the post-conflict territories under the Tourism and Peace program (MinCIT 2017).

6 Conclusions

Signing of the peace agreements in Colombia allowed tourism to achieve an unprecedented growth. In 2017, the arrival of international tourists had an increase of more than 27% (Sánchez 2018). It is evident that tourism acquires a greater participation in the national economy and that its projection is quite encouraging in economic mat-

ters. Tourism acquires greater importance for the economy of the country, since the signing of peace, and this activity has become the main bet for the national economy (Mora Forero and Bohorquez Patiño 2018).

It is very probable that these proposals will be replicated, taking into account the return of the demobilized to civil life. The government should propose more actions to incorporate the victims and those who acted in the conflict. Phoenix tourism is an opportunity for rural communities to create memory and generate a tourism dynamic. The latter must base its tourist attraction on building the memory of the conflict. The industry without chimneys in the country can achieve a successful development in the post-conflict, and this has already been evident in other territories that were under the scourge of the conflict.

Rural development in Colombia has gone unnoticed in the political areas; in fact, it is increasingly evident that this activity has not been a priority for national policies. In addition, some of these areas that were under conflict are under another threat, because uncontrolled tourism appears as a destructive practice for the natural landscape. It is important to promote an ecological conscience and make tourism a sustainable practice, for this it is important that all entities that make up tourism contribute to this objective.

Rural communities have the option of carrying out tourist activities; however, this can be done by alternating agricultural and agricultural activities. Tourism appears as an opportunity in the current conjuncture for rural communities, taking into account that this activity can be diversified with rural activities. This represents an opportunity for the inhabitants of rural areas to generate different alternatives of economic sustenance. Tourism appears as a protagonist, its growth is quite promising, and there are many opportunities to implement community tourism activities in a post-conflict process. This may be an option for people who return to their place of origin in accordance with the plan of the (Land Restitution Unit 2016). Some natural tourist destinations have been economically benefited by tourists who arrive in different rural areas.

Overall, it appears that tourism in Colombia is consolidating an alternative for the development of the country and is in the process of becoming a solid sector of the economy. However, this growth must be sustainable, socially, culturally, economically, and environmentally. Tourism in rural communities represents an opportunity for development, provided it is competitively sustainable. It is important to work so that the tourist activity is sustainable, not only by the providers of tourist services, but by all the actors. Tourism requires more actions to be sustainable and that is why the actions that are generated must have a decentralization of the different sectors and actors of the economy.

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Leading Approaches in Maintenance of International Peace and Security



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Abstract The modern world changes rapidly and the international law takes on the greater and greater importance for the regulation of the international relations and the maintenance of international cooperation, international peace, guarantees of international security and international legal order. The new world order shall be based on the common understanding of the universal values and principles, which are generally recognized. In view of the above, the states bring out the general consensus to ensure the headship of law and to fulfill the international obligations in good faith. The headship of law and the principle of fulfillment of international obligations in good faith are the basics of the fundamental basis of the international law, the updated understanding of which is required for the awareness of the present international law. The aim of our paper is to propose the new approach to the understanding of the headship of law and the principle of faithful fulfillment of international engagements in reference to each other and in view of the leading role of the said principles for the maintenance of international peace and safety. Taking into attention the above, we scrutinize the approaches to understanding of the headship of law and the principle of fulfillment of international obligations in good faith and to research the interconnections between the said principles for understanding thereof.

1 Introduction

In general, the existing legal literature offers various approaches to the definition and understanding headship of law and the principle of fulfillment of international obligations in good faith. For example, according to Lukashuk (1996), the content

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of the principle is largely defined by its interconnection with other fundamental principles. In order to understand the rule of law and the principle of fulfillment of international obligations in good faith, as well as their leading role for the handling of international peace and safety, one needs to establish the interconnection between the above-mentioned principles (Hajek et al. 2016).

One can see that the principle of fulfillment of international commitments in good faith is one of the ancient principles of international law (Butkevych et al. 2002). In the modern international law, which may be characterized by the actions of economic, political, and legal globalization, the international interstate integration, and a new role of territorial communities (Stojanov et al. 2011; Moyseyenko and Ryvak 2016; Baimuratov et al. 2018), the significance of the said principle increases. However, the international acts and the doctrine of international law do not provide for the exact and unambiguous understanding of the said principle (Zakharova 1987; Chvátalová 2016).

The Encyclopedia of International Law (2014) that contains the generalization of the up-to-date understanding of the key concepts of the international law provides for the following definition of the principle of fulfillment of international obligations in good faith: “the principle of general international law, according to which the legal obligations are fulfilled in compliance with the generally recognized moral minimum of the international legal standards” (Encyclopedia of International Law 2014).

