Knowledge Management and Organizational Learning 6

Elena-Mădălina Vătămănescu
Florina Magdalena Pînzaru *Editors*

Knowledge Management in the Sharing Economy

Cross-Sectoral Insights into the Future of Competitive Advantage

Springer

Knowledge Management and Organizational Learning

Volume 6

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ISSN 2199-8663 ISSN 2199-8671 (electronic)
Knowledge Management and Organizational Learning
ISBN 978-3-319-66889-5 ISBN 978-3-319-66890-1 (eBook)
https://doi.org/10.1007/978-3-319-66890-1

Library of Congress Control Number: 2017957061

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

What is best for our societies? How should the economy be managed? These questions have long been central not only in the academic debate but also in the practical lives of the common people.

The past century has been particularly characterized by a sharp contrast between two different ways of seeing the economy. On the one hand, the economic liberalism assumes that the maximum social welfare can be reached by means of the automatic coordination (via markets) of the single "independent egoism" of each individual. On the other hand, in centralized or planned economies, the property and management of the production factor—and the decisions about what individuals should produce and consume—are taken by a single "totalitarian" institution, generally in the hands of a few people.

Unfortunately—or fortunately, who knows—the world is much more complex than the two "simplified views" previously mentioned which, if they are put into practice at their maximum extension, also produce negative effects, injustice, and social asymmetries. Those of my age surely remember the days of the "fall of Berlin Wall" when, apparently, a bright future and a new age of freedom would have started with the collapse of the champions of the centralized economy: the Socialist governments of Soviet Union and Eastern Europe. Very quickly, however, it became clear that the "model that won the competition," that of the market economy, may not be "THE solution" to all our problems: it has its limitations, and especially it can't be purely applied to any local situation in the same way. The economic crisis that has heavily struck all countries of the world after 2008 or around has made these limitations emerge clearly. So, what?

The term "sharing economy" emerged more or less in those years. Its historical antecedents can be easily found in the ideas of mutualization and social cooperation, which have often characterized particular situations in human history where people became aware that it was impossible to "do everything by themselves" and was necessary to merge the forces to face challenging cases. The "new" notion of sharing economy is generally associated with innovative environments and technologies that make it possible to find new ways of producing, buying, selling, and consuming goods, namely, online markets and social media platforms. Not only new business models (think for example of Airbnb or Uber) have become possible but also "collective" economic structures (like consumer buying groups) or entirely

new ways of taking individual decisions based on the collective help of others (consider, for example, the amazing success of "review-based purchasing" such as that based on TripAdvisor and similar platforms).

Is the sharing economy the real "third way" for humanity to manage economy and economic interactions more efficiently but also more fairly compared to the "traditional" models mentioned above? What is beyond the development of the sharing economy and its proper functioning? What mechanisms and tools are really appropriate? And to sum up: what can we really share, and what it is better we don't?

The merit of the Book "*Knowledge Management in the Sharing Economy—Cross-Sectoral Insights into the Future of Competitive Advantage*" is that it sheds light on a crucial aspect of the sharing economy that has, however, not always been recognized: the connection between sharing economy and knowledge management. Indeed, knowledge is a crucial point for a sharing economy. First of all, to share something, we need "to know" what to share, "to learn" what the others can do for us and with us, and "to understand" how the reciprocal assets can be integrated for the benefit of everybody. Also, for knowledge management, the term itself "sharing" has a key meaning: since knowledge is not simply a piece of goods whose property can be traded like any other material product, "sharing knowledge" is recognized as an essential process.

The Editors, Elena-Mădălina Vătămănescu and Florina Magdalena Pînzaru, were particularly able to collect a selection of contributions that lie on the frontier of this fascinating field. It is a balanced combination of conceptual analyses and of practice-led investigations. Also, the Volume proposes a number of distinct but integrating views that, for sure, will catch the interest of all readers, both those who are looking for key references in this emerging area and those who demand more sophisticated analyses. I am sure that all these readers will enjoy the book, just like I did.

Padova, Italy Ettore Bolisani

Introduction

At the end of the 1990s, the academic business world was marked by the enthusiasts of the *new economy* concept, referring to the rising Internet economy, thought to lead to a striking change in the economic paradigm. The breaking of the Internet bubble proved the utopian characteristic of this enthusiasm, and, for the next decade, the so-expected new economy has already turned into "old-fashioned news."

However, in 2017, the unprecedented expansion of the sharing economy has revealed a novel and promising facet: now we are fit to talk about a transformative economic philosophy that alters the rules of the game in an increasingly visible way. New business models have exponentially emerged, along with new forms of competition and new challenges for governments trying to regulate (or not) new markets developed by business players such as Uber or Airbnb. The digital-based sharing economy springs up as the *new economy*, with a development favored by advanced and accessible technologies and by more and more fluid geographic barriers.

The fast-spreading sharing economy is concurrent with the rapid rhythm of the Artificial Intelligence (AI) systems, growing from the twentieth-century algorithmic systems to self-learning machines. In short, we are witnessing a revolutionary transformation challenging businesses to learn how to operate in the sharing economy framework, where efficient automatic software robots cover routine activities and processes.

To learn seems to be the pivotal term defining today's business landscape. Now more than ever, it is time for the rise of knowledge management, operationalized via continuous, proactive, and systematic practices, within various types of organizations and networks operating in the sharing ecosystem. Within the boundaries of the present paradigm, *to learn* is not a fashion anymore but an imperative and exigency of the competitive advantage within global dynamics.

Based on a twofold approach, as objectivized in its two parts (i.e., Part I *Keeping Pace with the Sharing Economy: From Concept to Practice* and Part II *Knowledge Management in the Sharing Economy: Edges and Hedges*), the volume is intended to glide from "The Crazy New World of the Sharing Economy" (Chap. 1)—based on P2P tech-enabled platforms—toward "Beyond Innovation: The Crazy New

World of Industrial Mash-ups" (Chap. 14)—anchored in the B2B "emerging industrial sharing economy."

By sharing our vision with both academics and practitioners, we hope that all the 14 chapters on knowledge management in the sharing economy, written by 35 authors from 11 different countries and 16 different European universities, will provide readers with substantive cross-sectoral insights into the future of competitive advantage.

Enjoy your lecture!

The editors

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Part I

Keeping Pace with the Sharing Economy: From Concept to Practice

The Crazy New World of the Sharing Economy

Constantin Bratianu

Abstract

The purpose of this chapter is to explore the new ideas promoted by the sharing economy and to explain the novel business models operating in today's turbulent economic environment. Sharing economy departs from the existing economic structures and focuses on ownership, by promoting flexible networking architectures and free access to sharing resources and activities. Considering Uber as a symbol of the new business dynamics, the chapter reveals some of the emerging changes and their role in shaping the new business environment. Uber comes with a new business model which is based on ownership outsourcing and the transformation of its drivers from employees into microentrepreneurs. The whole business operation is done through a powerful digital platform which provides fast connections between the managers, drivers and people using transportation services. Also, Uber introduces a price dynamics mechanism which computes the transportation costs as a function of demand and supply in that particular context and time. This system constitutes and effective core competence for achieving competitive advantage.

1 Introduction

The *sharing economy* has become a hot topic of many debates and economic interpretations, as "around the world, this new wave of peer-to-peer, access-driven business is shaking up established categories" (Yang et al. 2017, p. 48). Pursuant to

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_1

different researchers in the field (Belk 2014; Cannon and Summers 2014; Cohen and Kietzmann 2014; Richardson 2015; Smith 2016; Sundarajan 2014; Wirtz and Tang 2016), the most known players in this new economic environment are the following: *Uber* and *Lyft* in transportation; *Airbnb* in lodging; *LendingClub*, *FundingCircle* and *Prosper* in financial services.

The sharing economy appears as a new power in the business environment because of the new business models promoted and the decisive role played by digital platforms in managing knowledge and connections. These novel models display a large spectrum of new features and scales, but their core competence remains the same: sharing. The most known examples are about sharing space, like in the tourism industry, sharing rides, like in transportation industry, sharing activities, like in household maintenance, or sharing investments, like in financial transactions. Sharing applies to tangible things as well as to intangible ones, that is, from sharing rooms or washing machines to sharing activities and knowledge.

The sharing economy comes with new ideas which, at the beginning of their lifecycle, may be considered crazy, but that is just an interpretation based on the existing framework of normative regulations and cultural values. The new ideas are seen as crazy just because they do not fit the old paradigms of business, but, in time, they will become the new norms of making business. Consequently, the purpose of this chapter is to analyze the emergence of the sharing economy, focusing on its key players like Uber and Airbnb, and to identify the features of these cutting-edge business models and their potential changes in the business environment. In line with Heimans and Timms's statement (2014), "new power operates differently, like a current. It is made by many. It is open, participatory, and peer-driven. It uploads, and it distributes. Like water or electricity, it's most forceful when it surges. The goal with new power is not to hoard it but to channel it". Here, the new power of the sharing economy looks like chaos-like activities, without any specific structuring process, but this chaos unfolds a deep order of sharing and a paradigmatic switch from managing tangibles to managing knowledge, based on digital platforms and the advent of Big Data.

2 Paradigm Shifting as a Result of Some Crazy Ideas

Kuhn (1970) introduced the concept of "paradigm" to define a shared thinking model in the "normal science", with respect to a given phenomenon or a class of similar phenomena. New ideas enter with great efforts and time consuming in the scientific thinking due to their crazy assumptions. "Normal science, for example, often suppresses fundamental novelties because they are necessarily subversive of its basic commitments. Nevertheless, so long as those commitments retain an element of the arbitrary, the very nature of normal research ensures that novelty shall not be suppressed for very long" (Kuhn 1970, p. 5). Crazy new ideas cannot be confined to the existing framework of normal science, technology or business. They get outside the box and try hardly to create a new perspective of thinking. But they should be also able to endure the energetic opposition coming from the

establishment, by finding solid facts and arguments for their further development. When their coherence and validity are demonstrated and people can accept them, a shifting paradigm takes place.

Any new idea that shakes the existing model of thinking and cannot be explained by the known laws of science and technology is considered "a crazy idea" in a first stage of its life cycle. Consider for example the reactions triggered by the new model of the universe proposed by Nichoalus Cepernicus (1473–1543), in his book *De revoltionibus orbium caelestium*, which reversed the positions of the Earth and the Sun in the architecture of the universe. Until that moment the cosmological paradigm called *geocentrism* put the Earth in the center of the universe, while the Sun was revolving around it. The new paradigm, called *heliocentrism,* claimed that the Sun is in the center of the universe and the Earth is revolving around it. That revolutionary idea was contrary to the human perception of the relative motion between the Sun and the Earth and produced a mental earthquake in society. Anticipating the danger coming from the new Copernican paradigm, the Church came into play and imposed drastic measures against the scientist who championed the new cosmological ideas. Giordano Bruno (1548–1600), a Dominican friar, philosopher, mathematician, poet and cosmological theorist who promoted the new heliocentric model of the universe, was condemned for heresy by the Roman Inquisition and sentenced to execution by burning. Even the great polymath Galileo Galilei (1564–1642) was forced by the Roman Inquisition to question his heliocentrism and Copernicanism ideas which were considered foolish and absurd by the Church (Gribbin and Hook 2004; Stillman 1990).

When Thomas Alva Edison invented the phonograph in 1877, a mechanical device for recording and reproduction of sound, many people accused him of being a ventriloquist with crazy ideas. His new and revolutionary idea of recoding the human voice could not be accepted so easily by the society. It is interesting to recall the astonishment produced by one of his first presentations of the phonograph in front of a knowledgeable audience, The American Academy of Sciences (Conot 1980, p. 127): "The speaking phonograph has the honor of presenting to the Academy of Sciences—a metallic voice uttered from the instrument. Following that introduction, Batchelor shouted, sang, whistled and crowed like a rooster into the diaphragm. When the machine repeated the sounds, two or three girls in the audience fainted". People in the audience could hardly accept that human voice was coming from a mechanical device. A Yale professor wrote in the article published by the *New York Sun* that "The idea of a talking machine is ridiculous" (Conot 1980, p. 128). Today, when human voice can be generated by computers, we smile at those stories, but they reflect the reaction of people when disruptive technologies or innovations are confronting with the incumbent paradigms of science, technology and business. Moreover, when some people understand the new ideas, but feel the possible threats posed to their business, they energetically oppose their promotion.

In the first half of the nineteenth century, there were conducted several experiments in Europe with the new power of the steam engines used in transportation. For instance, in England, some inventors put omnibuses powered by steam engines on the roads. Some of these new vehicles operated for lengthy periods on

regular routes with excellent records of punctuality and safety. The crazy "horseless carriages" created competition to the stagecoach companies which saw the danger menacing their business. As a result, they reacted through political forces by imposing discriminatory tolls and fees, and by passing the "red flag law" in 1865. That law "limited self-propelled vehicles on public highways to a maximum of four miles an hour and required that each be preceded by a man on foot carrying a red flag. This law remained in force until 1896. It was a short-sighted piece of legislation whose only perceptible consequences were to cut off a promising development in highway transportation and retard the growth of the British automobile industry" (Rae 1965, p. 3).

Analyzing the correlations between technology revolutions and the reaction of society, Drucker (1972) emphasizes the need of social and political innovations liable to produce new institutions able to support the technological progress. "The new institutions have to be appropriate to specific needs. There are right social and political responses to technology and wrong social and political responses. To the extent that only a right institutional response will do, society and government are largely circumscribed by new technology" (Drucker 1972, p. 48). Drucker's remarks can be extended to the business environment, especially to the disruptive business innovations which bring about some new and crazy ideas.

The fusion of today's business with information technology increases the gap between the normative paradigms and the new ones, a fact that generates sometimes vigorous reactions from society. At the same time, the new disruptive innovations are received with skepticism even by knowledgeable people. It is already famous the prediction made by the IBM Chairman, Thomas Watson, in 1943, regarding the future of computers "... there is a world market for maybe five computers" (Szczerba 2015). It is interesting to see some similar reactions to the new and crazy ideas embedded now in well-known products and services, reactions compiled by Szczerba (2015):

- 1876: "The Americans have need of the telephone, but we do not. We have plenty of messenger boys"—William Preece, British Post Office.
- 1876: "This 'telephone' has too many shortcomings to be seriously considered as a means of communication"—William Orton, President of Western Union.
- 1903: "The horse is here to stay but the automobile is only a novelty—a fad"—President of the Michigan Savings Bank advising Henry's Ford lawyer, Horace Rackham, not to invest in the Ford Motor Company.
- 1946: "Television won't be able to hold on to any market it captures after the first 6 months. People will soon get tired of starting at a plywood box every night"—Darryl Zanuck, twentieth Century Fox.
- 1966: "Remote shopping, while entirely feasible, will flop"—Time Magazine.
- 1995: "I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse"—Robert Metcalfe, founder of 3Com.
- 2006: "Everyone's always asking me when Apple will come out with a cell phone. My answer is, "Probably never'"—David Pogue, The New York Times.
- 2007: "There is no chance that iPhone is going to get any significant market share"—Steve Ballmer, Microsoft CEO.

Nowadays, when the new and crazy ideas are directly in conflict with the social, economic and political norms of society, the reaction of the political establishment is to block them by legislation. For instance, the Chinese government blocked the penetration of Internet in China for many years (Shiying and Avery 2009). Even today, there is a strong censorship and surveillance in China on social websites like Google, Gmail, You Tube, Facebook and Instagram. The government authorities control not only social media networks, but also individuals' activities when using them. The tight social control over these new digital businesses brought the nickname of "The Great Firewall of China" (as debated on Wikipedia).

From a bird's eye view, the sharing economy is about sharing many of the ideas presented above. Whatever experts say about it, the reality is that the sharing economy, in its early lifecycle stage, generated many opposing reactions from both established businesses and government authorities in many countries. Uber—almost a symbol of the sharing economy—produced many revolts from the cab companies in many cities all over the world, including USA, and raised many questions concerning its compliance with the existing economic regulations in a myriad of countries. Uber appeared as a disruptive business innovation, although some ideas about sharing have been borrowed from other social activities. In the next sections of the chapter, new ideas embodied in the *uberization* of business and the aggressive sharing economy will be further explored.

3 The Crazy New Ideas of the Sharing Economy

The new mantra of the managers should be "Change. Change. Change.". The business environment is in a continuous flow of change, with many disruptive innovations which create a huge pressure for decision makers. "Businesses are about creating change for other businesses. Competition is about creating change; technology is about creating change. The appearance and disappearance of regulations cause further changes. Sometimes these changes affect only a company, other times they affect an entire industry. So the ability to recognize that the winds have shifted and to take appropriate action before you wreck your boat is crucial to the future of an enterprise" (Grove 1999, p. 21). Still, it is not only the change—it is also the accelerating rhythm of the change penetrating the business landscape and threatening the established business models with the new disruptive ideas (Jong and Dijk 2015).

Tom Peters (1994), in his provocative book, *Tom Peters seminar: Crazy times call for crazy organizations,* argues that managers should forget about the classical methods of organizing businesses and learn how to deal with the changeable and unpredic business environment. "Crazy times call for crazy organizations. The design concept for the model, the idea that would influence its eventual shape, was the inexorable fact that most/all value in a business, regardless of its size or industry, is generated by the energy from two sources—the intellect and the imagination" (Peters 1994, p. 289). But this new driving force of intellect and imagination opens the door for many disruptive ideas which, judged by the existing

normative business standards, look like being crazy. Some of them converge towards the new economic concept which has been coined as the *sharing economy*.

The concept of *sharing economy* is a semantic construct aiming at synthetizing the theories and practices through which sharing becomes a source of an economic process. *Sharing* is a powerful concept with many meanings reflecting both tangible and intangible things and both economic and non-economic purposes. According to the *Oxford Advanced Learner's Dictionary* (2000), *share* may have one of the following meanings: (1) to have or use something at the same time as somebody else (e.g. sharing the same house with somebody else); (2) to divide something between two or more people (e.g. sharing a pizza with somebody else); (3) to give some of what you have to somebody else, or to let somebody use something that is yours (e.g. to give your books for the exam to your friend, or to share some of your knowledge with your colleagues); (4) to have the same feelings, ideas or experiences as somebody else (e.g. having the same emotions about the wedding party); (5) to be equally involved in something or responsible for something (e.g. both drivers are responsible for the accident). Here, the sharing economy integrates, to some extent, each of these meanings, but mostly those indicated at 2, 3 and 5. The fact that there are many definitions for the *sharing economy* in the literature, comes from the multidimensional semantic of the concept of sharing (Belk 2014; Chakravarthy 2010; Lee 2015; Richardson 2015; Schor 2015; Yang et al. 2017; Walker 2015). It is important is to understand the essence of the business discussed and the context in which it is developed, with great attention to the difference between the tangible and intangible things involved. Also, it is advisable to define the overall framework by understanding that tangible things can be economically evaluated using linear logic while intangible entities should be evaluated by using a nonlinear logic (Bratianu 2009).

Schor (2015, p. 14) defines the new sharing economy "as economic activity that is Peer-to-Peer, or Person-to-Person, facilitated by digital platforms. 'P2P' is distinguished from models such as Zipcar, which is Business-to-Peer, in that the company owns the assets (cars) and rents them to consumers". The emphasis is on the digital dimension because it allows a large scale of the business and contributes substantially to the reduction of the transaction costs.

Although sharing activities are not really known in the social environment, the sharing economy implies sharing activities and ownership between unknown people. The novelty comes from the feeling of sharing something you have with strangers. That is really a crazy idea to share your own house or car with strangers for economic reasons. In other words, it all comes down to forgetting about privacy and the wonderful feeling of ownership, by transforming the emotional activity of sharing into a money-making service. It is one thing to invite some friends from another city to your house and to share with them your spare space for a couple of days and totally another thing to rent your house to some strangers while you spend some time in another geographical place. To leave all your belongings and your private home atmosphere in the hands of people you never had the chance to know is a new attitude which involves not only privacy concerns, but also having trust and assuming risks. And this is done only for money!

Let us consider the example of sharing lodging. CouchSurfing is an IT platform created in 2003 to support international travel and cultural exchange, especially among young people who have limited financial resources. CouchSurfing built a community of members "who both 'host' others and 'surf' to find a 'couch' to sleep on as they travel around the world, all without the exchange of funds". From a small community of practice (Wenger et al. 2002), CouchSurfing transformed into a global phenomenon with a distinctive culture in the last decade. The supporting information platform allows participants to these travel activities to share their experiences and to evaluate the quality of conditions offered by hosts, or the cultural exchanges stimulated by guests. After researching this phenomenon, Parigi and Cook (2015, p. 19) remark that "The accumulation of ratings about users (whether guests or hosts) had a double-edged effect on the emergence of trust and relationships: it made relationships easier to establish initially, but it also weakened them after certain threshold".

In this vein, the psychological process is of the essence. At the beginning, when information was scarce on the platform, there was a high level of uncertainty about meeting new hosts or guests and new conditions for lodging while travelling around the world. During the meetings, both the hosts and guests exchanged knowledge and shared new cultural experiences. There was a feeling of discovery and satisfaction when expectations were fulfilled. Once the accumulation of information and ratings reaches a certain level of saturation, the uncertainties of meeting strangers decrease and the discovery process is limited to few things, mostly to check the validity of the posted information. Also, the bonds created during those meetings between hosts and guests are more superficial since they are mediated now by the information posted on the platform. As Parigi and Cook (2015, p. 19) conclude, "Interactions are more normalized, less open to chance. This is because trustworthiness is promoted not by interpersonal ties, but by the monitoring of one another in a network in which reputations are posted".

Going beyond the natural economics of CouchSurfing, the Airbnb company introduces the idea of money making out of similar services and built up on the new culture of sharing your housing spare space with strangers. Taking Airbnb as an example, Richardson (2015) identifies three key elements of the sharing economy. The first one refers to the fundamental role played by the digital platform in creating the necessary conditions for connecting the hosts with the potential guests. The platform is a fast and efficient intersection field between the offer and demand which reduces the overall costs of transactions and reduces uncertainties associated to these transactions. The second element of the sharing economy is that it operates Peer-to-Peer. This means that Airbnb hosts may also be guests and that the roles played by service providers and consumers are interchangeable, at least from a theoretical point of view. The third element refers to the fact that Airbnb is access-based which means that "it is premised upon the ability to buy access to (rather than ownership of) a resource or service (in this case, hospitable space) for a period of time". To get an image of the business dimension of Airbnb, Walker (2015) remarks that the company is valued at $10 billion and has an estimated of 800,000 rentals listed in 34,000 international cities.

The research conducted in the sociology of the process of sharing for money reveals the importance of a new *ethos* in the community, as well. "It seems the perfect locally rooted, small-is-beautiful antidote to an economic crisis precipitated by reckless financial giants too big to fail. But it's not just tangible things like beds, bikes, and breast milk that are being shared. Equally important is the community *ethos* of sharing. The message of collective empowerment through human contact is its own viral product, touted by Harvard Business School professors and time-banking activists alike" (Lee 2015, p. 17). Thus, in order to diminish the feeling of implementing new and crazy ideas, the champions of the sharing economy turn towards emotional and spiritual knowledge (Bratianu 2015, 2017; Damasio 1999, 2003, 2012; Hill 2008). There is a powerful rhetoric of peace, love, and understanding which is very well designed and marketed. Also, the marketing strategy is designed to build up *trust* among strangers by using different ranking systems, supported by the IT platforms, in which consumers evaluate the quality of services and the trust in their providers (Parigi and Cook 2015, p. 19). Thus, when potential consumers enter the websites of the sharing economy-focused companies, they find evaluations and critical views expressed by previous consumers with respect to the whole service system and especially to the people who already shared their houses, cars, etc. This reduces the uncertainty linked to the unknown providers and contributes to the trust building process.

The concept of *sharing economy* goes beyond the known norms for regular workers, by blurring the border between paid work and uncompensated volunteering. Although some companies suggest the old image of helping one another, "in many respects, though, such crowd-sourced labor fits very well with the turn toward precarious employment and the privatization of risk, documented by many sociologists" (Walker 2015, p. 16). Companies using the new ideas of the sharing economy do not offer their contractors the health and social safety-net benefits of conventional workers. "What we learn, then, is that 'sharing economy' would be much more accurately understood as the 'crowdsourcing economy'. The change in terms recognizes the sector's technology and approach without misleading by moralization" (Walker 2015, p. 17). Another aspect revealed by researchers is that of spreading the risks over all contributors to the new business in a fuzzy way. Lee (2015, p. 18) remarks clearly this aspect: "Despite promises of million-dollar insurance guarantees, sharing economy terms and conditions reveal that liability and risk are unclear and often unequally shared".

In this front, the sharing economy is the tip of the iceberg as regards the emerging new economy based on new values and ways of thinking. From well-defined solid organizational structures and management philosophies focused on profit maximization by drastically reducing the organizational entropy, the new economy displays new and flexible organizational structures and management philosophies focused on networking and increasing organizational entropies. The new economy is shaping a novel culture based on sharing and open access to business activities. "As new power models become integrated into the daily lives of people and the operating systems of communities and societies, a new set of

values and beliefs is being forged. Power is not just flowing differently; people are feeling and thinking differently about it" (Heimans and Timms 2014).

4 Uber and the Uberization of the Competitive Advantage

The diversity phenomena of the sharing economy and its fuzziness in terms of business models can be grasped more easily through some examples than through the logical deduction of general well-established theories. Most authors consider that the emblematic example of the sharing economy is Uber Technologies Inc., a transportation network company which has its headquarters in San Francisco, California, USA (Belk 2014; Cannon and Summers 2014; Cohen and Kietzmann 2014; Richardson 2015; Smith 2016; Wirtz and Tang 2016; Yang et al. 2017). The name *Uber* comes from the German word *über* which means "above" and suggests the willingness of the founders to be the "topmost" company in the transportation business. The company started as Ubercab in 2009, and has been founded by Travis Kalanick and Garret Camp. Then, due to the fact that the company did not own any taxi cabs, but offered transportation services with the drivers' own cars, the company changed its name to Uber Technology Inc. After a beta stage of the mobile app in May 2010, Uber's services have been officially launched in San Francisco in 2011.

The company is using a digital platform to support all the connections and information needed for its services and contracts people willing to offer transportation services with their own cars. Thus, the drivers are not employees of Uber, but only contractors, playing the role of entrepreneurs. They may have different other jobs and serve as drivers for Uber in their spare time for some extra money. Because of this statute, drivers complained that they do not enjoy the rights and remedies of being considered "employees" under employment law. Being "contractors" and not "employees", the drivers cannot take the advantage of legislation for their payment and security. Moreover, their statute depends on the local legislation which can be more or less restrictive for this type of activity.

Because of the conflict between the new business ideas introduced by Uber and the normative legislation used for employees of taxi cab companies, and because of the pricing strategies used by Uber, the company activity has been forbidden in some countries. Although there were many protests coming from the taxi cab companies due to the fierce competition created by Uber, the company continued to develop almost exponentially. Some statistics available on January 4, 2017 may be indicative of the market penetration power of Uber (Venitism 2017): The Uber App is available in 77 countries and 527 cities worldwide. By the end of 2016, Uber reached the milestone of 1 billion trips taken. Six months later, it hit two billion. Uber has over eight million users worldwide. If one combines all Uber trips taken during the past 5 years, the total distance is just over a round trip to Saturn. Uber's current value is estimated at $62.5 billion. With this value, Uber is listed in the S&P 500 after Apple Inc., Alphabet Inc., Facebook, Inc., General Electric Co., Walt Disney Co. and

McDonald's Co., and is followed by General Motors Co., and Ford Motor Co. And this is an amazing business performance. . .

A new crazy idea introduced by Uber is the *dynamic pricing model*. This model is based on the idea that the same route may cost different amounts at different times as a result of contextual factors that shape the supply and demand balance. For instance, when the rides are in high demand in a certain area and there are not enough drivers, the cost of the ride is increased so that it will attract new drivers in that area while it will diminish the potential customers' willingness to pay. However, this model can be destructive in times of natural calamities when people need help of transportation. Due to many criticisms for such a policy, Uber decided to establish a maximum level of increasing fares. Prices are also in concordance with the type of service offered. UberX is a service of luxury cars that costs about 1.5 times more than a regular taxi ride. UberPOOL is less expansive since several customers may share the same ride. UberEATS allows customers to have a meal during transportation which is delivered from participating restaurants in the business. The service is available in 71 cities. UberRUSH is a courier package delivery service available in New York, San Francisco and Chicago. UberBOAT is a combination of land and water transportation service in Istanbul. It is done in cooperation with the company Beneteau which offers boats across the Bosporus strait. Uber made partnerships with some air travel companies for offering helicopter transportation in some cities, especially during holidays or special celebration events.

A quite crazy idea is that of using self-driving cars. The experiment took place in Pittsburg on September 14, 2016, when Uber used Ford Fusion cars equipped with sophisticated electronic systems for autonomous driving. This is a huge evolution in the transportation history, from the horseless carriages to driverless cars. However, the excessive focus on technology leads to paying less attention to the drivers who provide the service and also to the consumers who miss the pleasure of rides due to the lack of any emotional intelligence in the service supply. As one of formers Uber's drivers remarks, "The platform culture its leaders are propagating sometimes leads one to wonder whether they genuinely foresee a future where the human providers are cut out of equation and their technology powers a fleet of driverless vehicles transporting things rather than people" (Sundarajan 2014, p. 3). Still, Uber is considered by Smith (2016, p. 383) as a new business model that is shaping the economy future: "Not only does this business model fit the competitive opportunities of today's marketplace, but it also dovetails seamlessly with the larger dynamics shaping tomorrow's marketplace. What's ahead is a shift in the dominant business model, one in which all consumer goods will be available as a service and all consumer services will be available on demand. This is the Uber-All Economy of the future".

The model has been transposed into other fields with good results. For instance, companies such as *FlyCleaners*, *Washio*, *Rinse* and *Dryv* in USA, *Laundrapp* in UK, and *Edaxi* in China operate through an on-demand mobile app. Just with a click on the smartphones, consumers can get their laundry picked up and returned as fast as possible cleaned and ready to wear. Consequences of this new type of service are

not only exerted on shaping a new attitude from consumers, but also on questioning if they need washing machines, laundry detergent and even a special space for washers and dryers. Also, this on-demand service supply leads to *immediacy* attitude of the providers and builds up a considerable pressure on the established retailers to speed up their services (Smith 2016).

When analyzing the Uber business model, two ideas are of interest. The first idea is to offer people the opportunity to use their cars more efficiently, which otherwise could have been unused for some time. In a metaphorical perspective, this means to transform goods into services. As Smith (2016, p. 385) highlights, "The concept of work here is conversion—converting goods into services and converting underleveraged service assets into more valuable ones. For Uber, idle car-and-driver assets are converted from nonuse to use. Consumer goods must add a service or find a service within which to get embedded".

The second idea of the business model is on-demand availability anywhere, anytime. This condition can be satisfied by the information technology which develops and improves continuously. The novelty of the business model comes also from the pricing philosophy. Today, the pricing model is based on the idea of accumulation, not on usage or demand. The new philosophy is to correlate pricing with the context dynamics and the moment of using the service. If the demand is high in a particular area and at the moment of requesting the service, then the price goes up, and conversely, when the demand is low then the price becomes more attractive for potential consumers. The on-demand business model induces the idea that ownership becomes less important than access. "Access replaces ownership at the center of consumers' aspirational mindset. In addition, access instead of ownership means a shift toward consumers paying only the marginal cost of production, which in turn leaves less room for mark-ups by producers and retailers" (Smith 2016, p. 385). This shift in attitude should be also correlated with a shift from deterministic thinking to probabilistic thinking (Bolisani and Bratianu 2017; Bratianu 2007) which entails an increasing level of uncertainty in the decision making (Vătămănescu et al. 2017). Another consequence is the way people consider ownership as a framework for defining their identity. At this level, Belk (2014, p. 1599) metaphorically posits: "Shaking loose of the former wisdom that, 'You are what you own' and converting to a new wisdom, 'You are what you share', indicates that we just may be entering the post-ownership economy".

5 Sharing as a Strange Attractor of the Sharing Economy

The diversity of views concerning the sharing economy reflects the diversity of the phenomena under the umbrella of the sharing economy semantics. Also, it is a result of the diverse starting points of analysis (e.g. economics, sociology, business, management) and of the complexity engendered by the new economic environment. The crazy ideas identified so far are only some of the chaotic manifestations of the sharing economy. Thus, the multidimensional theories of chaos (Bird 2003; Gleick 2008; Stacey et al. 2000) may be used to explain the essence of the sharing

economy much better than any researcher coming from economics or sociology. The multitude of business practices developed so far and their evolutions demonstrate the turbulence of the business environment and, as Tom Peters (1994, p. 5) says, "Crazy times call for crazy organizations", adding later that "In the new age, paranoia will not be a disease. Instead, it's the first step toward job security and robust corporate earnings" (Peters 1994, p. 23).

The first observation we can make just looking at Uber and similar companies with employees and contractors is the fact that the new management operates across different scales, from micro—the contractor to the macro—the organization supported intermediary by a versatile digital platform. This phenomenon is very much similar to the turbulence regime displayed in fluid mechanics. As Gleick (2008, p. 122) explains, turbulence "is a mess of disorder at all scales, small eddies within large ones. It is uns. It is highly dissipative, meaning that turbulence drains energy and creates drag. It is motion turned random". An excellent image of turbulence is offered by a waterfall, when the myriad of water particles display a spectrum of trajectories which are impossible of being anticipated by the analytical equations of fluid mechanics. However, they remain confined within a certain domain and look like being convergent toward a strange attractor—"The traditional use of the word chaos signifies complete disorder, but the modern science of deterministic chaos has shown that there is a great deal of orderliness in the patterns of movement of chaotic systems. These patterns can be visualized as often-beautiful geometric forms called 'strange attractors'. These forms can sometimes be used to enable us to forecast what will happen in such a system" (Bird 2003, p. 5).

The strange attractor for the sharing economy phenomena is the procestables of *sharing*. As Belk (2014) underlines, sharing is at the center of all these activities integrated in the business framework designed to dissolve the solid organization and to transform it into a network with different managerial scales. At the same time, it is a dissolution of the company's ownership since individual contractors enter into play with their own cars, houses, washing machines, bikes and so on. Against this backdrop, sharing appears as an alternative solution to consumption enabled by a digital platform and suggests a new paradigm for business. Here, Richardson (2015, p. 121) emphasizes that "the sharing economy refers to forms of exchange facilitated through online platforms, encompassing a diversity of for-profit and non-profit activities that all broadly aim to open access to under-utilized resources through what is termed 'sharing'. The sharing economy constitutes an apparent paradox". The paradox comes from the conflicting aspects of being, at the same time, a part of the capitalistic economy and an alternative to the hyper-consumerist culture. The digital platform enables the sharing activities between micro-entrepreneurs and the sharing of knowledge between the company, service providers and consumers. In other words, knowledge sharing comprises new aspects that deepen its meaning and effects. Focusing on the role played by the digital platforms, one may consider the sharing economy as being boiled down to "online platforms that help people share access to assets, resources, time and skills" (Richardson 2015, p. 122). This involves access to the digital commons of the cyber

culture (Stalder 2010), like space (residential, commercial), transport (cars) and labor (taxi drivers).

The sharing attractor can be also identified within companies which comprise multiple businesses. Two or several business units can share knowledge or different activities if that is a win–win strategy for all of them. This aspect has been also revealed by Porter (1985, p. 326), in his famous analysis of the value chain and competitive advantage: "Sharing an activity can lead to a sustainable competitive advantage if the advantage of sharing outweighs the cost, provided the sharing is difficult for competitors to match". But sharing between two business units is possible if at least one of them has a boundary spanner, like a bridge between two banks of the same river. The concept of 'boundary spanner' is introduced by Chakravarthy (2010) to emphasize the need of people to enable both communication and sharing of activities between two different business units. Boundary spanning managers enable sharing by: (a) identifying the domain of cooperation where sharing is needed; (b) managing the knowledge sharing process; (c) building trust between participating people in the sharing process; and (d) managing the eventual conflicts created by sharing between participants. In this case, instead of peer-to-peer (P2P) sharing, there is a business-to-business (B2B) sharing.

6 Conclusions

It is really very challenging to synthetize some conclusions when analyzing new phenomena; still, it is worthy showing at least some potential directions of evolution for the sharing economy. First of all, the sharing economy is just the beginning of a new business philosophy where the focus is not on ownership and hyper-consumption anymore. Instead, the sharing economy opens the access to ownership to all business contractors or micro-entrepreneurs and promotes a culture of optimizing the use of owned resources, leading inevitably to the overall reduction of purchasing new goods and services. Secondly, the sharing economy promotes new organizational structures based on the networking architecture and supported by digital platforms (Vătămănescu et al. 2016). The new organizational structures are much more flexible and adaptable to the changeable business environment. A company becomes like a nuclear structure composed of a nucleus represented by the core employees and digital platforms, and a cloud of contractors who performs the business activities by using their own resources, knowledge and skills. That means a drastic reduction of the company ownership and a better use of internal resources, especially in times of economic crises. For instance, a taxi cab company owns all the cars and the drivers are employees while, in the case of Uber, the drivers are only contractors of activities and supply the rides for people by using their own cars. Thus, the maintenance problems and the risks of underusing the cars are transferred to the contractors. Thirdly, the sharing economy develops a new culture where sharing, ownership and privacy get new meanings.

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Reshaping Competition in the Age of Platforms: The Winners of the Sharing Economy

Florina Magdalena Pînzaru, Andreea Mitan, and Alina Daniela Mihalcea

Abstract

Since the beginning of industrialization, the pipeline business model has dominated world economies: products were created by a producer, be it a person or a company, then customers were informed that they could buy those products, and the cycle closed with the proper selling of those goods to customers. In recent years, this linear mode of doing business has started to be replaced by platforms. While platforms are not a new way of doing business—fairs are the classic platform prototype—the use of ITC in creating, managing, and accessing platforms stimulated the appearance of a different approach to this business model, providing benefits for all of the economic actors participating in the digital economy. This chapter presents some of the particularities of digital platform business models and argues in favor of their benefits by referring to a number of worldwide famous businesses, in fields from education to transportation and commerce, constructed according to these models.

1 Evolving Business Models: From Pipelines to Platforms

Until recent years, the main approach to business has followed the pipeline model: a company created products or crafted services, promoted its merchandise, and then sold it to the customers. In a linear flow, value was produced upstream and consumed downstream (Choudary 2013). Linked to the industrial age, the pipeline approach is common in many areas, including logistics (van Amstel 1990), managing supply chains (Mason-Jones et al. 1997), new product development (Ding and

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_2

Eliashberg 2002), sales prediction (Yan et al. 2015), entrepreneurship (Lichtenstein and Lyons 2006), and even leadership (McCarty Kilian et al. 2005; Charan et al. 2010; Dai et al. 2011) and talent management (Bhatnagar 2008). Most of what people worldwide traditionally consume comes through a pipeline, whether it is manufactured goods or luxury services.

Thus, most of the extant business theory regarding business models is related to managing pipelines. Because the environment has started to change profoundly, the relevancy and efficacy of the linear business model described as a pipeline have started to be questioned. The development of technology and the rapid rise of the Internet act as disruptive forces in the economic system, allowing the introduction of new kinds of products and services (Christensen and Overdorf 2000), but the emergence of ICT has given companies the opportunity to not only create new offerings for their customers but also to change the way they organize their activities and the way they engage in economic exchanges (Zott and Amit 2007).

In the digitalized world, 7.4 billion people worldwide have access to ICT (World Bank 2016, p. 8), and about 3,616,540,000 people use the Internet every day from their homes (internetlivestats.com 2017). The number of hours the average person spends online increases constantly, and the activities people engage in online continue to diversify. Consumers prefer to buy online or to use apps to place orders that are delivered to their chosen destination. They use a number of smart devices to access the Internet to stay informed and to be entertained, they demand customized products, and they want to feel like the companies they interact with are attentive to their needs and desires (Kasriel-Alexander 2017). Regarding the Internet consumption pattern, the available data show that in 2008 people in the US browsed the Internet for about 2.7 h daily, while in 2015 their browsing time had extended to 5.6 h, of which 2.8 h were spent using the mobile Internet (Chaffey 2017). Moreover, in 2014, the mobile Internet had already surpassed other types of Internet usage in the US, and three apps, which happen to be linked to platform businesses, were the favorite places to spend online time: Facebook, YouTube, and Google Play (Perez 2014).

Based on the use of digital computing technologies and commonly perceived as linked to the use of the Internet and the World Wide Web, the digital economy has emerged (BCS 2017; Van Gorp and Batura 2015, p. 15). Also referred to as the *Internet economy*, the *new economy*, or the *web economy*, the digital economy uses specific infrastructure (hardware, software, networks, human capital, etc.), specific modes of conducting business, and specific means of transfer (Mesenbourg 2001). In a report published in 2010, Oxford Economics linked the digital economy to a third wave of capitalism that has transformed the global marketplace to a great extent and in various aspects, from consumer behavior to new business models. While the first wave referred to the creation of the shared stock company and the second referred to the coordination of large-scale industry via communication, the current third wave focuses on the use of the Internet, mobility, business intelligence, social media, and cloud computing, and it affects both developed and developing economies worldwide. Not all the sectors of the economy are affected to the same extent by the digital wave, yet major shifts can be observed in ITC and

entertainment, retailing, and consumer products (Oxford Economics 2010, p. 4). In this context, the platform business model becomes the new star concept.

2 The Rise of the Platform Business Model in the Digital Economy

Platforms are diverse, and the term has been in use for quite some time. Gawer (2009, p. 47) presents a typology of platforms, distinguishing between internal platforms (within one company), supply chain platforms linking several suppliers in a chain, industry platforms that link several players in an industry that need to work together as part of a technological system, and multi-sided markets or platforms comprised of various companies that interact with each other through a double-sided or multi-sided market. This last type is the one that we connect strongly to the platform business model.

To the general public, the first platform businesses that have gained immense visibility are the social network services, such as Facebook (Han and Cho 2015). However, the platform business model is not new; it simply has gained momentum as ITC developed. In its elemental form, a platform mediates between multiple groups of stakeholders by coordinating the interaction between members of distinct groups, integrating the externalities that one group creates for another group (Evans 2003; Rochet and Tirole 2003; Jullien 2005). For example, the traditional trade fairs that bring together merchants and buyers and the newspapers that connect readers and advertisers are platforms.