2 Fulfillment of International Obligations

The research of the principle of fulfillment of international obligations in good faith was conducted back in the 1970s by the Soviet scholar Tiunov (1979). This research lost its relevance in some aspect but enriched the approaches to the scientific understanding of the principle of fulfillment of international obligations in good faith. Thus, in the view of Tiunov (1979), the essence of the principle is revealed in the issue that it is a universal and cardinal norm, which is recognized by all countries and fixed in the form of the international agreement or the international legal custom, as well as reflected in the international morality, and which reflects in the most general terms the obligation of the subjects of international law to fulfill the obligations arising from the generally recognized principles and rules of international law, the agreements and treaties in conformity therewith, the international custom, the separate decisions of the intergovernmental organizations, the said subjects are members of, and which serves as a criterion of the legality of the activity of the said subjects in the sphere of the international relations, and which is a condition of stability, effectiveness of the international legal order.

Moreover, Lukashuk proposes the following wording to define the content of the principle of fulfillment of international obligations in good faith:

- (1) States and other subjects of international law are obliged to fulfill in good faith their obligations under international law; these obligations arise both from

- the generally recognized purposes, principles, and rules of international law and from treaties and non-universal custom consistent with international law (Lukashuk 1989).
- (2) Obligations contradictory to a peremptory rule of international law are not subject to fulfillment. If a conflict arises between undertakings rising from agreements and those of the members of the United Nations Organization under its Statute, the undertakings under the Statute shall preponderate (Lukashuk 1989).
 - (3) Realizing their sovereign rights, including the right to define their laws and regulations, states should correspond with their undertakings under international law. A state may not summon the provisions of its municipal law as acquittal for failure to fulfill its undertakings under international law (Lukashuk 1989).
 - (4) Non-fulfillment or unfair fulfillment of obligations under international law entails international legal responsibility (Lukashuk 1989).

In addition, Lukashuk (1996) also refers to the issue of the sources, which the principle of fulfillment of international obligations in good faith refers to, and states that all international obligations shall be fulfilled in good faith (Lukashuk 1996).

Zadorozhnii (2015) states that the content of the principle of fulfillment of international obligations in good faith initially lays in the imposition on the states of the duty to duly perform the obligations, undertaken by them according to the Charter of the United Nations, their obligations according to the rules and mostly accepted principles of international law and international agreements (Zadorozhnii 2015).

Herewith, Zadorozhnii (2015) also identifies a number of rights and duties of the states in connection with the principle of fulfillment of international obligations in good faith: (1) the duty of a state to fulfill all its international obligations, irrespective of their sources; (2) the right of a state to require from another state the steadfast fulfillment of the international obligations before it; (3) the duty of the parties to do their best for full implementation of the obligations; (4) the duty of the party to ensure the exact fulfillment of the obligations according to all conditions envisaged in the respective source of international law; (5) the right of the other party (parties) to demand the exact performance of the obligations according to all conditions stipulated by the respective source of international law; (6) the duty not to participate in the agreements contradicting the provisions of the UN (1945); (7) the duty of the states to respect the legal capacity of each other in the sphere of the international rulemaking; (8) the duty to fulfill the obligations in good faith on the basis of the mutuality; (9) the right to receive the advantages and the benefits from the participation in the international agreements; (10) the duty to harmonize the internal legislation with the international obligations; (11) the duty to harmonize the respective actions concerning the implementation of the sovereign rights (in particular, the right to establish the laws and administrative rules) with the obligations under international law; (12) the duty to ensure the due functioning of the interstate mechanisms of the implementation of the international obligations; (13) the duty not to abuse the treaty rights, i.e., not to use them to the damage of the rights and legal interests of other subjects; (14) the duty to respect the obligations of other states according to international law; (15) the right of a state to require the respect for its international obligations from other

subjects of international law; (16) the right to obtain protection required for implementation of the rules of the international agreements and customs; (17) the right to terminate or change the obligations from the international agreements or customs in the cases, stipulated by the rules of the international agreements and other sources of international law (Zadorozhnii 2015).

3 Analysis of the Key International Law Documents

When defining the content of the principle of fulfillment of international obligations in good faith, the scientists state both the provisions characterizing the essence of this principle and the provisions concerning its application procedure, separate aspects of implementation, as well as trace the content of the principle in the sphere of the sources of international law, to which the said principle applies (Tiunov 1979). The special attention is paid to such important element of the principle of fulfillment of international obligations in good faith as the good faith, identifying how the obligations shall be fulfilled.

When characterizing the good faith of fulfillment of the international obligations, the scholars emphasize such features as accuracy of fulfillment of the obligations undertaken by the states (Tiunov 1979), correspondence of the actions of the states not only to the “letter,” but also to the “spirit” of the agreement (Zadorozhnii 2015); fair attitude to the obligations undertaken (Tiunov 1979); fullness of performance of the international obligations, etc.

The principle of fulfillment of international undertakings in good faith is envisaged in the key international documents such as the Statute of the United Nations signed on June 26, 1945 (UN 1945), the Vienna Convention on the Law of Agreements as of May 23, 1969 (UN 1969), the Declaration about Principles of International Law touching Friendly Relations and Cooperation between States according to the Statute of the United Nations, accepted by the resolution of the General Assembly of the United Nations as of October 24, 1970 (UN 1970), the Helsinki Final Act of the Conference on Security and Cooperation in Europe as of August 1, 1975 (OSCE 1975).

Considering the provisions of the Declaration about Principles of International Law touching Friendly Relations and Cooperation between States and the Helsinki Final Act of the Conference on Security and Cooperation in Europe, the following understanding and interpretation of the content of the principle of fulfillment of international obligations in good faith may arise: “*every State has the duty to fulfil in good faith the obligations assumed by it under international law, both those obligations arising from the generally recognized principles and rules of international law and those obligations arising from treaties or other agreements, in conformity with international law, to which they are parties*” (OSCE 1975).

“Where obligations arising under international agreements are in conflict with the obligations of Members of the United Nations under the Charter of the United Nations, the obligations under the Charter shall prevail” (UN 1970).

“In exercising their sovereign rights, including the right to determine their laws and regulations, the states shall conform with their legal obligations under international law” (OESC 1975).

On the basis of the conducted research and generalization, the following definition may be proposed: “the principle of fulfillment of international obligations in good faith is a generally recognized, universal, systemic and basic rule of international law, reflecting the duty of the subjects of international law to fulfill in good faith all international obligations under international law. The principle of fulfillment of international obligations in good faith has a very important meaning for maintenance of the international peace, international security and for the implementation of other principles and rules of international law.”

The special meaning of the principle of fulfillment of international undertakings in good faith for maintenance of the international peace and safety was emphasized by the General Assembly pursuant to the Declaration about Principles of International Law touching Friendly Relations and Cooperation between States according to the Statute of the United Nations, that proclaims that “the faithful observance of the principles of international law concerning friendly relations and cooperation among States and the fulfillment in good faith of the obligations assumed by States, in accordance with the Charter, is of the greatest importance for the maintenance of international peace and security and for the implementation of the other purposes of the United Nations” (UN 1949)

In the Resolution A/RES/4/290 “290 (IV). Essentials of Peace” as of December 1, 1949, the General Assembly also “Calls upon every nation ... To carry out in good faith its international agreements” (UN 1949). The same great meaning for the humankind, maintenance of the international peace and safety has the radical principle of the headship of law. The requirements regarding the realization of the headship of law are determined in many international legal acts. Thus, the Preamble of the Convention for the Protection of Human Rights and Fundamental Freedoms signed in Rome on November 4, 1950, proclaims that “the governments signatory hereto, being members of the Council of Europe, ... Being resolved, as the governments of European countries which are like-minded and have a common heritage of political traditions, ideals, freedom and the rule of law, to take the first steps for the collective enforcement of certain of the rights stated in the Universal Declaration” (ECHR 1950).

However, that the principle of the headship of law is often enshrined by states straight from the constitutions, internal legal acts, and is regarded in terms of the national legal regulation, this principle plays a significant role for the international legal regulation.

The United Nations Millennium Declaration accepted by the General Assembly of the United Nations states that the heads of State and Government, that gathered at United Nations Headquarters in New York from September 6 to 8, 2000, resolve to “strengthen respect for the rule of law in international as in national affairs ...” (UN 2000a, b).

Simultaneously, there is no single approach to the interpretation of the headship of law. For example, the Report of the Secretary-General of the United Nations “The

rule of law and transitional justice in conflict and post-conflict societies” of 2004 states that the headship of law “refers to a principle of governance in which all persons, institutions and entities, public and private, including the State itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights norms and standards” (UN 2004).