At first relevant for the ITC sector in the digital economy (Jacobides et al. 2006), the platform business model refers to a platform-mediated network (Eisenmann et al. 2008), which is made upof users who make transactions with the help of intermediaries, and these transactions are subject to network effects (Evans and Schmalensee 2007; Rochet and Tirole 2003). Users that engage in transactions respect a set of rules and use a set of components that include hardware, software, and service modules that are linked together via a specific architecture—that of the platform (Gawer and Henderson 2007; Han and Cho 2015).

Platforms allow for producers and consumers to meet and have high-value exchanges in a milieu where information and interaction are the chief assets and the source of the competitive advantage, while the novelty of the platform model in the digital age relates to the reduced need to own assets and physical infrastructure so that scaling up becomes cheaper and easier, diminishing friction between participants. All platform businesses have an ecosystem that follows the same basic structure, comprising four types of players: owners who control intellectual property and govern the platform, providers who offer the interface between platform and its users, producers who create the things to be offered to consumers, and consumers who use those offerings (Van Alstyne et al. 2016).

Platforms have disrupted the industrial mode of doing business by being intelligent structures that allow consumers not only to consume but also to create value (Choudary 2013). Platforms draw their strength from the so-called "killer content"

Table 1 Comparison between the pipeline business model and the platform business model (Van Alstyne et al. 2016)

Pipeline model	Platform model
Value is created by a company that controls a linear series of activities. This is the classic value-chain model	Value appears through facilitating interactions between external producers and consumers and governing the ecosystem
The company gains advantage by controlling scarce resources and valuable and potentially inimitable assets (patents, mines, real estate, etc.)	The company's strength lies in the community, the network of producers and consumers
Pipeline companies optimize resources, labor, sales, and services. Pipelines seek to maximize the lifetime value of products and services and maintain individual customers	Platforms aim to maximize the total value of the expanding ecosystem in a feedback-driven process, sometimes subsidizing a type of customer in order to attract another type of client. The demand-side economy of scale is dominant and gives the network effect
Businesses grow in a linear way and sometimes fail to anticipate competition coming from industries that seem unrelated	Businesses move aggressively into new industries that were previously considered separate
Focus on growing sales	Focus on growing the number of interactions between participants and on the quality of these interactions
The five forces business model is used. The company needs to erect barriers to protect it from external forces	The five forces model is not useful in the network. The power of suppliers and customers, for example, can be seen as an asset. The company needs only to control access to the platform and govern the platform (what consumers, producers, providers, and competitors are allowed to do on the platform)
Use a narrow set of metrics, such as inventory turnover, to measure the health of the organization	Platform owners have to decide how open the rules and the architecture are so that a fair reward system is established. An open architecture allows players to create value, while open governance allows players other than the owner to shape the rules of trade and reward on that platform

or the attractive content that stimulates users to remain on the platform through innovation and interactivity (Han and Cho 2015). The essential differences between the pipeline model and the platform model can be seen in Table 1.

The adoption of the platform business model brings changes at three levels: for consumers, for markets (providers), and for suppliers (Ernst & Young 2015). Consumers are driven to engage in exchanges using platforms because there is an increasing number of platforms and because it is rather easy for them to do so, as the Internet is accessible and the smartphone adoption rate is growing. They enjoy the fact that platforms offer lower prices for products that are customized, on-demand services, and the possibility to share experiences and benefit from the information shared by other participants. Marketplaces or aggregators (providers) are driven to engage in building and maintaining platforms by the quick market penetration and

higher revenues these businesses offer to them, by the availability of high speed Internet that allows many people to become customers, and by the inefficiencies that can be observed in various services (weak competition) that create an opportunity for them to grow their businesses at a fast pace. Platforms bring providers the opportunity to invest less capital and to work with lower priced supplies, allowing them to be more efficient and to invest in branding. Suppliers use platforms because they are enabled to use their resources better and because they are able to expand consumer reach. They benefit from social mobility, from the high level of digital literacy among consumers, and from brand creation and skill development, and they also enjoy greater growth rates for their business by penetrating wider markets.

Even though platforms differ from pipelines, both models coexist and compete even within the same market. For example, TV channels work on a pipeline model, but they compete, in some cases, with YouTube, which works on a platform model (Choudary 2013). However, while in the digital economy there are successful businesses built solely on a pipeline model, platforms seem to be taking over the market when competing with pipeline businesses (Van Alstyne et al. 2016).

Platforms are often presented as necessary for the sharing economy, a sector of the digital economy concerned with sharing human and capital resources. The sharing economy refers to the "shared creation, production, trade and consumption of goods and services by different people and organizations," including the recirculation of goods, the increased utilization of durable assets, the exchange of services, and the sharing of productive assets (Ernst & Young 2015). If the sharing economy does not sound familiar, perhaps its synonyms do: gig economy, platform economy, collaborative consumption, and access economy (Chandler 2016).

In the European Union, the digital economy alone is estimated to contribute 415€ billion per year (EC 2016a). In 2015 in the EU, the sharing economy alone generated £4 billion revenue and facilitated £28 billion of transactions (Office for National Statistics 2016). Worldwide, there are at least 176 platform companies (Evans and Gawer 2016). By 2025, the contribution of the sharing economy worldwide is estimated to reach $335 billion (Yaraghi and Ravi 2017). In the following pages we will explore some of the best examples of sharing economy businesses built on a platform model.

3 Examples of Successful Platform Businesses

3.1 TaskRabbit: Domain = People/Skills

TaskRabbit was founded in 2008 as RunMyErrand. It is a mobile marketplace that allows people to hire other individuals to do paid jobs and tasks for them, from delivery and handyman work to office help. It is generally focused on jobs that require little training or knowledge. TaskRabbit is currently active in about 19 cities in the United States, and it connects TaskPosters, people who need help, with TaskRabbits, a network of pre-approved and background-checked individuals who have the time and skills needed to complete the listed tasks (Juggernaut 2015a, b, c).

The business was built on the idea of neighbors (Rabbits) helping each other with various activities, from baking cakes to buying gifts or assembling furniture. At first, TaskRabbit followed the auction model: users had to auction for the needed service, but they were not able to set the starting price, and they had to scroll through pages to find what they needed. The current, improved model follows the on-demand invitation model, where Rabbits are matched automatically with the tasks Posters need done (Välikangas and Gibbert 2015). This new business model is Tasker-centric: the users are assigned to tasks instead of choosing themselves what tasks to do in their field of expertise, thus matchmaking is facilitated. Taskers wear a uniform (the TaskRabbitshirt), and they use the mobile app to do scheduling, chat, and book tasks that they put in a calendar where their availability and scheduling can be consulted. Taskers respond to all assignments in $<$30 min, even if the solicited task is not in their area of expertise (Juggernaut 2015b).

As a business, TaskRabbit has four key partners: the TaskPosters, or the people who ask for a task to be done for them, the Rabbits, or the people who accept the tasks, the Investors, and the Payment processors. The activities that are done by the platform owners include developing and managing the product, building the TaskPoster network and managing the members, building the Rabbit network and managing the task doers, and customer service. The resources used by the platform business include local TaskPosters, skilled TaskRabbits, and technology. For TaskPosters, the business saves them time, facilitates a connection with a person who can help them with a specific task and who can be trusted, insures tasks up to $1,000,000, and offers cash-free payment options. For TaskRabbits, it offers the benefits of finding local jobs in and around the neighborhood, working without a tight program, accessing their wages instantly, and increasing their return based on reputation as their level increases. Relationships with customers are maintained using customer service, social media, promotional offers, and task insurance. The channels used for communication and distribution are the website, the mobile app for Android, and the mobile app for iOS. The customers include Taskers or TaskPosters and Taskdoers or TaskRabbits. The TaskPosters are the people who need simple tasks done, people who are short on time, and elderly or disabled people who cannot perform the task themselves. The TaskRabbits are unemployed or underemployed people who wish to gain extra money and people who are searching for temporary jobs. The cost structure includes technological setup running costs, salaries to permanent employees, and social and community activities. The revenue streams are generated by the commissions for each transaction (Juggernaut 2015b).

The popularity of the platform is growing, yet TaskRabbit faces four types of scalability limits. Firstly, it only targets middle class customers, so at the moment it cannot target premium services customers or lower class customers. Secondly, the service is available only in urban areas and cannot be replicated anywhere due to the lack of availability of specialized workforces. Thirdly, the platform has no control over pricing. Fourthly, there are various competitors on the market, including Zaarly, Fiverr, and Needto (Välikangas and Gibbert 2015).

Trebor Scholz (2016, p. 80) indicated that with companies like TaskRabbit "we are witnessing a financialization of activities that used to be an expression of social capital...and implicitly monetization of private life." Despite the fact that TaskRabbit is one of the pioneers in the peer-to-peer labor sector by developing "an independent mode of employment and a new kind of entrepreneurship" (Välikangas and Gibbert 2015, p. 232) the question remains if it is really a marketplace dedicated to empowering people to do what they love. However, it has irreversibly changed the American workplace: "TaskRabbit is more than hip...regular careers are vanishing, every worker is a freelancer, and every labor transaction is a one-night stand" (Kuttner 2013, p. 46).

3.2 Uber: Domain = Transportation

Uber is the company that many people see today as emblematic of the sharing economy. It started as an app that was used to request premium black cars in some metropolitan areas; however, now, as a ridesharing platform, it has changed the way people around the globe perceive of and consume transportation services. Based on a two-sided platform, Uber competes with Lyft, MyTaxi and DixiChuxing to "allow individuals to act as individual mobility service providers" (Linz et al. 2017, p. 98). However, Uber differentiates itself by disrupting the cab industry: it enters in markets where there is a regulatory gap and an urgent need for infrastructure, gathering drivers and the clients' trust at the same time (Siedel 2016).

Uber has reached the value of $50 billion by leveraging the following six characteristics:

(1) Uber was launched in a city where there were potential tech savvy customers who were interested in following the tech trends.
(2) Uber offers Uber Taxi for lower income clients and Uber SUV for premium clients.
(3) Uber uses surge-pricing technology: the price increases as a result of growing demand, and per mile prices increase automatically.
(4) Uber offers various means of transportation, from motorcycle-pickup service in Paris to a delivery service in San Francisco and even an ice-cream-truck-delivery service in other cities.
(5) Drivers are treated as partners and obtain 80% of the total fare.
(6) The driving force offers promotion through word-of-mouth advertising (Juggernaut 2015c).

Apart from the drivers with their cars, Uber has three other partners: payment processors, map API providers, and investors. The key business activities include developing and managing the product, marketing and customer acquisition, hiring drivers, managing driver payouts, and providing customer support. The key resources employed are the technological platform and the drivers. The customer relationship is built and maintained via social media, customer support, and the

review, rating, and feedback system. The main channels used are the website, the mobile app for Android, and the mobile app for iOS. The customers of the platform are both the users and the drivers. The users include those individuals who do not own a car, those who do not want to drive themselves, those who like to travel in style and be treated as VIP, and those who want a cost-efficient cab at their doorstep. The drivers are people who own cars, enjoy driving, want to earn money as drivers, and wish to be called partners instead of taxi drivers. The cost structure at Uber includes the technological structure, the salaries for permanent employees, launch events, and marketing costs. Revenue comes via car riders on a per mile or per kilometer basis, from surge pricing, from UberX, UberTaxi, UberBlack, UberSUV, UberCargo, UberRideshare, and more (Juggernaut 2015c).

Chernev (2017) indicated that Uber's value map is focused on the following business pillars: from a strategic point of view, the business model is C2C (customers generate the company's revenue); from a tactical standpoint, it involves a rent model (transportation services replace car ownership); it uses a market-penetration model (services priced at a discount in order to gain rapid adoption); it uses a surge-pricing model (premium pricing) and a direct-to-consumer model (services offered directly to clients without counterparts). By taking into consideration the dimensions of the *Sharing Business Model Compass,*we can observe that:

(1) Uber is a tech-enabled business, meaning it relies on technology to facilitate connections, but it is enhanced by offline interactions.
(2) In terms of transaction types, Uber is based on controversial surge pricing.
(3) In terms of business approach, Uber—like Upwork or eBay—represents the profit-driven sharing economy.
(4) The governance model for this sharing startup is venture capital-backed business models and not collaborative. Taxi drivers have responded by forming cooperatives to counteract Uber competition (Cohen 2016).

Currently, Uber is targeting novel business models. The company recently announced a collaboration with Arizona University to develop advanced maps and a partnership with Robotic Lab for launching driverless car services (Linz et al. 2017, p. 98).

3.3 AirBnB: Domain = Accommodation

AirBnB is a trusted online community marketplace where people can list, search for, and book unique accommodations worldwide. It was founded in 2008 in San Francisco, California. Since its launch, it has gained tremendous popularity and is currently present in 190 countries. It is estimated that over 100 million people have already used AirBnB, and the numbers increase constantly (Chafkin and Newcomer 2016). It has become an emblem of the sharing economy and is on its way to "usurp the InterContinental Hotels Group and Hilton Worldwide as the world's largest hotel chain—without owning a single hotel" (Strong 2014, n.p.). Its supporters

underline the fact that through home sharing—the actual service that AirBnB endorses—travelers are able to experience different communities and cultures, thus they are enriched in a way that hotels cannot provide (Wanetick 2015).

AirBnB uses an innovative model, although the type of activity it promotes is not new. For example, during the summer, many people in cities located on the seashore, such as Constanţa in Romania, have historically rented rooms to willing tourists. According to Breuer and Ludeke-Freund (2016), AirBnB's innovation lies in its use of a multi-sided platform model through which individuals are able to book unique overnight lodging, as well as its strategy, which mixes the use of the online platform with the use of a social web application, its fee-based pricing model, its resources, and its specific scaling capabilities. "AirBnB collects money for providing a matching service on a highly scalable IT platform but faces none of the normal operating costs entailed in providing accommodations" (Pfeffer 2014, n.p.). This is similar to the business model used by Uber, which we presented in the previous pages.

The key partners of AirBnB are the hosts, or the people who rent their space, the guests, or the people who book the space, freelance photographers, investors, and payment processors. The key activities involved in this business include developing and managing the product, building the host network and managing hosts, and building the traveler network and managing guests. This business uses local hosts, skilled employees, and technology as its main resources, and its costs include technological set up and proper running costs, the salaries of the permanent employees, and the payment of freelance photographers. The relationship with the customers is built using customer service, social media, promotional offers, and home insurance. The website, the mobile app for Android, and the mobile app for iOS are used as main channels. Customers are both hosts and guests. The hosts are the people who own a house and want to earn extra money, while the guests are people who love to travel and want to stay comfortably at a cheap price. The value proposition for the hosts includes the money gained for renting their space, the insurance they are offered for their property, and the free professional photo shoots of the property. The guests are offered the benefit of booking a homestay instead of a hotel and at a lesser price. The revenue comes from the commission paid by every host and every guest for each booking (Juggernaut 2015a).

Despite its fast development, AirBnB faces a series of challenges. Firstly, it has to deal with strong competition from a number of places. For example, Homestay.com is an accommodation marketplace that connects guests with local hosts in more than 150 countries. Couchsurfing.com, another competitor, is a global community made up of 12 million members in more than 200,000 cities. Love Home Swap users choose their destination country and a home they want to stay in, then they make the swap either directly or through the site's Swap Points system. Homeexchange.com allows like-minded travelers to list their houses and contact one another through a messaging system. Bedycasa.com is an authentic accommodation rental platform through which one can book a stay with locals for work, studies, or holidays. Homestayin.com is a user-friendly website with homestay rooms across more than 1200 cities in 85 countries around the world (Cosslett 2016). Secondly, despite the fact that AirBnB has a

verification process for every host and traveler and motivates people to sign up with Facebook for better transparency, trust among customers remains a problem for them. Finally, they have to work hard to build traveler retention—AirBnB gives offers and promotional codes for clients' fidelity (Juggernaut 2015a).

3.4 Alibaba: Domain = Trade

Launched in 1999, Alibaba.com is the leading platform for wholesale trade that gives suppliers worldwide access to a global audience for their products and helps buyers find the products they need from suitable suppliers in a fast and efficient manner. Alibaba.com is part of Alibaba Group Holding Ltd., an online and mobile commerce company.

Currently, Alibaba.com is the most successful Chinese Internet business model and a leading player in online commerce. Its main strong points include a partnership with the online search engine Yahoo, creating a new business model that combines the marketplace and the engine. Another strength lies in the dimension of the business that empowered entrepreneurs to shutdown eBay in Chinaand, instead, power an e-commerce model tailored for Chinese consumers—taoboa.com.

Alibaba's business model is the online marketplace or the platform (Liu 2016, pp. 197–200), and it can be described according to the following elements: First, it is an e-commerce infrastructure provider, having no inventory costs, account receivables, or account payables. Second, while it started as a business-to-business company that collected fees from its members and for its online marketing services, Alibaba changed its fee structure after introducing Taobao, which only charges online marketing services and storefront fees. Third, although it invests in technology, data platforms, and the development of its logistical system, Alibaba focuses on a light-asset strategy. Finally, the business ecosystem is expanded constantly to include big data processing (deep learning, high-volume process, real-time analytics), security services, targeted marketing, database, and cloud computing services.

According to Erisman (2015, pp. 88–93), the ecosystem of Alibaba includes:

1. *Wholesale marketplaces*. Alibaba China works as the eBay of wholesale for the Chinese market, as members use the site to promote products, negotiate using live chat, and consummate transactions through AliPay, thus providing a boost for the Alibaba's financial services (microcredit, banking, and wealth management). At a larger scale, Alibaba International (alibaba.com) has become the world's largest wholesale marketplace for global trade.
2. *Retail marketplaces*. Taobao.com, part of the Alibaba group, uses a particular monetization model that sets it apart from its Western counterparts. Its revenues come from the sellers, who, instead of taking a commission for each transaction, are offered ways to promote themselves. Tmall connects important brands and retailers with their prospective customers and has already become an important channel for Adidas and Gap in the Chinese market. Juhuasuan is the most popular online group-buying marketplace that offers products at discounted prices. The reputation of AliExpress, which connects Chinese sellers with consumers in international markets, is growing.

3. *Support services provided by ecosystem participant*. Alibaba owns and/or invested in other types of supporting businesses, such as AliCloud, which provides computing power and storage for app developers and merchants, and AliMama, a division that provides big data analytics for markets. Alipay, on a different level, facilitates transactions with Alibaba Group marketplaces and transactions for third-party merchants and service providers. Its mobile service, called AlipayWallet, is currently replacing cash in China and supports offline payments.

3.5 Udacity: Domain = Education

Udacity is an education provider platform that started as an experiment led by two Stanford professors, Sebastian Thrun and Peter Norvig, who offered their "Introduction to Artificial Intelligence" course to the public for free. Currently, Udacity is supported by a team of educators and engineers who aim to bridge the gap between the real-world skills that education can provide and employment. It offers video lectures, integrated quizzes, and homework to students enrolled in classes, and upon course completion, the student is awarded a certificate that indicates their level of achievement.

The business model followed by Udacity has the following four dimensions (Beach 2013):

(1) All the courses offered by Udacity are free of charge;
(2) The Udacity community welcomes members free of charge and enables students to communicate with professors;
(3) The students can obtain a certificate for the skills they develop during the classes either online or by visiting the Udacity testing centers;
(4) Participants' resumes can be distributed free of charge to Udacity partners.

Online learning platforms such as Udacity and Coursera have tech-driven business models. Udacity is a disrupter in the education industry, an ed-tech start-up that has created a new platform for teaching. The business model is based on supplying credentials, called nanodegrees, that cost a fraction of the cost of traditional programs and are endorsed by employers. Thus, Udacity is like the Uber of education, as it uses a network of freelancers who cross check students' work in a peer review system. These freelancers are paid per piece of work they perform. Udacity's online courses in web development and data analytics have been launched through partnerships with AT&T, Google, and Salesforce (Moules 2015).

3.6 EdX: Domain = Education

The online learning platform edX is the result of Harvard University's and MIT's dedicated efforts in globally democratizing education (Voigt et al. 2016). EdX is an open-source platform that powers free courses and facilitates networking between

educators and technologists to build learning tools and contribute new features to the platform, creating innovative solutions to benefit students everywhere.

Designed as massive open online courses (MOOCs), edX offers a series of advantages to its users, among which the comfort of actively learning by watching videos and engaging in interactive exercises is rated as important. At edX this element of online learning is sustained through an innovative user interface. It enables instant feedback through automatically graded exercises, offers self-paced learning through the ability to pause or rewind videos, provides peer learning through online discussion forums, and uses the application of gaming mechanisms in virtual laboratories (Agarwal 2013).

As a business, edX has a good value proposition: it implements blended learning concepts that supplement online lectures through in-class interaction and offers professional education while also relying on strategic partnerships and valuable human capital to teach classes for a wide array of students (Voigt et al. 2016, pp. 164–166). Under the edX umbrella, courses from universities in 20 countries, taught in English and in other languages, are offered. Its success is obvious, as it is becoming financially self-sustaining. However, its focus is still on partner acquisition and cooperation management, while also operating and managing the platform. The University of California–Berkeley, Boston University, Cornell, Dartmouth, the University of Tokyo, and the Technical University of Munich are among its key partners, as well as Microsoft. Apart from its strategic partnerships, edX benefits from working with renowned teachers in fields that range from architecture to chemistry, as well as courses in the humanities and social sciences.

Providing courses with a wide addressability, edX teaches people aged 8–95. Most of its clients are, however, university and high school students. The numbers might change in the future as edX enters other markets. For instance, in 2014 they began offering professional courses aimed at professionals who need to boost their career and at companies that need to invest in developing human resources. Customer relations benefit from the introduction of blended learning opportunities and from course co-creation with partner universities.

In terms of the distribution channels used, apart from the platform providing the courses, edX owns a blog that they use to inform potential clients about their courses. Keeping pace with digitalization, edX offers its clients the possibility of using their smart phones to watch courses with either an Android app (launched in 2014) or an iOSapp (launched in 2015).

Although it remains reliant on institutional funding, edX has additional revenue models. It licenses a self-service approach by which universities design their own courses and use edX as a platform to offer them, while edX retains a portion of the generated revenues. At a different level, edX co-creates new courses for a one-time fee and retains 30% of the recurring revenues. The executive classes that specialize in cyber security, accounting, marketing, or creative writing cost about $500.

EdX is different from other massive open online courses (MOOCs), such as Cousera or Udacity, because, despite the fact that it is a non-profit, it is actually concerned with profit, and it has a “business-to-consumer approach, in which

students pay the course provider to verify their identity before they take a class on EdX.org, a kind of certification of achievement" (Meyer 2013, n.p).

3.7 Wallapop: Domain = Trade

The first version of Wallapop, the famous app for buying and selling secondhand products, Fleapster, was launched in 2013. Wallapop is a peer-to-peer, secondhand marketplace app connecting you to your neighbors and their items for sale. Their early success is attributed to the simple user experience and to an unrelenting focus on user acquisition, rather than trying to extract revenues on every transaction (Mackin 2015). The app was launched with the following intention: "[we] saw that the world of classified ads was shifting from a web-based model to a mobile model which allows users to communicate, as in the case of social networks, and we came up with the idea of creating a new classified ad system in a more social, geo-localized environment" (Olive 2015, n.p).

Wallapop could become the eBay or the Craiglist for mobile. If we look at the classical monetization theory that says companies first engage in creating network density, and then focus on the profitable areas of the business, we notice that Wallapop is following the same path. At this point, the B2C business pivots and becomes partly a quasi-B2B because it attracts the sort of sellers that will pay Wallapop for its network density and its qualified leads, but it's not sufficient (Sanso 2015).

How does Wallapop's app score compared to other platforms such as Letgo, Offerup or Craiglist? It has the lowest user rating as well as the lowest number of downloads, limited categories for selling products, and poor customer service. However, the app has a great intuitive search feature due to the geo-based location filters that show users close to you, and it is quite easy to understand and use. There's an in-app messaging feature as well (Hewitt 2017). At present, in order to take on the US market and the incumbent players (Craiglist, OfferUp, 5miles, and Facebook's Marketplace), Wallapop and LetGo have merged. The key to that has been a mobile-first approach, giving users the classified experience in an app that is easy to browse and comes with geo-tagging and other localizing features (Lunden 2016).

4 Instead of Conclusions: The Winners of the Platform Age

The emergence of the digital platforms age is a cause for joy among people who believe economic growth can be achieved through fostering SMEs, as well as for craftsmen and freelancers. In a time when access to markets and business development require greater logistics and marketing expenditures, platforms overtake some of the costs in exchange for moderate membership taxes. This way, small actors in the economy have greater ease of access to the global market. At the end of 2016, on Facebook alone there were over 60 million company pages, out of which about 4 million were advertisers that actively used this platform (Yeung 2016). Two years

before, in 2014, Amazon worked with over 2 million sellers (Perez 2015), who preferred to pay moderate amounts of money to the world giant for being present worldwide: marketing, distribution, and packaging and delivery of goods via fulfillment by Amazon. We can assert that both platform owners and the companies that use these platforms win.

As the platform business model brings together different groups of consumers and suppliers, what creates value for its users is the size of the users' groups on the other side of the platform, i.e., their number (Osterwalder and Pigneur 2010, p. 78). For example, a video game platform can be successful only if it provides enough games to attract even more consumers. In order to have enough games on the platform, the platform itself must be attractive to games' producers, who are interested in the platform only if it has enough (many)game consumers. This is, maybe, one of the most important business dilemmas of platforms: how to increase the number of users on both sides—suppliers and consumers. A solution is to subsidize some activities' segments, as was the case with Microsoft's free software development kit for Windows (SDK), released freely for developers. Free access to the kit increased the number of Windows-based applications, which has led to more Windows users, increasing Microsoft revenues too. Given this specific situation of platforms' business model, they are obliged to grow by attracting more and more users on both sides and by identifying which of their activities can be subsidized and what specific knowledge they can and/or must share with users in order to continue to be attractive. That's why platforms such as Amazon or Facebook tend to improve their user-related processes by making them more accessible through user-friendly presentations and why they continuously invest in free white papers, guides, and multimedia trainings addressed to business users. Thus, two concluding remarks can be presented. The first is that successful platforms become even larger and more successful. The second is that small merchants have an unexpected yet real opportunity to access the world market.

Digital platforms are increasingly becoming giants that are harder and harder to compete with. It is difficult to find global competitors for Amazon, for example, even though there are regional businesses that offer similar benefits to clients. However, these competitors operate in countries where Amazon has not yet developed a strong presence and only deliver some products. For example, eM, a Romanian company owned by Naspers in South Africa (76%), has a similar business model to Amazon and has a turnover of over 1€ million (Leaders Reunited 2016), operating in a regional market comprising Romania,[1] Hungary, Poland, and Bulgaria.

[1]Romania has an EU Digital Economy and Society Index (DESI) score of just 0.38, which islast among the 28 EU member states (EC 2016b). DESI is a composite index that summarizes "relevant indicators on Europe's digital performance and tracks the evolution of EU member states in digital competitiveness" (n.p.). These include connectivity, digital skills of human capital, use of Internet by citizens, integration of digital technology by businesses, and digital public services development.

To reach this level of development, the investments in platform businesses are continuous and growing. This raises the barriers to entry for new digital platform businesses. These companies could hardly compete with extent competitors that have already invested large amounts of money in programming, cloud data storage, logistics, and security and continue to do so. For example, in 2015 only the previously mentioned eMAG company announced they made over 48€ million in development (Leaders Reunited 2016), while Amazon announced they invested over 500€ million in Italy in 2016 (Fortune/Reuters 2016). The turnover of platform owners increases as the SMEs they work with grow and increase their own turnover rates. This aspect proves that the trending growth of platform businesses would support the growth of SMEs' involvement with platform businesses. As platform users or as API users that connect their own websites with platforms, SMEs would benefit from unbridled access to IT&C knowledge, secure transactions, intuitive processes, and multiple knowledge management resources that would allow them to maximize their profits.

Along with these main implications of business platform use for the global economic environment, there are some other remarks that need to be made. Firstly, digital platforms create a medium for knowledge to be concentrated and for increased efficiency and process optimization. Yammer, the social network dedicated to distance collaboration between people who work with the same company, is a relevant example in this respect. Using Yammer, work colleagues can share information, generate ideas together, solve problems, and build relationships between team members (Riemer et al. 2012). Yammer and other digital platforms that are dedicated to knowledge management invest in becoming more intuitive, more visual, and more accessible for mobile devices users. Using these solutions, information sharing and team problem solving become easier for business owners in various fields. This evolution allows for unprecedented worker mobility and leads to important modifications in the development of some business processes, many of which becoming integrated regardless of the operating systems they are based upon. Secondly, one cannot refrain from noticing that organizations are, to some extent, pressured to make the transition toward platform use if they want to enjoy the benefits that platforms bring to their users—benefits they cannot get from other sources. This is why organizations have become increasingly aware of the need to develop digital strategies and to focus on multisided business models (Bharadwaj et al. 2013, p. 478). The same authors point to the fact that corporations that decide to create internal platforms can additionally benefit from creating and attracting supplementary value.

To conclude, we underline the fact that there are four main winners of platform business model adoption in the digital era: the platform owners, who created and now scale a new market that is constantly growing the SMEs and the freelancers who now have access to the global market, an unprecedented occurrence that was suggested at the beginning of Internet use yet only became possible during the last decade; the organizations that integrate platform thinking with their own digital and business strategies so that they shift to increasingly efficient knowledge management; and, the consumers who have never before been so empowered and who have

unforeseen opportunities to choose from various offers. More so, information has never before circulated at such a pace and with such an impact: from the Arab revolution to NASA teams being encouraged to send Instagram message,[2] everything noteworthy that needs to be communicated seems to have moved onto platforms. The age of platforms is not a metaphor, nor is it a projection to be put to practice in the future. It is happening here and now, and it is linked to information, knowledge, new behaviors, and added value.

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The Sharing Economy in Post-communist Societies: Insights from Romania

Andreia Gabriela Andrei and Adriana Zait

Abstract

This chapter presents the results of a qualitative study on the sharing economy themes such as: peer-to-peer accommodation, transportation, item-sharing and crowdfunding. The study is based on in-depth interviews conducted with 63 participants from two of Romania's four largest university cities. The results depict country's specifics and indicate the main reasons which motivate or impede Romanians' participation as consumers and providers in each of the four areas. Finding a considerable level of reluctance to item-sharing, positive attitudes towards crowdfunding and an increased demand in accommodation and transportation domains (coupled with scarce internal offers), the chapter indicates the most promising domains of the sharing economy development in Romania, and highlights contextual factors related to the post-communist specificity. Offering valuable insights for researchers and entrepreneurs, this section has the merit of introducing the first report regarding the perspectives on the sharing economy development in Romania, and it is, to date, one of the few academic works offering on-topic insights from Eastern-Europe.

1 Introduction

What is frequently referred to as 'the sharing economy' became an increasingly debated topic, which has proven to challenge the traditional businesses and knowledge management models, as it has given rise to a lot of unanswered questions for practitioners, policy-makers and researchers (Codagnone and Martens 2016; Goudin 2016), indicating a reality which seems to defy settled ways of producing,

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_3

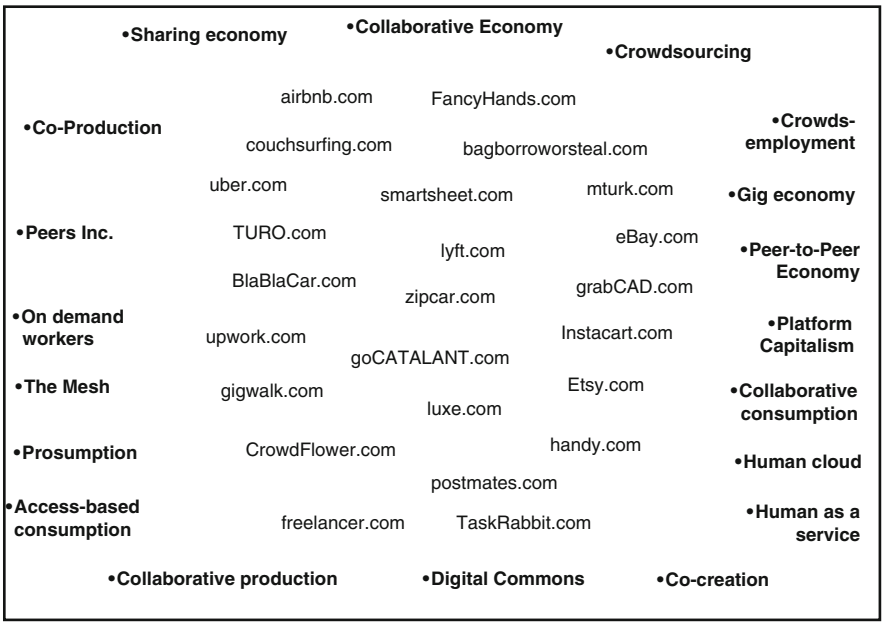

Fig. 1 Sharing economy: alternative labels (adapted from Codagnone et al. 2016, p. 22)

trading and consuming, by introducing new approaches to value creation and exchange (PWC 2015; Martin 2016; Pew Research Center 2016; Bocker and Meelen 2017; Roos and Hahn 2017).

Whilst discussion on the sharing economy describes it as economic model, economic system, economic ecosystem or socio-economic ecosystem, and practitioners use a variety of labels to name it (see Fig. 1), it is clear that the concept is still foggy.

In this respect, the Oxford Dictionaries introduced the term in 2015, and presents the sharing economy as "an economic system in which assets or services are shared between private individuals, either free or for a fee, typically by means of the Internet" (Oxford University Press 2015), the European Commission regards it as "a complex ecosystem of on-demand services and temporary use of assets based on exchanges via online platforms" (European Commission 2015, p. 3), while the 'Chief Sharer' Benita Matofska and The Sharing People (UK) define the sharing economy as "a socio-economic ecosystem built around the sharing of human and physical resources which includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organizations" (Matofska 2016, p. 1).

Obviously, in the absence of a consensual definition, both participation level and monetary value of the sharing economy are difficult to calculate. Still, PWC estimated the sharing economy at $15 billion in 2016, indicating that it could

reach $335 billion by 2025 (PWC 2014), and the European Parliament (2016) estimated a potential value of 572€ billion in the EU28 by 2025.

Although the impact of the phenomenon is unquestionable, only few academic works discussed the sharing economy in the East-European space, and no on-topic report from Romania was published to date.

In this context, the present chapter comes to fill-in a research gap, and it reports findings from a study conducted in 2017 in Romania. The study was meant to estimate the potential of the sharing economy development in Romania, and we opted for an exploratory research, as a first step in estimating the current situation, as well as the main drivers and deterrents of collaborative consumption and peer-to-peer exchange. A special attention was paid to understand the generation gap in the Eastern context, since the literature indicates middle class and educated Millennials (mostly those aged between 25 and 34 years old) as the largest group of participants in the sharing economy at global level (Matofska 2016).

Therefore, the current chapter will present the aforementioned study, detailing on the investigation method, obtained results and the research conclusions, after it will revise the literature for depict a largely accepted understanding of the sharing economy as a reality changing the framework of collaboration.

2 What Is Referred to as 'The Sharing Economy'?

Although the concept lacks a largely embraced definition, and the various authors emphasized different aspects and used different terms to describe the sharing economy (see Fig. 1), it seems there is a consensus in admitting there are three major areas of reality-change which are responsible for the rise of the sharing economy.

The first aspect relates to technology evolution and Internet access which have melted geographical boundaries, paving the way for a global-scale access and information availability (Gansky 2010; Belk 2014). The second aspect relates to people's appetite for product-as-a-service approach fueled by the change in consumption habits which seems to have shifted from the traditional model of using owned resources towards using without owning (Petrusca and Danilet 2012; Belk 2014; Rifkin 2015; Schor 2015; Schor and Fitzmaurice 2015). Finally, the third, and maybe the most important aspect, refers to an alternative system based on sharing and collaboration which encompasses learning, working, creating, producing, distributing, consuming, disposing, as the new ways of doing things (Rifkin 2015; Matofska 2016; Sigala 2017).

Detailing on the first aspect of reality-change, it is important to note that Gansky introduced in 2010 "the mesh" term to describe the sharing economy as a new society where the Internet, web and technologies enable the fully-interconnected people to access and distribute resources they need, without the burden and the expense of owning those resources (Gansky 2010).

Few years later, Belk (2014, p. 1597) discussed on the second aspect, describing collaborative consumption as an "economic model based on sharing, swapping,

trading, or renting" which "enables the access over ownership", and Schor and Fitzmaurice (2015) emphasized the "connected consumption" as the result of replacing the culture of ownership with a culture of accessing and reusing goods.

Looking beyond economic sphere, and emphasizing the third, and the most important aspect, Matofska (2016) defined the sharing economy as a socio-economic ecosystem based on sharing and collaboration, and Sigala (2017, p. 3) indicated the social value and sustainability resulting from the collaborative consumer to consumer transactions where "customers become suppliers and sellers of their own goods by negotiating and bartering exchanges for trading these goods even without having the use of money".

Going further in addressing the idea of an alternative system and the socio-economic implications of the sharing economy, Rifkin's view acknowledged a "hybrid economy—part capitalist and part collaborative commons, where social capital is as important as financial capital, access trumps ownership, sustainability supersedes consumerism, cooperation ousts competition, and the exchange value is increasingly replaced by shareable value" (Rifkin 2015, p. 2).

The brief overview of the specialized literature reveals that despite of a multitude of names used to coin the growing phenomena (e.g. the mesh, the access economy, on-demand economy, the matching economy, the peer-to-peer market or peer-to-peer economy, the collaborative consumption or the collaborative economy, gig economy, sharing economy, and other alternative labels as indicated in Fig. 1) the most authors indicate technology mediated collaboration as the core of the sharing economy.

Although collaborating parties might sometimes include businesses or public organizations involved in B2B transactions (i.e. Cargomatic, Cohealo), B2C transactions (i.e. Zipcar) or G2G transactions (i.e. MuniRent), the most frequent transactions are P2P (Codagnone et al. 2016), where peer-to-peer exchange occurs between private individuals via full service online platforms operated by a 3rd party who uses knowledge and technology to ensure the infrastructure and the technical support liable to make possible the exchange.

That is why, technology is only the instrument behind the mediated collaboration, while the ability of orchestrating full-service platforms—such as eBay, Uber, Airbnb, which enable the flourish of peer-to-peer collaboration—is mainly knowledge-based and it is driven by a visionary understanding of markets.

3 Romania on the Map of the Sharing Economy: A Qualitative Study

3.1 Method

In May 2017 the *sharing—economy* topic was explored using a qualitative research based on in-depth semi-structured interviews conducted on a sample of 63 participants recruited from a population with high chances to exhibit early adopting behaviors: Romanian academic environment.

Since the nature of academic environment is knowledge based, and it stimulates information sharing and networking, offering by international exchange programs (i.e. Erasmus) and academic events (i.e. international conferences) an increased exposure to global trends, we estimated that Romanian students and their teachers (especially junior ones) would qualify very well among the early Romanian participants in the sharing economy.

Therefore, an invitation to participate to the interview was sent to 1200 subjects matching the selection criteria. The response rate was 5%, and all 63 subjects who expressed their will to take part in the research, were appointed to complete the interview. Participants were guaranteed that results reporting will ensure respondent's anonymity and they will receive the summary of the research findings, as a reward for their implication.

Lasting between 40 and 45 min per participant, the interview comprised a fixed set of open-ended questions meant to reveal participant's opinions (pros and cons) about the sharing economy, as well as personal attitudes, motivations, usage experience and habits. Each interview was conducted according to the interview guide.

3.2 Sampling

The research sample comprised 63 participants from two large public universities from Romania: 54 students (25 undergraduates and 29 graduates, 20–33 years old) and 9 professors (30–60 years old), complying to the intent of exploring the nascent phenomenon with subjects holding the highest chance to be topic-aware and to have some previous participation experiences within the sharing economy. To this end, the adequacy of the sample's structure is also supported by literature indications regarding the demographic distribution by age between participants in the sharing economy reported in previous studies (PWC 2015; Matofska 2016; Codagnone et al. 2016).

3.3 Procedure and Measures

Each participant was introduced to the research topic and spent 45–50 min to answer the fixed set of open-ended questions provided into the interview guide. In the end participants were debriefed and reassured they will receive the summary of the research findings, as a reward for their implication.

Considering the research focus on assessing participant's view and sharing experiences, personal attitudes, habits and motives of embracing the sharing economy as consumer, provider, or both, we encouraged a relaxed atmosphere to stimulate participant's openness. To this end, the topic of the interview was introduced with an informal "*Let's discuss about the Sharing Economy*".

To clarify the topic, participants were told that *"The Sharing Economy is just one of the expressions used to name a disruptive phenomenon which was not clearly defined yet, but, for the sake of discussion's focus, an introductory overview*

presents them the currently available descriptions of the Sharing Economy from Investopedia.com and Pwc.com, two well-known websites providing business and financial information".

Note that Investopedia.com and PwC.com were chosen based on accessibility, source credibility and description conciseness, since we considered that increased sophistication or details might bias participant's responses.

Therefore, the following introduction into the topic was provided:

> **Let's discuss about the Sharing Economy**,
>
> described by Investopedia.com (2017) as an economic model in which individuals are able to borrow or rent assets owned by someone else, allowing the owner to make money from underused assets (i.e. a house, a spare room in a house, a car or an extra place in a car during a certain journey).
>
> As Investopedia.com indicates, communities of people have always shared the use of assets (i.e. bartering and peer-to-peer renting), but the Internet has made it easier for asset owners and those seeking to access and use the respective assets to find each other, increasing peer-to-peer transactions and collaborative consumption.
>
> Therefore, "the sharing economy can be seen as 'collaborative consumption' or a 'peer-to-peer market' that links a willing provider to a consumer. Payment is made by consumers to providers, with online platforms often offering the medium for bookings and payment. In general, sharing-based businesses provide the platform to bring together those with goods or services willing to offer them for use by others" (PwC 2015, p. 2).

After introducing the topic, ten open-ended questions directed the discussion to the most popular areas of the sharing economy: accommodation and space sharing, transportation sharing, commodities and item- sharing, crowdfunding. The four areas were approached one by one, to find out whether interviewees have experienced (or not) 'peer-to-peer market' transactions in each of the four domains, as well as their intention to engage in the near future is such activities. The interview was meant to uncover the level of participant's awareness and the main motives of their beliefs and/or behaviors. Participants were encouraged to develop their answers and/or to remember past experiences in support of their statements for both situations: consumer and provider. They were also stimulated to talk in-depth about their perceptions, opinions, attitudes, preferences, habits and the main motives of partaking (or avoiding to involve) in the sharing economy.

While the first part of the interview was focused on participant's experiences and habits related to each of the four domains (accommodation, transportation, item-sharing, crowdfunding) the second part was meant to clarify the underlying motives related to participant's willingness to involve (or not) in the sharing economy as well as their opinions regarding its benefits and drawbacks.

3.4 Analysis

The analysis approached the four areas of the sharing economy discussed in detail—accommodation sharing, transportation sharing, commodities/item-sharing, and crowdfunding—to estimate the actual level of participation and driving motives.

The interviewees' answers were carefully examined, compared and categorized systematically using a thematic analysis conducted to identify the main concepts and the occurrence of the common themes.

Finally, the statements explaining the motives of participating in the sharing economy were sorted and arranged into categories which were compared with literature indications regarding the drivers and deterrents of the sharing economy adoption [i.e. value and convenience (Bellotti et al. 2015); benefits and enjoyment (Hamari et al. 2016); sustainability, community and economic benefits versus lack of trust, efficacy and economic benefits (Tussyadiah 2015)] and results were advanced.

4 Study Results

The research revealed that 71% of study participants are familiar with the sharing economy, experiencing it at least once. More precisely, from a total of 63 participants in the study, 18 participants (14 students and 4 professors) have never partaken, while 45 interviewees (40 students and 5 professors) have been experienced the sharing economy at least once, although almost half of have specified that it needs time to clearly understand how it works (51%) and/or to get used with it (64%), some of them mentioning that *"an openness towards technology and a considerable online networking time spending are required for really enjoying the playground of the sharing economy"* (P40, 43 years old).

As interviews indicate, Romanians' peer-to-peer market experiences relate almost exclusively to accommodation/space sharing (managed usually via Airbnb or CouchSurfing and mostly for abroad stays) and transportation sharing (via Bla-Bla Car and Uber, most often), while the context of embracing the sharing economy was related in most cases to traveling and mobility.

The crowdfunding seems to be highly underused. When asked whether they have involved in crowdfunding in the benefit of a cause, a product launch, the development of a novel technology, or something else, most interviewees declared they never participated, but they would like to do it in the future.

The lack of familiarity with crowdfunding or the lack of information about worthy initiatives were mentioned as main reasons in all cases of never using it. As P 17 (60 years old) declared: *"I have used offline instruments to support different initiatives, but I never felt the need to use crowdfunding, because I'm not familiar with it"*.

Only three participants declared their involvement in crowdfunding. Two of them mentioned they have acted as donors, exemplifying with *"online payments for supporting Wikipedia and Mozilla"* (P13, 43 years old), and the use of crowdfunding platform Kickstarter.com to support the development of a Romanian project meant to release an IT application for tourism: *"I offered money for the app and I think my support was very helpful because they reached the amount of money they needed to lunch it. I also intend to participate in crowdfunding in the near future because I*

have some ideas but unfortunately I don't have the money for product development, so this crowdfunding platforms help a lot in terms of investors" (P8, 22 years old).

The third person declared: *"I was implied in creating a crowdfunded project during a previous collaboration with City Hall of Lozova. Moldavian Republic. The project was dedicated to support local community and the crowdfunding was made via https://guvern24.md. I enjoyed it, and I love this kind of community work. It empowers communities to change things!"* (P7, 25 years old).

The same person was extremely positive about items sharing: *"I used a public bike-sharing service during my stay in Belgium, as Erasmus Student. I enjoyed the sharing service because it enabled me to move and I wasn't forced to buy a bike, and sell it at the end of my stay. It was very convenient! I like to participate in peer to peer market sharing because that is a sustainable way of living."* (P7, 25 years old).

Aside from above example of a person really appreciating item-sharing, all the other interview participants indicated different degrees of reluctance.

When asked whether they have participated in 'peer-to-peer market' for sharing or (renting) various items (i.e. a bike, ski equipment, tent and other traveling equipment, clothing and outfits for special events) as providers or users, half of the interviewees declared they prefer to buy, or to rent from special shops if they have an occasional need for unusual outfits or some equipment for outdoor activities which are not frequently practiced. Some of these interviewees declared they "*follow the rule of not borrowing anything from (or to) anyone"* (P9, 20 years old), or they are *"against borrowing"* (P11, 39 years old) because *"it is safer to use your own things"* (P21, 28 years old).

To explain their avoidance behavior, they indicated the lack of trust (i.e. *"I haven't participated in this kind of sharing/renting mainly because I don't really trust using things from totally unknown people, or to let them using mine"*—P14, 27 years old), and the concern related to hygiene or hidden dis-functionalities (i.e. "*I don't like to share clothing and objects for which either hygiene, or the maintenance and proper functioning are important"*—P16, 23 years old), or they simply offered a general explanation (i.e. "*I believe it is related with family's influence and the education received in the childhood*"—P2, 21 years old; *"I am over-protective with my things and not willing to test others' things. It is all about my attitude towards sharing personal objects."*—P63, 33 years old).

The other half of the interviewed persons admitted they use to borrow to/from relatives and close friends all kind of items, from tools and house/garden appliances to sport equipment and clothing. Although they are reluctant to share things with unknown people, they recognize that peer-to-peer transactions offer convenient solutions for managing occasional or very specific needs. As P6 (27 years old) explained, *"all depends on the object I would like to share. If it's something I will wear only occasionally, I would prefer to share it. If it's something more personal that I could use for years old, I would prefer to have it only for myself"*.

Finally, an in-depth explanation related to the decision of stuff sharing (versus not-sharing) was provided by P10 (48 years old): *"I grew up developing some psychological limits about sharing—there are things I can share and things that I cannot. I don't like to share clothing or other very personal objects, for which both*

uniqueness and hygiene are important, but I wouldn't mind sharing a bike or a tent and I am very enthusiastic about buying in common and sharing things such as tools for cleaning the roads in the neighborhood and all type of items for which it would be a waste to buy individually".

When discussing their personal opinions about the sharing economy (pros and cons) and the reasons for participating (or not), the interviewees disclosed their motives related to personal benefits and risks, but they also approached a wider view revealing their beliefs regarding the social context of the phenomenon.

On a general level, the study reveals a mentality gap depending on both age and participant's exposure to western cultures. Those who have traveled more often (above 10 countries visited) or for longer periods of time (at least one stay higher than 6 months in a western country) indicated an increased willingness to engage in the sharing economy.

The generation gap highlighted the fact that older people are those who have the assets but do not have much disposition to share, while the young people (especially students around 25 years old, who were exposed to western cultures) are willing to share, but do not have much possessions for sharing, which limits them to act mostly as consumers in the peer-to-peer market.

Overall, most participants exhibited a certain degree of reluctance related to at least one of the discussed aspects of the sharing economy. As P54 (24 years old) explained, "*Although sharing should be natural—we learn to share with our parents, then we share with our friends and later with our kids—we are still reluctant to share things with strangers. It's all about fear and the lack of trust. Mostly, we have second thoughts when sharing things with a total stranger. Not all of us are ready for this, mainly because we don't know anything about the people we would have to share things with. Moreover, there is a mixture of generations with different feelings on the subject, but, in time, the number of people with the views of the new generation will increase.*"

The perception of an increased risk, the lack of trust and the fear of exposing themselves to dangerous situations or malicious strangers seems to be the most important barriers appearing in participant's mentions, regardless their age, as expressed in P27 (21 years old) statement: *"In some circumstances it might be pretty awkward to travel or to sleep under the same roof with totally unknown people"*.

On the 2nd level of importance appeared to be the barriers related to the increased preference for privacy and the enjoyment of ownership, as well as the lack of control on the usage of shared assets. Still, an increased preference for both privacy and ownership was exhibited more often by the older participants, as indicated very well by P1 (45 years old): "*It happened only once to have a shared accommodation experience, but it was not the best! I consider these types of experiences more suitable for young and very young people, looking to minimize spending. I prefer comfort and quality. I value the most my inner peace, my personal space and belongings. I believe it's also about ownership.*"

Finally, the different types of experiences (i.e. lower quality than expected, extra-spending) as well as misinformation and peers influence might be regarded

as additional issues contributing to the degree of openness towards peer-to-peer alternatives, as observable in P35 (32 years old) evocation: "*Although I am not a real fan of the peer-to-peer market, I was open to try it at the advice of my friends. I went to a cottage in the mountains and, contrary to my expectations, it was really clean and comfortable. The owners were living in an annex of the house and they were friendly and eager to assist us in all our queries. They introduced us in the place particularities and we found out more than a simple guide could have provided us. Overall, it was a very pleasant experience, a cozy accommodation and a family-like spirit.*"

Of course, as the main part of our interviewees' sharing economy experiences relate to transportation domain and accommodation (45 participants recalled such situations), the most articulated motives and opinions refer mainly to these domains.

We remark participant's mentions on country-specific obstacles which impede the sharing economy expansion in Romania, such as offer's scarcity in transportation (40%) and peer-to-peer accommodation (31%) via sharing platforms, some of the interviewees expressing their hope that the online mediation services will enable the development of Romanian tourism: *"There are wonderful places in this country such as Danube Delta, Bucovina, Maramures, and so on, but a lot of visiting people are missing the full experience because they don't choose to stay at locals. I hope the offers for such destinations will be available on Airbnb soon, enabling people to find easier the information about private accommodation alternatives and develop the taste for authentic experiences" (P43, 39 years old).*

Indeed, some of the recalled accommodation experiences offer a bright perspective in the aforementioned direction: "*I am very active in hospitality sharing because I want diversity in my life! I have used CouchSurfing for finding accommodation in very different places—from USA to Europe. I have also used it in Romania (Brasov, Sibiu, Timisoara) and my experiences were enjoyable each time. Aside from saving money, I have also met and befriended some interesting people among my hosts with whom I have kept in touch to this day.*" (P62, 25 years old).

Although most of the specific mentions regarding offers scarcity in transportation sharing referred to Uber which was recently introduced but only in four Romanian cities, additional examples were also offered: "*The sharing economy infrastructure is not developed in Romania. It would be useful to have Mobility CarSharing services etc. as they have in Switzerland*" (P19, 25 years old).

When asked about their opinion regarding Romanian taxi-drivers' protests from Cluj and Bucharest against Uber, 25 participants declared they have no idea about these protests, while the other 38 participants declared that these protest are legal but futile, since the market and legislation do not impede the emergence of such services explaining that "*it is Uber's right to capitalize their advantage and its competitors' obligation to find solutions for their lack of competitive strategy*" (P5, 37 years old). Younger ones considered that such incidents are normal results of a reality comprehension delay: *"I think that the protests of taxi-drivers are normal reactions of a really fast changing economy. They have the right to protest but I see*

these protests useless: the progress won't stop! Now or a little bit later, the taxi industry (and not only) will be disrupted" (P62, 26 years old).

Perhaps younger 's view is more realistic, since the recalled stories during the interview indicated that they are much more experienced with transportation sharing: *"I used Uber in Los Angeles (a brand new Lexus took me, and I was sooooo surprised :D) and Washington DC, I used BlaBlaCar to travel in Romania (from Brasov to Sibiu) and abroad (from Bruxelles to Amsterdam, from Konstanz to Zurich) and each time I enjoyed it a lot because the people I got to know were so cool! They told me some tips about visiting the cities and we also discussed about common interests and exciting experiences"*. (P3, 25 years old).

Also, the students younger than 30 years old proved to be more enthusiastic about the sharing economy, and they have indicated both immediate and long term advantages (*"I consider car sharing more sustainable for our future! I really enjoy combining utility—moving from A to B—with pleasure—getting to know new people"*—P3, 25 years old) unlike their older colleagues who were more focused on their immediate financial benefits (*"I guess carpooling is not so common in Romania and people are quite individualistic. They don't like to share their belongings, although I shared the car quite often—as a provider and as a user as well—in order to cut back trip expenses"*—P59, 31 years old).

With very few exceptions, participants older than 30 years proved to be more individualistic, more ownership oriented and more worried about potential risks of the sharing economy, weighing its advantages and disadvantages mostly in terms of personal benefits and associated loss, while the very young participants were those seeing a larger range of advantages at both personal and social level, proving themselves more opened to experience, more social oriented and more environmentally aware.

Making clear their belief that the benefits of the sharing economy outweigh its drawbacks, the majority of the participants younger than 30 years indicated much more advantages and motives of embracing collaborative economy and sharing: connecting with different people, socializing and having authentic social experiences (such as local feel), enjoyment, pleasant surprises, acquiring knowledge through intercultural exchange, expenses cut-off and financial benefit, time saving, increased convenience, additional income sources, supporting entrepreneurship, feeling good to help others, sustainable consumption, resource preservation and/or waste reduction, community benefits and a better world.

As P54 (24 years old) detailed, *"The sharing economy offers the way of having more experiences and affording more things—instead of paying a lot of money on a castle and live there all life long, you can live 2 weeks in a castle and then change to a different place and so on. One can save money and enjoy life more, without the burden of owning certain things. Things happen this way in nature, where everything is shared, it would be a natural process, like bees in their huge families. Younger generations have learned a lesson from history and wars: owning things means nothing, so they don't really care about this anymore, since happiness can be obtained in other ways. Sometimes it's the difference between playing or not*

playing a game: older generations were taught to play for winning, but a solution might be to refuse the win-lose game!"

Overall, the participants younger than 30 years expressed less fears and a higher degree of confidence towards the sharing economy comparing with the older ones, who indicated besides positive attitudes, a higher degree of prudent forethought: "*I sometimes wonder if, once developed, the sharing market could not become as bad as the classical market! A certain equilibrium would be needed, in which neither the classical, nor the peer-to-peer market would become too powerful"* (P10, 48 years old).

On this point, it worth mentioning that, regardless of the age category, almost 40% of the interviewed people indicated peer-to-peer market as a promising alternative for an improved allocation of resources and a fairer distribution of wealth (see Fig. 2). In line with the recent investigations related to responsible consumption in Romania (Andrei et al. 2017), most interview participants in the present study indicated an increased preoccupation for social and environmental aspects.

Corroborating aforementioned outcome with the results indicating that 59% of participants noticed that sharing is fun and/or enjoyable, 62% of participants indicated sharing as "the mood of our times", 67% consider that sharing is environmentally friendly, it increases the sense of community (67%), it enables authentic social experiences (70%), and empowers people to help others (71%), the social dimension of the sharing economy and participants' orientation towards a sustainable life-style, as well as their hope for a better society, appear to weigh more in interviewees' attitudes than the economic benefits arising from collaborative consumption, such as: affordability (71%), accessibility (65%), offer's diversity (61%), saving money (61%); potential incomes (55%), as outlined in Fig. 2.

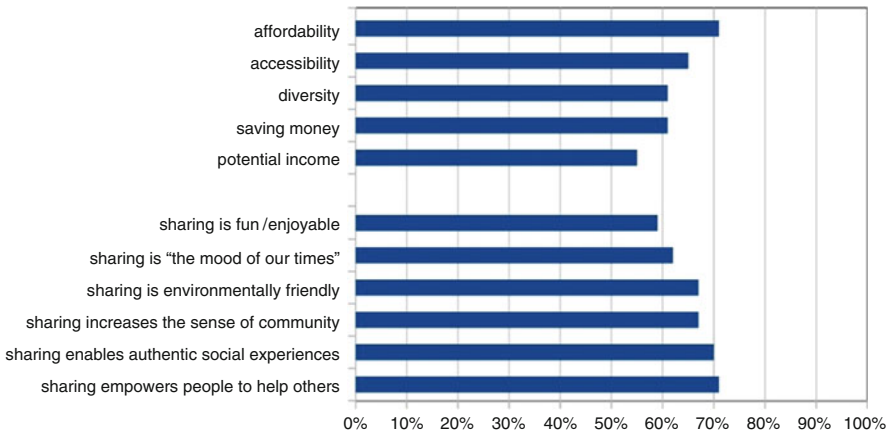

Fig. 2 The sharing economy: the main benefits mentioned by participants (%)

5 Conclusion and Discussions

The study indicate that transportation and accommodation are the most promising domains of sharing-economy development in Romania (note: skill sharing—i.e. freelancing—was not investigated in this study), as 71% of the interviewees have already taken part in different types of peer-to-peer transactions related to these areas, and all (bar one) were willing to repeat the experience.

Still, the study reveals that most of the Romanians' peer-to-peer experiences occurred while traveling abroad. This demonstrates Romania's increased participation as a consumer, but almost zero participation as a provider of peer-to-peer accommodation on a global level, despite the country's touristic potential mentioned in the international rankings (Adventure Travel Trade Association et al. 2011).

Inside Romania, the alternative market of transportation sharing is limited to Bla-Bla Car and Uber (available only in Bucharest, Brasov, Cluj, Timisoara), while the accommodation market sees high demand but low supply, as the offers for private accommodation in Romania are almost absent on major peer-to-peer platforms (i.e. only a small number of listings on Airbnb in July 2017 from a country with an area of 238,397 square kilometers and 19 million inhabitants).

The study shows that aside institutional asymmetry which was revealed by Horodnic et al. (2016) and Williams and Horodnic (2016, 2017), both infrastructure inadequacy and the age gap in Romanian's preferences for privacy (versus sharing) are responsible for this unbalanced situation, since the most experienced and enthusiastic peer-to-peer users are students aged 22–29, who own very few possessions compared to older segments, who own more, but have less disposition to share.

Therefore, the results point out a 30-year age limit as a more adequate threshold for indicating the generation gap in Romania—instead of the 35-year limit reported in other countries (PWC 2015; Matofska 2016; Goudin 2016). Thus, it makes sense to discuss the findings by referring to the X Generation (36–50 years old), Adult Millennials (30–35 years old) and Young Millennials (18–29 years old) groupings (Pew Research Center 2016).

Highlighting that those identified as Young Millennial are the most experienced and active participants in the sharing economy, our findings also support the results presented in UNWTO's youth travel report (World Tourism Organization 2016) and in the general statistics available at global/European level indicating that young people are more prone to intensively participate (Goudin 2016).

As our study indicates, Young Millennials are more confident and optimistic about the sharing economy than Adult Millennials and the X Generation. Also, Young Millennials are more inclined to socialise, more opened to experience, and more environmentally aware, while Adult Millennials and X Generation members are more ownership-oriented and more worried about potential risks of the sharing economy, weighing more cautiously the personal benefit and associated loss, as well as general advantages and limitations.

The gap between Young Millennials and Adult Millennials on the one hand, and the similarities between Adult Millennials and the X Generation, on the other hand,

appear as a Romanian specific. This could well be the specific of a post-communist society, if we consider the fact that the communist regime ended in Romania in 1989, allowing the children and the young people of those times (Adult Millennial and X Generation in 2017) to witness the end of the state ownership, the associated joy of private property allowed, and the beginnings of their country's transition towards free market and democracy.

In this light, we can more easily understand why Adult Millennials and the X Generation are more ownership-oriented and more worried about the potential risks of the sharing economy. Indeed, these groups perceive ownership in terms of social status, as western cultures do (Roos and Hahn 2017), but Romanians also associate it with freedom.

On the other side, the disappointments experienced in almost 28 years of ups and downs arising from Romania's transition towards free market and democracy might explain the higher level of concern about the potential risks of the sharing economy, the inclination to more carefully weigh its advantages and limits, as well as the more cautious general attitudes exhibited by Adult Millennials and the X Generation. These attitudes were very clearly expressed by some participants from the X Generation (the young enthusiasts of 1989), who mentioned that an equilibrium is needed, in which neither the classic, nor the peer-to-peer market would become too powerful.

However, our study has found no case of extreme pessimism among participants, although the literature acknowledges some skeptical opinions (i.e. *"The sharing economy doesn't build trust—it trades on cultural homogeneity and established social networks both online and in real life. Where it builds new connections, it often replicates old patterns of privileged access for some, and denial for others"* —Cagle 2014). On the contrary, we found positive opinions about the sharing economy, with most participants indicating that its overall benefits outweigh the main drawbacks associated with lack of trust, diverse forms of risk, decreased privacy, and the lack of control on the use of shared assets, lower than expected quality, over-spending or misinformation.

Although Young Millennials were found to be more enthusiastic and more experienced while Adult Millennials and the X Generation proved to be more or less reserved, our findings indicate that the sharing economy is generally seen as a global movement that offers both social and economic benefits (Fig. 2). In this regard, we remind that 40% of study participants view it as a promising alternative that is environmentally friendly (67%) and community oriented (67%), enabling people to help each other (71%) and to adopt a modern life-style (62%). On a personal level, the sharing economy is perceived as offering authentic social experiences (70%), being full of enjoyment and fun (59%), as well as bringing important economic benefits such as: affordability (71%), accessibility (65%), a more diverse offering (61%), money savings (61%), and potential extra income (55%).

It is important to remind also the increased favorability towards crowdfunding coupled with a discouraging lack of knowledge and domain-specific experience across all age categories that was found in the present study, as this situation highlights the need for on-topic education in Romanian universities. In a detailed

view, the results have shown a reduced inclination for entrepreneurship among investigated participants, but an increased willingness to support the development of online platforms, the access to information or creative commons, as well as all kinds of projects related to social and community causes. In fact, results indicated 100% participation intent in support of worthy projects if such projects were brought to attention, and people were familiar with how crowdfunding worked. However, <5% of respondents were able to recall any kind of past crowdfunding experiences.

Finally, the paper has the merit of presenting the first report on the perspectives of the sharing economy development in Romania. To date, it is one of the few academic works offering on-topic insights from Eastern European space. Since the sharing economy is part of a shifting social and business environment, the present chapter offers valuable insights for policy-makers, education institutions and businesses (operating, or willing to operate in this area).

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A Synthesis of the Sharing Economy in Romania and Russia

Laurenţiu-Mihai Treapăt, Anda Gheorghiu, and Marina Ochkovskaya

Abstract

Ten years ago, renting a flat from a stranger instead of a room in a hotel might have been considered very unusual in some countries and, of course, not an ideal way to spend holidays. However, times have changed all over the world, and now there are a multitude of online services that offer alternatives to traditional hosting. The products and services of the sharing economy have begun to change lifestyles. The sharing economy, often called the collaborative economy or collaborative consumption, is a new form of business that is growing rapidly. This type of economy presents a challenge, mainly for producers, since, instead of producing new products, the system revolves around the exchange of goods and services that already exist. To better understand the sharing economy, it is beneficial to explore examples of how this economy works in different countries. In this paper, we concentrate our research efforts on Romania and Russia-countries that both experienced communism and are now developing their own market systems. The objective of the paper is to investigate the specifics of the sharing economy and single out successful examples in Romania and Russia. The paper begins by explaining the novelty and importance of the subject. It then depicts the sharing economy in Romania and Russia and specifies the research methodology. Finally, it reports results and findings from the presented case studies.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_4

1 Competitive Advantages of the Sharing Economy

According to Botsman and Rogers (2010):

> now we live in a global world where we can imitate the exchanges that once took place face to face, but on a scale and in a way that had never been possible. Internet efficiency, combined with the ability to create trust between strangers has created a market of efficient exchanges between producer and consumer, provider and borrower and between neighbor and neighbor, without intermediaries.

The authors establish a taxonomy for the practices of collaborative consumption, which they articulate according to three systems. In this paper, the term *collaborative consumption* is synonymous with *the sharing economy*.

The first is a product-based system and includes initiatives wherein one pays for the benefit of using a product without the need to purchase it—for example, car sharing or renting P2P—which means that economic activities based on traditional models of individual private ownership suffer a profound transformation. The second system involves redistribution markets. This system encompasses those collaborative consumption activities in which the used or acquired goods are redistributed from where they are no longer needed to destinations where they are needed, basically referring to exchanges and second-hand markets. In this regard, these may be markets in which the products are free (Freecycle), exchanged (thredUP), or sold (eBay). In this regard, it is pointed out by Botsman and Rogers (2010) that redistribution may become the "fifth R," along with those already known—reduce, reuse, recycle, and repair. The third system covers collaborative lifestyles. In addition to sharing or exchanging material goods, the interest in participating in collaborative consumption may also lie in sharing and exchanging less tangible goods, such as time, space, skills, and money. This system would include, for example, rentals between individuals. These types of exchanges preferably occur at the local or neighborhood level, where spaces for work (Citizen Space), gardens (Landshare), or parking (Parkatmy House, changed to Just Park) are shared. At a more global level, there are loans between individuals (Lending Club) and rental of rooms to travellers (Airbnb).

Another type of categorization of collaborative consumption is proposed by Schor (2014, 2016), who refers to one form of collaborative consumption as "connected consumption" in order to emphasize the digital and social dimension of these practices. According to Schor and Thompson (2014), the collaborative economy and connected consumption attract users for three reasons. The first is economic. They argue that economic activity shifts from the middlemen to the consumer—producers, which makes alternative lifestyles possible. The second is ecological. Since almost all of these initiatives allow the reduction of one's ecological footprint by sharing transport, reducing waste, or increasing the utilization of assets that already exist, they reduce the demand for the production of new goods and facilitate the reutilization of goods, such as luxury products. Finally,

there is the social aspect. Many citizens move toward collaborative consumption because of relational reasons that allow them to expand their social network.

The range of proposals and experiences of collaborative consumption at a global level are wide and include any type of goods and services of general and daily use as well as those of a more segmented nature. In short, any area of daily life can be the object of collaborative or participative consumption. The diversity of initiatives has grown in response to the economic crisis, which has provoked the emergence of platforms, for example, for the purchase of clothes and second-hand wedding accessories, for the rental of everything from accommodation in houses to gowns, and even in relation to designer clothes or luxury accessories. Other options include sharing taxis from the airport to the city, sharing office rooms, mobile platforms where users can buy and sell goods and services to people living in the same community, or even cultural exchanges for young people from different countries, such as the ERASMUS+ academic program.

2 The Sharing Economy: Rental Housing for Tourist Use

The sharing economy is a recent phenomenon that has begun to transform the way we do business globally (Botsman 2010). It has shifted consumer focus from the need for possession to the demand for "access" to goods and services without owning them (Botsman and Rogers 2010). In the case of tourism, and particularly in the subsector of accommodation, collaborative consumption is based on the idea of sharing a property by providing others access to it, either for free or payment. In the second case, these practices are based on the owner receiving a return on their housing investment by renting it for tourist accommodation purposes, either with or without intermediaries. It is one of the clearest examples of the sharing economy in the tourism industry, and it was occurring long before the term *sharing economy* appeared as such (Algar 2007).

This model has been defended by the argument that it favors economic, environmental, and social sustainability by promoting democratization in the access to goods (Heinrichs 2013). The sharing economy has contributed a large number of micro entrepreneurs to the tourism industry, as well as being instrumental in the proliferation of the informal economy. In the tourism industry, the sharing economy, or peer-to-peer exchange, is associated with the term p2p tourism (Pizam 2014). The step from consumer to prosumer—a user who not only consumes information but also produces and shares it, in this case on the network (Weiermair 2004) thanks to web 2.0—has been grouped in the travel designation 2.0 (Tennyson 2011). Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform.

In this change of model, the relationship between company and customer has been transformed to the point where the information that can make the hotel or destination decide is increasingly. The decision generated and controlled by the traveller who, using web 2.0 tools and social networks, collects information from

other users' experiences, verifies the veracity of the information, and checks if the information given is authentic and true. However, in the tourism industry, p2p interactions can go beyond the mere exchange of information, hence its ascription to collaborative consumption.

In this respect, Pizam (2014, p. 118) defines it as the environment in which "individuals carry out transactions with other individuals directly, through an Internet platform managed by a third party to offer and purchase a variety of products, including travel services such as accommodation, rental of vehicles, food and beverages and tourist guides." In their pioneering study, Botsman and Rogers (2010) analyzed p2p tourism as a rising phenomenon that gives greater importance to access to a property than to its possession. Being a more relevant tourism experience than ownership, theory also developed by Moltz and McCray (2012), such as the immaterial versus the material ownership. This form of collaborative consumption of a property intended for tourist purposes is based primarily on the reputation of the user who offers their property and the trust of their potential consumer (Botsman and Rogers 2010). This dialectic between reputation and trust in virtual space derives mainly from the aforementioned figure of the prosumer, as the user of travel 2.0, who testifies about the products he has previously consumed and tends to consult the opinions of others before buying a good or service (Vermeulen and Seegers 2009). This gives the traveller a key role in the process of acquiring these services (Labrecque et al. 2013).

The pioneer in this new form of tourist consumption was Airbnb, created in 2008 with the innovative idea of using the Internet to commercialize accommodations around the world (Airbnb 2016). Following the success of Airbnb, numerous p2p websites dedicated to the renting of housing for tourists have arisen in recent years. In relation to the turnover rate for this type of p2p websites, According to *Euromonitor International*'s study for the World Travel Market (Euromonitor International 2014), these p2p websites generated sales worth million EUR30.9 in 2013, and that figure is expected to grow by 19% to reach million EUR36.5 in 2018. As for the user profiles of these p2p websites dedicated to the rental of housing for tourist use, given the very recent nature of the phenomenon, there are hardly any studies that analyze them, so we will refer to the only one that has done a dedicated study of the countries we discuss here. In regards to the general causality of the current success of the sharing economy, authors like Algar (2007) point out that, in general, the current economic crisis has led to the appearance of numerous initiatives that have been received willingly by the population because they give them the possibility to access places and properties that they otherwise would not have been able to enjoy.

3 Methodological Design

This section explains and justifies the methodology used in order to complete the present research. The methodology is appropriate to achieve the aims and objectives of the study. The authors used secondary research and conducted a

systematic scan of Airbnb's website, the blogosphere, Google alerts, and similar sources in Romanian and Russian languages from February to April 2017, using the online platforms' automated tools. The collected insights were used in a SWOT analysis of Airbnb services. In this way, it was possible to draw pertinent conclusions regarding consumption patterns, practices, values, and policies. Research results could not be generalized to the entire population; they only indicate viewpoints and motivations based on the available pieces of information in the current study.

In April 2017, we concluded our research of the prices of Airbnb housing units and the prices for single rooms/apartments in hotels located in the area of the most important avenues in Bucharest and Moscow. We concluded that Airbnb rates were lower than hotel rates by an average price of Euro 26.5 in Bucharest's city center.

For Moscow, the historical Tverskaya Street was chosen. This street is perceived as the most famous and touristic. The prices per night for rooms, as well as for flats, in the Stalinist high-rise buildings at Tverskaya were much lower than the price for a standard single room at the Ritz Carlton Hotel on the same street. Although the 5-star Ritz Carlton Hotel provides pure luxury and exceptional service, staying at an atmospheric flat in a historical city center might provide an unforgettable experience as well. In general, the prices at 5-star hotels range from 5 to 15 times higher than Airbnb prices.

The current research allows stakeholders to make the right decisions about renting houses in Romania and Russia through the Airbnb system.

4 Results and Findings

4.1 Roots for Collective Consumption in Romania and Russia

Romania is a medium-sized country located in southeastern Europe on the Western coast of the Black Sea. It shares borders with Bulgaria to the south, Moldova and Ukraine to the northeast, and Hungary and Serbia to the West, as can be seen from the map below (Fig. 1).

Immediately after the 1989 Revolution, the Romanians endured a slow and painful transition to a market economy. Many factories went bankrupt, agricultural production fell, the gap between urban and rural areas increased, and millions of Romanians were forced to emigrate in order to have a decent life. A serious demographic downturn has deepened in recent years, leading to a population decrease that is the result of several million citizens leaving the country to find work coupled with an aging population.

Currently, after a quarter of century, there are still aspects than can be improved, such as developing infrastructure and fighting against corruption. However, overall, the opportunities to build new businesses are great. Therefore, many international companies now operate in Romania, which means new jobs, a rise in the middleclass, and increased consumption. In fact, consumerism drastically influences the national mentality, although Romanians have never completely

Fig. 1 Map of Romania and Russia positions in the region. Source: http://www.genderevaluation.net/gem/en/practitioners/reports_217c.htm

abandoned their spiritual values. The allegory about a special breed of a communist "New man", resistant to material values, turned into consumerism. Saving for private education, healthcare, and retirement is still not common, so a high percentage of family income is spent, which retailers have been keen to exploit. Rich Romanians behave in exactly the same way as the *nouveau riche* from Russia, China, or the Arab countries. The young generation will play a decisive role in the maturing Romanian consumer population.

Sometimes food waste reaches alarming levels. On holidays, Romanians queue up at stores to buy all kinds of food, which they later throw in the trash bin because it spoiled in refrigerators. The causes are multiple, but they include the Romanian custom of celebrating with abundant food and aggressive advertising, as well as other factors such as diversification, adoption of a Western lifestyle, and increases in income and living standards. Consumption of food in excess leads to various cardiologic and digestive problems (especially during Christmas or Easter holidays). Not coincidentally, Romania is among the first places in Europe to see an increase in cardiovascular diseases, cancer, and diabetes. Moreover, unhealthy food (with dangerous additives and excess sugar or salt) contributes to this medical catastrophe.

In contrast to Romania's size, Russia is a huge and versatile country located in northeastern Europe and northern Asia. It shares borders with the following 14 countries: Belarus, Lithuania, Latvia, Estonia, Finland, Norway, Poland, Kazakhstan, Ukraine, North Korea, China, Mongolia, Azerbaijan, and Georgia.

During the time of the Soviet Union, the borders were closed, and average people were not allowed to travel abroad. All of the Eastern Bloc countries restricted outside travel for their citizens. When the Soviet Union collapsed (it officially ceased to exist on December 31, 1991), the standards of living were rather low. In 1992, price liberalization had started, and free market prices were introduced. Prices for most of the goods flew up 10–12 times higher than they had been before the reform. Due to hyperinflation, millions of Russians lost their life savings. Moreover, a lot of people lost their jobs and could barely make ends meet. Those who still had a job were often not paid for months or were given goods instead of money, which they had to exchange for food. A majority of factories stopped functioning, and people had to change their professions, sometimes taking jobs that were below their qualifications. Engineers and researchers from scientific institutes had to master new professions as well. Many people had to sell their family possessions (e.g., tea sets, silver spoons, apparel, jewellry, etc.) in the streets in order to survive. Cases of suicide increased, as some people were not able to find themselves in the new reality. The 1990s were the hardest years in Russia. It was not until the 2000s that people adjusted to the new reality and stability, more or less, was achieved. Given their history, Russians are inspirational consumers. "The great history of revolutions and changes in Russia gave people the mentality of living for today, rather than delaying gratification for an unknown tomorrow… Russians do not tend to hesitate before making even the most expensive purchases" (Kulikova and Godart 2014, p. 53).

In recent years, booming online platforms (such as www.olx.ro) have emerged. On these platforms, individuals sell used or useless items, as well as new products. Sometimes products are sold without warranty. However, there is a rating system and an opportunity to comment and assess the goods' quality, which is helpful for prospective buyers. According to one report, 34% of Russian online users aged 18–64 (or 25 million people) purchased something online in 2014 (Salminen 2016). Nielsen states that around 43% of Russians prefer making purchases in a conventional store rather than online (Nielsen 2015). Shopping is a type of leisure activity, and customers enjoy visiting restaurants or cafes after they have finished shopping. Shopping or strolling about the huge malls gives people an opportunity to have fun, and it often involves the whole family.

Romanians also enjoy shopping as a leisure time activity. Going to the mall is one of Romanians' favorite activities in their free time. Most large industrial sites and factories inherited from the Communist period have been turned into malls, apartments, and office buildings. Additionally, the market for restaurants and cafes has begun to strengthen in recent years, as consumption has started to rise. However, according to a Eurostat study, Romanians are last among the European countries in terms of the frequency with which they buy goods and services online (see Fig. 2). Only two out of ten Romanian users between the ages of 16 and 75 shopped online in 2016, while eight out of ten users in the same age range

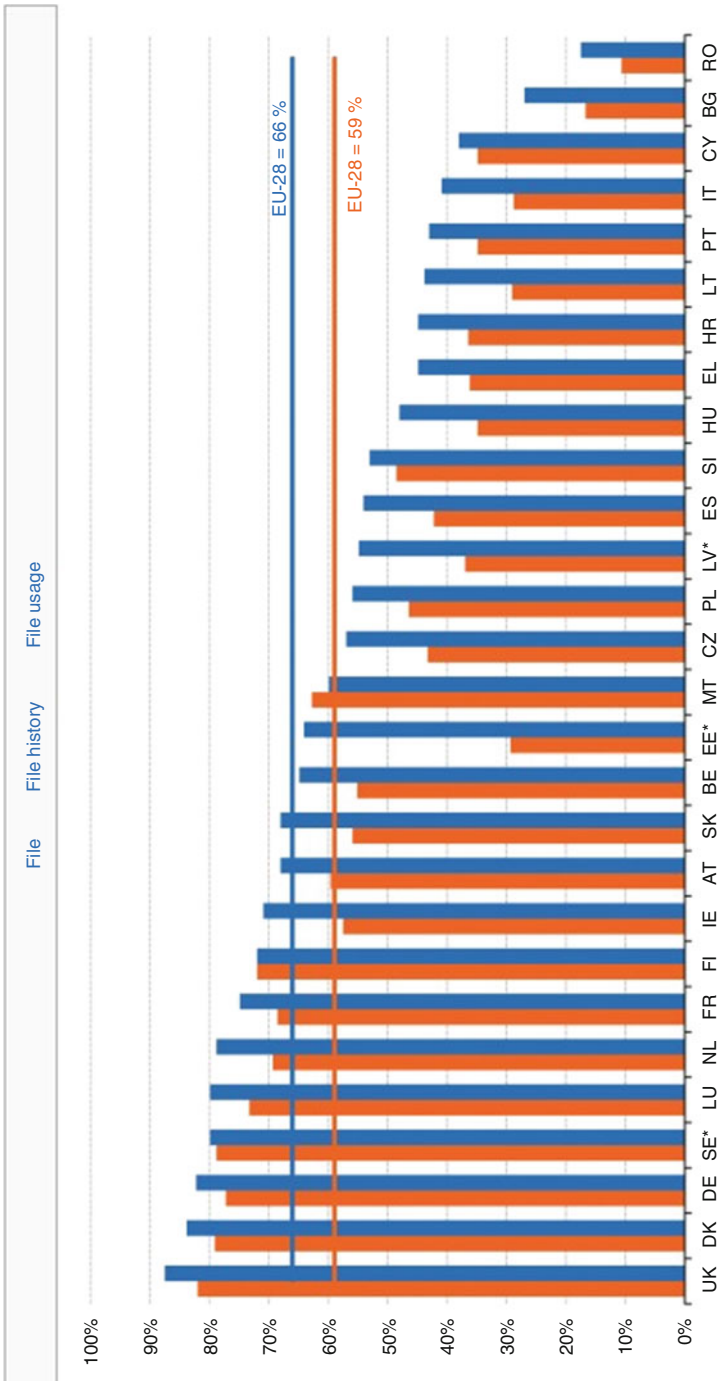

Fig. 2 Internet users who bought or ordered goods or services for private use over the Internet in the previous 12 months, 2012 and 2016 (% of Internet users) (Reproduced from Eurostat, "E-commerce statistics for individuals")

ordered online goods in the UK, Denmark, and Germany during the same period. In Romania, over three million people bought online goods and services at least once in 2016.

4.2 How the Sharing Economy Works in Romania and Russia

Airbnb is a company that helps people find and book online accommodations around the world. It was founded by Joe Gebbia, Brian Chesky, Nathan Blecharczyk in August 2008 as a start-up in San Francisco, California. With millions of bookings, Airbnb has achieved extraordinary success, proving that this innovative activity supported by Internet and mobile technology has enabled the development of the sharing economy and democratized access to the global housing market. However, regulators around the world are at an impasse, since they do not know exactly how to cope with these innovative practices. Should they be largely encouraged or impeded? Some cities, including Amsterdam, London, and San Francisco, have already adopted legislation in favor of Airbnb, while others are alarmed by the dangers regarding public safety, health, and the limited liability of this kind of service. For instance, Airbnb worked with Amsterdam's local council to pass an "Airbnb-friendly law" in February of 2014, which permits residents to rent out their homes for up to 60 days a year, provided that the owner pays the relevant taxes (PriceWaterhouseCoopers 2015).

Airbnb services have been also contested by hotel managers, who accuse the sharing economy practice of being a form of unfair competition. For instance, in 2014, the New York State Attorney General released a report stating that 72% of the site's rentals violated state zoning regulations or other laws. In a complaint submitted March 12, 2014, a person mentioned the following:

> my life and the life of my roommates is constantly disrupted with the noise from upstairs neighbor with groups of people making heavy noise, especially during the night. We have had property stolen from the basement, lost deliveries left inside the building, the front door was once vandalized and the list of incidents goes on. . . The host accommodates up to four people in each room (for a total of 12 people at the same time). [For] at least one year the host has [been offering short-term rentals and does] not live in the building but with his girlfriend somewhere else in the neighborhood. To rent the rooms he comes to meet his clients, gives them the keys to the building, and then leaves (New York State Attorney General Report).

In addition, Berlin has prohibited short-term rentals in the most popular parts of the city without preceding authorization from the local authorities, while in Paris, owners risk sanctions if they do not allow inspectors to check if they are unlawfully providing housing services.

To sum up the general issues, we conducted a SWOT analysis of Airbnb (Table 1).