Recognizing the central role of the principle headship of law, the General Assembly adopted the Declaration of the High-level Meeting of the General Assembly on the headship of Law at the National and International Levels as of November 30, 2012 (UN 2012). By the said Declaration, the states reaffirm their “commitment to the rule of law and its fundamental importance for political dialogue and cooperation among all States and for the further development of the three main pillars upon which the United Nations is built: international peace and security, human rights and development” (UN 2012).

According to the said Declaration, the states “recognize that the rule of law applies to all States equally, and to international organizations, including the United Nations and its principal organs, and that respect for and promotion of the rule of law and justice should guide all of their activities and accord predictability and legitimacy to their actions” (UN 2012), and that “all persons, institutions and entities, public and private, including the State itself, are accountable to just, fair and equitable laws and are entitled without any discrimination to equal protection of the law” (UN 2012).

The Declaration provides for a variety of provisions and points characterizing the headship of law. The Declaration indicates that the “States shall abide by all their obligations under international law” (UN 2012), and stresses “the need to strengthen support to States, upon their request, in the national implementation of their respective international obligations through enhanced technical assistance and capacity-building” (UN 2012).

The characteristics of the headship of law principle on the Web site of the United Nations contain the link to the Statute of the United Nations, namely to the Preamble of the Statute, stating that the peoples of the United Nations are determined “to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained.”

It shall be mentioned that one of the goals of the United Nations stipulated in the Statute of the United Nations is “to maintain international peace and security” (UN Statute 1945). Herewith, Article 2 of the Statute of the United Nations envisages the principles of the United Nations and stipulates the following: “The Organization shall ensure that states which are not Members of the United Nations act in accordance with these Principles so far as may be necessary for the maintenance of international peace and security” (UN Charter 1945).

In the Report of the Secretary-General of the United Nations about the work of the Organization in 2000, the Secretary-General also emphasized the aim envisaged in the Statute of the United Nations that is “to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained” (UN 2000a). The Secretary-General specified: “It is not enough for States simply to give their consent to be bound by treaties. If

the peoples of all nations are to participate in the emerging global legal order and enjoy its benefits, States must also respect and implement the obligations that the treaties in question embody. Realizing the promise of the framework of global norms developed by the international community is of critical importance. Without such a commitment the rule of law in international affairs will remain little more than a remote abstraction” (UN 2000a).

The European Commission for Democracy through Law (Venice Commission) in its report regarding the headship of law states the definition of Tom Bingham in which most fully considered the basic elements of the headship of law: “all persons and authorities within the State, whether public or private, should be bound by and entitled to the benefit of laws publicly made, taking effect (generally) in the future and publicly administered in the courts” (COE 2016).

However, as the scientists state, an exhaustive definition of the headship of law cannot be given. For the comprehension of the principle of fulfillment of international obligations in good faith and the headship of law principle, it is necessary to deduce the contact between these principles, their reference to each other.

Herewith, the interconnection between the principles of international law is emphasized in the Helsinki Final Act as of August 1, 1975, stating that “all the principles set forth above are of primary significance and, accordingly, they will be equally and unreservedly applied, each of them being interpreted taking into account the others” (UN 2018), and in the Declaration about Principles of International Law touching Friendly Relations and Cooperation between States, envisaging that “in their interpretation and application the above principles are interrelated and each principle should be construed in the context of the other principles” (UN 1970).

As can be seen above, the principle of fulfillment of international obligations in good faith is often considered (including the documents of the United Nations) as one of the elements needed for the realization of the headship of law principle.

With that, the execution of the international obligations in good faith is considered as fulfillment according to the “letter” and the “spirit” thereof (American Society of International Law 1935), according to the rule of law. The process of fulfillment of the international obligations and enjoyment of the rights according to the rule of law shall correspond with the content of the principle of fulfillment of international obligations in good faith.

As scholars state, the principle of fulfillment of international obligations in good faith “contains the source of the legal force of international law” (Lukashuk 1996; or Encyclopedia of International Law 2014). Thus, the meaning of this principle for the realization of the headship of law principle in international law is obviously significant.

Therefore, the realization of the principle of fulfillment of international obligations in good faith shall be conducted according to the headship of law principle and, withal, the rule of law principle cannot be implemented without the implementation of the principle of fulfillment of international obligations in good faith. These two principles are interdependent.

4 Conclusions

Overall, considering the leading role of the principle of fulfillment of international obligations in good faith and the headship of law principle for maintenance of the international peace and security, the understanding of the interconnections between these principles is required for understanding each of them and their role. Our paper and its main results attempt to do just that.

All in all, our results pave the road for the new approach to the understanding of the headship of law principle and the principle of fulfillment of international obligations in good faith in the modern international law in reference to each other. Such separate approach was not used for understanding of the said principles before and was not analyzed in the scientific literature.