Table 1 SWOT analysis of Airbnb case

	For people renting out their properties	For people who need a cheap room when travelling	For local community and state	For Airbnb owner
Strengths	• The platform allows people to earn money in a safe manner and is accessible to millions of potential clients • There is no trouble with invoicing and finance • The first night is automatically paid	• Airbnb rates are lower than hotel rates	• It can solve the problem of room rental scarcity, if that is a problem	• The labor costs are lower, often by 30%, since it is not responsible for social security
Weaknesses	• Owners may encounter difficult tourists, with exaggerated requirements, who later post bad reviews • The activity requires the owner to be flexible regarding check-in, check-out, cleaning, and socializing times	• There is no way to check the accommodation conditions, except the rating system (opinions from previous users)	• People working in the hotel industry may lose their jobs or have diminished salaries • Shrinking profits for hotels and, consequently, lower taxes paid to the state and local communities • No health benefits or social security are provided	• The system can crash if attacked by hackers (potential of losing credibility and clients)
Opportunities	• Owners may make new friends and meet interesting people from different continents, cultures, and backgrounds • Hosts from the EU can legally operate if they declare their incomes to the local fiscal authority	• It provides cheaper housing and rental options when travelling • Travellers can make new friends and meet interesting people from different continents, cultures, and backgrounds	• It may provide an opportunity for the local community to become more prosperous	• There is the potential to expand the business through the current development of social media and mobile technology

(continued)

Table 1 (continued)

	For people renting out their properties	For people who need a cheap room when travelling	For local community and state	For Airbnb owner
Threats	• There is a lack of income predictability • Renters may be untidy or steal	• Deception, limited legal responsibility, and amateurish service providers are potential problems	• There are concerns regarding public security, health and limited liability • Hotels argue that Airbnb is a form of unfair competition	• There is a danger of being banned or muted by excessive or outdated regulations

4.2.1 Romania

In the 1990s, Romanians encountered the time-sharing system by which property is shared over the course of a year by manifold owners who enjoy the benefits of the facilities and services characteristic of a tourist resort. The owner is recorded in the Land Registry, and the property can be sold, rented, mortgaged, donated, and left as inheritance. This form of the sharing economy started as a dwelling exchange between friends, but, in time, it evolved into the current system. In Romania, time-sharing is regulated by Law no. 282/2004. One example is that of a villas complex located in Transylvania that includes 21 housing units affiliated with the global time sharing system Interval International, which is a network of over 3000 destinations in 80 countries (Timesharing Bran 2016).

Time-sharing, however, is an expensive alternative for holidays, and many travellers hope that Airbnb will offer a better solution. It is a convenient way to find cheaper housing and rental options when moving from city to city. In fact, it enables people who have space they are not using to rent it out at cheaper costs than hotels to people who need a place to reside for short periods of time. An Airbnb host usually offers rooms that are cheaper than hotels, tourist agencies (the middleman) are eliminated, and Airbnb's maximum fee is 15%. The platform allows people to make money securely and effortlessly in ways that had not previously been possible.

Romania's steady economic growth of +3.7% in 2015 and +5.4 % in 2016 and low profit tax (16%) has attracted many foreign direct investments (in 2015, FDI net flow stood at EUR3.461 million) and, consequently, more foreigners. This development means higher demand for short-term accommodations. According to the National Bank of Romania's Statistics Department, accommodation and food service activities were valued EUR504 million in 2015 (National Bank of Romania 2015). In fact, the potential for growth is tremendous, provided that the public authorities will encourage tourism in the future by promoting a country brand, improving the national infrastructure, supporting international fairs, and stimulating both entrepreneurship and leisure.

Romania, particularly Bucharest, has an active hotel market, with great potential for all hospitality segments. Most visitors come for business reasons but, in recent years, the leisure business has grown the most thanks to the greater number of flights into and from Bucharest International Airport, as well as more Danube cruises. According to the National Institute of Statistics, in 2016, there were 6821 establishments to receive tourists in 2016; 1545 of these were hotels with a total of 190,275 beds. In 2015, 1,990,498 foreigners were hosted in hotels, but many others were sheltered in other types of units (40,168 in hotels, 92,798 in tourist boarding houses, 50,569 in agro-tourist boarding houses, 29,709 in tourist villas, and more). The hotel market in Romania is dominated by three-star establishments that account for almost 39% of the total supply, followed by the two-star segment (35%) (Romanian National Institute of Statistics 2016). One hundred and 73 hotels and 20 hotel chains are located in Bucharest. Out of them, 147 are independent hotels. International chains have begun expanding in Bucharest and other major cities. The most important of these include Intercontinental, Hilton, JW Marriott, Radisson-Blu, Sheraton, Novotel, Mercure, Ramada, Ibis, Pullman, Crowne Plaza, Golden Tulip, and Best Western. For 2015, the average occupancy rate in Bucharest was 65%. In the case of 4- and 5-star establishments, the rate reached the level of 72%, registering the same increase of 5% as the rest of the market (Colliers International 2015).

When someone rents their private residence, they create the schedule, including check-in and check-out times, directly with the client, and the price is posted on the listing website. The platform sends the invoice to the client and, after collecting its own fee, sends the money to the proprietor. According to Romanian fiscal code, the Romanian owner who rents rooms to tourists is taxed 16% on the income of the rental (income tax). If renting is the only income source for the proprietor, he should also pay social security and health taxes on that amount. After a maximum of 15 rental days, the owner should declare the income. However, the truth is that the large majority of people who rent rooms with the help of the Airbnb platform do not declare their income and do not pay any tax, since the local authority does not have access to the platform database and cannot check the earnings of Romanian fiscal residents who make money from renting their properties.

There are thousands of Romanian properties registered on Airbnb, with prices ranging from EUR9.25/night to more than EUR1099/night. Most offers are in Bucharest and other major cities located in very touristic places, including Sinaia, Buşteni, Braşov, Bran, Cluj Napoca, and Constanţa. The largest number of rooms in the country can be rented in Transylvania and near the Black Sea shores. The historical regions of Moldova and Wallachia are almost absent on Airbnb, so there is a lot of potential for growth there.

In April 2017, we conducted a study that found that Airbnb rates in Bucharest's city center were, on average, EUR26.5 less than hotel rates. The research was conducted by studying the prices of Airbnb housing units and the prices of hotels located along the most important avenue in Bucharest-Bulevardul General Gheorghe Magheru, continued on to Bulevardul Nicolae Balcescu. This avenue links two of the most important squares—Piata Romana and Piata Universitatii—and offers easy access to Bucharest's main tourist attractions, as they are within walking distance.

Table 2 Comparison of prices between different housing units located on Magheru Avenue, Bucharest, Romania

Single rooms/apartments offered by 4 stars hotels Ambasador and Scala	Single rooms/ apartments offered by 22 Airbnb hosts	Bucharest-Comfort Suites, 4-star hotel located at N. Balcescu 16
64–85 euro (booking.com)	19.78–72.30 euro (airbnb.ru)	52 euro (booking.com)

Many business people and tourists desire a residence in this part of the city. We found 22 Airbnb hosts located in this area, with prices between EUR19.78 and EUR72.30. The average price of houses located near the most important avenue in Bucharest on Airbnb was EUR34.28. We only found three hotels located in the same area (Ambasador, Scala, and Bucharest-Comfort Suites, all of which are 4-star hotels). Lido, once one of the most luxurious hotels in the country, is closed now, so it was excluded from the study. The average price of hotel rooms was EUR60.87.The research conclusion is that the Airbnb rates were lower than the hotel rates in 21 cases (Table 2).

4.2.2 Russia

Although Russian people have rather closed personalities and follow the rule "my home is my castle," more and more of them have become more open and begun to seek some extra income to cope with the economic crisis (Khrennikov 2015). According to the expert's opinion, the sharing economy is growing in Russia (Kalinina 2017), as people have to find some alternative ways to earn money during cutbacks in their income.

The sharing economy is not new to Russia. During communism a lot of people had to live in communal apartments known as *kommunalka*. *Kommunalkas* appeared in the USSR after the Russian Revolution of 1917. Each family lived in their own room, which often combined a living room, dining room, and bedroom for the whole family. All of the residents of the entire apartment had to share the usage of the hallway, kitchen, bathroom, and telephone. There are still communal apartments in Russia. Nowadays, young Russian people coming from small cities do not mind renting a room in a communal apartment that is situated in a building in the historical city center of Saint-Petersburg. There were a limited number of hotels during the Soviet times. In those times, the hotels were not only expensive but also artificially booked. Formally, rooms in hotels were not occupied, but average people could not reserve them, as they were intended for communist VIPs who in most cases might have not appeared. Thus, people had to rent a room in an apartment instead of staying in a hotel. Renting a room was a common practice when people went on vacation. Moreover, there was another prevalent collective consumption practice in the USSR. People who were close friends could share expensive goods, such as fur coats, tights, or perfume, on very special occasions. TV sets were a desired good that only a few people could afford to have. In small cities, owners of a TV set could share their treasure by inviting neighbors to watch news and films. Therefore, collective consumption has deep roots since Soviet times.

Table 3 Comparison of prices between different housing units located on Tverskaya Street, Moscow, Russia

Ritz Carlton Hotel at Tverskaya (standard single room)	Single room in the apartment at the Stalinist high-rise building	Apartment at the Stalinist high-rise building
499 euro (booking.com)	40–72 euro (airbnb.ru)	69–120 euro (airbnb.ru)

In recent years, Airbnbhas become very popular in big Russian cities, especially in Moscow and Saint Petersburg. Inbound guest growth has been indicated, and its rate increased by 121% from 2015 to 2016 (Kalinina 2017). In Russia, the apartments and rooms in Stalinist high rises are in very high demand, especially among foreign tourists. The prices at 5-star hotels can be 5–15 times higher than Airbnb offerings. A price for a night in a room in a Soviet high-rise building on Tverskaya Street might start from EUR40.00. Russians offering their rooms and apartments get not only additional money but also some valuable experience. In addition to money, they gain a wonderful opportunity to speak and exchange opinions with people from different countries. Moreover, this practice of opening their flats might broaden their horizons and change their minds and ways of thinking (Table 3).

Another on-line platform, YouDo (https://youdo.com/), shares a symbiotic relationship with Airbnb. The owners who rent their houses on Airbnb usually need help to clean and fix their properties, and YouDo is an online crowd service platform for tasks that are outsourced and performed by individuals or groups. YouDo's platform was initiated in 2012. The platform matches people who need assistance with some domestic task (e.g., fixing, cleaning, etc.) with service providers who can comply with their requests. This platform helps people earn some extra money in their free time, receiving orders for activities such as cleaning apartments or windows or fixing something. The platform even plays a social role, as it gives people a way to make ends meet if they've lost their job. On the one hand, YouDo is positioned as an opportunity to earn more money in your spare time, and, on the other hand, it is a platform where people can find any needed service fora cheaper price.

The numbers of Russians who have found work on YouDo.com has been increasing. In January 2015, 23,000 people found jobs on the platform, but by October 2016 that number had increased to 137,000. The popularity of YouDo among younger generations might be because not all of them are oriented toward an office career. A few millennials are not ready to work from 9 a.m. until 6 p.m. They want to work flexible hours, as it gives them opportunities to have more free time. YouDo satisfies this need, as it helps them to have a flexible job. Today, the sharing economy market in Russia is not regulated by legislation (Kalinina 2017). The system is based on trust and feedback from users. In Russia, people usually do not trust much to legislation. Positive feedback and recommendations work better than any state regulation.

5 Conclusions Regarding Socio-economic, Managerial, and Practical Implications

Airbnb, as a tool of the sharing economy, allows people to find different alternatives to staying in hotels. Due to Airbnb, travellers can find appropriate housing at cheaper costs than hotels while also exploring the world. Meanwhile, owners have an opportunity to earn additional income by renting out their available properties. However, renting with Airbnb is not only about money; it also concerns emotional values, such as new friendships and horizons. If people are open to the world, they probably make new friends from different continents and backgrounds with the help of Airbnb's platform.

Usually the most open-minded people are the younger generation. Millennials (Generation Z) do not fear the new and unknown, and they have been quicker to appreciate the different advantages of home sharing. According to the research initiated by Airbnb, millennials already account for roughly 60% of all guests who have ever booked on Airbnb, and the number of millennials who have booked on Airbnb has grown by more than 120% in the past year (Airbnb Citizen). Taking into account the lower price levels offered by Airbnb in comparison to hotels, we might stress the social role of this platform, as it facilitates the travelling to and exploring of new places by young people whose income is still not very high.

The results of this research also suggest that the expectations of Airbnb customers are met in most cases. Therefore, the alleged disadvantages of an accommodation service such as Airbnb seem to be outweighed by the benefits of having accommodations in a private residence, especially the feeling of familiarity with being in a home rather than a hotel.

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Behind the Sharing Economy: Innovation and Dynamic Capability

Patrizia Gazzola

Abstract

The aim of this chapter is to show how dynamic capability constitutes a primary engine of the sharing economy and how important this concept is in terms of enabling firms to manage their resources proactively in order to compete by forming new asset combinations. Dynamic capabilities enable businesses to adapt to changes in the environment and secure competitive advantages. They create innovation connected to the development of completely new capabilities through the exploration and path-creation of new processes, products, and services. This chapter focuses on incremental innovation and disruptive innovation. Innovation as a concept is relative to the experience and knowledge of a country, community, or group. As a recent economic innovation, the sharing economy has improved people's access to several services and products. The sharing economy includes social innovations in addition to process, product, and service innovations. Dynamic capability emphasizes the analysis of knowledge management problems and the combination of economic and behavioral aspects of sharing economy organizations. While dynamic capabilities have been extensively discussed in the literature, the way that organizations in the sharing economy use dynamic capabilities to help fulfill the requirements of stakeholders has not been extensively investigated.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_5

1 Introduction

In the current competitive economy, innovation is one of the most important drivers of long-term consumer welfare gains. In the last 10 years, the concept of sharing has progressed from a community practice into a profitable business model, and the sharing economy has grown in scale and scope. In this period of technological transformation, the sharing economy represents a change in the evolution of capitalism. We have moved from ownership to smart platforms that link individuals and/or businesses that need a product or service with others that supply them. We live in a connected age, and it is very easy to create common networks; peer-to-peer online platforms, which are networks of interconnected "peers," share resources without the presence of a centralized system (Vătămănescu et al. 2016a, b). The sharing economy represents an opportunity for everyone. On the one hand, it is one of the most important responses to the current economic crisis; on the other hand, it has the potential to lead to paradigmatic social change. In the sharing economy, it's not the idea of sharing that is new but the introduction of technology into the concept. The sharing economy is facilitated by the growth of digital platforms and the willingness of consumers to use mobile apps that facilitate peer-to-peer business models, shared entrepreneurial enterprises, and more. Cloud and mobile computing technologies are determining changes in business, and they will determine the future of many firms. Technology plays a crucial role in enabling the connection between spare capacity and demand. This emerging business model is disrupting the conventional company-driven economic paradigm, as evidenced by the large number of peer-to-peer based services.

With mobile apps, collaborative consumption is easier, and changes in consumer preferences are at the base of the success of the sharing economy. Younger generations favor low-cost networks of shared assets or service providers and on-demand access instead of supporting the idea of individual ownership and the higher costs of managing it. Younger people will lead the creation and the development of the majority of this business innovation (Vătămănescu et al. 2016b, 2017).

In today's world, innovative companies constantly face challenges from their respective environments. They need to maintain a healthy competitive advantage in the market. To maintain this competitive advantage, they are required to develop dynamic capabilities—the adaptive capacity that enables an organization to develop new capabilities better fitted to the changing environment (Čiutienė and Thattakath 2015). According to Teece (2009), it is the capability of a set of learned processes and activities that enable a company to produce a particular outcome. Best practices are an example of ordinary capabilities. Currently, the concept of dynamic capabilities is a dominant paradigm for developing and explaining competitive advantages. The notion provides a coherent framework that can both integrate existing conceptual and empirical knowledge on competitive advantage. The concept of dynamic capability lies at the heart of an organization's ability to enact change in a systematic way that gives them a competitive advantage over their peers (Ambrosini and Bowman 2009). The basic assumption of the dynamic capabilities

framework is that core competencies should be used to modify short-term competitive positions that can be used to build longer-term competitive advantages.

Following a model, this study shows how dynamic capability influences the success of sharing economy organizations through innovation. The work is theoretical and develops a model of dynamic capability where the connection with the sharing economy is shown. Beginning with the hypothesis that dynamic capability is the engine of the sharing economy, the chapter opens by reviewing the relevant research on dynamic capability and the sharing economy. The dynamic capability approach is used because it emphasizes two main aspects. First, it refers to innovation in a different way. Second, it emphasizes the key strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies to suite the changing environment. Moreover, the dynamic capability approach gives a coherent framework to integrate existing conceptual and empirical knowledge (Teece 2010; Vătămănescu et al. 2016a). The study concludes by outlining some best practices from sharing economy companies that are successfully following the dynamic capability approach. The case study approach, with the examination of aspects of experience that come from the past, can help to build models or to check if a model can be applied to the case under analysis (George and Bennett 2005). The adoption of a qualitative methodology is supported by the fact that dynamic capabilities are embedded in company's organizational routines and processes (Eisenhardt and Martin 2000), and it's very difficult to identify these through quantitative research. The case study focuses on two companies from the sharing economy that represent outstanding examples of successfully utilizing dynamic capability: Amazon and Spotify.

2 The Basics of Dynamic Capability and the Sharing Economy

The first concept used in this study is *dynamic capability*. Developed by Teece et al. in 1997, the concept is now a key dimension of the academic literature addressing organizations' ability to innovate and to maintain and/or increase their competitiveness. Dynamic capability is defined as the ability to integrate, build, and reconfigure internal and external competencies to address rapidly and unpredictably changing environments (Nelson and Winter 1982; Eisenhardt and Martin 2000). In 2007, Teece in 2007 argued that dynamic capabilities are related to organizations' ability to sense and then seize new opportunities and, finally, to transform in order to create value. Teece (2008) considered two interrelated elements of dynamic capabilities: the capacity to identify new business opportunities and the capacity to use those opportunities effectively. The idea is to combine "asymmetric" advantages and organizational adaptation to market changes.

Hamel and Prahalad (2013) synthesize the dynamic capabilities like a forward-thinking competency linked with the resource-based view (RBV) of the firm. Rothaermel (2015) suggested that the dynamic-capabilities perspective "is the

outflow of a firm's capacity to modify and leverage its resource base in a way that enables it to gain and sustain a competitive advantage in a constantly changing environment" (Rothaermel 2015, p. 114). In "Understanding Dynamic Capabilities," Winter (2003) tried to demystify the approach and consider the ongoing and prevailing uncertainty. Specifically, the business field of strategic management has made significant contributions to the dynamic capabilities approach (Foss 1997; Teece et al. 1997; Sanchez and Heene 1997; Volberda and Elfring 2001). Indeed, the word *dynamic* refers to situations in which there is a rapid change in technology. According to Wu et al. (2012), this approach is used to investigate innovation in the sharing economy.

Teece (2009) points out that "in fast-paced, globally competitive environments, consumer needs, technological opportunities, and competitor activity are constantly in a state of flux" (Teece 2009, p. 9). Dynamic capability is not only the ability to find a solution for innovation problems (Winter 2003); it is also the ability to create and adapt routines in terms of interacting with stakeholders. In order to stress this structural aspect of problem-solving as a result of dynamic capability, Zollo and Winter (2002) developed an alternative definition of the concept: "A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Zollo and Winter 2002, p. 340). The words "learned and stable pattern" and "systematically" highlight the point that a dynamic capability is structured and persistent (Zollo and Winter 2002). Finally, dynamic capability reflects an organization's ability to achieve new and innovative forms of competitive advantage (Lawson and Samson 2001). The ability to create long-term competitive advantages is derived from the ability to recognize new business opportunities in advance and capture them ahead of other competitors. Firms can use their dynamic capabilities to meet the rapidly changing expectations of stakeholders through systematically sensing their needs.

The second concept, the sharing economy, is a recent phenomenon. Russell Belk (2007) was one of the first researchers to explain the concept of the sharing economy. According to Belk (2014), the sharing economy is linked to the digital age. Currently, there is no shared definition of the sharing economy, and different terms are used in an interchangeable way (Codagnone and Martens 2016). Nevertheless, it is characterized by related business and consumption practices that go by the following names: collaborative consumption (Botsman and Rogers 2010; Botsman 2013), collaborative economy (Vaughan and Hawksworth 2014), access-based consumption (Bardhi and Eckhardt 2012; Belk 2014), the mesh (Gansky 2010), connected consumption (Dubois et al. 2014; Schor 2014; Schor and Fitzmaurice 2015), commercial sharing systems (Lamberton and Rose 2012), product-service systems (Mont 2002), or access-based consumption (Bardhi and Eckhardt 2012). The definition of the sharing economy used in the paper comes from Hamari et al. (2015): *"the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services"* (Hamari et al. 2015, p. 3). According to Belk (2014), there are two commonalities between the sharing economy and collaborative consumption practices: the use of temporary access, non-ownership

models of utilizing consumer goods and services and the reliance on the Internet, and especially Web 2.0, to bring this about. In some official documents, the European Union (EU) uses the words "sharing economy" (European Commission 2015a, b; EESC 2014; European Parliament 2014). Botsman and Rogers (2010) use the term *collaborative consumption* in *What's Mine Is Yours: The Rise of Collaborative Consumption*. They suggest that the concept covers sharing, bartering, lending, trading, renting, gifting, and swapping through rapidly changing technologies. Moreover, they identify the following four principles of collaborative consumption:

(1) Critical mass: It's necessary to have enough exchange in a system to make it self-sustaining (Mella and Gazzola 2017).
(2) Idling capacity: It's important to consider items like infrequently used equipment.
(3) Belief in the commons provides values to the community and improves personal values.
(4) Trust between strangers: In collaborative consumption, there is no middleman, and there is fundamental trust among users.

These sharing activities are phenomenologically new because consumers increasingly share their belongings with other people. According to Turner and Rojek (2001), in the past, traditional sharing occurred within groups, such as family, friends, or neighbors. Dervojeda et al. (2013) consider that the sharing economy is strongly driven by the information technologies (IT) that have become available at more reasonable cost (Giesler 2006; Hennig-Thurau et al. 2007; Galbreth et al. 2012). According to Hamari et al. (2015) and John (2013) information and communication technologies (ICT) help the matchmaking between those in need and those willing to share (Heinrichs 2013; Owyang et al. 2013).

3 Dynamic Capabilities and the Innovation Perspective

In the business field, the term *innovation* is linked with the implementation of new ideas and the creation or the improvement of dynamic products or services (Lichtenthaler and Lichtenthaler 2009). Innovation does not only mean inventing but also changing the business model and adapting to changes in the environment where the firm is located. Innovation can be connected with a profit-driven or non-profit organization. Innovation can be classified as follows, according to type: product innovation, service innovation, business model innovation, process and technology innovation, organizational innovation, and social innovation. Products and services concern both material products and intangible services, such as services that satisfy customer needs and, therefore, are acquired by the customer. Business model innovation includes innovations in strategy, marketing, supply chains, value creation, pricing, and cost structures. Technological innovations involve the way products are created and/or rendered. In principle, these are also process innovations. Organizational innovations are related to

changes in organizational structure. This may include organizational process innovations or management innovations. Social innovations are those that primarily benefit society, and their purpose is not primarily profit. Environmental innovations contribute to the improvement of the environment. Successful innovation needs to be integrated into a business' strategy (Tidd 2001; Westland 2008). Innovation can be a catalyst for the growth and success of firms, but a large amount of innovations can quickly lose their uniqueness in the rapidly changing environment and become obsolete. Therefore, it is necessary to create a culture of innovation and innovative thinking (Bessant and Tidd 2007). Consequently, continuous innovation based on dynamic capabilities offer the only effective mechanism for creating long-term competitive advantages.

Dynamic capabilities give firms the ability to achieve new forms of competitive advantage. The term "dynamic" refers to their ability to renovate competencies and make changes in relation to transformations in the external environment (Wang and Ahmed 2007). The pillars of being dynamic are innovation strategy, time, and swift change. First, it's necessary to define the innovation strategy. It has to be in line with the right time to enter the market. Second, it's vital to define the timing. Third, it's necessary to react with swift changes in technology. Overall, dynamic capabilities address the rapidly changing environment and suggest an organization's capacity to accomplish new and innovative forms of competitive advantage (Dixon et al. 2014). In this period of turbulence, the capacity to build and reconfigure knowledge assets and resources is one of the most important aspects of successful organizations (Gazzola and Mella 2015). The role of dynamic capability increases when firms situate in turbulent environments.

This work develops a dynamic capabilities-based approach because it emphasizes the key strategic management that is necessary to appropriately adapt, integrate, and reconfigure internal and external organizational skills, resources, and functional competencies to suite a changing environment. The dynamic capability approach provides a coherent framework to integrate existing conceptual and empirical knowledge. It is focused on opportunity and on the efficient and effective transfer of technology between and among the various organizational units of a firm. Capabilities strongly depend on the organization's level of innovativeness. Zollo and Winter (2002) take an agnostic view of dynamic capabilities, arguing that they are only employed in pursuit of improved effectiveness. Nevertheless, this perspective links the creation and development of dynamic capabilities with innovation. In this paper, innovation is defined as "the ability to take new ideas and translate them into commercial outcomes by using new processes, products or services" (Nedis and Byler 2009, p. 7). Innovation does not only refer to new technology; it can also involve new ideas regarding how products and services are used. With innovation, it is possible to start the realization of an idea that improves technological, social, or economic aspects of life (von Stamm 2008). However, the idea needs to be successfully linked with the marketplace or the society. A good innovation strategy (Goffin and Mitchell 2005) should include the technological aspects of innovation as well as the social aspects. In this way,

innovation is not only linked to emerging technologies but also to socially innovative programs and services that help to reduce poverty and discrimination.

Zaltman et al. (1973) considers two different innovation processes: initiation and implementation. The first step consists of all activities connected with how the problem is perceived, and this depends on the individual culture and openness to the innovation. The second step involves the modification of both organizations and innovation strategies. It is associated with the group's capacity to make innovation a routine within the organization (Damanpour 1992). According to this view, the creativity of individuals and work teams is a necessary condition for innovation (Rhee et al. 2010). Innovation reflects the successful implementation of creative ideas within the organization (Amabile et al. 1996; Zhao 2005). It's possible to learn from other organizations, but it's not possible to copy. There is no model that fits all firms in the same way or that works under all circumstances. It is a mistake to believe that just because one development model is good for one organization it is going to work for another, because it's not possible to copy the culture. Thus, innovation cannot be assessed in global terms; instead, it depends on the social and economic circumstances of the organization. While innovation guides the continuous renewal of firms (Danneels 2002; Szeto 2000), dynamic capabilities enable firms to address the demands of highly changing business environments and include the ability to sense opportunities, seize opportunities, and sustain competitiveness through the acquisition, combination, protection, and reconfiguration of their resources and capabilities.

4 The Different Meanings of Innovation

The term *innovation* is very versatile. Technological innovations are often analysed in terms of dichotomies: radical and incremental (Freeman 1994), discontinuous and continuous (Bessant 2005), disruptive and sustaining (Christensen 1997), and competence-destroying and competence-enhancing (Tushman and Anderson 1986). According to Augsdörfer et al. (2013), classifying types of innovation is used to distinguish between new and existing innovations or the big and small dimensions of an innovation. According to Freeman (1994), what is radical for one organization might not be radical for another. It depends very much on the perspective in which innovative activity is being considered (Audretsch and Aldridge 2008).

In this work, two kinds of innovation are considered: incremental and disruptive. Incremental innovation focuses on a series of small-scale improvements or upgrades to add to or sustain the value of a company's existing products, services, processes, organizations, or methods (Sundbo and Gallouj 2000). Incremental innovation is the main form of innovation, and through this form, performances are significantly enhanced or upgraded. The changes made through incremental innovation normally concern the improvement of an existing product's development efficiency, productivity, or competitive differentiation. The result is a reduction in the costs or an improvement in the features. The way incremental

innovations work can differ from sector to sector and from country to country. Moreover, they are linked with a specific period of time. They can be simple, such as adding a new feature to an existing product, or complicated, such as making changes in major processes. Firms consider incremental innovation a way to help maintain or improve a product's market position. Incremental innovation mainly delivers results to already established companies. In our contemporary era, incremental innovation is regularly used in the consumer technology industry to improve personal devices by adding customer-friendly features. There are many good examples of incremental innovations. Coca-Cola started 130 years ago and has extended the line of its products over time, introducing Diet Coke, Cherry Coke, Coke with Lime, and Coca-Cola Life. Each of these was an incremental innovation. Although Google's Gmail is now the world's most popular email service, when they started, the service only had a few features, but they were very good features. Over the years, they improved their services and introduced other products, including Google Maps and Google Chrome.

Disruptive innovation is the opposite of incremental innovation. Bower and Christensen (1996) first identified and developed the idea of disruptive innovation. Christensen et al. (2015) argued an innovation "describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses. Specifically, as incumbents focus on improving their products and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others" (Christensen et al. 2015, p. 3).

This concept is based on the impact of innovations (Björk et al. 2010). With disruptive innovation, a new product or a new service is introduced to a market, and it makes a significant impact on the market because it replaces existing technologies and methods or it makes existing products obsolete (Bower and Christensen 1996). Apple is a great example of a company that practices disruptive innovation through the creation of its system of products and applications. The iPhone that Apple debuted in 2007 was a sustaining innovation in the smartphone market. The iPhone's subsequent growth is explained by the telephone as the primary access point to the Internet. Apple created a facilitated network connecting application developers with phone users. The iPhone created a new market for Internet access and eventually was able to challenge laptops as mainstream users' device of choice for going online. Firms that follow disruptive innovation strategies use new technologies, and they have a high level of risk and uncertainty.

Smaller companies or start-ups play important roles in disruptive innovation because, in some ways, they can take greater risks. Disruptive innovation normally requires an informal and flexible model, especially at the beginning, to deal with the uncertainties. In the second stage, it is possible to use a more formal model when there are fewer uncertainties. The key elements of incremental innovation are the use of existing technology and the use of existing business models, and it is easier to use this strategy than following disruptive innovation. Incremental innovation is more common, and often the firms use a formal, phase-gate development model, but using this method only can be dangerous. For example, Kodak used incremental

innovation for years to make gradual improvements to traditional film. However, when digital imaging entered the market, there was a big change in the way people made photos. Thus, Kodak became obsolete. To solve this problem firms often use both incremental and disruptive innovation strategies together. Innovation has become a major factor in determining modern firms' longevity and success. This trend has led many enterprises to put more focus on both incremental and disruptive innovation strategies and to consider how these can benefit their product and service development.

5 Dynamic Capabilities and Disruptive Innovation: The Model

Dynamic capabilities consider the inimitable capacity of the firms to configure or reconfigure the organization's asset correlated with the innovation strategy of answering to changing technologies and to new markets.

Dynamic capabilities enable firms to proactively adapt in order to generate and exploit internal and external competencies that are specific to their organization. They help firms to adapt in rapidly changing environments (Teece et al. 1997). According to Collis (1994) and Winter (2003), one fundamental element of dynamic capabilities is that they govern the rate of change of ordinary capabilities.

A firm's agility and ability to reconfigure itself represents a very valuable competency that secures future competitive advantages. A firm that follows a disruptive innovation strategy takes more risks, but it can obtain higher gains than if it simply used incremental innovation. Sometimes there are small differences between the two different kinds of innovation, and companies shift between these innovation types. The shifts between the two innovation types can be linked together, creating an "Innovation Cycle". If we consider that the dynamic capabilities approach relates to the capabilities of an organization to answer to changes in the external environment (Teece and Pisano 1994), we can understand their role (Čiutienė and Thattakath 2015).

Figure 1 shows the dynamic capabilities cycle between Disruptive Innovation and Incremental Innovation (Dixon 2013). We can see possible scenarios for innovative organizations, for example when a new technology is put on the market. The capacity of a firm to use both of the innovation strategies determines the organization's failure, survival, or success (Chesbrough 2006). Dynamic capabilities allow organizations to create a virtuous circle of best practices and strategic decisions that constantly innovate and reinforce their competitive advantages. Without developing dynamic capabilities, disruptive innovation cannot be achieved. Dynamic capabilities play an important role in maintaining the balance between the different types of innovation and directing firms toward disruptive innovation. In firms that already exist, the dynamic capabilities cycle often starts with an incremental innovation strategy. They continuously adapt their business model to reach success, creating temporary competitive advantages.

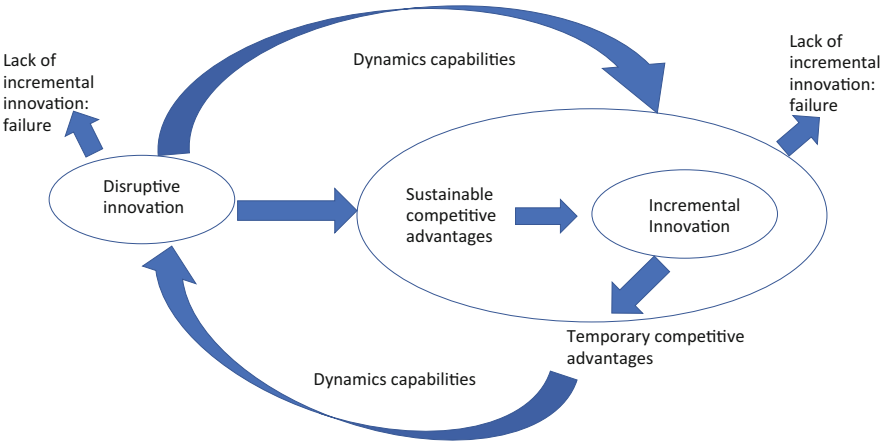

Fig. 1 The innovation cycle

Organizations that don't follow the incremental innovation strategy risk failure, at which point, they exit from the dynamic capabilities Innovation Cycle.

Sometimes firms need to shift from an incremental innovation strategy to a disruptive innovation strategy. In this situation, they need to reinvent a product or a service by replacing existing technologies and methods. If they fail to reinvent the business, they'll exit from the dynamic capabilities Innovation Cycle.

Disruptive innovations strategies are riskier. For companies that are dominant and need to protect their market, the decision is very difficult. It often seems better to follow an incremental innovation strategy and sustain a competitive advantage rather than focus on disruptive innovation. To build a good innovation strategy that helps different groups align within an organization it is important to define objectives and focus the organization's efforts on them. Dynamic capabilities help organizations to secure short-term competitive advantages and to create the basis for long-term competitive advantages: "If an enterprise possesses resources/competences but lacks dynamic capabilities, it has a chance to make a competitive return for a short period; but it cannot sustain supra-competitive returns for the long term" (Teece 2007, p. 1344).

6 The Sharing Economy

Over the last decade, the sharing economy has grown consistently. The concept of "sharing" refers to the use of and/or access to shared physical or human resources or assets. A sharing economy has different forms of value exchange, which include the following: renting, borrowing, lending, exchanging, swapping, collective purchasing, trading used goods, shared ownership, shared value, co-operatives, co-creation, recycling, upcycling, re-distribution, subscription based models, peer-to-peer, circular economy, on-demand economy, gig economy, crowd economy, pay-as-you-use

economy, peer-to-peer lending, micro financing, micro-entrepreneurship, social media, social enterprise, crowdfunding, crowdsourcing, cradle-to-cradle, open source, open data, user-generated content and public services. It is based on the exchange of goods and services between individuals. The sharing economy enables individuals and businesses to maximize their assets and reduce costs to traditional products and services. It found fertile soil thanks to the increase of Internet-based platforms that allow people to exit traditional commercial channels and to share excess resources and trade with one another effectively at a reasonably low transaction cost.

The most important pillar of a sharing economy is that it allows individuals to use assets that are not being fully utilized, which may be motivated mainly by the spirit of giving or may be mainly profit-driven, like Uber. In research prepared by PricewaterhouseCoopers for the European Commission (2016), the five most prominent sectors, with their various forms and examples, are defined as follows:

(1) Peer-to-peer accommodation
    - Peer-to-peer rental platforms (Airbnb)
    - Home-swapping platforms (LoveHomeSwap, CouchSurfing)
    - Online-only vacation rental platforms (HomeAway)
(2) Peer-to-peer transportation
    - App-based, short-distance ride sharing services (Uber, Lyft, Sidecar)
    - Long-distance ride sharing services (Blablacar, Hitch, carpooling.com)
    - Car sharing networks:
        – Peer-to-peer car sharing networks (GetAround, RelayRides)
        – Business-to-Consumer car sharing networks
            - "One-way station" models (Enjoy)
            - "Round-trip" models (Zipcar)
            - "Free-floating" models (Car2Go)
        – Driveway/Parking sharing platforms
(3) On-demand household services
    - Crowd-sourced delivery networks
        – Generalised "A-to-B" delivery networks (UberRUSH)
        – Specialised, on-demand delivery services
            - Grocery delivery services (Instacart)
            - Local restaurant delivery services (Deliveroo)
    - On-demand household chores
        – Handyman and general DIY services (TaskRabbit)
        – Specialized household services (ZipJet for dry cleaning)
(4) On-demand professional services
    - Large online-only freelancer marketplaces (Upwork—typically for more administrative services)
    - Specialised on-demand professional service platforms (HolterWatkin—typically, for more specialised, technical services)
(5) Collaborative finance
    - Crowdfunding platforms:

  - "Rewards-based" crowdfunding (Kickstarter)
  - Equity crowdfunding (SyndicateRoom)
- Lending platforms:
  - "Peer-to-peer" consumer lending (LendingClub)
  - "Investor-to-SME" lending (FundingCircle)
- To this list of the five most prominent sectors, we can add three additional sectors:

(6) Media and Entertainment: Amazon Family Library, Wix, Spotify, SoundCloud, Earbits
(7) Retail and Consumer Goods: Neighborgoods, SnapGoods, Poshmark, Tradesy
(8) Other kinds of sharing: LeftoverSwap, Feastly

The sharing economy is often based in disruptive innovation. Peer-to-peer platforms—for example, Lyft and Airbnb—changed the sectors of for-hire transportation and short-term accommodation. Disruptive innovation is very important for sharing economy organizations because it means innovation that creates new markets by discovering new categories of customers. Botsman and Rogers (2011) consider that the disruptive innovation shift into the sharing economy. This creates market efficiencies that bear new products, reframe established services, and generate overall economic growth. We can use Fig. 1 and add the sharing economy to the model. Often, in the sharing economy, the Innovation Cycle starts with disruptive innovation. For example, a disruptive innovation can be introduced to the market, and if it is successful, the firm uses incremental innovation to improve the product and keep it competitive over time (Fig. 2).

When organizations use disruptive innovation, the risks of failure are very high. There are many examples of organizations that had some great ideas but failed to get them to the marketplace or that applied complex technologies that failed in their

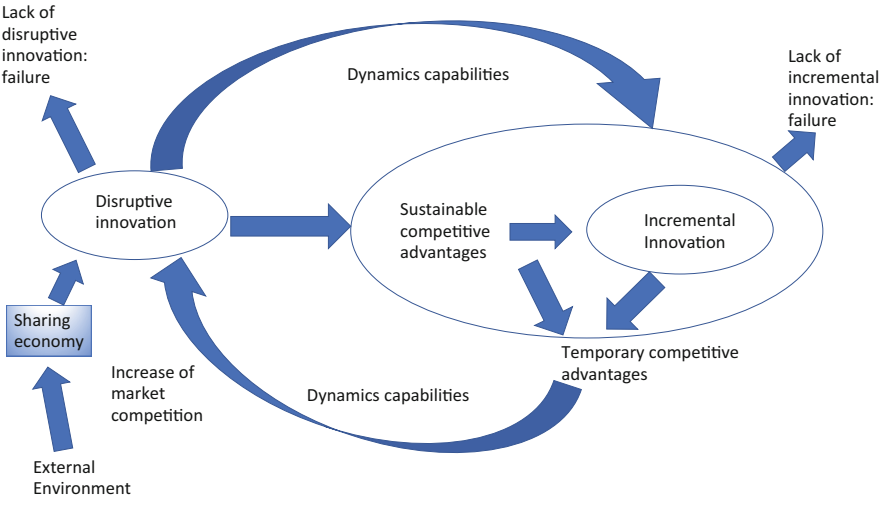

Fig. 2 The innovation cycle and the sharing economy

implementation. To survive over time, businesses must use new technologies and develop new business models. The sharing economy also encourages innovation because it increases market competition. The sharing economy develops new business models and exploits old technologies in new ways, bringing substantial benefits to consumers and suppliers alike while challenging incumbents who have traditionally served those sectors. This is obtained with the use of new technologies. By using Internet and smartphone technology, sharing economy businesses are significantly reshaping the way products and services are provided. The use of platforms establishes marketplaces that enable transactions between numerous suppliers, individuals, small organizations, and consumers in ways that were impossible prior to today's technology. In this situation, the effect of technology and social networks gives a prominent position to disruptive innovation. The success of the sharing economy is less about a specific business model configuration than about the dynamic capability to constantly innovate the business model by aligning information technology and consumer needs in a way that balances innovativeness and acceptability (Krzakiewicz 2013; Sach 2015). The making available of massive amounts of data, linking owners to potential renters, reducing transaction costs, and eliminating the need for expensive middlemen are some of the changes brought on by the sharing economy that put traditional models in a difficult position. The use of the Internet and social media has changed many business functions, including communication, marketing, and customer care, because, in the sharing economy, consumers can interact with each other and share opinions on the products and services that they use (Gazzola et al. 2017). To take Milan as an example, here are some numbers from the sharing economy there (Milano Smart City 2017): 2000 cars are shared every day with: Enjoy, Car2Go, Guide me, E-go, Twist; 10,000 bikes are shared every day; there are 49 places of co-working and 34,000 sqm of shared garden space. In some sharing markets, there are strong network effects. This means that a sharing platform becomes more attractive to customers and suppliers. Different platforms may exist side-by-side in the same market segment. Some sharing economy organizations are becoming very popular, and there is a risk that some platforms may become dominant and gain a market position (NOU 2017).

7 Dynamic Capabilities and the Sharing Economy: Amazon and Spotify

In one list of the top ten most innovative companies of 2017 (Robischon 2017), Amazon and Spotify are highlighted as two with exemplary best practices. We can apply the model in Fig. 2 to both of these companies. The connection between dynamic capabilities and disruptive innovation is the base of the sharing economy, and this is visible in several sharing economy enterprises, but it is exemplified by Amazon and Spotify.

Amazon is an online retail giant. There are businesses that manage to continually reinvent themselves, having the dynamic capabilities that enable them to learn and

reconfigure their organizations, and Amazon is one of the best. It is the world's most innovative company of 2017 (Robischon 2017). Jeff Bezos, Amazon's CEO, considers his job is "to invent new options that nobody's ever thought of before and see if customers like them" (Keast 2017). Amazon's strategy has been to continuously evolve, and they have moved into one sector after another. Amazon was founded in 1994, and the website launched publicly a year later. In the beginning, the company focused on books, the first of which was sold out of Bezos' garage. He started with books because each book is standard all over the world, and there is no need to touch and feel a book before buying it. The website that once sold only books now sells just about anything. The warehouse and logistics capabilities that Amazon built to sort, pack, and ship the books are available to any seller that is willing to pay for the service. Amazon Web Services grew in line with the company's own e-commerce infrastructure needs. Amazon is taking the sharing economy to the next level, recruiting amateur drivers to deliver packages for the global online retailer. They have rolled out a service in the their hometown of Seattle, Washington to deliver packages ultrafast to Prime consumers, using a crowd-sourced network of drivers. The program's model is like those used by on-demand service providers like Uber and Lyft. The new program, Amazon Flex, lets drivers sign up for shifts through an Android-based app that alerts them when there are delivery opportunities in their area. Drivers use a smartphone app to choose where and when they want to work and to give them directions to customers' homes; customers can also track their orders. The drivers, who deliver packages ordered through Amazon Prime Now's same-hour delivery service, are paid between $18 and $25 an hour to work for the company, but they have to provide their own car and Android phone. Amazon advertises the role to potential workers as follows: "be your own boss: deliver when you want, as much as you want. You can choose any available 2-, 4-, and 8-h blocks of time to work the same day, or set availability for up to 12 h per day for the future. You can work as much or as little as you want" (Amazon 2017). Amazon Flex takes advantage of the shared economy business model. By crowd-sourcing, a network of delivery drivers can meet demand while cutting costs and helping to build independent contractor job opportunities. Plus, customers get their goods delivered quickly and efficiently. It's a win-win situation for all involved parties.

Spotify is a commercial music streaming service that provides music content from a range of major and independent records. In the list of the world's most innovative company of 2017, it is in10th place. Spotify was launched in Sweden in 2008 and has completely changed the way people listen to music ever since. By allowing users to play music directly from the cloud, rather than by downloading it first, Spotify became wildly popular, and as a startup, it gave entrenched music industry players like Apple's iTunes a run for their money. Their mission is "Give people access to all the music they want all the time—in a completely legal and accessible way" (Spotify 2017). They use the rental business model: everything the customer wants, whenever the customer wants it, and however the customer wants it. Spotify and related music streaming services represent a window into the future of the music industry. It provides consumers convenient access to over 13 million

music tracks through their smartphone, tablet, or computer, but Spotify's social features have enabled the platform to also be a space that helps both artists and labels reach a larger audience (mynewsdesk 2013). Spotify holds a systemic advantage over iTunes in one particular area: relative pricing. While iTunes and Spotify both deliver music over the net, Spotify's position as a radio service allows it to set a price that is far below the level of iTunes. Spotify also offers users the ability to create their own playlists. Much of Spotify's success is due to increasingly sophisticated data collection, which allows it to keep releasing new products that captivate its users around a particular mood or moment in time rather than offering the same old genres.

8 The Sharing Economy Revolution: The Change in Human Behavior

Dynamic capability is based on the knowledge of the firm. The idea behind dynamic capabilities is to use an organization's knowledge and proactively manage their resources in order to form new asset combinations. The dynamic capabilities paradigm opens up perspectives for all-encompassing analyses of various business strategy aspects, particularly those that are crucial to creating long-term success, such as change management or knowledge management. The concept of dynamic capabilities creates a new mechanism for developing competitive advantages that is characteristic of the innovative, information-driven economy (Böckmann 2013). Using this concept contributes to our ability to solve numerous methodological problems connected with strategic management theory by emphasizing the analysis of knowledge management problems when combining economic and behavioral aspects of an organization's activity. There is already research that analyzes knowledge-creating companies and intellectual capital management (Nonaka and Teece 2010).

In the model presented in Figs. 1 and 2, dynamic capability was presented as the ability of an organization to make changes in congruence with the changing business environment. This is the base of the sharing economy that confronts new technological and socio-economic challenges. The sharing economy operates in many business sectors. Most people have, or know someone who has, used Uber, Airbnb, Homeaway, Blablacar, etc. To be successful in the sharing economy, the organizations must be, first of all, innovative, but also efficient, trustworthy, and centered on the community. The innovative ideas of the sharing economy include the concept of disruptive innovation and refer to new products and services that either have a business purpose or simply aim to solve social problems. Applications of the sharing economy use the existing information and communication technology infrastructure to employ dynamic capabilities without important investment. The idea can work for any business model, even if it's between two businesses rather than two consumers. The use of dynamic capabilities to achieve each of the innovation types is explained in the two exemplary companies: Amazon and Spotify. In these two companies dynamic capabilities are used to achieve disruptive innovation.

We are changing and moving from passive to active consumers. Consumers are becoming co-creators in the sharing economy. Thanks to technology, everyone is able to be part of the new way of consumption. It is not changing what we consume but how we consume. The sharing economy is not something linked only with technology, but it's also a change in human behavior, particularly for digital natives who have more opportunities to instantly satisfy their needs (CSRwire 2012). Online platforms such as Uber and Airbnb become the middlemen. Technology has increased the possibilities for people to connect and share with each other. Platforms broaden the local experience first, then they become global platforms that offer local transactions, creating new ways to consume and exchange.

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Nonprofit Organizations and the Sharing Economy: An Exploratory Study of the Umbrella Organizations

Alexandra Zbuchea, Sotirios Petropoulos, and Beata Partyka

Abstract

This chapter focuses on the way knowledge management could facilitate the inclusion of the nongovernmental organizations (NGOs) in the sharing economy. It explores to which extent the NGOs are part of the new sharing economy trend, by investigating how the representatives of the NGO sector relate to the sharing economy in the framework of the umbrella organizations. Thus, our analysis connects sharing economy to knowledge management, having in mind the implications for both the umbrella organizations and the member NGOs. In this front, NGOs are knowledge intensive organizations. Knowledge and networking are at the center of the activity of any NGO. They create value through networking and sharing, therefore they match the model of the sharing economy. They are connected with the main elements associated with the sharing economy: collaboration, social networking, sustainability, ecology, community, etc. By adopting a sharing economy approach, the NGOs could be more efficient, connect better with their beneficiaries and prepare better for the challenges of the new society and economy. An insight revealed by the research is that the NGOs connected in the sharing economy tend to be more business-oriented and effective. These NGOs are concerned with ensuring the sustainability of their activity. If this process leads to a less connected and social organization, it is to be seen in the future.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_6

1 Introduction

Considering the wide variety of existing business models, practices, and platforms, it is difficult to give a clear definition of the sharing economy. The first one (2008) made reference to the collaborative character of the consumption of shared goods and services (Puschmann and Alt 2016, p. 95). A broad approach to the sharing economy defines it as "people sharing underutilized assets and skills to meet certain needs" (Netter 2016, p. 67). A part of these needs corresponds to the superior social ones, leading to the creation of user communities (Botsman and Rogers 2010). Although centered on individual needs, sharing economy offers many opportunities for both the non-profit and the for-profit organizations.

Society seems to have embraced eagerly the services and products offered through the system of shared, collaborative and on-demand economy (Smith 2017). Considering the latest evolution, this behavior is connected to the facilities and benefits associated; it may not be only a business fashion (Netter 2016, p. 66). Sharing economy is innovative not only from the clients' perspective. It involves new business models, new forms of employment, a different asset management and such. Studies investigated the economic, technological and social changes which lead to the sharing economy (Puschmann and Alt 2016, pp. 93–94). Despite the positive aura associated to it, Martin (2016), Netter (2016), Richardson (2015), Verboven and Vanherck (2016) consider that although profitable for the society, the development of sharing economy might be artificial, overestimated and not free from flaws and perils to society and economy. Nevertheless, the recent shifts present a clear business opportunity for companies, associated to various positive outcomes for the customers, business, and society.

This chapter focuses on the way knowledge management could facilitate the inclusion of the NGOs in the sharing economy. It explores to which extent the non-profit organizations are part of the new sharing economy trend, by investigating how the representatives of the NGO sector relate to the sharing economy in the framework of the umbrella organizations. They are non-profit structures, developed to support the development of the nonprofit sector by providing information and resources, by promoting good practices in various ways, and by contributing to knowledge and skill development within the member-organizations. Therefore, intra-organizational and inter-organizational knowledge management is at the core of the activity of the umbrella organizations. Thus, our analysis connects sharing economy to knowledge management, having in mind the implications for both the umbrella organizations and the member NGOs.

The methodology consists of a series of individual interviews, developed with the help of the NGOs representatives being part of certain umbrella organizations. Three such organizations have been selected, one from Romania, one from Poland and one from Greece. Their comparative analysis allows for a better understanding of the extent the processes identified are connected with the economic and social development of the society where the respective NGOs operate in.

2 A Concise Framework for the Sharing Economy

Since several limiting approaches are considered by various extant studies: macro-economic, micro-economic, legal, business administration, etc., definitions of the sharing economy are still out of focus. Nevertheless, in all models, a hybrid form of the value-exchange done in a collaborative manner is to be observed.

Openness and equity are at the core of sharing economy. In addition, there are other several aspects that characterize it: the collaborative character (Lessig 2008; Hamari et al. 2015), social networking (Puschmann and Alt 2016, p. 95), intrinsic vs. extrinsic motivations of the consumers (Hamari et al. 2015; Luchs et al. 2011), sustainability and environment friendliness (Stevenson 2014; Parsons 2014; Verboven and Vanherck 2016), community and local development (Netter 2016; Verboven and Vanherck 2016). Although the sharing economy is associated with positive outcomes, in some cases, it might reproduce inequality and dysfunctions (Schor et al. 2016).

Sharing economy is characterized by the connection and cooperation between consumers and crowdsourcing—it is based on C2C business or hybrid B2C models. Even more, in some models, consumers might constantly switch to a producer status, adopt an entrepreneurial approach to cooperate in order to gain access or produce resources, etc. (Scaraboto 2015). Actually, there are many business models identified within the sharing economy: this market is very segmented (Verboven and Vanherck 2016, p. 307). The sharing economy models are meant to ensure sustainability, including the social and ecological perspectives (Hamari et al. 2015). The activities associated with the sharing economy models are the recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets (Schor 2014, pp. 2–4). Technology facilitates all these processes, and, in most instances, a platform supports the sharing.

The altruistic reasons are important factors leading to the initiation and development of various sharing economy platforms. Nevertheless, pragmatic reasons satisfaction is vital to ensure the commercial success of sharing economy initiatives. Three elements are to be considered when proposing commercial sharing systems: costs, utility, and scarcity risk (Lamberton and Rose 2012).

Reasons to be part of the sharing economy are not only social/ecological but also economic (Schor 2014, pp. 5–6). The pragmatic economic view is a central motive to share, in the context of collaborative ownership (Belk 2010, p. 728; Lamberton and Rose 2012; Sacks 2011). Lower costs and saving time and money are the main drivers for consumers to be part of the sharing economy. Nevertheless, other soft benefits are also to be considered: connectivity, being part of a community, sharing ideas and beliefs, etc. (Luchs et al. 2011). Potential future rewards are also part of the equation (Hars and Ou 2001). Enjoyment is influential in terms of attitude and use of collaborative consumption. Intrinsic motivations (such as enjoyment, responsibility) are a stronger attitude trigger, but continuous consumer involvement in sharing the economy is determined by extrinsic motivations—such as the economic benefits (Hamari et al. 2015).

Sharing and collaborative ownership have provided a disruptive business model, offering competitive advantages. A main competitive advantage would be the

creation of an innovative digital platform. In most cases, the advantages considered are a decrease in costs—for all those involved -, enhanced social interaction and community development around a brand, a better total product life value, improved added-value, etc. all due to the sharing business model adopted.

3 Compatibility Between the Nongovernmental Organizations and the Sharing Economy Model

Nongovernmental organizations (NGOs) are knowledge intensive organizations (Hume and Hume 2008; Renshaw and Krishnaswamy 2009). Knowledge and networking are at the center of the activity of any NGO. In knowledge-intensive organizations, such as the NGOs, knowledge represents a competitive advantage (Hurley and Green 2005). Therefore, knowledge management and transfer, which determine the effectiveness of these types of organizations, should be considered within both the intra-organizational and inter-organizational contexts.

Previous research (Rathi et al. 2014) identified eight types of partnerships that the NGOs are involved in: business partnerships, sector partnerships, community partnerships, government partnerships, expert partnerships, endorsement partnerships, charter partnerships and hybrid partnerships. All of them involve knowledge sharing, but the transfer and cooperation patterns are different when considering the direction and formality of the relationships. Lately, a relevant role has been taken by the social media (Andrei et al. 2017).

Some authors (Hurley and Green 2005) recommend that knowledge management should be approached in a similar manner by the NGOs and firms, due to the existence of the same set of existing subsystems—people, technology, tasks, and structure. Some others, quite to the opposite, suggest that an adaptation is necessary, being triggered by the existence of specific stakeholders and beneficiaries (Ragsdell 2013; Renshaw and Krishnaswamy 2009). Motivation is a key factor influencing the knowledge transfer and usage, while intrinsic factors are more relevant than extrinsic ones (Hasnain and Jasimuddin 2012, pp. 136–137).

The emergence of the technological development, of the various applications and digital facilities, and of the sharing economy highly impacts the practices of the nonprofit sector. Reduced costs and fast networking are the key elements in the early adoption by the NGOs of some of the facilities associated with these transformations. An increased capacity of information and dissemination are at the heart of the sharing economy in the case of the NGOs.

The NGOs are matching the model of the sharing economy (Gore 2014). They create value through networking and sharing. They are connected with the main elements associated with the sharing economy already presented above: collaboration, social networking, sustainability, ecology, community, etc. Moreover, the social enterprises model generates a direct economic impact on communities and economies. By adopting a sharing economy approach, the NGOs could be more efficient, connect better with their beneficiaries and prepare them better for the challenges of the new society and economy (Gore 2014).

Zabel (2016) argues that the NGOs should create new systems of investment based on local knowledge and exchange among the members of a community. She believes that the efficiency pattern adopted by companies is not successful in a nonprofit framework. The sharing economy is tightly related to the concepts of equity, community, connectivity, and partnerships. These values characterize the nonprofit sector, too. In order to be part of the sharing economy, Zabel (2016) recommends the NGOs to share programs and tools, governance, and solidarity. This last aspect would be easier to materialize if an NGO were a member of a coalition or an umbrella organization.

Within a nonprofit sector framework, the collaborative economy is tightly related to crowdsourcing and crowdfunding. Technology facilitates the fundraising processes in several ways. It facilitates the management of the small donations, creates opportunities to donate, and ensures the transparency of this process, leading to a circular process development. Technology could attract new segments of donors by ensuring greater access to information, networks, lower entry barriers and innovation (Arrillaga-Andreessen 2015).

NGOs tend to be more commercially-oriented in time even if they were born as bottom-up social innovation initiatives based on a sharing economy model (Martin et al. 2015). This is not a negative evolution per se since it increases the relevance and impact of the organization within the sharing economy. Nevertheless, although improved, social networking and advocacy are limited in such organizations. In addition, mixed outcomes are related to this evolution.

Knowledge transfer is another component of the sharing economy that might positively influence the NGOs which are active within this framework. Knowledge sharing in organizations is facilitated by many elements, of tangible or intangible nature (Jo and Joo 2012). A brief overview of the influence factors indicates that knowledge sharing depends on personal aspects, organizational culture, as well as infrastructure (Zbuchea and Leon 2015, p. 1719). An umbrella organization would particularly facilitate such a process since trust seems to be the main barrier (Casimir et al. 2012; Zbuchea and Leon 2015). In general, the relationships between the organizations involved in the knowledge transfer, as well as the existence of a social network, facilitate or slow down the transmission (Hasnain and Jasimuddin 2012, p. 136).

A previous study on the Romanian cultural NGOs revealed that access to knowledge and knowledge sharing are important concerns of these organizations, which try to take advantage of this process despite a perceived lack of relevant facilitating infrastructure (Zbuchea and Leon 2015, p. 1725). Therefore, both umbrella organizations and platforms of the collaborative economy might supply the necessary framework for the desired knowledge sharing.

4 Methodology

The sharing economy has many facets, involving the joint use of resources, collaborative consumption, hybrid operation, open-source communities, information technology etc. How do all these aspects occur in the context of the NGOs

cooperation under the umbrella organizations? The purpose of the research is to understand in which way and to what extent the membership of an umbrella organization helps the non-profit organizations share and develop knowledge relevant for a more effective and profitable operation, and become actors of the sharing economy.

In order to understand the related processes, interviews were conducted with members/beneficiaries of the activity of three umbrella organizations: the Higher Incubator Giving Growth and Sustainability (Greece), the Foundation for the Support of Nongovernmental Organizations "Umbrella" (Poland) and the Romanian National Network of Museums (Romania). The three organizations share their active involvement in the development of the capacities of the member/associated organizations through information, training, and consultancy. They all contribute to capacity building on a daily basis activity, but also through projects and programs especially designed, focusing on certain skills and sectors of interest.

The Higher Incubator Giving Growth and Sustainability (HIGGS) is an Incubator and Accelerator targeting Greek small and medium NGOs, as well as groups that would like to set up an NGO. It supports them through educational seminars and consultancy services. In a way, it operates the same way as an umbrella organization, constantly focusing on supporting its members, offering value adding services and trying to enhance their networking capacity. Although the HIGGS was established in 2015, its history dates back to 2012 when the current team of the organization offered an intensive training program called the "Autumn School". The program was designed to address the needs of the NGOs operating in Greece. Based on the positive outcome of the seminar, it expanded to include eight Greek cities: during the following 3 years, nine seminars were carried out and the HIGGS team met with more than 230 organizations of unlimited potential and sincere willingness to achieve positive social impact but there were significant gaps in the training, support, and overall guidance. Although the new seminars were highly successful also, they did not provide a valuable tool for the capacity building process, i.e. time. Hence, the HIGGS was created so that training and consultancy support could be offered on a permanent basis while two main programs, an Incubator, and an Accelerator were established. These programs comprise both theoretical training sessions and practical usage of infused knowledge, as well as additional seminars, access to a set of experts (legal, accounting, marketing, volunteers' management, etc.) and various extra activities aimed at enhancing the organizational level of the participating NGOs. The heart of the HIGGS is its co-working space used by both the participating organizations and the HIGGS teamwork and there they have numerous instances to communicate, exchange ideas and share best practices. To further strengthen the sense of community, as well as to provide a pro-collaboration environment, the HIGGS premises include common rooms with couches and armchairs for more relaxed interactions, table tennis facilities and an exercise room for interaction during the leisure time, and a set of meeting rooms for the more private sessions.

The Foundation for Support of the Nongovernmental Organizations "Umbrella" (Umbrella Foundation) is a non-profit organization registered in 2007. The

Umbrella Foundation is an infrastructure-providing organization, which aims to encourage the creation and development of new organizations. Their goal is achieved through training, counselling, information, and animation. With their funding provided by the Municipality of the Wrocław Foundation for over 9 years, the Foundation implemented the Wroclaw Non-Profit Organizations' Support Centre "Sektor3" project whose beneficiaries are organizations and activists planning to take action in the non-profit sector. Within the framework of the project, the Foundation offers free support in the form of specialist training and consultancy on legal and financial aspects, writing and managing projects, communication, fundraising and cooperation with the public authorities, Public Relations and soft skills useful in social activities—management, assertiveness, and community animation. Other objectives of the Foundation include the development of the civil society, as well as the organization of educational and youth work activities. In addition to the Wroclaw Non-Profit Organizations' Support Centre "Sektor3" project, the Foundation has many other projects in the area of education, aimed at different audiences. The Umbrella supports and trains non-formal groups on the way to start an association, to raise funds for their activities, train their staff and organize their training programs. The Umbrella is a member of the "National Network of Social Initiatives' Incubators", of the „Lower Silesian NGO Incubators Network" (regional), of the Strategic Map of Civic Society Development (national) and the Local Partnership Gądów and Kosmonautów (local). Moreover, the President of the Umbrella Foundation is a member of the Advisory Board of the above mentioned HIGGS. The Umbrella Foundation is a partner of the Europe Direct Information Centre in Wrocław. Umbrella maintains good contacts with the local and regional institutions through the participation to the Lower Silesian Youth Forum sessions, as well as participating in the local (organized by the Municipality) and the regional civic consultations concerning the policies in the field of social protection, civil society, youth, and adult education. A brief overview of the activities undergone by the Umbrella looks as follows: vocational training courses for the non-profit organisation workers and volunteers; eight key-competency courses for the general public; specialist consultations (financial, legal, managerial, PR, ICT, fundraising, networking); general advising; communication activities (described above); conferences on non-profit sectorial issues; organisation of study visits for other organisations, schools, university students, groups of persons interested in the non-profit sector (in Polish, English and Russian); organisation of annual non-profit events (non-profit regional fair, non-profit regional congress); animation meetings (for persons interested to be involved in non-profit organisations; lectures (as guest lecturers) on the non-profit sector and the civil society; participation in the CSR local cluster; participation in other networks (described above).

The Romanian National Network of Museums (RNNM) was set up in 2007 as a nongovernmental organization. Most members are public museums, but the RNNM also includes a small number of professionals associated with the museum sector. It is a professional organization promoting the interests and best practices of the entire sector not only of the over 60 institutional members (small local museums and large

national museums). All these types of museums are represented on the Board of the Association. A representative of the RNNM is also a member of the board of the Network of the European Museums Organization (NEMO). This position triggers increased opportunities for the cooperation between the member museums and the European museums, exchange of experience and development of joint projects. The newsletter and the online platforms of the organization are the main distributors of information for the development of the museum sector in Romania and worldwide, as well of opportunities for funding, professional development, and legislative initiatives. The association organizes seminars and workshops, as well as training programs mostly (but not exclusively) for the employees of the members. Therefore, sharing knowledge, capacity building and the skill development needed in the museum sector are among its core aims. The RNNM is also a vocal and active advocate on behalf of the museums and museum professionals. It offers consultancy in various fields (legal, management and project design).

The study involved in-depth interviews with 12 individuals representing NGOs from Greece, Poland, and Romania (Table 1).

The interviews focused on the contribution of the umbrella organization in capacity building through the positive contribution to knowledge development and generating added value through the sharing economy. They also aimed at understanding specific situations when the participation in the umbrella organization was beneficial to the previously specified framework. Secondly, the investigation explored the understanding of the sharing economy that the respondents had, as well as the perceived contribution of the NGOs to the sharing economy.

Some limitations of the present study need to be highlighted. A brief interview guide was drafted in order to facilitate the interviewees' participation while generating focused results. Previous studies show that even though the non-profit organizations' representatives are eager to share their views, it is difficult to plan an interview due to their lack of time and changing schedules. The small size of the sample makes generalizations difficult. The sample consists mainly of people with long experience in their field, actively involved in their organizations. Therefore, their opinions are relevant for the understanding of the membership implications in the umbrella organizations from a managerial/organizational perspective, but the study does not allow for either the understanding of the common members' perspective of the non-profit organizations or of the actual impact of the membership in the umbrella organizations.

5 Analysis of the Interviews and Discussions

The interviews reflected a part of the value that the participating organizations perceived they obtained through their membership, as well as an overall perception of the way the umbrella organization could better serve the interests of the interviewees.

Table 1 Respondents' profile

Characteristic	GR	PL	RO
Gender			
Women	2 (G2, G4)	1 (P3)	3 (R1, R3, R4)
Men	2 (G1, G3)	2 (P1, P2)	2 (R2, R5)
Education			
High-School	–	1 (P1)	–
B.A.	3 (G1, G2, G3)	1 (P3)	1 (R5)
M.A.	1 (G4)	1 (P2)	2 (R1, R3)
Ph.D. and more	–	–	2 (R2, R4)
Years of experience in the represented organization/field			
Less than 3	4[a] (G1, G2, G3, G4)	–	–
3–5	–	–	1 (R5)
5–10	–	3 (P1, P2, P3)	–
10 plus	–		3 (R1, R2, R3, R4)
Years of experience with the umbrella organization			
Less than 3	4[b] (G1, G2, G3, G4)		1 (R3)
3–5	–	1 (P3)	1 (R5)
5–10	–	2 (P1, P2)	3[b] (R1, R2, R4)
10 plus	–		–
Characteristics of the represented organization			
Small (<15 employees/volunteers)	4 (G1, G2, G3, G4)	1 (P1)	2 (R3, R4)
Medium (16–100 employees/volunteers)	–	2 (P2, P3)	2 (R2, R5)
Large (more than 100 employees/volunteers)	–		1 (R1)
Position in the represented organization			
Top management	4 (G1, G2, G3, G4)	2 (P2, P3)	4 (R2, R3, R4, R5)
Middle management	–	–	1 (R1)
Execution	–	1 (P1)	–

[a]The interviewees represent newly established NGOs, associated with the HIGGS incubator
[b]Maximum possible considering the foundation year of the umbrella organization

5.1 HIGGS

In the case of the HIGGS, most respondents indicated as the main reasons for choosing to join the HIGGS, their need of knowledge and young age as an organization. It should be mentioned that in order to become HIGGS members, organizations need to fill in an online application containing key questions on their vision and goals; shortlisted applicants are invited to an interview. All our

respondents stated that they were satisfied with their HIGGS membership. Interestingly, networking—a collateral, non-direct benefit of the HIGGS offer—was mentioned by most of the interviewees, some of whom indicated it to be the first among all other benefits they obtained through their membership. Some called it the "connection to the community", possibly indicating an even a more complex benefit than networking. Responses also highlighted the main need of the young organizations: besides the obvious skills/know-how gaps that needed to be filled, they also required significant networking: being new in the ecosystem gave them the impression they could not meet the expectations.

A common view on how the HIGGS participants benefited from their membership was the expertise/training seminars offered while some organizations also mentioned the provision of space in order to have their headquarters at the HIGGS premises. The latter were in a way designed to highlight their strategy on the ecosystem—that is, of a sharing community in which the members support each other with information and the best practices exchange while remaining open towards the cooperation initiatives aiming at win-to-win synergies to the benefit of the Greek society as a whole, and the vulnerable groups in particular.

As far as some weaknesses of the HIGGS offer are concerned, respondents indicated the lack of specialized expertise regarding specific issues of their concern, i.e. environmental issues and the IT/coding experts. Also, they indicated the absence of a web-based platform for enhancing online discussions, exchange of ideas and participating in long-distance seminars. The latter idea has been sponsored mostly by organizations based outside Athens, which is where the HIGGS premises are found.

> The HIGG's workshops and seminars should be also provided through a web/internet based platform in order to allow the NGOs and their members from other areas of Greece to participate . . . The HIGGS could allocate more personnel in providing advice and support to member NGOs in order to avoid delays and improve the quality of the collaboration. (G3)

In what gained knowledge and information were concerned, fundraising and NGO/project management training were indicated by all respondents. This happened through the participation to the HIGGS bootcamp (a compulsory 80-h intensive training program) but also through the experts, the participants had access to through one-to-one meetings. Interestingly, although the participation at the HIGGS gave access to more than 24 thematic courses, it was the fundraising capacity building knowledge offered by the HIGGS that has been mostly appreciated. This is probably derived from the perception of the respondents on what their highest needs were.

> (A main benefit was) . . . the HIGGS bootcamp that provided us with the knowledge and educational material that empowered the Operation Manager of our organization to develop more skills. (G2)

Regarding the community aspect of the HIGGS, most respondents were reluctant to use the term "community" but used instead "network". This indicates a qualitative difference suggesting the HIGGS has not yet achieved an in-depth interconnection between its members. Nevertheless, a specific networking/community-building activity called "Best to Share" where all participants exchange their experiences and ideas on the ecosystem and their organizations, is being offered.

> No, I don't feel that we are a community. Although I know most of them and I have participated in many events with them, we don't have many chances to talk together. There is only one event (Best to Share) every two months, but this is not enough. Probably, more social events could be a solution. (G1)

In addition, some respondents indicated the co-working space, the core of the HIGGS premises, as a tool for community-building. This is in line with the HIGGS premises formulation, where all participants are directed to have a seat in the co-working space and thus be more open and exposed to others.

Some others interviewees, nevertheless, associate the NGOs members of the HIGGS with a community:

> (The HIGGS offers) ... connection to a community ... the HIGGS is a community in a co-working place where members share ideas and good practices for the operation of the NGOs. (G3)

The competitive advantage offered by the HIGGS, according to the respondents, mainly relates to the know-how and the networking opportunities offered. In addition, they appreciated the expertise of the HIGGS team and the prestige gained by their participation in their programs.

> The HIGGS' staff is very popular and respectful in the NGO ecosystem, so the HIGGS' members are more trustworthy than others. (G1)

Finally, referring to the understanding of the sharing economy that the respondents have, results were mixed. Some understood it as a new economic model, others as to peer-to-peer sharing, and some as a more systemic approach to developing knowledge and supporting co-members. Overall, it seems that the term was not well-established within the Greek NGO community.

Irrespective of the interviewees' perception of whether they were part of the sharing economy or not, they considered sharing as a trait embedded in a nonprofit organization's DNA:

> The mission of a non-profit organization is to make a change, not to make money. Therefore, our goal is to share what we know with the rest of the world. By sharing our projects that have led to successful solutions, the successes can be multiplied by. That can result in seeing our work on a larger scale and gathering feedback, modifications, new ideas etc. It can also be used by sponsors and partners as a more important and general proof of our impact and of the sustainability of a certain project. (G2)

5.2 The Umbrella Foundation (UF)

All the NGOs are satisfied with their membership and cooperation with the Umbrella Foundation. The long-term cooperation with the UF proves the sustainability of this initiative. Among the benefits associated with the Umbrella membership, the interviewees mentioned: working space, knowledge, trainings, individual consultations, advising, legal information, promotion, possibility to participate in a very big number of events, benchmarking, models of good practices, documentation for project development, partnership development with other NGOs, support for project implementation, European connections, and better use of financial resources.

> Without this help, we would probably develop much slower than we do. (P1)

> We are real fans of the umbrella organizations because they permit us to grow in a very significant way. (P2)

Therefore, the high level of satisfaction is related to many and various benefits which help the member organization to develop sustainable projects and even gain competitive advantages. An important benefit of the participation is knowledge development. Knowledge input is related to the functional—managerial aspects of the NGOs' activities, as well as to the knowledge of the surrounding environment, including the European developments.

The network of experts facilitated by the UF is highly valued. Networking is a key element in the eco-system developed by and around the UF. This is probably the main factor determining the respondents to consider themselves as part of a community.

> In our opinion, the members of the Umbrella are a part of a community. This community could be described as a community of organizations and individuals working in the social, educational and cultural fields with its members centered on one place, but their activities took place in the metropolitan area, so a large spectrum of receivers can benefit from their actions. Inside this community, in our opinion, the cooperation exists mainly at (1) the design level, some kind of place where new joint ideas are born, (2) joint actions, as common projects or other initiatives, (3) exchange of information and knowledge. (P1)

> For sure, the UO members are part of a community. This community is constituted around a core, which is the UO, physically existing in a certain area while organizations are the cells around it. As mentioned above, some of them are close, others further away, however, there are moments when almost all of them meet together. (P2)

The interviewees considered that the networks, the community and the infrastructure connected with the UF gave the member organizations a competitive advantage. This advantage was associated with sharing of information, good practices, ideas, and resources.

The sharing economy is perceived as a very broad concept, a complex social system where organizations implement social actions and participate in social networking.

> In our opinion, it refers exactly to what the Umbrella Foundation offers to the local organization—the common use of space, the common use of material resources, the exchange of knowledge and partnership projects. For sure, the member NGOs are part of this sharing system, being involved more or less depending on their way of regarding the umbrella organizations: a service provider or a community. (P1)

All the NGOs are part of this system, but those most active and benefiting most are the members of the umbrella organizations.

5.3 The Romanian National Network of Museums (RNNM)

In the case of the RNNM, the opportunity to communicate and connect better in the museum sector was a main drive for the museums to become members of the Romanian National Network of Museums. Access to resources, information and partners are recurrent aspects brought about by the representatives of the museums members of the RNNM. Integrated promotion and advocacy for the Romanian museums are also highly valued in relation to the museum network.

> We are finding out more and there are more promising news about the network coming from other colleagues in the country. In addition, we felt the need to belong to a larger group, amid an increasing local autonomy and the disappearance of the centralized system. (R2)

The main benefits identified by the representatives of the members of the Romanian National Network of Museums were access to knowledge and the latest information on the field, visibility and professional training. Contacts and exchanges of experience with other museums across Europe were also valued. Due to the additional skills and knowledge developed during various professional development programs, the museums appreciated that they could improve their museum practices, become more innovative and could activate their visitors.

Increased cohesion across the museum sector is also suggested by the Romanian interviewees.

> Furthermore, the member status facilitated the access to up-to-date training for museum professionals and an organizational cohesion between the members having the same goals. (R1)

Access to resources is also valued by the member-organizations. This could take various forms, such as being a partner and/or beneficiary in a non-reimbursable financed project

A respondent stressed on the guidance offered by the Network of Museums—valued as necessary:

> . . . the existence of this association has in many cases replaced the central government after its "withdrawal" from the local affairs in 1990. This process continues and will increase. (R2)

Not all respondents identified significant benefits related to their membership. The reasons given are related rather to the characteristics of their museums and the

specific local situation and not the umbrella organization. Several suggestions to increase the positive impact/benefits of the member organizations were given: more attention to the specific, functional aspects, the involvement in the regulation and setting up of the professional committees and more thematic workshops. Generally, an increased cooperation among museums and an active involvement of all the members were proposed.

Advocacy and more influence on the decision-making processes in the cultural domain were further expected from the Network of Museums. The present actions in this domain were appreciated by the members but there were higher expectancies:

> And while the Network response could have been considered slow, and shy in its endeavor, the action per se cannot be denied. (R5)

The representatives of the large museums tend to consider the activity of RNNM from a systemic perspective and they look for increased organizational benefits, whereas the smaller museum representatives have a more functional perspective, related to their daily activities, and would like more benefits for museum professionals:

> I think the RNMR lacks a bit in terms of vertical communication, namely the distribution of information between the museum management (that often takes part in the RNMR meetings and discussions) and the other employees of the museums. In our opinion, over the years, the addressability of the RNMR actions has, with a couple of exceptions, been restricted to the upper levels of the museum employees, giving fewer chances for the middle management and the regular museographers, or younger employees, that would actually be those who need to benefit more from the professional training. (R4)

Access to knowledge and resources are among the main benefits identified by the members of the RNNM. The museums specified as the main positive aspect the access to information (including information on the European trends in the museum sector). The Network is perceived as an important factor in keeping them updated with the latest news in the field. Nevertheless, more access to information is specified by some respondents as being needed. Finding potential partners for projects was also appreciated by the respondents.

The community of knowledge and sharing practices were seen as insufficient to build a unified and supportive community.

> The RNMR is a diverse community of museums sharing the same goals and values, and where the cooperation is mainly based on the mutual promotion of the events organized by each member, but also on the exchange of knowledge and information. Given this same diversity, however, the relations between its members lack (to some extent) the unity normally characterizing any community. (R1)

One interviewee positioned himself differently—he perceived the museum professionals as part of a community, interacting frequently, and having joint projects

> Museums have the advantage of being few anyway, and inevitably we feel like a large family. Thanks to professional and scientific meetings, we have the opportunity to meet our colleagues all over the country. The establishment of the national network of museums has strengthened the feeling of us belonging to a family. (R2)

Cooperation in a tighter manner was expected:

> The level of cooperation between the members has much to be improved, in terms of exchange of information, shared focus on the common problem and, access to resources. (R5)

The respondents considered that belonging to the network gave them several competitive advantages. More visibility, increased protection in case of oppressive local administration or skills necessary to a modern museum approach were the aspects mentioned. The advantages offered by the membership to the Romanian National Network of Museums led to the development of new strategies and increases effectiveness. Nevertheless, these advantages were not appreciated equally by the member museums:

> Also, in terms of knowledge acquired via the Network's events, the chances of implementing any new ideas or matters is simply remote (economic, social, cultural factors)—e.g. for small and medium-sized members. (R5)

The understanding of the concept of sharing economy was weak among the respondents.

> The NGOs are part of the sharing economy system since it refers to a complex process that begins with the creation, continues with the distribution and ends with the use of mutual resources. (R1)

Nevertheless, there was a sense of sharing within the framework of the RNNM.

> Sharing economy, in this case, refers to placing together specific resources to common goals and mutual benefits. An institution such as the current UO could easily act as a platform—using the same system the NGOs use in other domains—of placing together various people and/or opportunities. (R5)

It facilitated the sharing of information and professional knowledge which helped museums achieve their mission.

> This is not a term that I am very familiar with. I think it has to do with an easier access way to resources (be they material or cultural) and a better circulation of knowledge. It seems that the sharing economy can be rather similar to what the open access policies are in the academic world. The NGOs can be part of this economy, as they play a significant role within the private-public partnerships. (R3)

From a sharing economy perspective, the RNNM is probably the most significant from all the cases of umbrella organizations investigated. The members

appreciated more the direct material and financial benefits, as well as the increase in effectiveness triggered by their membership. Members benefited from increased resources and funds to improve their services and become more attractive to the public. They even aimed at the development of additional resources and activities such as joint exhibitions, a joint communication platform and sessions, and the development of various resources and tools.

6 Discussion and Conclusions

This research is the first academic study investigating the relations between the NGOs and the sharing economy, from the point of view of the mediating role played by the umbrella organizations. From a theoretical perspective, the latter provides support for the natural place that the nongovernmental sector has within the sharing economy. Nevertheless, in order to activate this position, the NGOs should implement an operation model resonating with the sharing economy, based on equity, openness, collaboration, crowdsourcing, social networking, sustainability and environment friendliness, community, and local development, connection, and cooperation between beneficiaries, value co-generation, etc.

An insight revealed by the research was that the NGOs connected in the sharing economy tend to be more business-oriented and effective. The NGOs are concerned with ensuring the sustainability of their activity. Therefore, being more business-oriented could lead to increased performance. A concern in this framework, from the point of view of the social mission, would be the mixed outcomes that may result. In such organizations that are more commercially oriented, social networking and advocacy might be limited given their association with other types of strategies, while being rather time and resource consuming, with a slower progress rate, as well. In addition, in the case of these organizations, the forms of preferred partnerships might incline more towards the ones with business and expert representatives. If this process leads to a less connected and social organization, it is to be seen in the future. Organizations have to ensure, nevertheless, a balance between the functional/material outcomes and the social performance.

Sector and social networking should remain a main concern for the NGOs since not only that it gives them strength but also they are linked to the DNA of a particular NGO, meant to be part of a mechanism of initiatives for a greater societal good. Within this framework, the umbrella organizations fit. They are intended to help the member organizations to be part of this system leading to the development of the society.

The interviews showed that the umbrella organizations strengthened the organizational capabilities of the member NGOs and helped them connect. The member organizations perceived a consolidated competitive advantage and a stronger support for a more effective knowledge management.

Within the framework of the umbrella organizations, the NGOs can establish many types of partnerships. Depending on the type of the umbrella organization and the other members involved, an NGO could develop all the eight types of partnerships

mentioned in the academic literature (business partnerships, sector partnerships, community partnerships, government partnerships, expert partnerships, endorsement partnerships, charter partnerships and hybrid partnerships). This prospect ensures a complex synergy from which the NGOs could benefit in many ways.

The membership to an umbrella organization was highly valued in all the three investigated cases, which highlighted diverse organizational benefits. The members tend to be more satisfied and willing to get more involved in the network's activities if more benefits and longer cooperation can be foreseen.

Networking was a relevant benefit specified by most interviewees, from all the three countries. Access to information, resources, and partners were among the most appreciated aspects of the membership to such organizations. In the Romanian and Polish cases, international openness and connectedness were also valuable benefits. Such processes were not relevant in the case of the HIGGS' members probably because of their different character—newly born NGOs.

In the first two cases, the sense of community and the desire to cooperate within the network were also more important than in the case of Greece. The Greek NGOs tended to evaluate the benefits from a strict organizational perspective while the Romanian and Polish representatives had a more systemic approach. This might be related to the longer time of cooperation under the above mentioned umbrella organizations. The HIGGS is a very young organization; therefore, the sense of community had no time to mature and it is maybe more inner-oriented. Sharing might be also experienced in such cases from a more egocentric perspective and was not related to the community-development but rather to the organizational-development.

As the literature review revealed, the sharing economy involves a hybrid form of value-exchange done in a collaborative manner. This process comes naturally in the framework of an umbrella organization. In the cases analyzed, the value-exchange existed mostly at the informational level—in many cases connected with best-practices dissemination. Depending on the type of the umbrella organizations (as in the case of the Greek and Polish ones), the value-exchange could be more extensive, based on the use of a common infrastructure.

Sharing economy is a blurry concept for most of the interviewees, in all three countries; nevertheless, they saw the nongovernmental organizations as part of the sharing economy. They did not have a clear view on their role in this system, and on what the relation between the economic aspects involved and the pledge for non-profitable support of the society might have been. Further research should aim to additional clarifications regarding the possible role that the umbrella organizations, as well as the NGOs, have within this system and the way they could better fulfill their purpose.

Further research should investigate the sharing patterns specific to the non-profit sector for a better understanding of the processes and a way to generate social innovation and added-value. We would like to mention that in most cases, the best-practices associated with the sharing economy (presented in the literature) were benefiting from technological innovation. The existence of a technological platform

has a multiplying effect. Further research should bear in mind the use of technological advances by NGOs in order to produce social and economic value.

Acknowledgment This chapter has been partly based on research generated by the Erasmus+ project "Advancing the Third Sector through Innovation and Variation" (Grant Agreement No.: 2016-1-EL01-KA204-023550). The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Part II

Knowledge Management in the Sharing Economy: Edges and Hedges

The World I Know: Knowledge Sharing and Subcultures in Large Complex Organisations

Nick Chandler, Aniko Csepregi, and Balazs Heidrich

Abstract

Practitioners and researchers have agreed upon the fact that the culture of organizations is one of the most difficult challenges and holds the key to the success of knowledge management. The basis for formation of subcultures has been found in empirical studies to range from age and gender though to department and function within the organization and have a range of both positive and negative impact upon the performance of a range of areas in an organization. We examine how knowledge in its various forms may have an impact on the formation of subcultures on knowledge sharing, and through a quantitative approach, our explorative study uncovers five subcultures in a Hungarian higher education institution. Our findings confirm subcultural boundaries and tribes and territories in this context and we apply these findings to existing theory on the evolutionary nature of strategy implementation as a means of considering the potential impact of subcultures on knowledge management initiatives. We conclude that subcultural lenses affect the assimilation of knowledge from management in general and find that multiculturalism in this large complex organisation is likely the best approach as each subculture has its own specific range of competencies as part of an overall market orientation. As a concluding section, we offer a 'subcultural audit' model for practitioners that may reduce the subcultural obstacles to knowledge sharing as part of knowledge management programs.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_7

1 Introduction

Subcultures continuously emerge on both a societal and organisational level, and research has likewise examined these phenomena since the times of early works such as that of Henry Mayhew's London Labour and London Poor (Mayhew 1862). The basis for the formation of subcultures seems nigh on impossible to pinpoint as due to a lone source such as gender or age. However, subcultures have two sides: they can be hugely beneficial to organisations or play a part in their downfall. Understanding where subcultures come from and the effects they have is crucial to our understanding of the behaviour of organisations as well as society in general.