One would probably agree with us that for achievement of the goals stated by and imposed by the United Nations, maintenance of the international peace and safety the states shall develop their international relations according to the fundamental principles of fulfillment of international undertakings in good faith and the rule of law which find their implementation in reference and compliment to each other.

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Mathematical Analysis of Political Leadership in Modern Russia



Valeriy Zarubin and Vera Makaridina

Abstract Our paper focuses on the main trends and prerequisites of the modern political process. It concentrates on the political processes in Russian Federation in the recent decades to figure out the most common trends and tendencies. We advocate that the usage of mathematical research methods represents a pathway for the rational studying and understanding of the political process. Recent events with the British company Cambridge Analytica that used big data approach and artificial intelligence (AI) algorithms to harvest users' data on Facebook with the purpose of building voters' profiles in accordance with the principles of Top 5 Personality features (also known as the OCEAN model), show how important, yet dangerous and volatile the use of analytics might be in modern democracies. Even though, we do not have the same ambitions as the British political marketing company, our findings in the mathematical substantiation of the multiplicity of political parties and their effective number allow us to structure the political process in modern Russia and determine its main historical stages and trends.

1 Introduction

Generally, understanding the social and political processes from the standpoint of rationalism is essential for the interpretation of various phenomena occurring in modern Russia. Rationality is not just a basic ideological principle, but also acts as a measure of understanding the object under study. Outwardly, the political process is a stream of contradictory social practices. As a result, the sociologist acts not just as an observer fixing this stream, but as a researcher seeking to understand the internal

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logic of phenomena. To realize this task will allow the union between sociological and formal-mathematical knowledge.

Many social processes, including political ones, are amenable to mathematical description. First of all, these are processes that are described by numerical characteristics: resources of power, votes. A significant indicator in the analysis of political processes is the numerical characteristics of competing political parties.

The use of mathematics and analytics in politics and especially political marketing has been employed for quite a long time now; however, it gained special public attention after the recent scandal with Cambridge Analytica, a company from the UK that based its analytical tools on the works of the Psychometrics Centre of the Cambridge Judge Business School at the University of Cambridge. Early in 2018, it became known that Cambridge Analytica developed and trained an artificial intelligence (AI) algorithm that was powered by the vast study of users behaviour on Facebook (according to some accounts, about 40 million profiles were used, most of them without their owners knowing that they were participating in the study) and allowed micro-targeting of Internet users in order to significantly influence their political decisions (Ward 2018). All in all, the power of mathematics in politics proves to be a powerful tool that cannot be ignored or neglected (de Beer et al. 2015; Kollmannová and Matušková 2014; Čábelková et al. 2015; or Persily 2017).

Our paper focuses on the mathematical analysis of political leadership in modern Russia. In general, mathematical model of a political process can be done in a form of a numerical or algebraic expression, or for example a graph, as well as in a form of an index (Milonakis 2017). The model is a simplified analogue of the phenomenon. Simplifying the picture of the real political world makes it possible to analyse it by means of mathematics and obtain an objective result. It should be remembered that the main purpose of calculations is not the order of numbers, but their interpretation. The construction of a mathematical model of a real situation requires a deep analysis of this situation.

2 Mathematical Tools for Assessing Political Processes

The index of the effective number of political parties is among the instruments that characterize the success of the union of sociology and mathematics. Detailed overview of the cognitive abilities of indexes can be derived from the works of many researchers working in the field of political studies, international relations, or political marketing (see, e.g., Matušková and Strielkowski 2014; Stoet and Geary 2015; Hošťovecký and Poláčik 2016; Schmitter 2016; Konyukhovskiy and Holodkov 2017; Baldwin-Philippi 2017; Kahan et al. 2017; or Matveychev 2018). In general, all of the studies and research papers mentioned and cited above can be summarized with one single unifying idea: the ideal measure of an effective number of parties simply does not exist or is too complicated to be derived even though some make these attempts with a varying degree of success (Di Salvo and Oliveri 2017).

The use of this political index is an example of the successful interaction of sociology and mathematical sciences in the field of the formation and evolution of the party system in the Russian Federation. Using the procedure for finding the index of the effective number of parties, one can reveal the content of the process of institutionalization of political parties. Moreover, the assessment of the influence of political parties on the decision-making process in the legislative branch of power can also be substantiated. Moreover, this index can be used to determine the creative potential of regional party systems or even applied as an effective tool for analysing party and electoral systems.