Our chapter first considers how knowledge in its various forms may have an impact on the formation of subcultures in the organization. The basis for formation of these subcultures has been found in empirical studies to range from age and gender though to department and function within the organization. A lesser known basis for formation of subcultures is offered by Sackmann (1992), who referred to cultural knowledge as a basis for formation with four types: dictionary knowledge, directory knowledge; recipe knowledge; and axiomatic knowledge. We cover these types and the role knowledge plays in subcultural development.

We then consider a specific case of subcultures in higher education and how, once these subcultures are formed, they may have a positive or negative impact upon knowledge sharing. We develop the concept of cultural boundaries and tribes and territories in this context. We consider how subcultural lenses affect the assimilation of knowledge from management in general and develop the existing model on the evolution of strategy in organizations. We then narrow down our study to consider how knowledge management programs are impeded by subcultures, in particular.

Finally, we offer some empirical research to consider both the limitations and strengths of subcultures in light of knowledge sharing or a lack thereof, with a resulting argument in favour of multiculturalism in large complex organisations. As a concluding section, we offer a 'subcultural audit' model for practitioners that may reduce the subcultural obstacles to knowledge sharing as part of knowledge management programs.

2 Knowledge and Culture

Knowledge can be explicit, implicit or tacit and yet, overarching these types is the nature of knowledge itself. It is formed by the social practices of employees, regardless of whether in a department, project team or group.

Davenport and Prusak (1998, p. 5), when offering their "working definition" of knowledge, emphasise that knowledge "originates and is applied in the minds of knowers" and extend this statement by stating that "in organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms." On the other hand, Spek and Spijkervet (1997, p. 36) determined knowledge as "the whole set of insights, experiences, and

procedures which are considered correct and true and which therefore guide the thoughts, behavior, and communication of people" and it is "always applicable in several situations and over a relatively long period of time". Knowledge can be classified into several groups and Table 1 presents few of these classifications.

These classifications of knowledge (Table 1) are based on the iceberg metaphor with its two distinct components explicit and tacit knowledge. Besides the iceberg metaphor, the stocks-and-flows metaphor also exists, and these metaphors are based on analogies with the tangible world and its Newtonian logic having several limitations (Bratianu 2016). On the other hand, in the past few years another metaphor, the energy metaphor, appeared with three basic knowledge fields: rational, emotional, and spiritual. Rational knowledge reflects "the objectivity of the physical environment we are living in", while emotional knowledge demonstrates "the subjectivity of our body interaction with the external world" and finally, spiritual knowledge represents "the understanding of the meaning of our existence" (Bratianu 2016, p. 330).

There is a discrepancy in knowledge management literature since some authors suggest culture to change in order to support knowledge management initiatives while others claim that these initiatives have to adjust to culture being too enduring (McDermott and O'Dell 2001; Hislop 2005; Ribiere and Sitar 2010). In spite of this culture can be considered as one of the most significant input to effect knowledge management by determining the knowledge being appropriate to share, when and with whom (King 2007).

According to Debowski (2006) the following values can be found in effective knowledge culture:

- Work together is preferred, and sharing and learning are invited by colleagues,
- Employees are kept informed of events, issues and innovations,
- Knowledge sharing is actively encouraged by supervisors and leaders,
- Regular communication across levels and organizational units is demonstrated,
- Working together is seen as a core activity,
- Innovative ideas and solutions are developed through combined efforts,
- New ideas are welcomed and explored,
- Openness, honesty and concern for others are encouraged, and
- Learning is incorporated into the work community and practice.

Chmielewska-Muciek and Sitko-Lutek (2013) consider the cultural characteristics that are conducive to knowledge management as: team work, cooperation, informal communication, openness, tolerance of uncertainty, the right to make mistakes and risk, tolerance of different opinions and diversity, autonomy, creativity and flexibility. If we are to assume that organisations adopt such characteristics as they become 'knowledge management cultures' then we need to consider how this occurs.

Members of organisations interpret the world around them based on a combination of their values, beliefs, as well as their socialization and national culture. Culture is taught to new members and passed throughout the organisation. It affects

Table 1 The classification of knowledge and its associated meaning

Author(s)	Classification of knowledge	Meaning
Nonaka and Takeuchi (1995)	Explicit knowledge	Formal and systematic, easy to communicate and share
	Tacit knowledge	Highly personal, hard to formalize, difficult to communicate to others, deeply rooted in individual's action, experience, ideals, values, or emotions
Blackler (1995)	Embrained knowledge	Depends on conceptual skills and cognitive abilities
	Embodied knowledge	Emphasises practical thinking, action oriented
	Encultured knowledge	Emphasises meanings, shared understandings arising from socialisation and acculturation
	Embedded knowledge	Emphasises the work of systemic routines
	Encoded knowledge	Embedded in signs and symbols
Ruggles (1997)	Process knowledge	How-to (similarly generated, codified, transferred as the other two)
	Catalog knowledge	What is (similarly generated, codified, transferred as the other two)
	Experiential knowledge	What was (similarly generated, codified, transferred as the other two)
Probst (1998)	Individual knowledge	Relies on creativity and on systematic problem solving
	Collective knowledge	Involves the learning dynamics of teams
De Long and Fahey (2000)	Human knowledge	What individuals know or know how to do something
	Structural knowledge	Embedded in the systems, processes, tools and routines of an organization
	Social knowledge	Largely tacit, shared by the member of the group, developed as the result of working together
Becerra-Fernandez et al. (2004)	General knowledge	Held by a large number of individuals, can easily be transferred across individuals
	Specific knowledge	Possessed by a very limited numbers of individuals, not easily transferred
Christensen (2007)	Professional knowledge	Is created and shared within communities-of-practices either inside or across organizational barriers
	Coordination knowledge	Makes each employee knowledgeable of how and when he is supposed to apply knowledge
	Object-based knowledge	Knowledge about an object that passes along the organization's production-line
	Know-who	Knowledge about who knows what, or who is supposed to perform activities that influence other's organizational activities

(continued)

Table 1 (continued)

Author(s)	Classification of knowledge	Meaning
Zhang et al. (2008)	Individual knowledge	Related to the process, that is the elementary cell for knowledge creation, storage and usage
	Team knowledge	The accumulated knowledge capital of the team is more than the sum of knowledge of each member, creates a valuable result
	Organization knowledge	To form a complete organization it possesses own unique structure, function partition and procedure

our behaviour as a culture develops norms or correct ways of doing things. Even back in the 1930s, the Bank Wiring Room was one of the GE experiments that highlighted how subcultures can affect productivity as staff accepted norms to neither work too much or too little, regardless of the financial incentives offered. Thus, it seems that one of the main goals of knowledge management initiatives should be to encourage subcultures to adopt values and attitudes that are conducive to knowledge sharing such as those mentioned earlier. This involves subculture change. However, before considering subcultural change, we should consider how subcultures emerge and what circumstances are conducive to the emergence of subcultures.

3 The Emergence of Subcultures

If large, complex organisations resemble the society around them (Gregory 1983) then the existence of subcultures in society indicates the potential for subcultures in organisations as well (Hofstede 1998; Trice 1993). Early works such as that of Henry Mayhew in the late nineteenth century discovered subcultures in Britain in the form of deviant subcultures and viewed subcultures as 'those who will not work', Marx and Engels (1960) used the term 'Lumpenproletariat[1]' to describe a segment of the working class. From these beginnings, subcultures have been found in high culture, pop culture, youth culture through to criminal subcultures and, more recently digital pirates and virtual communities. Subcultures may be seen as 'groupings of values' (Boisnier and Chatman 2002, p. 13). Meek (1988, p. 198) claimed that organisational subcultures are not only created by leaders, but also managed and eventually destroyed by them. This begs the question as to what scenarios are more likely to encourage or discourage the formation of subcultures within organizations.

Parker (2000) claimed that staff identifies with different groups in the organisation and that such groups may be formed on the basis of age, gender or

[1]Lit. "rag proletariat".

Table 2 Subculture characteristics in the development process (Bokor 2000, p. 7)

	Return culture	Market culture	Profession culture	Small labourers
Members	Product Managers [Top Managers (to some extent); potentially: Finance]	Sales (potentially: Customer Care)	Technicians (to some extent: the Lawyer)	Invoicing, MIRA, Lawyer, Customer Care, Finance
Self portrait	The conducting midfielders	The magic forwards delivering goals	Defender serving the others	Secret talents on the bench
Perception of others	Skilful gamblers	Over occupied little star alike	Overloaded geniuses somewhere in the building	Ambitious ballasts
Internal–external focus	Intermediate internal	Strong external (customers)	Intermediate external (suppliers)	Miscellaneous (potentially internal)
Attitude towards risk	Intermediate	Risk taker	Risk avoider	Risk avoider
Time orientation	Intermediate	Shorter	Longer	Intermediate-longer
Professional—task orientation	Task orientation	Task orientation	Professional orientation	Task orientation (some professional)
Professional—business orientation	Business	More business than professional	Professional	Professional

education as well as location, job description and length of tenure. Van Maanen and Barley (1985) proposed that subcultures see themselves as a group within the institution, share a commonly defined set of problems and act on the basis of collective understandings unique to their group.

Subcultures are also more likely to develop in bureaucratic, larger, or more complex organizations with a wide range of functions and technologies (Trice and Beyer 1993). Bokor (2000) found that subcultures were identified as: technicians (profession culture); customer oriented parties (market culture); business oriented parties (return culture); and the subculture of small labourers. Through these typologies, it can be seen how the different interactions, attitudes, perceptions and values differentiate the subcultures identified in the organisation (Table 2).

Taking a cognitive perspective, Sackmann (1992) claimed that it is a collective cultural cognition held by groups in an organization that leads to the formation of subcultures. This type of cognition is referred to as cultural knowledge and Sackmann (1992) separates this into four types.

Firstly, there is dictionary knowledge. This involves commonly held descriptions, including expressions and definitions used in the organization to describe the "what". This refers to what is considered a problem and what is considered a success. The second type is Directory knowledge and this is concerned with commonly held practices and describes the "how" of processes, such as how a problem may be solved or the way in which success is achieved. The third type is recipe knowledge and this involves strategies recommending what action "should" be taken, for example, to solve a problem or to become successful. The fourth and final type is axiomatic knowledge and this considers answers to the question "why" events happen by providing reasons and explanations.

The decentralization of power makes organisation more susceptible to subculture formation as found by Martin and Siehl (1983) with DeLorean's counterculture at General Motors. Prior to this, Hage and Aiken (1967) linked decentralized power with professional activity and hierarchical differentiation, which may be likened to HEIs where power is very much centralized, there is professional activity such as research and publication and very much hierarchical differences in status, prestige and reputation. Cohen (1955) claims subcultures form through interaction and building relationships. When individuals work together on a task, subcultures may also form (Trice and Beyer 1993). The willingness to become part of a subculture is referred to by Boisnier and Chatman (2002) when they suggest three criteria which are conducive to subculture formation: (1) structural properties; (2) group processes; and (3) individual's propensity to form and join subcultures.

Hatch (1997) claims organizational subcultures may be based on a variety of factors such as: task interdependence; reporting relationships; proximity; design of offices and work stations; and sharing equipment and facilities. Beyond this list, demographic differences, professional interests and affiliations, informal groups and performance-related distinctions may be causal factors (Jermier et al. 1991; Trice and Beyer 1993). Berscheid (1985) indicated that the 'similarity-attraction paradigm' may be a causal factor in subculture formation. Boisnier and Chatman (2002) saw teamwork as the means by which a set of values may develop in line with the requirements and needs of the team regardless of the values of the larger organisation.

In summary, there are a wide range of factors that may cause the emergence of subcultures and the literature presents somewhat conflicting findings, which leads us to believe that one particular root cause or even a handful of causes cannot be pinpointed. We now consider whether this remains the case in the context of higher education in general and in the context of Hungarian higher education in particular, as this will be a focus for a case study referred to later in this study.

4 Subcultures Formed in Higher Education

When considering the likelihood of formation of subcultures in higher education, there seems to be a combination of characteristics with some encouraging and some discouraging subculture formation. Van Maanen and Barley (1985) approach the

factors affecting formation of subcultures as a number of situations conducive to subculture formation. Firstly, there is *importation*. In this case, an acquisition or a merger can introduce new subcultures, as well as importing new occupation, which may bring different mixtures of subgroups, levels of interaction and problem-solving. Just over a decade ago, the organisation in this case study underwent a merger, indicating a potential for subcultures. The second situation involves *technological innovation*. Barley (1986) points out that technical advancement does not always lead to alienation but can also positively change role structures. The organisation has in the past 5 years undergone some changes such as changing from a system using reports books, which has to be signed for each student for each subject every semester to a computer based system. Such innovations might create subcultures with the desire for employees for 'the good old days' or other subcultures that see the organisation as being up-to-date and moving with the times, or rising to the challenge of the global market or local competition, for example.

Roberts (2008, p. 2) reinforces this in her paper developing a strategic change process specifically to deal with resistance to change when introducing new technology in higher education: "...the move toward implementing technology in higher education is driven by an increasing number of competitors as well as student demand, there is still considerable resistance to embracing it". In the case of *ideological differentiation,* subcultures may arise with competing ideologies. In a higher education context, Winter (2009, p. 123) highlights the differentiating ideologies and their impact upon (sub)cultural values in the context of a market orientation: "As higher education institutions contrived themselves in market-oriented, utilitarian terms in response to an altered economic environment of public funding constraints, user-pays principles, full-fee paying courses and research directly tied to business needs, academics internalised business-related values and profit-making ideals" (Henkel 1997; Slaughter and Leslie 1997; Winter and Sarros 2002). Thus, it seems that in a higher education context, the very introduction of a market orientation may cause a split between different ideologies, resulting in the formation of subcultures. In fact, Winter (2009, p. 123) continues by citing Deem et al. (2008) that the transformation of identity in higher education is based on the ideology of economic and managerial concepts, which have reshaped institutions in higher education.

Another situation in which subcultures have been found to form is within *counter-cultural movements*. Van Maanen and Barley (1985) assert subcultures could form as staff rejects existing subgroups or feel rejected through blocked ambition, poor training, inadequate rewards, impersonal management or inadequate resources, which may in turn lead to rituals of resistance. Inadequate rewards and resources may indeed be an impetus for the formation of subcultures in higher education institutions in Hungary as funding is decreased and student numbers drop due to changes in funding to students as well, which very much affected the organisation of this case study over the past few years. Nahavandi and Malekzadeh (1988) claim that, for organisational cultures to complete the process of acculturation after a merger, it may take around 7 years. It would be false to assume that

acculturation process is complete for the organisation as the acculturation process depends on other factors such as the level of interaction and conflict as well as barriers to integration such as the organisation being based on a variety of locations. Therefore, the subcultures identified in this case study may not necessarily be the state of the organisational culture following completion of the acculturation process.

Batterbury's (2008) study of the academic tenure system of the USA claimed that tenure maintained a split between tenured, untenured and non-tenured track staff, which would seem to indicate the potential for subculture formation through career filters. In the organisation of this case study, teaching staff with or in the middle of PhDs have a different career track in some departments compared to those who are not. Furthermore, the pressure to have articles published could be seen as slightly ambiguous performance criteria as it is not clear how much it affects career prospects nor how quantity or quality are related to performance and therefore may be conducive to subculture formation. The concept of a split referred to by Batterbury (2008) leans towards the idea that divisions are causes by certain perceived boundaries between groups in the organisation. Becher (1987) in his extensive study of subcultures in higher education claims that boundaries between functions may be strongly upheld between departments; especially when considering issues such as workload and budgets, but also that the only function which is able to cross such boundaries is administration. Furthermore, Becher (1987) found that boundaries of subcultures, which formed on the basis of specialisation, appear to overlap. This simultaneous occurrence of overlapping and firm boundaries highlights the complexities of culture and subcultures in higher education, although the detection of boundaries and the degree of overlapping of them in subcultures is beyond the scope of this study.

In higher education, there is a combination of top-down hierarchy in terms of work flow and yet, the work flow may also be affected by the customer, the student. When considering courses and the management of courses, there is a certain degree of consistency of workflow as similar courses are taught each year. As the work flow of administration and management is also related to student numbers and courses, there is a certain degree of consistency and yet the work flow is not entirely centralized. For example, one lecturer may decide to keep up-to-date and produce new materials each year, requiring administrative staff to work more in materials preparation and library staff to supply the articles and other materials for the lecturer to keep up to date. On the other hand, a lecturer who repeats the same course as taught the previous year would have little change in work flow for himself or others.

According to Tierney (1988) there may be numerous subcultures in a university or college and the basis could be: managerial; discipline-based faculty groups; professional staff; social groups of faculty and students; peer groups (by special interest or physical proximity); and location (offices arranged by discipline). However, that is not to say that all factors are found in all institutions with a plethora of emergent subcultures. Taking one example, location may be a limiting factor of who talks with each other, but that does not necessarily mean that such behaviours

are related to assumptions and values about the culture or subculture (Kuh and Whitt 1988, p. 27). The relative importance of each in shaping subcultures is somewhat contested. Becher (1989) asserts that disciplinary cultures are the key to HEI cultures. Valimaa (1998) reinforces this with findings that disciplinary differences affect many areas of academic life such as modes of interaction, lifestyle, career paths, publishing patterns, and so on. Thomas et al. (1990) even asserts that disciplinary differences outweigh gender differences.

Disciplinary cultures were first examined by Becher (1989) and have been used as a basis for research in many cases since that time (e.g. Snow 1993; Collini 1993). Becher (1989) indicates that disciplinary cultures are differentiated according to knowledge and classifies the cultures into four categories: hard, pure, soft and applied knowledge. These disciplinary cultures are also found by Becher (1989) to be either socially convergent or divergent. It is this study that led Quinlan and Akerlind (2000) to the introduction of department culture as a concept. Disciplinary cultures not only indicate the potential for the formation of subcultures but also indicate the ranking of staff, or 'pecking order' with the basis being hard-pure, soft-pure, hard-applied and soft-applied (Becher 1987). According to Becher (1989, p. 57), the theoreticians are ranked highest with staff involved in practical, soft and applied disciplines ranked lower. However, Becher (1989) also points out there may be subgroups according to specialisation and that within disciplines and specialisations there may in fact be some overlap. Subgroups within disciplines include women faculty, minority faculty and part-time faculty (Bowen and Schuster 1986). Becher (1984, 1990) focussed on these sub-specialisations as a unit of analysis. Sandford (1971, p. 359) refers to rules being held in Faculty culture so that only specialists in a given field are permitted to discuss in conversation and present their ideas concerning the specialisation and thus other faculty should defer to the specialists. This sense of boundaries seems to be only transversal by administrative and library staff, who, lacking academic credibility are actually interdisciplinary (Bergquist 1992, p. 41). Freedman et al. (1979, p. 8) described HEI culture according to the faculty as 'a set of shared ways and views designed to make their (faculty) ills bearable and to contain their anxieties and uncertainties'. Finkelstein (1984, p. 29) saw the main components of faculty culture as: teaching, research, student, advisement, administration and public service.

5 Subcultural Lenses: Barriers to Knowledge Management Initiatives

In a large organisation made up of people from different backgrounds and nationalities, employees learn to see things through the eyes of others as they learn and appreciate cultural differences. However, an organisational culture can still be diverse without national differences and the way employees perceive the organisation, its management and the world around them can impact upon their individual motivation and effectiveness. These are the employees' 'cultural lenses'. This aspect of perception is one which also is highlighted in the literature on

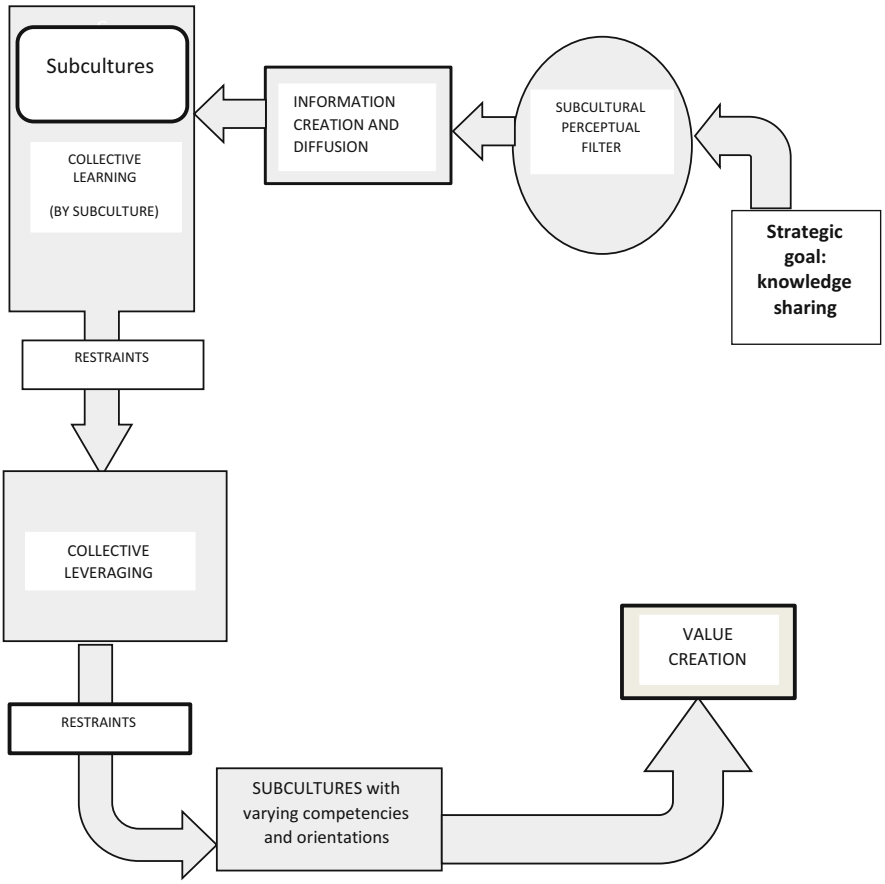

Fig. 1 The impact of subcultures on a knowledge sharing initiative

knowledge management. Chmielewska-Muciek and Sitko-Lutek (2013) refer to knowledge management culture as relating to the "problem and unconventional perception of processes within the organisation, deep analysis of problems going being simple answers, continuous denial and questioning chosen strategy". Within our pluralistic perspective, this view is no longer a general attitude to problem resolution, but we are faced with an organisation full of heterogeneous subcultures, each subculture perceiving processes within the organisation differently and questioning chosen strategy in a different way.

As referred to and shown in Figs. 1 and 2, these heterogeneous subcultures have varying perceptions but also may have commonalities or be seen on a scale of different ranges of perceptions. These subcultures can have an influence on "how and what knowledge is valued, what kinds of relationships and rewards it encourages in relation to knowledge sharing, and the formal and informal opportunities that individuals have to share knowledge" (Ipe 2003, p. 353) and can control the

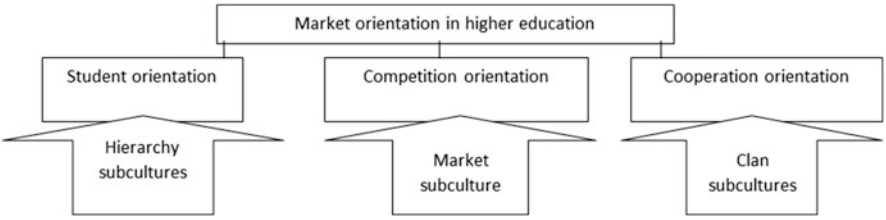

Fig. 2 The different market orientations of subcultures

relationships between different levels of knowledge (e.g. individual and group). The uppers tiers of management develop strategic goals such as knowledge management initiatives based upon key considerations such as marketplace position and capabilities. These knowledge management initiatives can differ in their success depending on combinations of business strategy of a unit (efficiency, innovation) and knowledge management strategy (codification, personalization) (Greiner et al. 2007). Combining efficiency with codification (collecting knowledge, storing it in databases, and providing knowledge in a codified form) and innovation with personalization (helping people to communicate their knowledge) can lead to higher success than other combinations (Hansen et al. 1999; Greiner et al. 2007). On the other hand, organisational subcultures evolve organisational competences relating to the information passed on to them concerning the organisation's orientation. However, the information received by top management on strategy is interpreted according to the subculture's view of themselves, others and the greater organisation, called the *cultural perceptual filter* (Deneault and Gatignon 2000). By embarking upon a knowledge management initiative, top management is attempting to orient staff towards knowledge sharing as well as other aspects. Deneault and Gatignon (2000) developed a model to explain how orientation evolves in organisations, as can be seen in Fig. 1.

It is through this model that management can appreciate the importance of implementation of strategy in a large organisation with great cultural diversity. Because of the differences in subcultures their members can define important knowledge differently and this can lead to miscommunication and conflict since subcultures can apply different criteria in knowledge valuation (De Long and Fahey 2000). Firstly, allowance needs to be made for how information and knowledge is perceived and interpreted by subcultures, since subcultures can determine on the one hand what is perceived as knowledge, and on the other hand the perceptions about what knowledge should be managed and transferred within the organization (Simard and Rice 2007). Secondly, management need to consider how information is diffused i.e. although strategic plans and related information may be diffused through the hierarchy via top-down communication, information is diffused and interpreted within each subculture. Granovetter (1973) pointed to the significance of interpersonal communication channels in the diffusion of information indicating that strong ties (close relations and frequent interactions with family, and friends) are less important sources of information than weak ties (e.g. infrequent relations

and contacts with several peoples) are, weak ties provide access to a wider range of information. Factors as the frequency and intensity of interaction, the available means of communication, the sharing cultural and social codes and contexts and finally legal protection and restrictions can influence scale of the diffusion (Choo et al. 2013).

Finally, value creation is specific to each subculture as collective learning will produce a range of different competences. Having a learning culture results in creating knowledge that drives additional intentional knowledge leverage and accumulation leading to an advanced learning phase (Kim 1998) Thus, value creation is seen in a range of orientations and associated competencies being covered by each subculture. Creating positive values reflected by spiritual knowledge being built up on dynamic culture is essential in conceiving strategies being a success and in competitive advantage achievement as well (Bratianu 2015, 2016).

6 The Case Study

To illustrate the impact of subcultures on knowledge management, we will use the empirical findings of our study of the subcultures of the Budapest Business School in Hungary. Our study was purely explorative and had the aim of discovering what subcultures existed in the organisation (if any). We wanted to discover as much as possible about the characteristics of these subcultures and chose a quantitative approach as a means of finding out the values and perceptions of as many staff as possible. Two instruments were selected for this approach and these will be explained in the following section.

6.1 Instruments

According to Cameron and Quinn (2011) organizations are seldom characterized by a single cultural type and thus tend to develop a dominant culture over time as they adapt and respond to the challenges and changes in the environment surrounding them. They used the Organizational Culture Assessment Instrument (OCAI) to develop a measurement of organizational culture. The Competing Values Framework (CVF) aiming to find the most important criteria and factors for effective organizational operation was the basis for OCAI (Quinn and Rohrbaugh 1981). This CVF developed by them allows an assessment of a dominant culture across six key cultural characteristics (dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphasis and criteria of success). It also recognizes the complex nature of culture based on two primary dimensions. The first dimension is related to formal–informal organizational processes and the extremes of this continuum represent the competing demands of flexibility and discretion versus stability and control. On the other hand, the second dimension reflects the conflicting demands of the internal organization and the external environment. Thus on the one end of this continuum the focus on internal integration, organizational processes, and

Table 3 Comparison of organizational cultures (based on Szabó and Csepregi 2015)

Scholar	Culture type	Advantages	Disadvantages
Kono (1990)	• Vitalized • Follow the leader and vitalized • Bureaucratic • Stagnant • Stagnant and follow the leader	• Based on empirical study	• Concentrates only on Japanese companies
Handy (1993)	• Power (spider's web) • Role (building supported by columns and beams) • Task (net) • Person (loose cluster/ constellation of stars)	• Simple, clear typology	• Has theoretical approach • Not supported by empirical survey and database
Trompenaars and Hampden-Turner (2002)	• Incubator (fulfilment-oriented) • Guided missile (project-oriented) • Family (power-oriented) • Eiffel tower (role-oriented)	• Based on empirical study • Depends on a large international database, thus it is possible to compare organizational culture on international standards	• Limited access to the international database
Cameron and Quinn (2011)	• Clan • Adhocracy • Market • Hierarchy	• Measures the current and preferred culture types and the direction of change can be determined • Easy use of the questionnaire	• The results come from average values

structural stability and control appear, while on the other end the emphasis on competition, interaction with the environment, and a focus on outcomes. These dimensions create four quadrants representing four culture types: Clan, Adhocracy, Hierarchy and Market. Table 3 presents this model in relation to other organization culture typologies in light of their various advantages and disadvantages.

In comparison of the advantages and disadvantages, we chose the Framework of Cameron and Quinn (2011) for this study for a number of reasons. Firstly, the model allows for the simultaneous existence of a number of different culture types within an organization, which is more suited to the complexity found in the large organisation at the centre of our study. Secondly, previous studies have confirmed

that the CVF has already been used to measure organizational culture's relationship with various variables in general (Wiewiora et al. 2013) and in Hungary in particular (Bogdány et al. 2012; Bognár and Gaál 2011; Chandler and Heidrich 2015). Thirdly, the instrument developed shows current perceptions in comparison with staff preferences in the organization, thereby giving an additional dimension to a study of the organisation.

The second instrument we used was the Market Orientation questionnaire to consider the nature of subculture orientations in light of the current organizational mission and strategies. This instrument was designed by Hemsley-Brown and Oplatka (2010) for use in higher education. Based upon the theoretical work of Narver and Slater (1990) on market orientation, Hemsley-Brown and Oplatka (2010) developed this instrument to split market orientation into customer (student) orientation; competition orientation; and inter-functional orientation. Under a customer orientation staff is focussed on creating and providing value to students. This means that academic staff centre their classes upon students' needs (customization) and administrative staff and management likewise seek to ensure the satisfaction of the student, involving a mapping of the students' lifestyles, preferences and environment in general. There is also a forward-looking aspect as improvements are made for future students. Competitor orientation refers to an awareness and understanding of the strengths, weaknesses, opportunities and threats for the HEI. More than this, staff are also geared towards knowing and keeping ahead of competitor developments. Finally, the inter-functional orientation is also referred to as the cooperation orientation. Creating value for students that is greater than that offered by competitors is achieved through integration of staff and the optimal coordination of resources. Within this orientation all staff see their role as to attract students, rather than solely management.

6.2 Method

Our questionnaires were sent in printed format to all members of staff throughout the organisation, following approval of the top management to do so. We received a net repose rate of 38% with 334 questionnaires after extracting those which incomplete or incorrect data. Incorrect data was determined as respondents were required to allocate points out of a hundred to various categories of the OCAI and wherever the total did not equal 100, the questionnaires were considered invalid. We identified subcultures through a hierarchical cluster analysis using Ward's method (Hofstede 1998) with the Organisational Culture Assessment Instrument (Cameron and Quinn 1999). The market orientation section and demographic data were used as aids to characterise the subcultures and develop subcultural profiles for each one. This will be elaborated in the following section.

6.3 Empirical Findings

Five subcultures were found through a hierarchical cluster analysis and typified by dominant culture type into three dominant culture types: market; clan; and hierarchy. There were two clan, two hierarchy and one market culture type. A summary of our findings can be seen in Table 4 that shows how the subcultures were identified according to the values and perceptions that distinguished them from other subcultures. Values besides symbols, images and emotions are embraced by knowledge (Nonaka and Takeuchi 1995), thus shows that the management of knowledge is possible in all cases but in different forms. An identifying name has been put forward for each subculture as a means of encapsulating the essence of the differences between each subculture and a cliché as the key frame of thought that is conjectured to be within each subculture (Hofstede 1998; Morgan 1986). Although the instrument allows for four culture types, one is usually dominant and the dominant culture type defines the dominant values of the subculture, as highlighted in bold in the table.

These subcultures, as indicated in Table 4, can be conductive to knowledge management in different forms. Market subculture with its competing orientation may appear as one that mainly restrains knowledge management, but the usage of adequate instruments such as motivation, reward, and recognition can facilitate the diffusion of knowledge. Basically, the determination of measurable goals is the key incentive of knowledge management depending on their achievement and valuation. If the goals are defined properly and can be achieved only by the cooperation of employees and the performance valuation is also based on group work the sharing of knowledge can be accomplished easily. On the other hand, if individual goals and not to group goals are defined, their achievement will lead to competition

Table 4 Overview of the five subcultures

Dominant characteristic	Subculture				
	1	2	3	4	5
Size (number of persons)	140	84	34	30	44
Dominant culture type	**Market**	**Clan**	**Hierarchy**	**Strong Hierarchy**	**Strong Clan**
Perceived dominant culture type	Hierarchy	Hierarchy	Hierarchy	Hierarchy	Clan
Position	Lecturer	Lecturer	Office staff	Office staff	Lecturer
Function	Teaching	Teaching	Admin	Admin	Admin
Identifying name	*Market mentors*	*Nostalgic professors*	*Devoted Smooth operators*	*Ardent Bureaucrats*	*Cohesive Community*
Clichés (sports)	*Stepping up to the plate*	*The goal posts have been moved*	*Buying into the coach's system*	*Follow the rule book*	*In a league of their own*

and to individual performance evaluation and not to cooperation and to group performance evaluation thus knowledge sharing cannot be achieved (Gaál et al. 2010a, b).

At a clan and strong clan subcultures the personalization knowledge management strategy can have a significant role in the evolvement of knowledge management in an organization. Personalization strategy focuses mainly on the dialogue between individuals, thus at this approach knowledge is shared through networks of people, not only face-to-face communication, but also via electronic communication (Hansen et al. 1999). This culture type can have collaborative orientation and can be essentially based on trust that can encourage knowledge sharing. The features of extended family, tradition, loyalty show that the members of the organization are very close and thus knowledge sharing can be realized easier. Outsiders can hardly gain trust or it takes a longer time for them (Gaál et al. 2010a, b).

At hierarchy and strong hierarchy subcultures the codification knowledge management strategy can define the management of knowledge. This strategy focuses on codified knowledge being independent of the person created or developed it and thus the knowledge can be retrieved, shared without having to interact others, since knowledge is stored in documents, databases, manuals etc. (Hansen et al. 1999). The knowledge management is mainly forced since this subculture type has controlling orientation and is based on formal rules and policies. If these rules, policies are determined adequately, the forced knowledge diffusion can be completed with characteristics that can allow voluntary knowledge diffusion (Gaál et al. 2010a, b).

In light of the hypothesized varying competencies and perspectives of subcultures indicated in Fig. 1, our study finds empirical evidence (although not generalizable as it is a case study) that each subculture type has a corresponding dominant market orientation, as shown in Fig. 2.

This seems to highlight the competency development of subcultures indicated in our evolutionary model in Fig. 1, and the potential impact of subcultures on KMIs. For example, the clan subcultures have a tendency towards cooperation, rather than competition and student cooperation.

If we consider the model in Fig. 1 in relation to our specific findings in this empirical research then there are some areas that need further consideration:

- *Strategic goals*. The government's increasing role in governance of Hungarian HEIs has led to an emphasis on cost reduction and rationalisation.
- *Marketplace position*. The use of the word 'marketplace' is kept due to the emphasis on rankings and advent of 'academic capitalism', as well as the finding that some subcultures have a dominant competitive orientation.
- *Perception and misconceptions*. Allowance needs to be made in the model for how information is perceived and interpreted by subcultures.
- *Information diffusion*. Although strategic plans and related information may be diffused through the hierarchy via top-down communication, the model should allow for the diffusion of information within each subculture.
- *Restraints*. The more rigid constraints seem to be the ones imposed by the State, without any predilection towards entrepreneurial Universities and thus subcultures.

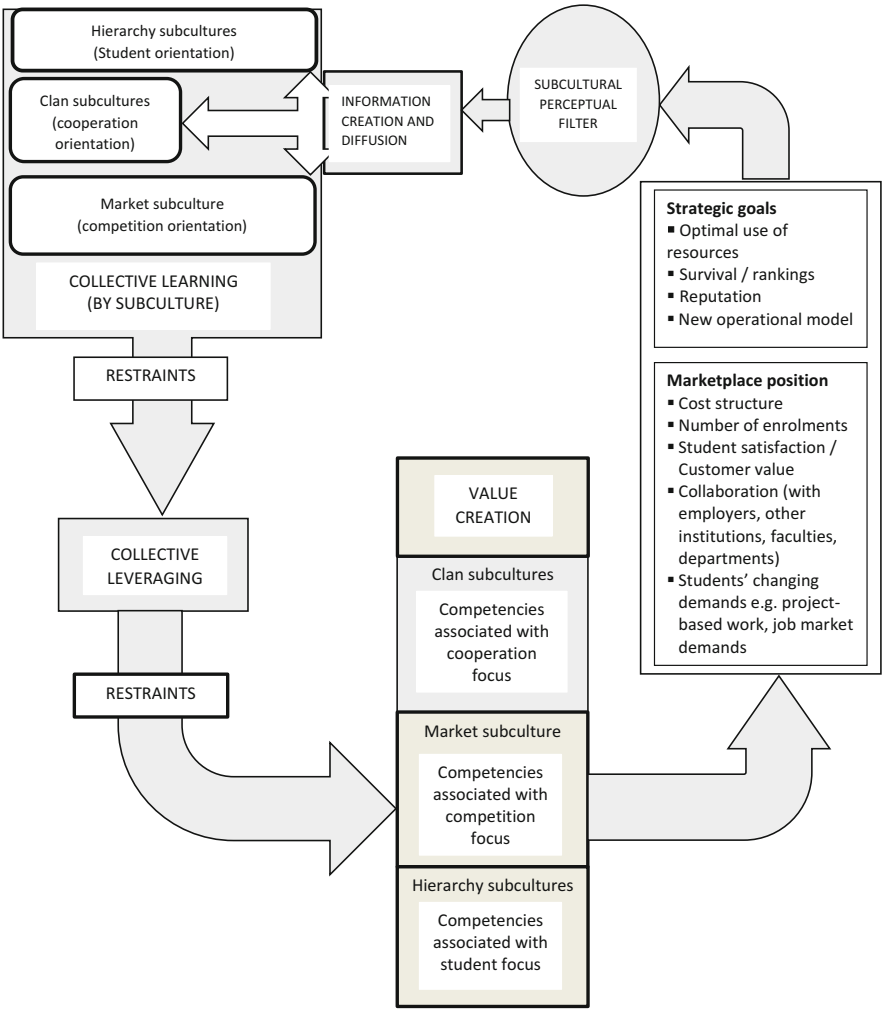

Fig. 3 The behavioural and strategic manifestations in the organisation

- *Value creation*. The three subculture types produce varying dominant market orientations, which in turn through collective learning will produce a range of different competences. Thus, value creation is seen in a range of orientations and associated competencies being covered by each subculture.

Taking into account these findings, we propose the following model (Fig. 3) for the evolutionary theory of organisational orientation (see Fig. 1) within the context of the Business School that was the focus of this study.

7 The Subcultural Audit

To close this chapter, we propose a model by which organisations may examine their subcultures. Subcultures have been found to have a profound effect upon the organisation but, by their very nature, there is potential for ambiguity and uncertainty. Members of one subculture may follow their values but be judged (or perceive themselves to be judged) on a completed different set of values by the other subcultures or the top management. Thus, members of each subculture may be faced with these conflicting values, which may be termed subcultural incongruence. Thus, when members of different subcultures meet to discuss or make decisions, there are the following impacts upon a subculture (Fig. 4).

This model serves to indicate the uncertainty and potential impact upon decision making through conflicting values found in the higher education institution. The evident ensuing conflict and discomfort of members in such a situation may well stimulate change and be the impetus for an alignment of subcultures. The evident high level of complexity and obstacles which may hinder decision-making and overall performance can be reduced by undertaking a subcultural audit.

For practitioners, the organisation needs to consider whether the path to success is through a homogenous culture demanding conformity from its members or a 'subcultural approach', which would affect organisational functions such as human resource management (Palthe and Kossek 2002) and marketing, as can be seen in this case, with the varied range of market-orientations found within one organisation. When organisations wish to develop a strong culture in large complex organisations with a high likelihood of subcultures, subcultures may be aligned as a

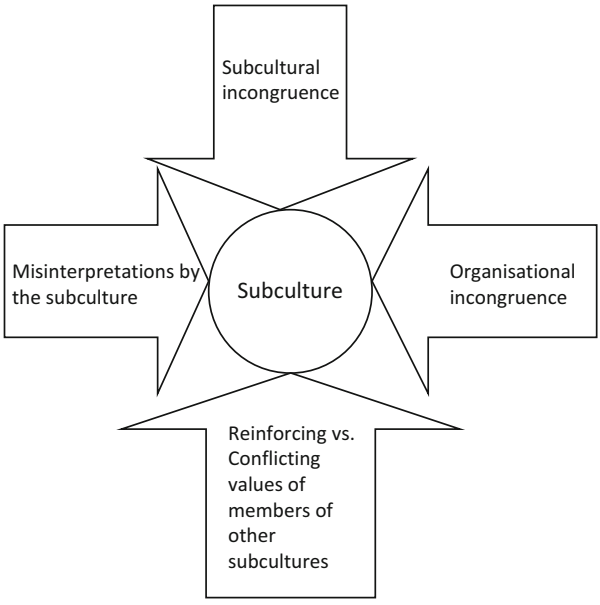

Fig. 4 The impacts upon decision-making of members of subcultures in the organisation

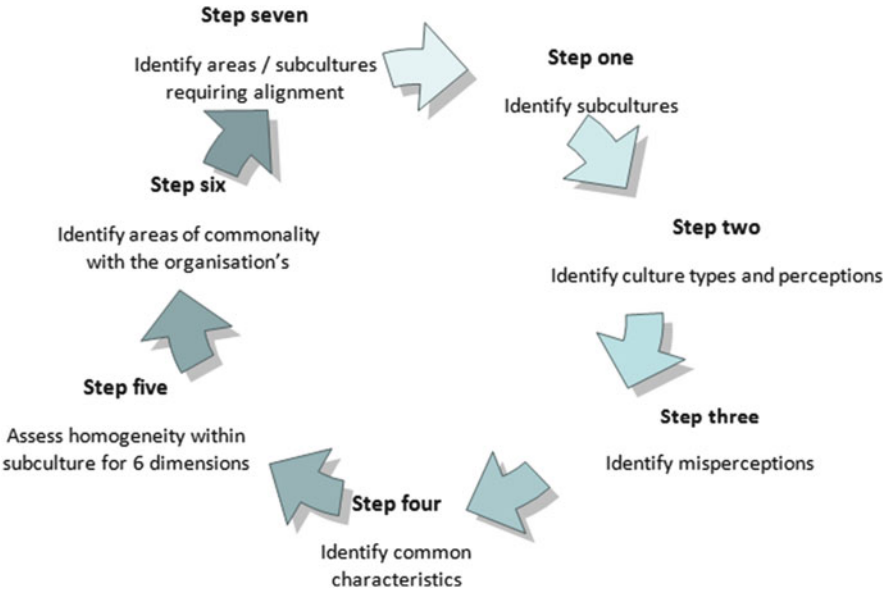

Fig. 5 The change management prcess for aligning organisational subcultures

means of strengthening the culture. The following model is a process by which organisations may seek to strengthen organisational culture through the alignment of subcultures (Fig. 5).

In Fig. 5, it can be seen that this is a continuous process as it is assumed that cultures and subcultures are dynamic in the organisation and that through interaction, as was suggested in the discussion part of this study, when one subculture changes another may respond in kind either following the new set of values, taking them on partially (as in this case when subculture three expected the leadership to take on a market-culture style of leadership despite being a hierarchy subculture type), or rejecting them likewise partially or fully. Alternatively, this model could be applied in practice as a means of conducting a 'subculture' audit prior to the commencement of any change processes or when looking to implement a change in the direction of the organisation.

8 Conclusion

'In an economy where the only certainty in uncertainty, the one sure source of losing competitive advantage is knowledge' (Nonaka 1991, p. 96). Either located in the minds of individuals, or embedded in organizational routines and norms, or codified in technological devices, it is becoming a strategically important source and a significant driver of organizational performance (Polányi 1966; Nonaka and Takeuchi 1995; Yesil and Dereli 2013). According to Belk (2014, p. 1597) in a

sharing economy people coordinate the "acquisition and distribution of a resource for a fee or other compensation". Although no definitive definition of the content of sharing economy exits, it is believed that aspects of the current social economic system has started to transform because individuals, communities, organizations and policy makers are being allowed to re-think the way we live, grow, connect and sustain (Department for Business Innovation & Skills 2015; PwC 2015; Schor and Fitzmaurice 2015). After reviewing the literature, Cheng (2016) determined three broad areas of sharing economy literature in general having various themes and concepts within them reflecting sharing economy's diverse perspectives and complex nature: the sharing economy's business models and its impacts, the nature of sharing economy, and sharing economy's sustainability development.

The first organizational efforts in the management of knowledge focused on information technology solutions, which although were important to knowledge management however often failed to achieve their objectives since organizations did not consider cultural factors critical to the management of knowledge (Gaál et al. 2008). According to Janz and Prasarnphanich (2003, p. 353) 'organizational culture is believed to be the most significant input to effective knowledge management and organizational learning in that corporate culture determines values, beliefs and work systems that could encourage or impede knowledge creation and sharing'. Our paper digs deeper and investigates subcultures through a quantitative approach and uncovers five subcultures in a Hungarian higher education institution. Subcultural boundaries and tribes and territories are confirmed by our finding that are applied to existing theory on the evolutionary nature of strategy implementation as a means of considering the potential impact of subcultures on knowledge management initiatives. In addition our paper concludes that subcultural lenses affect the assimilation of knowledge from management in general and reveals that multiculturalism is likely the best approach as each subculture has its own specific range of competencies as part of an overall market orientation. Finally, a 'subcultural audit' model for practitioners is offered that may reduce the subcultural obstacles to knowledge sharing.

9 Limitations and Future Directions

When planning the research, it was considered that culture and subcultures were such a complex issue that it should be handled on a single case basis, although there is potential for more extensive research in which a number of subcultures are identified in a number of institutions of higher education and correlations are found for all the subcultures identified. However, if as found in this study, one subculture appears to impact upon another, any attempt to correlate a range of subcultures across a range of HEIs, may overlook this interrelationship. On the other hand, a higher number of subcultures gives a larger sample size, which in turn may produce significant correlations.

The subject of the study is a matrix organisation with employees spending their working hours either at one or a combination of locations for between around 3 and

6 days a week. This is just one example of the peculiarities of the higher education institution as an organisation. However, it does give another example of the lack of *generalizability* of this case study and the need for research along the similar lines as well as further afield.

A *longitudinal study* may produce some interesting findings with regard to the dynamic nature of subcultures, not only considering the lowering of the average age of staff but also in the example of the market subculture which was found to have a mentor subculture with a combination of long and short tenure groups. The shorter tenure members of the subculture may now be left to cope with the absence of the mentors. In this sink or swim situation, it would be interesting to discover not only the coping mechanisms but whether the subculture continues with this market culture domination, if the values weaken or strengthen or perhaps the subculture merges with one of the other subcultures with common pivotal values such as the hierarchy with common values of stability and control. The 'younger organisation' may affect not only the aspect of mentoring in subcultures but also the apparent nostalgia and attitudes towards cooperation, the student and competition i.e. all elements of the market orientation.

A potential weakness of this methodology is that if one wants to get a true picture of all the subcultures that constitute the organisational culture then *a very high response rate* would be required. In this study with a 34% response rate, five subcultures were found, but it cannot be declared that the remaining respondents were members of these five subcultures or that there would have been more subcultures to be found with a larger sample. However, in defence of this criticism, it is unrealistic to expect response rates of 90–100% with high response rates for such studies being: Tan and Vathanophas (2003) with a 63% response rate; and Hofstede (1998) with a 76% response rate. Even regarding Hofstede's case study, a 76% response rate constituted 1295 individuals (Hofstede 1998, p. 3) meaning that 408 individuals were unaccounted for and could constitute at least one or more subcultures. Thus, it can be said that in this area of research, it is hard to pinpoint the exact number of subcultures and, bearing in mind the findings of this study concerning the importance of size of subcultures, we can get a rough idea of the size and number of subcultures, much in the same way that a more general study of, say, universities in Hungary can with a response rate of 30–40% suggest certain correlations even though a much higher response rate would be ideal.

One challenge with regard to this and other studies of subcultures is that of proving that *sufficient interaction* takes place within a group with common values to constitute a subculture. This study has strived to ensure that sufficient interaction can be seen to exist between members in a subculture to accept this assumption through the inclusion of a question about this in the survey and forming networks of the respondents for each subculture by location to show interaction. However, there is potential for further research into methods to reduce this limitation.

As a final point, the authors are aware that for any study into organisational culture *a qualitative approach* would allow for greater depth of analysis into the organisation's culture. A further study is planned with semi-structured interviews to further examine knowledge sharing and subcultures in organisations.

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Knowledge Sharing as a Driver of Competitive Advantage: Two Cases from the Field

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Abstract

Knowledge sharing, that is the elicitation of knowledge from experts and its transfer to potential stakeholders, has become essential for organisations to remain competitive. Knowledge sharing is particularly relevant in the current socio economic environment shaped by user connectivity and business convergence, where collective knowledge means value for customers and competitiveness for suppliers. This research explores the importance of knowledge sharing within and between organisations, in order to contribute to current efforts to devise effective mechanisms for engagement. The paper describes a qualitative research based on two case studies from the transport sector and the utility services respectively. It was found that regardless of the nature of the business it was essential that individuals, groups and decision makers within the organisation had a common understanding of the key issues driving the business. In order to reach such a joint view, a collaborative, people-based approach to knowledge sharing proved valuable in both case studies. The paper describes both cases and draws some lessons to be learned by the knowledge management research and practice communities.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_8

1 Introduction

In addition to tangible forms of resources on sharing economy platforms, such as cars or clothes, there are intangible forms of capital such as human knowledge or labour (Yang et al. 2017). Effectiveness of such capital relies on the sharing of intangible assets, expertise or knowledge.

Under certain conditions, organisations can benefit from accessing the expertise and knowledge they need without having to hire full-time experts. For example, research students and staff in universities seek opportunities to apply or create theories while business organisations need solutions for complex problems that often cannot be addressed through their own resources. Consequently, collaboration between universities and organisations is one of the methods that strongly motivate both parties to share intellectual capital and thus contribute to improvement of one another.

Teece (2000) remarks that the ability of organisations to create, share and utilise knowledge assets promotes the competitive advantage of the organisations. Teece (2000) clarifies that knowledge and expertise exist within segmented units of the organisation and that to create/improve new product/service or solving problems often skills and knowledge from different units are required. Consequently, integration of some units or creation of knowledge sharing channels between units becomes essential. The same rule applies when knowledge from different organisations within one domain is required. Bstieler et al. (2017) remarks that organisational learning involves the accumulation of individuals' knowledge shared with other individuals within an organisation and inter-organisational learning revolves around the same theory that involves the accumulation of different organisations' knowledge shared with other organisations within a domain.

Government-imposed fragmentation of industries in the UK, as in many other countries, was followed by the increasing recognition of public interest in the quality of services provided by such industries for which there is limited competition and little (or no) customer choice. Due to such factor, the last decade has witnessed a growing number of customer representation groups and regulatory bodies in the UK, regulating services provided by privatised industries. Consequently, existing organisations are under an increasing pressure to achieve higher level of customer satisfaction.

This challenge has an unavoidable complexity because customers see the industry as a unit when—because of the fragmented structure of the industry—in fact, the overall performance of the industry relies on involvement and performance of numerous diverse and segregated parties.

There has been a distinct possibility that in order to improve the overall performance of the organisation or industry, collaboration between the units or organisations will eventually be needed. Because of privatisation, the knowledge base of segregated organisations within privatised industries, to some extent, has become fragmented into separate, specialised knowledge domains. Due to such factors, collaboration between people who have divergent identities and may have limited common knowledge is typically complex.

The argument above shows the importance of cross-functional, intra-organisational and inter-organisational collaborations for the contemporary privatised industries in the UK. These collaborations involve the sharing or joint utilisation and development of knowledge among people who do not typically work together and who might have different skills or knowledge.

This paper highlights the imperatives of knowledge sharing in different types of organisations in the context of privatised, yet regulated businesses. Using two case studies in transport- and utilities-related services in the United Kingdom, the theory and practice of knowledge sharing are studied. With that aim, this paper has been structured as follows: Sect. 2 refers to the importance of knowledge sharing for competitive advantage as described in the literature. Section 3 focuses on the theoretical underpinnings of intra-organisational knowledge sharing in a service-oriented business looking to improve its levels of customer satisfaction. Section 4 describes a parallel study focused on the need for and approach to inter-organisational knowledge sharing. Finally, conclusions and practical implications of this research are included in Sect. 5.

2 Knowledge Sharing, Competitive Advantage and Customer Satisfaction

Ever since the origins of Knowledge Management (KM) as a discipline of study, authors such as Nonaka and Takeuchi (1995) have argued that shared knowledge is a critical and essential resource that provides the organisation with competitive advantage. Riege explains that knowledge sharing is the corner-stone of many organisations' KM strategy (Riege 2005), and refers to it as the transferring of one's knowledge to others, so that individuals can benefit from experts' knowledge.

2.1 Knowledge Sharing and Competitive Advantage

Competitive advantage has been defined by scholars from different perspectives over the last few decades. From "implementing a value creating strategy not simultaneously being implemented by any current or potential competitors" (Barney 1991, p. 102) to "providing a product or service perceived by its customers as adding value and doing so in a way that is unique and difficult for a competitor to readily duplicate (Ulrich and Lake 1990), most definitions implicitly rely on knowledge, or the ability to create unique strategies, product or service. In resource-based and specifically knowledge-based models of strategy, scholars agree that sustained competitive advantage is tied in some way to the possession of valuable, unique, non-transferable knowledge (Tallman et al. 2004; Barney 1991; Grant 1996; Teece et al. 1997).

Chuang (2004) argue that among the variety of factors that have been shown to have an important effect on the ability of organisations to acquire sustained competitive advantage include the relative capability development of a firm

(Johannessen and Olsen 2003), and the firm's ability to differentiate its products (Johannessen and Olsen 2003; Teece et al. 1997). With focus on economic geography and strategic management, Tallman et al. (2004) developed a model of the stocks and flows of knowledge as critical sources of competitive advantage for regional clusters and for the firms within them. Reid (2003) went further to study how knowledge sharing assists organisations in the development of solutions which promote their competitive advantage. Kearns and Lederer (2003) further argued that alignment processes that promote knowledge sharing are essential in determining profitability and that identifying and cultivating these processes can result in a competitive organisational asset (Ferrier et al. 1999).

2.2 Customer Knowledge and Competitive Advantage

An intangible source of knowledge for an organisation is the customers' knowledge, gained through experiencing the service they receive which is not only a detailed source for better understanding of customer needs but also it is a valuable source for better understanding of customer expectations.

Customers create one of the major stakeholder groups of service providers. Wang and Lo (2003) explains that as a key indicator of customer-focused performance, customer satisfaction has often been considered one of the important dimensions of business performance. Bosch and Enríquez (2005) remark that the customer complaint involves the experience of the customer with the failure of product or service; this brings valuable knowledge for that firm and it is important to gain insight from the complaints and consider them as a learning opportunity. Nonaka et al. (2001) remark that experimental knowledge represents tacit knowledge that is shared among internal and external stakeholder groups including customers. Prahalad and Ramaswamy (2004) remarks that 'co-creation experience' revolves around the creating effective consumer-company interactions that provide opportunities for collaborative problem-solving and although it has certain benefits for the improvement of business performance, many firms are reluctant to let go of the traditional passive transaction-based relationship between firm and consumer. Schneider (2005) emphasise that the 'co-creation experience' developed by Prahalad and Ramaswamy (2004) is innovative; in addition to understanding that consumers determine the value of products and services, it allows consumers to be actively engaged in co-creation of value.

This study explores the extent to which efficient and effective knowledge sharing, can be profitably integrated into organisational culture for the purpose of achieving a sustained competitive advantage.

3 Methodological Approach

As knowledge sharing can only be understood in the context where it take place, the study of its relationship with organisational culture and competitive advantage relies on the interpretive understanding of such concepts in specific organisations. Thus, there was a tacit understanding that in its dealing with people, organisations, business and management, this research would be shaped from its early stages by the context within which it has been carried out. Thus, a qualitative research strategy based on a multiple case study defined the methodology employed by the research team to draw the conclusions of this research.

In addition to study those concepts in the setting where they interact, i.e. organisations, we sought to study at least a case study for every dimension of the knowledge sharing process. Hence the cases were based on the study of knowledge sharing (1) within an organisation and (2) between organisations. This plan led to the consideration of a multiple-case study as a research design, which would enable the authors to provide an in-depth elucidation of the knowledge sharing process by concentrating on their implementation in one or more organisations (Bryman and Bell 2007, p. 62).

Case study was therefore chosen as a research design, also based on the following issues outlined by Yin (2014, pp. 3–13):

- The *explanatory* nature of the problem.
- Knowledge sharing in organisations can be studied as this process takes place within a real-life context.
- Organisations do not provide a laboratory setting where the research could focus on one or two variables related to the knowledge sharing process and control all the remaining variables beyond the scope of interest. Knowledge has a human dimension and its related processes are influenced by many behavioural variables such as motivation, politics, etc. which are beyond the control and even access of the author.

Those challenges suggested that the data collection would be an iterative process involving the researchers and practitioners acting together on a particular cycle of activities that included problem diagnosis, action intervention, and reflective learning. This was later found to be in line with the principles of Action Research as defined by Avison et al. (1999), who argue that in order "*to make academic research relevant, researchers should try out their theories with practitioners in real situations and real organisations*".

Different methods were used to collect data, a process that was informed by the problem being studied and the relevant background literature on knowledge sharing and competitive advantage. These methods included:

- Analysis of documents such as those related to the knowledge domains where knowledge sharing was being studied.

- Analysis of records from practitioners' dealings with specific issues relevant to the knowledge sharing process within their organisations.
- Interviewing individuals within the organisations involved in the research.
- Direct observation of knowledge sharing processes and reactions from individual participants and managers during presentations of the outcomes of such processes.
- Use of physical artefacts such as flip charts, voice recorders and cameras.

Once the set of relevant data on each individual case study had been collected using different methods, the use of triangulation enabled the author to contrast all data collected on that particular case and create a short report that described the case from a wider perspective.

4 Intra-organisational Knowledge Sharing: A Case from the Services Sector

Britain Water Service (BWS), one of the largest water suppliers based in the UK had to minimise the number of complaints it receives from its customers to meet the lowest level of customer dissatisfaction specified by the regulation authorities. BWS is the only service provider in its region (over 10,000 square miles) (Britain Water Service is a fictitious name, used to preserve confidentiality).

With more than 10,000 employees and over 5,000,000 customers across the UK, this organisation has always put extra value on providing quality service to its customers, and for that reason the causes of the high level of customer dissatisfaction were not explicit. Schwarz defines that the problem is the gap between what is expected and what is provided (Schwarz 2015). For BWS, what customers expect from its service was mysterious. In response to this, Britain Water Service benefit from collaboration with Coventry University.

Figure 1 shows the proposed stages of identifying customer dissatisfaction with the service provider by the researchers.

4.1 Identifying Potential Knowledge Sources

In response to regulation authority demand from water companies, BWS conducts a telephone survey for collecting customers' feedback on the service they receive. After customers' phone contact with BWS, they receive a survey in a text format in

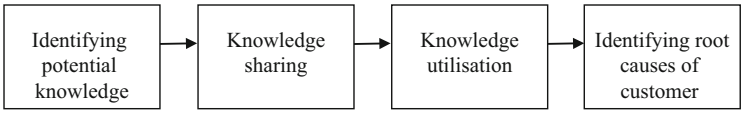

Fig. 1 Key stages of identifying customer dissatisfaction

which they can rate BWS (1–5: satisfied–dissatisfied), the agent they spoke to (1–5: satisfied–dissatisfied), and they have an option which allows them to write a comment about the service at the end. The researchers did not rely on the ratings for examining customer dissatisfaction with the service for two reasons. First, according to the content of comments, some of the respondents entered a wrong number by mistake; second, it does not specify which service has been rated. Therefore, for an accurate evaluation of the experience of customers with the service, only the comments are the focus of this research. BWS did not consider this analytical approach to understanding customer satisfaction prior to this research.

The number of comments collected in seven months was 39,732, among which more than half were not valid (only yes/no/na etc. was written or the comments was stored more than once) which left the total number of valid and accurate comments about 15,000.

To maintain a deeper understanding of customer needs and expectations, 9000 of the valid comments were randomly selected for this research. The intention was to understand the main reasons leading to customer dissatisfaction in order to analyse which of these maybe related to information and knowledge. Following replication strategy (Yin 2014), looking at contrary data (both negative and positive evidences), linking qualitative and quantitative data analysis (Miles et al. 2014) and exploring embedded sub-cases within the case were explored in this research to add confidence to the findings.

The four main categories of comments, sentiments and opinions that were defined are as following:

1. **Compliments** (Great or Swell; respondents were satisfied with the service and expressed their feelings with mostly positive words),
2. **Complaints** (Wretched or bad; respondents were dissatisfied with the service and expressed their feelings with mostly negative words or disappointed tone)
3. **Neither satisfied nor dissatisfied** (so-so; respondents were neither satisfied nor dissatisfied and expressed their feelings with positive and negative words), and
4. **Suggestion**.

Frequency of the comments left in each category is shown in Table 1. Overall 47.12% of respondents were satisfied with water services provided by BWS,

Table 1 Survey respondents' frequency of comments in each category

Type of comment	Frequency	Percentage
Compliment (Satisfied)	4241	47.12
Complaint (Dissatisfied)	4022	44.69
Neither satisfied Nor dissatisfied	562	6.24
Suggestion	175	1.94
Total	9000	~100

44.69% were dissatisfied, 6.24% were neither satisfied nor dissatisfied and 1.94% had suggestions for service improvements.

4.2 Knowledge Sharing

Although the automated sentiment analysis of customer comments is much less time consuming than manual analysis, it does only identify the level of customer complaints and compliments on the service and does not clarify the root cause of satisfaction or dissatisfaction with the service. Reading a large number of customer feedbacks one by one is, certainly, time consuming but this method enables the researchers to understand the factors affected customer satisfaction or dissatisfaction with the service or the service provider. Nevertheless, it is critical that the analyst be able to analyse the feedbacks not based on the personal sensitivity but the actual quality of the service provided and the validity of feedback.

Although finding the root causes of customer dissatisfaction is one of the main concerns of this research, it would be more accurate to analyse compliments also. As Miles et al. (2014) suggest that, it is important to consider the factors that could work against the prediction. Moreover, there are at least two different conceptualizations of customer satisfaction: one is transaction-specific; the other is cumulative (Boulding et al. 1993). '*From a transaction-specific perspective, customer satisfaction is viewed as a post-choice evaluative judgment of a specific purchase occasion*' (Oliver 1997). '*Cumulative customer satisfaction is an overall evaluation based on the total purchase and consumption experiences with a product or service over time*' (Fornell 1992), which is a more fundamental indicator of the firm's past, present and future performance. '*It is the cumulative customer satisfaction that motivates a firm's investment in customer satisfaction*' (Wang and Lo 2003). To assess the comments based on these criteria, the relationship between the comments and account creation date was measured. Approximately 50% of survey respondents are the ones that have been supplied by BWS from the time it was established (more than 30 years) and the other 50% have been supplied by BWS about 2 years. These significant percentages of cumulative customer satisfaction and dissatisfaction shows the trustworthiness of the data used for this research.

4.3 Knowledge Utilisation

The challenge of this stage was that most of the satisfied customers wrote a very short comment mentioning the words like 'satisfied', 'very happy', or 'good service' and these comments do not explain the reasons of their satisfaction which could be used for evaluating different services, except the ones that had comments and sentiments about the agents who addressed the customers' enquiry. Therefore, to maintain an accurate distinction between types of services that customers are satisfied or dissatisfied with, the compliments and complaints had been further divided into two categories of 'Call Centre' and 'Excluding Call

Table 2 Breakdown of call centre compliments and complaints

Call centre compliments and complaints			
Group	Type	Compliments (Satisfied) (%)	Complaints (Dissatisfied) (%)
Contacting	Time taken to get through an advisor	**3.20**	14.14
	High cost of call	–	12.88
			27.02
Speed and quality of the service	Time taken to handle customer's issue/ long time on hold	**4.58**	3.64
	Call interruption	–	1.31
	Noisy and unclear line	–	1.16
			6.11
Advisor	Courtesy and politeness of adviser	15.95	4.04
	Make customer feel valued	–	2.42
	Adviser was able to understand the issue and identify the problem	28.03	12.93
	Willingness to help resolve your issue	9.15	4.19
	Call back as promised	–	1.62
		53.13	**25.20**
Standard of advice	The issue was resolved to customer's satisfaction	**39.10**	20.20
	Advice/issue was easy to understand	–	6.01
	Advice/information was correct	–	4.85
	Contradictory information	–	1.62
			32.68
General	Calling more than once for the same issue	–	**8.99**

Centre'. Furthermore, compliments and complaints about call centre (see Table 2), and complaints excluding call centre had been sub-categorised (see Table 3). The percentage is calculated based on total number of comments in each category. Overall 18.33% of survey respondents are satisfied with services provided by call centre and 18.79% are dissatisfied; 28.67% are satisfied with services provided by BWS excluding call centre and 25.90% are dissatisfied.

More than half of customer complaints, followed by dissatisfaction with the service provider, were about the poor customer experience call centre department in regards to handling customer queries. Call centre employees operate between the firm and its environment that represents the role of stakeholder boundary spanner. The accuracy of the knowledge and information exchanged between them and the firm and its environment is the primary responsibility of call centre employees (Table 2).

Table 3 Breakdown of complaints—excluding call centre

	Complaints—excluding call centre	
Group	Type	Complaints (Dissatisfied) (%)
Billing	Dissatisfactory methods and process of refunds	1.40
	Late or no bills	9.33
	Inaccurate or incorrect bills	10.81
	Dissatisfactory methods of payment (Strict and Inflexible)	8.08
	Lack of transparency of the bills in pricing and billing structure	7.64
		37.26
Price	Low level of consumption and high cost (Unmeasured)	3.02
	Too expensive	28.48
		31.50
Communication	Lack of internal communication (between departments)	1.51
	Failure to keep customers informed	5.46
		6.97
General	Not done what they confirmed to be done	3.21
	Not understanding individual circumstances	4.87
	Dissatisfactory water quality/pressure	2.91
	Dissatisfactory on-site works (Late or slow service)	3.32
	Inaccurate system of storing customers information	9.96
		24.27

4.4 Identified Key Cause of Customer Dissatisfaction with the Service Provider

The main factors identified through investigating customer complaints are as follows:

- Boundary spanner was not able to understand the complaint
- Boundary spanner was not able to identify the problem
- Boundary spanner did not resolve the problem to customer satisfaction
- Boundary spanner provided complicated advice
- Boundary spanner provider incorrect information
- Boundary spanners provided contradictory information

The fundamental significance of knowledge sharing has been identified, as that information about customer expectations from the service provider needs to reach

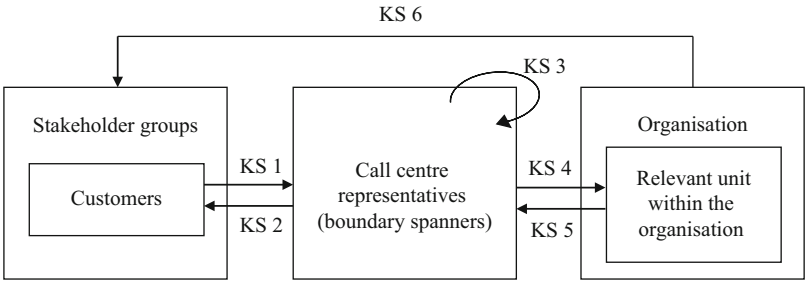

Fig. 2 Knowledge transfer network model

the organisation in order that the gap between customer expectations and organisation perception may be minimised.

Figure 2 shows the proposed knowledge sharing (KS) network between customers and the organisation. The two separate arrows instead of two-dimensional represent the different direction of knowledge flow in the knowledge sharing process.

KS 1: Knowledge sharing between customers and call centre staff

Customers do not always explain their problem with the services in a clear and articulate manner. Moreover, sometimes customers are not even sure about what they want from the call centre staff. One of the call centre experts mentioned: *In many occasions, customers provide plenty of contextual details while describing their query and at the end, the point of their query became too complicated to understand.*

The boundary spanners need to address customer queries, even the ones that contain ambiguity. This requires skills and experience of handling highly variable, complex and distinctive customer needs. Their queries need to be addressed and although because of them not being able to explain their query, boundary spanner might fail to help them, this counts as poor quality of service—from customer perspective—followed by customer dissatisfaction.

KS 2: Knowledge sharing between boundary spanners and customers

La and Kandampully (2004) explain that the experienced boundary spanners, who have significant knowledge about the firm's services and knowledge boundaries associated with customer's lack of experience, are able to address the problem more effectively than the less experienced ones.

To such aims, not only having quick access to information is sufficient. Customers' feedback shows that they know whether advisors are experienced or they just 'read a script'. Knowing the reasons leading to a request from a customer and how the information will help that customer to overcome the problem are two of many skills that staff must have in order for a customer to feel satisfied with the service provided. These issues underline the importance of knowledge sharing skills required by staff in organisations.

Stamper and Johlke (2003) remark that the way boundary spanners interact with the customers has significant influence on customers' impression of the firm.

Tax and Brown (1998) emphasise that inexperienced call centre employees increase the dissatisfaction of customers with the service failure. Miller et al. (2000) affirms that dissatisfied customers become more understanding if the call centre employees demonstrate the willingness to address the problem.

The important point is that customers become more negatively disposed towards the service when they receive no concern from call centre, and become more positively disposed towards the service when the boundary spanners accept the responsibility and understand the trouble the customer had been through, on the behalf of the company. The main reason is that although the call centre staff did not cause the problem but in fact, they are representing the company for the customers, the call centre employees are the company.

The above discourse shows that the poor quality of service provided at customer contact point has significant influence on customer dissatisfaction with the service provider.

KS 3: Knowledge sharing between boundary spanners

The nature of service provided by BWS at their call centre suggests that there is a need for a range of information resources to be shared between call centre employees in order for them to be able to provide customers with accurate and consistent information.

Indeed, all four of call centre experts mentioned the significant importance of being able to draw upon the accumulated knowledge and experience of one another at work, however, the tacit knowledge of boundary spanners is difficult to verbalise. Moreover, operation call centre expert mentioned that the comments boundary spanners write about the need for follow up on customer complaint are difficult to understand and the next boundary spanner might need to either contact the first one or seek for more information from the customer.

KS 4 and KS 5: knowledge sharing between boundary spanners and other units of the organisation

The findings have shown that one in four complaints that involve customer service advisers are related to the lack of information and knowledge within the call centre at BWS. This confirms that not only attitude of call centre representatives but also information and knowledge available within the call centre could determine customer perception of the organisation and its services. By having a well-informed support strategy, boundary spanners can satisfy the customer needs and help develop brand loyalty in their customer base. Meaningful intra-organisational knowledge transfer strategies must therefore involve customer-facing staff whenever the organisational knowledge (in the form of experience, skills or information) can lead to better customer service.

KS 6: Knowledge sharing between the organisation and its customers

Keeping customers informed is an additional requirement in the current environment (Ainsworth and Ballantine 2017). Service consumers typically have limited knowledge of how the entire service system works (Gummesson 1993). Although it provides the essential supports for front-line areas to create and deliver service, the unseen part of the organisation, often referred to as back-of-house areas, seldom receives recognition from the customers (La and Kandampully 2004).

In particular, keeping customers informed has significant influence on their satisfaction with the service provider. Captive market knows that the service provider is the only firm in the market and customers do not have any other choice of water supplier in their area. Thus, the customers becoming more concerned whether they receive the best quality of service or the organisation does not value their customers compared to if there was a competition on retaining customers.

4.5 Summary of the Benefits of Knowledge Sharing for the Organisation

The assessment of some of the participants from these BWS identified some benefits of this university-industry collaboration that are as follows:

- It supported BWS in development of a fledgling programme designed to drive actionable insight from customer feedback. The goal was to turn the wealth of knowledge locked up in verbatim comments and turn them in actions that would drive improvements in customer experience.
- It helped BWS to understand the gap in its analytics capabilities.
- It provided BWS with a solution to drive new localised short term improvements to deliver small but rapid change.

5 Inter-organisational Knowledge Sharing: A Case from the Transport Industry

Britain Rail Service (BRS), one of the research associations in the UK funded a collaborative project with Coventry University aiming at improving the safety of rail system in the UK (Britain Rail Service is a fictitious name, used to preserve confidentiality). This research project was the window of opportunity for applying inter-organisational knowledge sharing across the rail industry.

Provision of transport services relies on a combination of capabilities, involvement and performance of numerous, diverse parties. This causes inevitable challenge when data and expertise from many parties are required for solving a problem. The challenge is even bigger when required data is incomplete, contradictory, complicated, indefinite, uncertain or inaccessible. To address this problem, a feasible and reliable approach is needed to first identify and represent dependencies of the sources of data and expertise related to the problem in hand and second to utilise this information in an effective way.

Use of new technologies, to some extent, assists interaction and collaboration between individuals, however, the limitations of technology-based approaches has negative impact on the effectiveness of the collaboration. Stahl et al. (2006) emphasise that exploring and understanding are essential in successful collaborations and computer-supported collaborations is helpful for coding

preconceived behaviours and counting pre-defined features rather than joint meaning making.

Data-centric collaboration approach can rely on virtual information and computational environment that support data sharing (Chin and Lansing 2004). This approach has been a feasible solution for real-time communication in virtual environment, however, problem-centred approach, requires real environment that facilitates real-life interaction and knowledge sharing.

Levinson and Asahi (1995) suggest that people-based approaches to collaborative improve the effectiveness of inter-organisational learning and knowledge sharing. They explain that Telecommunications technology, to some extent, can facilitate knowledge sharing between participating organisations in collaboration. Individuals who are connected through telecommunications can obtain better access to new ideas and each of them can in fact play the role of boundary-spanner. Therefore, telecommunication technologies can improve the inter-organisational or collaborative learning including reflection process. However, telecommunication technologies can only assist or facilitate collaborative learning only to a limited extent. Without person-to-person discussions and face-to-face interactions, achieving effective collaborations is extremely difficult. The prerequisite to participating and engaging in collaboration is the development of respect and trust among the organisations that are best cultivated through informal and face-to-face interactions, in particular, for knowledge sharing and problem solving.

Siekman (2001) remarks that Matt and Gail Taylor developed the concept of DesignShop in the 1980s to encourage creative collaboration between members of a group beyond the conventional group works. He explains that the Taylor approach supports engagement of diverse groups of organisations in solving complex problems through knowledge sharing and designing solutions. Burck (2014) emphasises that DesignShop is a facilitated environment within which people who have a key stake in the required change meet contribute to problem solving. He explains that the concept of the DesignShop collaboration distinguishes it from the traditional workshops for number of reasons that are as follows:

- In this type of collaboration, the focus is on meaningful problem-related conversation between the participants. It facilitates parallel work of small groups to enhance the chance of better understanding of the participants' perspective.
- One of the characteristics of DesignShop is that it is a focused collaboration approach and maintains collaborative experience.
- DesignShop provides iterative and non-linear process that supports better understanding of the root causes of the problem through sharing problem-centred experiences in advance to creating the final designs of the solutions.
- Developing a collective vision that emerges in non-linear collaboration sessions is the result of skillful facilitation of feedback loop that feeds back on the development of the components of final solution.
- Shared experience advanced during the DesignShop collaboration session facilitates creating new patterns of thought and action and it integrates individual's identity into a collective identity.

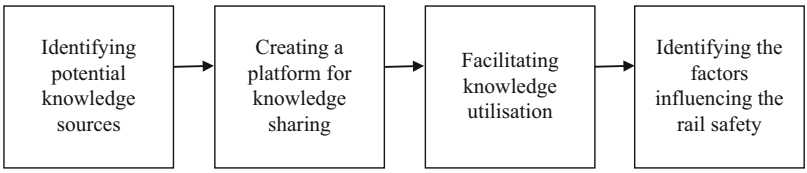

Fig. 3 Key stages of identifying the factors influencing the rail safety

Figure 3 shows the proposed stages of improving and efficiently managing safety of rail industry.

5.1 Identifying Potential Knowledge Sources

Implicit in safety-related decision-making is domain-specific knowledge that is difficult to derive, build and model for decision making. One source of such knowledge is professionals (from safety engineers to signalling operators) in the domain that brings with them sources of implicit knowledge and point to explicit repositories.

It was noted that different organisations within the British rail industry collect (and in many cases own) data which is not always available to other sectors of the industry. Therefore, expertise from different sections of the British rail industry (i.e. infrastructure manufacturers, owners and operators) were evaluated to first identify and later understand their key data stocks and data flows and, more importantly, the perceived relevance of such resources for understanding safety. Consequently, the selection of expert groups included academic researchers, safety and data experts from the main sections of the rail. In addition to researchers from Coventry University, 12 senior managers who have safety-related knowledge from eight sections of rail-related firms agreed to participate in the collaboration and contribute to its purpose.

5.2 Creating a Platform for Knowledge Sharing

In an industry such as rail, where radical innovation will take place within the near future, learning from experience is an effective approach to understanding safety. Such learning from experience relies on two main sources: the volumes of data already available and the knowledge of rail and safety experts. Experts' knowledge is essential in the process of understanding the interrelation between all components of the rail industry (e.g. infrastructure, passengers, systems etc.). It would enable the industry to extract meaning from the data available. Therefore, the aim was to involve key experts from the British rail industry in intensive two-day collaboration DesignShop.

5.2.1 Clarifying the Purpose

In the start of the session, participants' attitude was defensive and focused on least compliance as opposed to seeing rail safety as being part of their broader role in the industry. Within the first hour of the first session, there was general frustration and discomfort in communicating between participants due to divergence definition of safety and its importance for each group within the rail industry. In addition, the possibility of being selected as the responsible organisation for the unsafe environment deepened the pressure across the group of participants and the unwillingness to listen to one another.

The facilitator wanted to challenge and break down their usual pattern of not accepting the rails' safety dependence on the effort of almost all the organisations within this industry. One hour later, the communication form shifted, dramatically, from defending one's own performance to collaboratively focusing on finding answers to the bigger questions.

5.2.2 Engaging the Participants in Sharing Their Perceptions of the Problem

The topic was too generic. Although appropriate initiatives such as clarity of topic in the inviting phase, adjusting different perspectives and expectations right at the beginning of the session, and sharing experience took place to understand the influence of the problem on each participating group, the perception of participants varied, significantly. The need for co-creating of topic clarity with the participants was inevitable. It became necessary to clarify what rail safety means and distinguish between risk management and safety management. In order to do this, participants engaged in creating a series of question to be answered. This resulted on clarification of the concept of safety (see Figs. 4 and 5).

5.2.3 Creating Credible Problem Resolution

It was important to create credible problem resolution that covers the wide range of factors that have many different influences on safety. This was facilitated through engaging the participants in developing models that illustrated the relationship between those factors and their influences. One of the many models developed in this DesignShop is shown Fig. 6.

Q. Is there a railway definition of safety?
Q. Is there a standard "proven" for Fmeca/ Risk/ Fault tree analysis?
Q. Are there any 'cultural approaches' to reduce risk of safety related incidents or otherwise?
Q. Is the railway aware of EFQM + its processes, Quality ≡ Safety in principle?
Q. How do we develop standard process?

Fig. 4 A series of questions that supported co-creating of topic

Fig. 5 Co-creating of topic

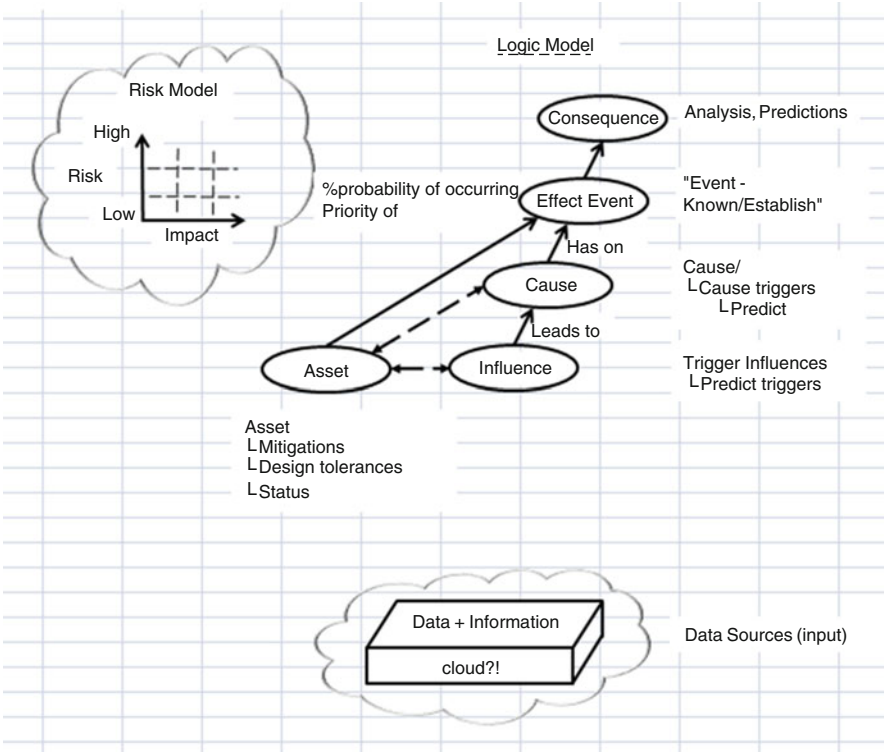

Fig. 6 Creating credible problem resolution

5.3 Facilitating Knowledge Utilisation

During the first day of the DesignShop, the group focused on rail data and its management in two parts. During the first part, all the participants joined in the discussion and the group designed a precise model of 'whole system approach'. During the second part, the facilitative leader divided the stakeholders into two groups, each group collaboratively added the relevant element to the models and at the next stage, and the whole group designed the comprehensive models by sharing their findings.

The collaborative exercise was not only an opportunity for rail experts from across the industry to exchange their views on key issues of common interest. It also highlighted the need for industry to have a common approach to questions such as the safety of new IT-based products and services for the rail and further, the need for new strategies to use experts' views in understanding safety.

The discussions were informed and initiated by the notions of rail data and safety already developed in the designing phase. Participants were encouraged to review the models and add any comments or further suggestions.

Many years of experience within a highly fragmented environment allowed the experts to lead the way in reviewing the model. Participants highlighted how new developments such as availability of wireless access to the internet in the stations may on one hand is desirable while on the other hand, have increasing safety implications.

Having created initial models for rail data and safety, the researchers focused on the elicitation of knowledge of rail operation and performance from rail experts in the form of metadata-driven knowledge models, with focus on factors of safety concern.

5.4 Identifying the Factors Influencing the Rail Safety

The researcher acknowledges that the depth of the knowledge elicited is limited to a high-level understanding of the domain. The limitation is due to two main factors, namely (1) the complexity of rail safety domain and (2) the limited availability of experts. However, the value of such knowledge resides in the number of key safety concepts and relationships identified by experts and the fact that knowledge models emerged as a result of a collaborative exercise where achieving experts' agreement was paramount.

In the second part of the first day of DesignShop, participants were divided into groups in which they were asked to investigate one main area of safety—Platform Train Interface (PTI) incidents. Experts at the knowledge elicitation DesignShop agreed that Platform-Train Interface (PTI) incidents are among those that need continuous attention by the rail industry. During the second day of the DesignShop experts focused on identifying the key factors influencing a safety incident, and drawing from their expertise in the collection and analysis of data, the relationship between such factors, informed. The diagram shown in Fig. 7 was outlined by experts.