In our opinion, at the same time, the cognitive potential of the index of the effective number of political parties cannot be limited to research only in the field of typology of party systems. The use of this index allows to overcome one-sidedness in the study of such a multifaceted phenomenon as a political process. Modern Russian researchers focus on certain aspects, for example, by drawing attention to the socio-psychological feature, or to marketing and technology, or stressing the value and ideological dimension of the political process.

3 Effective Number of Political Leaders

In general, one would agree that the index of the effective number of parties allows us to reveal a significant deal on and about the modern political regimes. Moreover, it allows us to fix the relationship between the number of political parties and the number of votes casted for them during elections.

The discovery of such a relationship reveals the following attributes: (a) spatial, (b) temporal characteristics, as well as (c) the number and (d) the degree of participation of actors in the political process. Together, these characteristics constitute a political process.

In modern Russia, the political preferences are quite diverse (Greene and Robertson 2017). Similar to other democracies, it has several “big players”—major political parties that dominate the political spectre. Figure 1 shows the ratings (expressed in preferences in %) for the major political parties in Russia between 2006 and 2018. The parties gaining more votes are the United Russia (UR), Communist Party of Russia (KPRF), Liberal Democratic Party of Russia (LDPR), and Just Russia (JR).

The political process is a dynamic characteristic of political life. The existing framework and rules in force in Russia create an equal space for participants in the political process (Kozlov 2017). This space provides conditions for competitive rivalry between major and minor actors. In addition, the peculiarity of political confrontation influences the forms of political participation and the mobilization actions of actors. And finally, in the course of the development of the political process, a mechanism is created for a stable connection of society with political structures.

There is an objective relationship between the dynamic characteristics of the political process and the number of political parties participating in elections. Its essence lies in the fact that the election procedure allows you to determine the actual

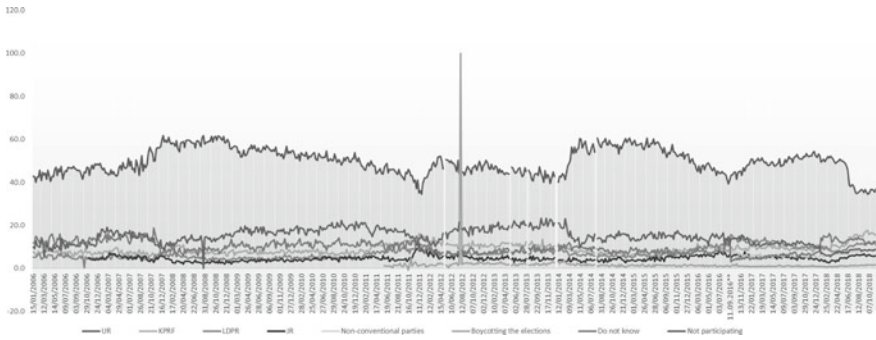


Fig. 1 Rating of the political parties in Russia (2006–2018) *Source* WCIOM (2018)

number of participants capable of articulating public interests in a specific period of time.

4 Empirical Model

Using empirical models (mostly mathematical and statistical ones) in deriving political outcomes or predicting the winners of elections and polls have been used for a long time. Several researchers specialize in learning analytics and deriving complicated models or software in order to study politics (see, e.g., Kazan et al. 2015; or Perrotta and Williamson 2018).

Our approach to this problem is more simplistic, yet quite effective. The formal-mathematical procedure proposed by the authors of this paper (see Eq. (1) allows, along with the characteristic of the number of batches, to determine the effective number of batches in the political elections. It is calculated by the following formula:

$$N = 1 / \sum (p_i)^2 \tag{1}$$

where p_i —the share of votes received by the i -th party in the elections.

Based on the proposed formula, it becomes possible find out whether there is a correspondence between the real number of political actors and their effective number when forming representative bodies of power in the Russian Federation. The data of electoral statistics for 1993–2016 reported in Table 1 that follows was amended and used from the website of the Central Election Commission of the Russian Federation (2018).

The results presented in Table 1 indicate that the political process in modern Russia can be divided into three periods:

- The first period was the time of political transformation. If, in 1993, 13 political actors took part in the elections to the State Duma of the Russian Federation, and

Table 1 Elections to the Russian Parliament (Duma) and main statistics

	First stage			Second stage			Third stage		
	1st convocation (1993)	2nd convocation (1995)	3rd convocation (1999)	4th convocation (2003)	5th convocation (2007)	6th convocation (2011)	7th convocation (2016)		
Elections to the State Duma of the Russian Federation	13	43	26	21	11	7	12		
The number of political parties participating in elections	8.6	11.6	7.0	5.6	2.3	2.8	2.6		

Source Own results based on the Central Election Commission of the Russian Federation (2018)

their effective number was 8.6, then in the 1995 elections 43 political actors, the effective number was 11.6. This period is characterized by an active search for new participants in the political process.

- The second period was the time of political stabilization. If 26 political actors took part in the 1999 elections to the State Duma, and their effective number was 7.0, then 21 political actors took part in the 2003 elections, and the effective number was 5.6. During this period, there was a grouping of the main political forces involved in the struggle for seats in the highest legislative body;
- The third period is a time of sustainable political development. If in the elections to the State Duma in 2007—11 political actors took part, the effective number was 2.3; in the elections of 2011—7 political actors took part, the effective number was 2.8; and then in the elections of 2016—12 political actors took part, the effective number amounted to 2.6. During this period, a stable group of political actors was formed who followed the rules of the political game.

Therefore, based on our results we can come to a logical and definite conclusion that the use of the method of mathematical indexing, firstly, helped to avoid the subjectivism embedded in the value-ideological and psychological approaches, and, secondly, allowed us to reduce the complex political whole to a single, quantitative indicator.

In addition, with the help of our political index, it was possible to detect trends inherent in the political process in modern Russia: the first (an increase in the number of parties) indicates the need for political change; the second (reduction in the number of parties) is about the stability of the political regime; the third (stabilization of the number of parties) creates conditions for the formation of a party system with a limited number of parties (no more than 2–3 political actors).

5 Conclusions and Discussions

Overall, one can see that finding a healthy balance in political systems represents a difficult task. Determining an optimal number of political leaders represents an enormously complicated matter. However, the tools of mathematical modelling allow us to make certain predictions and prognoses.

Our results demonstrate that mathematical indexing applied to political markets can provide answers for the optimization of the political realm in a country or a group of countries. Moreover, it allows us to get rid of the subjectivism embedded in the ideological and psychological approaches to political sciences and political marketing. We designed and tested a quantitative indicator that can be used for mathematical substantiation of the multiplicity of political parties and their optimal number of political processes. Our results are based on and derived from the data on modern Russia and include the main analysis of its main stages and trends. However, we think that they can also be applied in different countries where a multiparty

democratic system is in operation and in place. Our model allows to determine and predict political leaders that would most likely share the power in a given country.

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Conclusions and Policy Implications for Business and Academia



Anetta Zielińska and Wadim Strielkowski

Abstract This paper provides some concluding remarks and outlines the main implications for the proceedings of ESAL2018 conference held in Prague, Czech Republic, during 13–14 September 2018. The title of the conference was “*Sustainable leadership for entrepreneurs and academics*”, and during the discussions and presentations that it encompassed, many novel and useful ideas for business and academia emerged. The conference and the book of proceedings that emerged from it enhanced an advanced debate on the sustainable leadership for entrepreneurs and academics. We had a whole array of papers dealing with various types of approaches to leadership. However, what lots of them had in common was the message on the importance of information as a key market product and a valuable commodity that would shape up the world of the first half of the twenty-first century. This paper summarizes some of the most common occurrences and findings on the role and the place of information and its role in supporting sustainable leadership for entrepreneurs and academics.

1 Introduction

One would probably agree on the central place of leadership in the future sustainable development of business and education. Strielkowski and Chigisheva (2018) provided a comprehensive analysis of that which yielded in an edited book of proceedings *Leadership for the Future Sustainable Development of Business and Education* that embedded the peer-reviewed contributions from the first international conference “Social, economic, and academic leadership for the future sustainable development of business and education” held in Prague, Czech Republic, on 12–15

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September 2017 by the Prague Institute for Qualification Enhancement (PRIZK) and International Research Centre “Scientific Cooperation”. Sustainable leadership for entrepreneurs and academics (ESAL2018) was the second conference of the same series dealing with other aspects of leadership. Both conferences generated many novel and useful ideas for business and academia. However, one common topic that came through many contributions as the red thread was the notion that information represents the new (soft) power of the twenty-first century and that it is absolutely crucial for shaping up the future leaders and leadership concept.

This short concluding paper summarized some conclusions and policy implications for business and academia based on our experience with preparing and organizing ESAL2018 conference and reviewing and preparing papers for its book of proceedings.

2 Leadership and Information

Information is a key category in a modern society and in the economy based on knowledge (Gałka et al. 2016). With regard to this, Zielińska (2016) states that information plays a number of essential functions in the economy, especially an informative, decisive, controllable and consumable functions. Moreover, Zielińska (2016) also defines information as: “*the flow of data or truths formulated in the sequence of signs of a certain language from the sender to the receiver*”. One would probably agree with us that information has three main attributes:

- a sequence of signs distinguished in a certain language;
- a matter that always occurs with its carrier (either in any physical form of matter or energy perceived by senses or appropriate instruments which transform it so that it could be perceived by senses);
- a category that makes sense only when there are its sender and receiver (when the parties are aware of the mutual process of communication, the information sent between them has the nature of a message, but when the only party aware of reception is the receiver of information, then it has the nature of news).

Nowadays, information became a market good that can be bought and sold, as well as stored and transported. It is easy to see that information can be perceived as: (i) an economic resources and production factor; (ii) a product or commodity; or (iii) an infrastructure of economy and public good. This is also in accord with the findings of Czaja and Becla (2007) who state that economic resources are all the forms of reality which can be used in management.

Furthermore, information helped to launch a digital era in academia. Strielkowski (2018) contemplates over the role of information in the academia and fantasizes over the idealistic job advert for an ideal post-doc in a digital era. According to him, such an advert would look something like that: “*An Ivy League University is announcing a call for the ideal post-doc position. We are a cronyism-free workplace. Are you approaching 40 and still without a tenure? Join us and let the Matthew effect boost*

your career. Your main duty will be to publish extensively—your publication output is more important for you (and for us) than any teaching or administrative obligations. Our prestigious location incurs high living costs. But in the digital epoch and you can work remotely. Moreover, there is some flexibility in start date, remuneration, and part-time working. Please contact us to discuss your preferences” (see Strielkowski 2018).

The job advert presented above might seem uncompromising to many people. However, this is what really happening in science and education nowadays. Internet helped us to free our labour and enabled the scientists from all over the world to collaborate. In the same time, it also helped education by enabling teaching and the exchange of ideas and materials using webinars, interactive classrooms and various learning management systems.

Nevertheless, the abundance and the availability of information in both business and academic also often lead to its overflow. Consumers, researchers and students alike can get overloaded with information which decreases the threshold for its meaningful absorption and processing. With regard to the above, Oehler and Wendt (2017) or Magnini and Dallinger (2018) provide various examples of consumer information overload. Moreover, Lee et al. (2017) describe the effects of news consumption via social media. They also mention the news information overload on perceptions of journalistic norms and practices. This is of a special importance for our debate since the phenomenon of “fake news” and fabricated stories that became today’s grim reality would not be possible without the information boom. Unfortunately, one cannot longer believe everything what she or he sees on the news or reads in a newspaper or magazine. All information has to be filtered, verified and critically processed before it can be used in any spheres of economic and social life.

3 Concluding Remarks

The progress in business and education made it a lot easier for all of us to access the information of any kind and at the astonishing speed. However, it also made the quantities of generated information to increase on the unprecedented scale. A situation arises when the rapid spread of information space does not coincide with the adequate development of techniques and methods used for searching and processing the information for its further efficient use. As a result of this, we are facing a dangerous paradigm, when most of the humans are not capable of filtering the extensive volumes of information fast enough. All of the above might lead to serious threats to personal and national security, as well as to distortions and collapses on business markets and in the academic and educational space.

We think that those of us who will become the future leaders in business and academia are those who will be the pioneers in handling information properly. Harnessing the information flows pouring over us from each direction and extracting the valuable grains of wisdom from it is what will shape up the leadership in business and academia throughout the twenty-first century.

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Conclusions: What are the Challenges for the Sustainable Leadership for Entrepreneurs and Academics?

Wadim Strielkowski

To conclude our volume of Proceedings entitled *Sustainable Leadership for Entrepreneurs and Academics* which is based on the results and outcomes of the second International Conference “Sustainable leadership for entrepreneurs and academics” (ESAL2018) held in Prague, Czech Republic, during 13 and 14 September 2018 by the Prague Institute for Qualification Enhancement, I would like to ask ourselves as well as our potential readers one important question, namely: “*What is the essence of the sustainable leadership for entrepreneurs and academics and what are the challenges one has to face in the 21st century to reach it?*”.

Overall, I tend to think that leadership, whether in its entrepreneurial or in its academic form, is becoming a necessity for the sustainable development of business and education in the highly globalized world of the twenty-first century. The world we live in keeps adapting and changing.

The main results and outcomes of the second PRIZK International Conference on ESAL2018 might speak for themselves and give us all plenty of food for thought.

Best wishes,
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