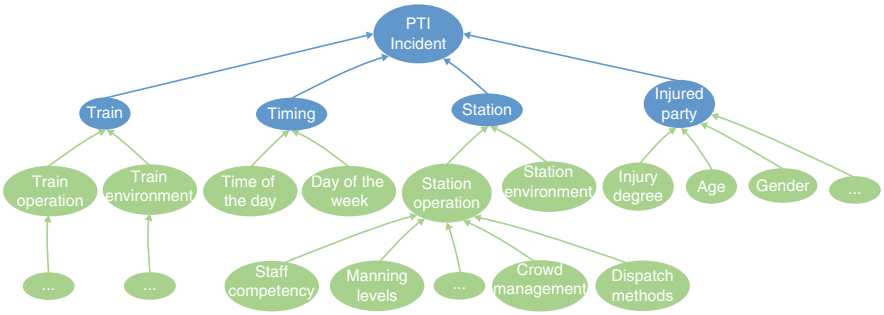

Fig. 7 A reduced version of the PTI data model as outlined by experts

Key developments during the DesignShop are as follows:

- Discussions of different views of safety, its probabilistic nature, its reliance on a number of human factors and the approaches to understanding and addressing these by different organisations within the rail industry;
- Identification of several safety-related data sources and provision of relevant data samples by participants;
- Collaborative development of a series of models of rail operation and rail safety.

The rail industry is working to realise the full potential of all the data available and understand their growing value for the future of the rail industry. A joint view of those data resources could lead to a wide consensus on its value, sharing and use by key organisations.

The assessment of some of the participants from these BRS identified some benefits of these collaborations that are as follows:

- It developed tools that supports the rail industry in their efforts to understanding the potential root causes of some of the safety incidents;
- The stakeholders participated in the DesignShop found this collaboration the start point of realising how different groups of stakeholders within the railway industry are working on very similar problems associated with safety, in total unawareness of each other.

6 Conclusions

This research has been conducted over the course of 3 years and in collaboration with two institutions that rely on a quality relationship with their customers and the general public. The study of the concept of knowledge sharing in two cases from different perspectives (intra-organisational and inter-organisations) allowed for a better understanding of the validity and generalisability of the findings, as well as opening opportunities for further research.

The study of the knowledge sharing process within and between organisations from two different sectors revealed that despite the differences between these two cases, the sharing of knowledge—be it from customers, other parts of the organisations or even other organisations, is key to their business strategy in many ways. These include:

- Supporting the development of new programmes to drive actionable insight from customer feedback;
- Understanding the gap in the company's analytics capabilities;
- Facilitating new localised short term improvements to deliver small but rapid change;
- Supporting industry-wide efforts to understand the potential root cause of safety incidents;
- Supporting an industry-wide understanding of how different parts of the industry are working on similar problems and the importance of cross-industry collaboration.

In providing the organisations with opportunities for the implementation of a value creating strategy and the development of new services based on new knowledge, our findings suggest that knowledge sharing has a direct positive effect on competitive advantage. Furthermore, the literature shows that this finding can be generalised in the current socio economic environment shaped by user connectivity and business convergence, where collective knowledge means value for customers and competitiveness for service providers.

One of the key implications for management practice is that the research shows that although there are several mechanisms for knowledge sharing within and between organisations, it is important that the principles of dissemination are adopted at all levels, from employees to the management board. This helped an organisation focused on the delivery of utility services and environmental solutions understand the gaps between customer expectations and their current services and drive actionable insight from customer feedback. Furthermore, the organisation was able to devise solutions to drive new localised, short term improvements to deliver small but rapid change where needed.

Another contribution to practice, when it came to an industry-wide collaboration in areas such as safety and culture, driven by human factors, was that it became apparent that a comprehensive view of the subject domain was only feasible if knowledge of across the industry is necessary. In doing so, knowledge sharing becomes the key to industry-wide efforts to understanding a problem and how to deal with it. Knowledge sharing allows for the emergence of interest groups where stakeholders from across the industry are enabled to engage in long term collaborations.

One more contribution to practice is concerned with the mechanisms to be used for the sharing of knowledge. This research suggests that collaborative solution of problems of common interest seems to lead to effective sharing and adoption of relevant knowledge. Management support remains a key to success. This contrasts

with a view of technology-driven, spontaneous approaches as the key mechanism for knowledge sharing as reported in some literature.

Finally, given the nature of the problem, there are areas to be further studied based on the limitations of this exploratory research. These include:

- As only two organisations were studied, there is an opportunity to replicate this study in organisations from other contexts and business domains in an effort to better understand the extent to which knowledge and its sharing drive competitiveness. This would help demonstrating reliability, replicability and validity of the research findings;
- Collecting and organising a consistent set of data relevant for the purposes of the research. The authors sought to minimise the extra effort required from participants during the data collection processes. In future research other, perhaps more comprehensive data sets may be collected to confirm the validity of the results.

Although the full potential and practical implications of an improved knowledge sharing for competitive advantage are still to be explored, this research has made a significant contribution to the understanding of these key concepts.

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The Nature and Dimensions of Knowledge Mobility for Competitive Advantage

Pia Hurmelinna-Laukkanen, Heidi Olander, and Max Von Zedtwitz

Abstract

Knowledge exchange generally leads to mutual benefits, but unintentional knowledge transfer may have negative consequences for the original knowledge owner. Knowledge loss may be caused by, e.g., key employees leaving, and if key knowledge assets are obtained by competitors, it may harm the competitiveness of the firm. As the dynamics of overall knowledge mobility are rather abstract and difficult to grasp, this study first reviews the debate on the relevance of knowledge mobility and protection for competitive advantage. To identify the dimensions of knowledge mobility we seek explanations for how and why knowledge moves, what kind of knowledge moves, and where and how knowledge flows occur. Based on earlier literature and empirical evidence from qualitative research, we develop a categorization of dimensions of knowledge mobility. In particular, we suggest that intentionality of knowledge mobility reveals other dimensions of the type, modality, and locus. This categorization allows a sharper analytical evaluation of the nature of the connection between knowledge mobility and protection.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_9

1 Introduction

Knowledge mobility is acknowledged and accepted as a central part of innovation, and consequently, a contributor to the competitive advantage of firms (e.g., Dhanaraj and Parkhe 2006; Laursen and Salter 2006; Singh 2008; Lipparini et al. 2014; Bai et al. 2015). Yet, what exactly knowledge mobility is comprised of is not easy to define. Challenges for determining knowledge mobility and its implications are present both in theory and practice. Different views on knowledge and its flows, and related management issues have been introduced, quite often in connection to firm innovativeness, competitive advantage, and performance. For example, the international business literature addresses knowledge flows between subsidiaries and headquarters, and in international markets more generally (e.g., Rugman and Verbeke 2001). (Strategic) management studies consider the issues of imitation and competitiveness (e.g., Schulz and Jobe 2001; Saviotti 1998), and knowledge management research addresses inter- and intra-organizational knowledge exchange (Segarra-Ciprés et al. 2014), a topic also raised in network studies (e.g., Jiang et al. 2013). Individual level issues are considered in human resource management (HRM) studies (e.g., Minbaeva et al. 2012). As these studies often pursue different methodological and conceptual approaches, they tend to disregard alternative views, and often arrive at contradictory findings, especially depending on what kind of knowledge is considered, how and from which point of view (employee or firm, or a wider network) mobility is understood, and in which contexts knowledge mobility is examined.

From the point of view of competitive advantage research (especially if building on innovation research), it is sometimes forgotten that even if knowledge exchange in general generates mutual benefits [and in practice most organizations still struggle with finding ways to encourage employees to share their knowledge sufficiently with one another (Zhang and Jiang 2015)], it may (although not necessarily) have opposite effects if this exchange happens unintentionally from the knowledge holder's point of view. Knowledge leaving, that is, losing knowledge that is embodied in individuals, may be problematic to the firm, especially if its appropriation by outsiders hurts the firm's long-term competitiveness (irrespective of whether knowledge only has been copied, in which case the knowledge continues to remain with the original holder, or whether it has departed completely, as a result of all knowledge holders and assets leaving that firm). As the dynamics of knowledge mobility are rather abstract and difficult to grasp, we will review the existing debates in terms of the relevance of knowledge mobility and knowledge protection for competitive advantage (Bogers 2011; Hurmelinna-Laukkanen and Soininen 2011).

We believe that addressing the issues (especially their juxtaposition) in relation to knowledge mobility and protection can be done by identifying and examining the different dimensions of knowledge mobility. We take the point of view of the firm/management, and leave the point of view of the employees outside the scope of this study for reasons of breadth of the topic. With this exclusion in mind, we pursue the research question of *what are the central dimensions of knowledge mobility and what implications do they have for the competitive advantage of a firm*? We consider

this question especially in the context of how the dimensions of knowledge mobility influence innovation management activities. Our results enhance our understanding on the outcomes of knowledge mobility and on the need to control different types of knowledge mobility, and at what time firms can and should put effort into managing (facilitating and limiting) knowledge mobility so as to improve their innovation performance and competitive advantages—and when not to.

Seeking answers to our research question, we utilize existing literature in order to identify relevant dimensions of knowledge mobility as comprehensively as possible. We then categorize the dimensions and attributes of knowledge mobility to identify the relevant factors behind the manageability of knowledge mobility. We augment our theoretical framework with empirical evidence from qualitative data analyzed by means of content analysis. The data consists of 65 face-to-face interviews on knowledge protection and sharing-related issues. The empirical examination is followed by a discussion on the findings, with theoretical and managerial implications, limitations, and future research suggestions.

2 Dimensions of Knowledge Mobility

Dougherty (1999, p. 262) notes that "knowledge is about people, not databases". Knowledge mobility has often been linked to labor mobility (Fornahl et al. 2005; Moen 2005), and is tightly connected to absorptive capacity and learning at the individual, organizational, and network levels (Messeni Petruzzelli et al. 2010; Dhanaraj and Parkhe 2006; Hurmelinna-Laukkanen et al. 2012; Hurmelinna-Laukkanen and Olander 2014). Regardless of the level, knowledge mobility eventually comes down to individuals (e.g., employees) operating in various intra- and inter-organizational networks (Adler 1995; Alegre et al. 2013), and employees' knowledge-sharing behaviors in effective knowledge management (Park et al. 2004). Individuals initiate knowledge mobility by taking knowledge with them from one context to another, and by disseminating their knowledge to others. It can be argued that the effectiveness of knowledge mobility depends on people's ability and willingness to share and utilize new knowledge (e.g., Bishara 2006).

It is important to distinguish between specific features of knowledge mobility. Earlier research shows that knowledge mobility is a multidimensional issue (e.g., Birkinshaw 2002), and identifying these dimensions is the first step toward understanding knowledge mobility. Considering that managers in networked environments (in which individuals hold the power with regard to knowledge and its uses) are constantly concerned with balancing knowledge exchange and protection (e.g., Bogers 2011; Kale et al. 2000), it is important to understand that knowledge mobility in its different forms has positive and negative effects for developing competitive advantage. The severity of the consequences is very likely to depend on whether knowledge mobility is considered something that is wanted or needed. Therefore, we organize our discussion around the intentionality of knowledge mobility.

By *intentionality*, we refer to the initiation of knowledge mobility as being a deliberate course of action by employees who are bound by a number of guiding limitations and expectations, such as firm goals, group morals, and individual ability. We also argue that while intentionality forms only one dimension of knowledge mobility, it serves as an important lens through which it is possible to identify other dimensions, as it inherently shows the reason behind knowledge mobility taking place (the "why" of knowledge mobility). While the reasons behind knowledge mobility are occasionally implicitly present in the theoretical discussions (that is, knowledge flows are often taken as the basic assumption), they also capture the aspect of intentionality of knowledge mobility, such as when knowledge mobility is purposeful and knowledge is actively transferred or allowed to happen. However, knowledge also often moves without particular intent.

The "how" of knowledge mobility is best viewed as a dimension of *modality*. Modality can have different forms. First, it may be that knowledge is actively shared (at the same time maintaining the knowledge within the organization). This refers to information given out or taught, such as to representatives of the firm (see Dhanaraj and Parkhe 2006). A willingness to share is therefore present in knowledge mobility, and there is the underlying expectation that when sharing happens, it will have beneficial effects. Second, knowledge leakage (Durst et al. 2015; Jiang et al. 2013; Ritala et al. 2015) may take place. Intuitively, the leaking of knowledge [which refers to a movement of sensitive knowledge that at the same time stays within the original holder of the knowledge (Olander and Hurmelinna-Laukkanen 2015)] could be considered unintentional and probably harmful. However, it may be that knowledge leaking is deliberately made a non-issue, meaning that while such knowledge is not actively given out, there are also no attempts to restrict its outflow. Finally, knowledge leaving may take place (e.g., Olander and Hurmelinna-Laukkanen 2015; Franco and Filson 2006). From a managerial point of view, knowledge leaving can be considered uncontrolled when it happens relatively unexpectedly as a result of employees changing jobs, for example. Similarly, periods of sick leave, retirements, departures due to disability, and lay-offs add to examples of knowledge losses. In these situations, if the organization has not prepared for losing knowledge through employees leaving, various disruptions and challenges may emerge (Chang et al. 2008). On the other hand, it may be that knowledge mobility through turnover is quite intentional, e.g., by recruiting into key areas in order to gain fresh ideas (see, e.g., Bae and Lawler 2000; Rose and Kumar 2006), or by removing redundant activities (e.g., lay-offs during the reorganization of a business).

A key question is "what" kind of knowledge moves, from which the *type* of knowledge mobility emerges as a relevant dimension. It has been well established in earlier research that tacit and codified knowledge move differently (e.g., Szulanski 1996). Explicit, codified knowledge can be considered to be quite prone to both intentional and unintentional knowledge mobility. Tacit knowledge may gain mobility unintentionally rather than intentionally. For instance, the frequency of face-to-face meetings can be modified to allow (or prevent) the

transfer of tacit knowledge; still inherently this appears to be more about intrinsic issues than deliberate action (Zollo and Winter 2002).

The origin of knowledge mobility serves as yet another differentiating dimension—whether intentional or not. Does it originate from within the individual firm in an outbound fashion, is it generated outside but moves inbound; or is it mutual, i.e., shared knowledge in collaboration? The "where" of knowledge mobility shows the *locus* of knowledge-moving taking place. The direction of knowledge mobility has attracted attention in various aspects of management theory (e.g., Gassmann and Enkel 2004), and organizations are interested in gaining access to external knowledge and thus organize for such knowledge flow accordingly (Cohen and Levinthal 1990). However, this is not without its limitations: Not all external information and knowledge is relevant or desirable. Information overload makes it necessary to restrict inbound knowledge mobility (Swan et al. 1999; Gurteen 1998).

These different attributes of knowledge mobility and their anticipated effects are relatively straightforward to identify. More difficult to identify are the implications knowledge mobility poses for management practice. It can be difficult to predict whether knowledge mobility is useful or harmful, what kind of knowledge mobility is useful, and if and how knowledge mobility can or should be facilitated or limited (e.g., Frishammar et al. 2015; Porter Liebeskind 1996, on knowledge leakages, and Alexy et al. 2013, on the benefits of knowledge revealing). These questions give rise to new categorizations, such as whether knowledge mobility is related to risks of knowledge leaking and leaving (Olander et al. 2016), and those where mechanisms of managing the mentioned risks vary from formal to informal, and from one cultural context to another (Olander and Hurmelinna-Laukkanen 2015). However, for the time being, we will turn our attention to seeing how these aspects emerge in practice, and what kind of implications the mix of dimensions of knowledge mobility can have on firm competitiveness, especially in innovation settings.

3 Methods

For the empirical examination of the issues at hand, we used two sets of qualitative interview data. The first set of data was gathered from 15 Finnish SMEs from multiple industries (IT, engineering, and content/service providers) using a qualitative multiple case study method. We gathered the data through semi-structured theme interviews performed by a group of researchers. We chose the firms for the sample by using a combination of theoretical (Eisenhardt and Graebner 2007; Patton 2002) as well as convenience sampling (access to relevant cases as one of the defining factors) (Silverman 2005). Including firms from different industries improves the generalizability of the findings over using just a single industry sample. As the companies were small in size, employing between 2 and 50 employees, the interviewed managers were all actively involved in the innovation and collaborative activities of their respective companies. In each company, we interviewed the CEO and another person (if available; we interviewed

a total of 24 individuals), typically senior managers, who were well informed of the operations of the company. In these pair interviews, we reduced risks related to single-observer bias as two researchers interviewed the two interviewees simultaneously. Although only one face-to-face interview (with the CEO and one senior manager) took place in each company, the reach of key informants in terms of the issue under investigation was broad, given that the SMEs were small in size, and all of the interviewees were therefore actively taking part in the knowledge management issues of the firm. The interview instrument included several themes (customers and competitors, networks, renewal, and trust), of which one was the management of intellectual property and innovations, the focal context of this study. Knowledge protection and sharing-related issues were included in this part (with 19 questions). The other themes enabled us to get a better overview of the firms' businesses. The interviews lasted up to 3 h in total. Triangulation (Eriksson and Kovalainen 2008; Patton 2002) was used when gathering data by the semi-structured theme interviews, as we also used questionnaires with Likert-scaled item sets from the interviewees in order to check the coherence of the answers, as well as pre-examined company websites for background information. The interviews were recorded with the permission of the interviewees, and the tapes were transcribed afterward for analysis.

In order to extend our view to larger firms, we also collected data from two globally operating technology companies' R&D units (MNEs). A combination of theoretical and purposive sampling was applied when selecting the organizations. One of the MNEs operated in the IT industry, and the other was involved in high-tech engineering. In total, we interviewed 20 employees from the IT industry company, and 29 from the engineering industry company. As managers alone would not have been able to respond to all questions regarding knowledge mobility in large companies, we included informants from four different levels within the companies: R&D operations (eight in engineering company, ten in IT company), team leadership (eight and four respectively), HR and R&D management (six and four), and strategy (seven and two). Both firms had their headquarters in Finland. We gathered data through semi-structured theme interviews in three countries where the companies had R&D units: In Finland, the U.S., and China.

We selected the R&D units of the companies, as these units and their employees are significantly involved in knowledge-intensive activities and inter-firm collaborative innovation where knowledge mobility takes place. Hence, the employees we interviewed were "knowledge workers." Apart from two interviews that were conducted by teleconference, the interviews took place in face-to-face meetings at the interviewees' office locations. Each interview lasted between 90 and 120 min, and they were recorded with the permission of the interviewees. These tapes were also transcribed afterwards from recording.

The data was independently analyzed by researchers that had conducted the interviews, and also by those that did not participate. Those researchers involved in the interviews gave advice on where in the data to find those aspects that would be

Table 9.1 Features of the analyzed firms

	Industry	# of Firms	Firms (# of personnel)	Business
SMEs	Engineering	5	E (9) G (50) J (16) M (20) O (40)	Product/service
	IT	5	B (12) C (6) D (2) I (6) N (10)	Service
	Content/service	5	A (12) F (2) H (5) K (11) L (5)	Service
MNEs	Engineering	1	P (>10.000 worldwide)	Product/service
	IT	1	Q (>10.000 worldwide)	Product

the most relevant, and then the materials were jointly analyzed by the group of researchers. Altogether, our analysis thus included 65 interviews from SMEs and MNEs, where we reached the perceptions and ideas of a total of 80 people (pair interviews in the SMEs). Table 9.1 summarizes the basic information on the data from the examined companies.

In our analysis we did not distinguish between the different sizes or industries of the case companies, but treated them as combined to get a wider perspective on the managerial issues and reality of firms. In analyzing the data, we first reduced the data to include only the relevant parts by going through the transcribed data, marking it, and then placing into a separate document those parts of the data that referenced knowledge mobility. Thereafter, we grouped the findings into different categories based on their contents. As we went back and forth between theory and data, our approach can be called an abductive one: Taking insights from theory, and allowing the data to produce its own categories. After this phase we moved to analytical abstraction, where we not only selected the most frequent but also the more exceptional notions under closer observation. After several iterations, we started forming our categories that we labeled according to the dimensions: Intentionality, to indicate "why" it is that knowledge moves (if it is intentional or not); type, i.e., "what" kind of knowledge moves; the modality, that is, "how" mobility occurs; and the locus referring to "where" and/or in which direction knowledge flows. Table 9.2 shows these general categories and the constructs that we associated with each of them.

Table 9.2 The dimensions of knowledge mobility

Intentionality/why	Type/what	Modality/how	Locus/where
Unintentional	Codified Tacit Confidential Non-confidential	Leaking Leaving	Outbound Inbound Mutual Within
Intentional	Codified Tacit Non-confidential Confidential	Sharing Leaking Leaving	Inbound Outbound Mutual Within

4 Analysis: Knowledge Mobility and Intentionality

The above abductively-developed categorization is quite neutral and does not take a stance on what actually happens (e.g., in what kind of mix the dimensions of knowledge mobility emerge) or the implications of knowledge mobility. However, it can be used in order to approach knowledge mobility analytically. For closer analysis, we started including original quotes from the data to illustrate how knowledge mobility can be seen in this regard. We used the descriptive examples of quotes to demonstrate the issue at hand with interesting quotes, rather than exhaustively show the breadth of findings.

In order to clarify our analysis and organize our discussion on potential implications of knowledge mobility, we decided to rely on practical examples that emerged from the data when intentionality was of concern. Overall, our findings suggest that there are two forms of intentionality from the point of view of the firm: Intentionality with regard to employee turnover, and intentionality with regard to knowledge transfer. The intentionality of employee turnover could be seen, for example, in how the interviewees talked about using commitment practices and duration of employment within the company. The intentionality with regard to knowledge transfer could be seen, for instance, in how the interviewees described different kinds of education practices to restrict unwanted knowledge transfer, monitoring of communication (e.g., presentations), as well as in the ways in which knowledge sharing was enhanced for the type of knowledge that the managers wanted the employees to share with one another. In the following sections we will discuss our findings in relation to these different dimensions.

4.1 Intentionality of Employee Turnover

Table 9.3 provides an initial insight into how different dimensions of knowledge mobility show intentionality in relation to employee turnover, and serves as a roadmap for the subsequent discussion.

Based on empirical evidence, intentionality in employee turnover can be further categorized in terms of *intentional* and *unintentional employee turnover*, where the

Table 9.3 Dimensions of knowledge mobility: Intentionality of employee turnover

Intentionality/ why	Type/what	Modality/how	Locus/ where
Unintentional employee turnover	Tacit "bad" if not shared within company on time	Leaving harmful if results in complete loss of key employee, or if knowledge leaving can cause learning outside the firm (with competitors)	Outbound
Intentional employee turnover	Codified "good" Tacit "problem" (but with incoming employees can be turned into positive)	Leaving harmful if results in complete loss, beneficial if inbound	Inbound Outbound

first refers either to the wanted and needed turnover that brings new and fresh ideas from outside, or to intentional strategic changes in employee structure: Termination of employment contracts or letting-go of people with fixed-term contracts after their expiry. Unintentional turnover refers to the uncontrolled and unwanted loss of employees that the company wants to hold on to (especially the most talented and enthusiastic R&D employees, or the managers with the most perspective to lead creative people). As a manager in Firm P described to us, one needs to have proper plans to "replace the irreplaceable:"

> You can't hold them back and say "well, I don't have anybody to replace you so I'm not going let you go." I always say, that's no different than somebody wanting to go work for some company outside. If they want to go, then you have to. . . respect their choice and say OK. But you have to have enough planning in place to take care of a situation like that.

Unintentional employee turnover will likely only produce problems if the person leaving without the approval of the company is considered a key employee. In case of an intentional letting-go, this should not be the case, unless this is due to economic difficulties and lay-offs, which are outside the main scope of this study (we did not have companies facing this situation in our sample). In this sense, turnover would probably be preferable in the form of inbound rather than outbound knowledge mobility. As the firm recruits new employees, it may initially benefit from the experience of the incoming employees. A manager from Firm K described this process: "*We get entrepreneur-like people in our group that are more like freelancers*," implying that the firm would benefit from these innovative newcomers. A more detailed discussion shows the practical insights.

4.1.1 Unintentional Employee Turnover

A typical situation of *unintentional employee turnover* would be someone leaving too soon, for example, when a firm's total investment in the employee (in terms of salaries, training, etc.) has not yet been recouped. An interviewee from Firm O told us: "*It takes several years of experience to learn to do these things*." They would have had more to lose than they would have won with the recruitment if the

employee were to leave too soon after recruitment. The same would apply to key employees and the associated greater loss.

Another typical situation of unintentional mobility would be that of someone leaving unexpectedly, so that the firm would not have time to prepare for such a departure, and therefore the knowledge could not be transferred in time: "*Due to the constraints in our resources, we have not been able to use that much of the master-apprentice knowledge transfer model*," said a manager from Firm D. Even if retirement, for example, is a natural reason for people to leave the company, the company may not have adequate opportunities to prepare for such an event in terms of knowledge mobility. Therefore, some managers feel vulnerable to unintentional knowledge mobility in that in the case of retirement, for example, it is an inevitable event.

In many firms (G, H, I, M, L, N, P, Q in our sample), we found that when know-how was significantly tied up in individuals, the managers acknowledged the need to pay attention to decreasing outbound knowledge mobility. People committed to the company will not be as motivated to leave. An entrepreneur-like mindset might decrease employee turnover, as a manager from Firm L noted: "*We have got [to recruit] people that are rather committed to this*." Another example regarding unintentional employee turnover in which the company feels unable to hold on to the employee is a situation mentioned by a manager in Firm F:

> Our business is based on seasonal variation in demand. Therefore, there is no way of holding on to the key employees in any formal way. We can't help it. Our employees even work for competitors in different market areas during the off-season.

Here, employee turnover is neither intended by the company, nor can it do much about it. However, presumably the tacitness and embeddedness of important knowledge keeps it from being transferred too easily to competitors, even in the case of employee turnover.

The extent of the harmfulness of unintentional employee turnover for the competitive advantage of a firm seems to be dependent on the extent to which the knowledge can be retained by transferring it to followers within the firm or through documentation, and on the direction of where the employee will go: If they leave to go and work for a competitor, or if they retire. Therefore, harmfulness is also dependent on the extent to which the competitors are able to take advantage of knowledge that leaves with the employees. As a manager from Firm P put it:

> Even when we patent something we're basically immediately making our competitors aware of what we're working on and they quickly learn about what technique we are using and maybe even try to find a way around our patent, so. . . at least we have covered as many of the bases as we possibly can. There are certain situations that we may not have too much control over, like people leaving or things like that.

Despite non-competition clauses in employment contracts, some departing employees will end up at competing firms.

4.1.2 Intentional Employee Turnover

Intentional employee turnover may ensue if a company does not continue fixed-term employment contracts; for instance, if employees do not reach pre-agreed targets (or if entire projects are abandoned and units disbanded). Even intentional turnover can be harmful to a company, as knowledge will usually be lost more completely than in the case of unintentional turnover. This was supported by a quote from a manager from Firm Q, referring to the intentional reduction in the number of employees: "*I still have people calling me for advice on some technology I was involved with four, five years ago*." It is possible for colleagues to do that, as the manager did not entirely leave the company, and changed position under good terms with the employer. This would be much trickier if an employee left the company entirely, or left the company against his/her own will, in which case the incentives to communicate with company representatives could be much lower. Therefore, it should be of benefit to make exits as convenient as possible. Otherwise, knowledge could be lost for good, at least as long as employees are not re-recruited. Going further, a situation where an employer lets employees go may also lead to employees retaliating by disclosing information to outsiders (one manager from Firm Q shared an example on this kind of event).

With regard to *outbound intentional turnover*, the codification of knowledge can be a good thing: Even if some codified knowledge might leave (employees may learn things by heart even if they are not allowed to take documents with them), the company will not lose all of the knowledge with the employees who leave. In terms of tacitness, on the other hand, problems are more likely to emerge. It cannot be guaranteed that outbound employees are willing or even able to transfer tacit knowledge before leaving. Outbound intentional employee turnover, even if deliberate, can decrease tacit knowledge (Firm K): "*The ideas of people produce knowledge that does not transfer easily [to external contexts], as it needs the inventors to bring them to life*." However, if people leave, they will not only take "the life out of the ideas," but they also may carry on with their ideas in competing organizations. Therefore, even intentional turnover may cause problems for the firm's innovativeness and competitive advantage. On the other hand, in the case of inbound intentional turnover, the tacitness of knowledge can be positive, as the firm can gain and learn from the incoming employees.

4.2 Intentionality of Knowledge Transfer

The intentionality in knowledge transfer can also be divided into two: Intentional knowledge transfer refers to transferring non-confidential knowledge that a company intends to share, or to confidential knowledge being transferred under instruments such as non-disclosure agreements (see Table 9.4). Such knowledge mobility can bring benefits for collaborative innovation, and can, and should at its best, be two-directional. The latter, on the other hand, refers to knowledge leaks of confidential knowledge (CK) that the company means not to share as it builds competitive advantage for the company.

Table 9.4 Dimensions of knowledge mobility: Intentionality of knowledge transfer

Intentionality/ why	Type/what	Modality/how	Locus/ where
Unintentional knowledge transfer	Codified "problem" Tacit "good"	Leaking potentially harmful if utilized by someone else/competitor Leaking potentially beneficial if it happens within (unexpected ideas); potentially harmful if causes information overload	Outbound Within
Intentional knowledge transfer	Tacit "good" (word of mouth) Tacit "problem" Codified "good"	Sharing Leaking potentially harmful if excessive Leaking potentially beneficial if it results in emerging business opportunity or extension of customer base	Inbound Outbound Mutual Within

4.2.1 Unintentional Knowledge Transfer: Leaking

In the case of *unintentional knowledge transfer*, a company does not want its *confidential knowledge* to be transferred outside of the company. The occurrence of such actions can therefore be called *leaking*. Such leaking of knowledge is potentially harmful, considering the competitive advantage of a firm, at least if there is a risk that a competitor can get a hold of such knowledge and use it for its own purposes, or even prevent the original holder of the confidential knowledge from using it. A manager in Firm P described a situation where he came across a severe situation of crossing the border with confidential codified knowledge:

> And of course, when I very strongly objected and threatened that I was going to inform [the board] of what had happened, they said 'we'll go get the drawings back,' to which I responded, 'oh my, now it's too late, because you have already given them the knowledge, you can't take the knowledge back, you cannot drain their head.

Inbound unintentional knowledge transfer (or outbound transfer of knowledge that is not confidential) is not generally a problem, but the outbound flow of confidential knowledge constitutes a risk. Interestingly, knowledge transfer *within a company* can also cause problems and is in some cases not intended by management:

> We would like our employees to not talk about their salaries in case there are differences between them. Sometimes they still do but we try to tell them we don't want them to (Firm P).

Salaries are but one example showing that the company may not like their employees talking to each other (not to mention outsiders). In the case of salaries, the reasoning lies in such knowledge mobility creating pressure to raise wages. No matter how reasoned, knowledge of differences between wages could cause a sense of disrespect and deteriorate in the work atmosphere. Furthermore, on a more

general level, discussing individually difficult situations, dissatisfaction with the company or lay-offs with co-workers can cause negative feelings among employees, deteriorate work motivation, and affect innovation. Another aspect with regard to unintentional inbound knowledge mobility is potential information overload, or receiving wrong information on which decisions are then made.

Confidentiality is not the only aspect of the type of knowledge that is of relevance. In relation to *unintentional knowledge transfer* and *the tacitness of knowledge*, a couple of noteworthy observations can be made from the data. When dealing with external partners, the more codified the knowledge is, the more likely it is that the partner will be able to learn and capture the knowledge. Therefore, if the question is about confidential knowledge, one should be careful with codification. We found an example in which a manager from Firm G described such a situation: "*We try to draft our external documents so that they would not give access to any critical issues*." This is described as one way to ensure that customers need to come back for repurchases. In the same vein, managers from Firms N and J acknowledged that knowledge that is in tacit form provides security for unwanted knowledge transfer in the first place. Our data revealed that many of the companies agreed that "*unintentional leakage of tacit knowledge would cause at least partial loss of knowledge*," and therefore problems, as "*if knowledge is easily available, it would bring emergent competition to apply the knowledge*," as a manager in Firm G put it.

4.2.2 Intentional Knowledge Transfer: Sharing

In the case of *intentional knowledge sharing,* a company often aims at incoming knowledge flows by allowing outbound knowledge flows as well. As an interviewee from Firm Q put it:

> If sharing the information would help in getting something done, then I think one can decide in favor of collaboration.—We used to be more careful, but nowadays, as we've seen what good it can bring, we are more open.

Naturally, knowledge sharing *within the company* is also intended and desirable, generally speaking:

> We share knowledge at work. On coffee breaks. Sometimes we have long coffee breaks because we share and comment on ideas there. It should be done in a good atmosphere and not be too formal (Firm N).

Intentional knowledge transfer, therefore, seems to resonate with improvements in competitive advantage. However, it could also be approached in a different fashion: It could turn to knowledge leaking.

4.2.3 Intentional Knowledge Transfer: Leaking

If knowledge sharing is not strictly focused on non-confidential knowledge but becomes close to (or even crosses into) the gray area of *confidential knowledge*, this form of knowledge mobility is called *leaking*. Leaking—while it has at least a

slightly negative connotation—can be also strategically and selectively used to reveal ideas to outsiders. Nevertheless, generally it is *potentially harmful to the company*, depending on the confidentiality and criticality of the knowledge concerned, and the extent of the knowledge leaked. In our interview data we find that even if knowledge sharing between partners was a mutually agreed action item, it was difficult to draw the line on when such sharing should end. Therefore, unintended mishaps and accidents may occur (both Firm P):

> It is not easy to know what to share and what not to. Employees are important, but of course I feel there are leaks, even today... but I would say not on purpose.

> *Generally speaking I don't think so* [that there would be good level of knowledge about confidentiality], *R&D, maybe yes.*

While knowledge leaks may be harmful in general, if they occur en masse they may even be beneficial, as in the case when they lead to new business opportunities or when they enhance the buzz around a product and thus increase sales. As a manager from Firm F mentioned:

> It is not wise to even try and make people not talk about our services. In our industry word of mouth and recommendations from other people are so important that it is only beneficial to us if people talk about us.

Another manager (Firm K) said:

> Our services could not even be protected from leaking. Once another colleague-actor told us he had seen us do this thing very well, and that he'd put us on their list of services. And he did. But I think that's just great for us if they as a bigger actor want to take ideas from us. It's almost a recommendation.

A manager from Firm L mentioned that leaking and copying may not necessarily be harmful in his industry, as others offering similar services would make customers used to such activities and therefore enhance the industry.

When *intentional knowledge transfer*, be it *sharing* or *intentional leaking*, is in question, it should be beneficial to have the knowledge in codified form so as to easily transfer it (being aware of the risks of excessive sharing, or sharing of confidential knowledge). Tacit knowledge, on the other hand, can be problematic, as sharing tacit knowledge requires more effort. However, in terms of word-of-mouth marketing, companies can benefit from direct tacit knowledge sharing by its employees. A manager from Firm L told us that enhancing tacit knowledge sharing among his employees helped tacit knowledge learned in collaboration with customers to spread to other employees, enabling better customer service. Therefore, one needs to encourage intentional sharing, but it is not without challenges, especially in the case of tacit knowledge.

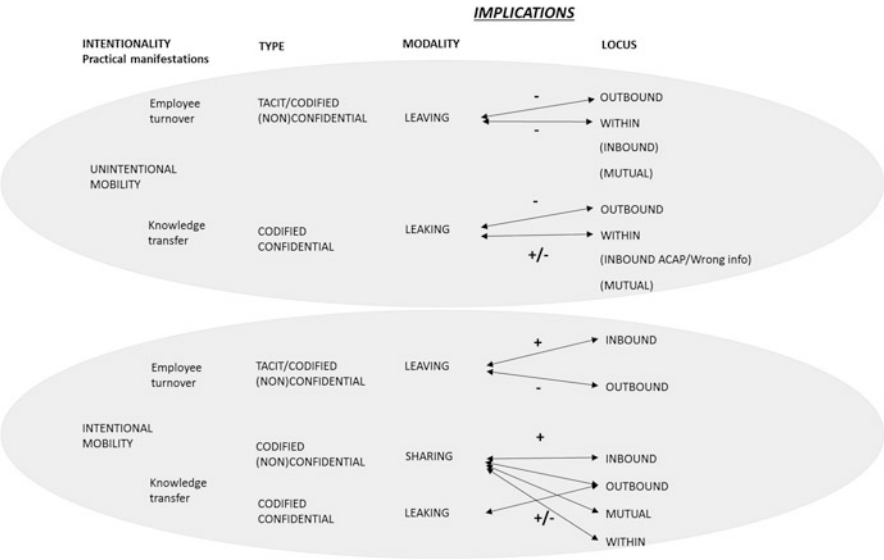

Fig. 9.1 Dimensions of knowledge mobility—implications for competitive advantage

4.3 Intentionality of Knowledge Mobility Through Employee Turnover and Knowledge Transfer: A Summarizing Illustration

Figure 9.1 summarizes the different dimensions of knowledge mobility and suggests how the implications of knowledge mobility emerge from their various combinations.

While this figure is not intended to describe all potential combinations of the dimensions of knowledge mobility, it provides direction for evaluating the different outcomes, and for making decisions on whether or not to react to knowledge mobility in specific situations, and what the potential reactions could be. In other words, this framing of knowledge mobility might ease pinpointing the point of balance between knowledge protection and sharing. This could ease the problems with under- or overprotection, for example.

5 Conclusions

As our goal, we set out to discover what the central dimensions were to describe and analyze knowledge mobility, and how these dimensions in different mixes contribute to the competitive advantage of a firm. With the help of theoretical discussions and analysis of empirical evidence, we were able to pinpoint *intentionality* (addressing the "why" of knowledge mobility) (cf. e.g., Durst et al. 2015; Jiang et al. 2013) as an important focal lens through which other dimensions, such as *type*

of knowledge (what kind of knowledge—tacit, codified, confidential—is mobile) (e.g., Polanyi 1967; Szulanski 1996; Zander and Kogut 1995), *modality* (how mobility is realized—through sharing, leaking, leaving) (e.g., Ritala et al. 2015), and *locus*, or where the knowledge mobility originates from and where the boundaries are within which it takes place—outbound, inbound, mutual, within) (e.g., Gassmann and Enkel 2004) could be identified in different streams of literature. Practical manifestations of intentionality (especially employee turnover and knowledge transfer) further allow evaluation of the implications of knowledge mobility, and finding the balance between knowledge protection and sharing.

In particular, this categorization of knowledge mobility into its dimensions allows the analytical evaluation of where intentional and necessary mobility ends, and where unintentional mobility starts. We therefore contribute to the discussion on the search for balance between knowledge protection and sharing, with the aim of improving competitive advantage (see, e.g., Bogers 2011; Kale et al. 2000; Manhart and Thalmann 2015). We suggest that without a holistic view, it may be difficult for innovation managers and researchers to decide on what kinds of actions regarding knowledge protection and sharing suit each situation. The analytical organization of different dimensions of knowledge mobility should be helpful in this.

Our analysis further indicates that specific relationships between and combinations of knowledge mobility dimensions can be identified. Among the possible outcomes of knowledge mobility that affect competitive advantage is knowledge loss as a result of leaving knowledge rather than of knowledge leaks, whereas copying is more likely to happen as a result of leakages. The analysis also suggests that each of these relationships and combinations have specific implications with regard to the manageability of knowledge mobility. While some aspects are beyond the manager's influence (e.g., in case of intended employee turnover taking place in the form of lay-offs, it may be difficult to react to implications of knowledge loss as laid-off employees may not be willing to share and restore knowledge any longer), others can be affected quite efficiently (e.g., with company policies or technical solutions to store information). Furthermore, among those factors that can be managed, there are those that should definitely be managed both proactively and reactively, and those that are not likely worth the effort (see, e.g., Alexy et al. (2013) on selective revealing). Our categorization makes these differences visible. These findings contribute to existing knowledge by gathering together aspects on knowledge mobility that have so far been spread within different streams of literature and in separate discussions. The findings therefore add to discussions in the fields of knowledge management, knowledge-based views, organizational learning, innovation management, and human resource management, for example.

Our study has managerial implications as well. As companies are often dependent on their employees' knowledge base and capabilities to utilize and develop the knowledge pool further (e.g., Olander and Hurmelinna-Laukkanen 2015), knowledge mobility is an important area to manage. There are both benefits and disadvantages related to knowledge mobility that need to be acknowledged, and there is dynamism involved that suggests that knowledge mobility can be useful at

one point and a problem at another. We suggest that intuition-based, reactive approaches to knowledge mobility can be replaced with more analytical and also more proactive management practices. This study provides tools for identifying the boundaries of knowledge sharing and protection, and developing managerial responses depending on the intentionality of the knowledge mobility (employee turnover/knowledge transfer) in question.

There are naturally limitations to our study. For example, we have selected intentionality of knowledge mobility as the lens through which to approach other dimensions. We have also chosen to address these issues by making a distinction between mobility of knowledge per se, and of knowledge embedded in people. However, taking other angles might reveal additional points of view. In addition, we have opted to take the point of view of the firm/management, and acknowledge that intentionality of leaking and leaving could represent some different attributes to employees than they do from the management perspective, which offers an interesting avenue for further research. We hope that our study can be used as basis for further studies on knowledge mobility to build on.

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The Impact of Knowledge Management on the Market Performance of Companies

Aino Kianto, Henri Hussinki, and Mika Vanhala

Abstract

Academic research community almost unanimously agrees upon the benefits of knowledge management, but practitioners seem to be more suspicious of it. One major reason for their hesitant stance could be the lack of available empirical evidence regarding the relationship between knowledge management and business performance of companies. The purpose of this study is to address that research gap by empirically demonstrating how knowledge management practices influence market performance of companies. This is done by analyzing survey data collected from 259 Finnish companies. Our results highlight the key role that knowledge-friendly managers have at the helm of company's knowledge management journey, and point out knowledge-based learning and development activities as effective means to improve market performance. In addition, we find out that organizational learning mechanisms should be regarded with great attention, as some on-the-job learning practices may even hamper firm performance. The results of this study develop the understanding of the knowledge management practices integral to performance of companies. It also provides validated measurement scales to study knowledge management practices and market performance of companies.

1 Introduction

Knowledge management has gained increasing visibility and attention during the past two decades. However, while scholars engaged in this debate take for granted the benefits of knowledge management utilization, managers tend to be more

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_10

skeptical about the return on investment of knowledge management activities. For example, an international survey conducted in 2010 in 222 companies in Finland, China, and Russia found that 91% of companies claimed that knowledge is a key strategic asset for them, but only 43% of companies had a dedicated budget for knowledge management activities (Andreeva et al. 2011; Kianto et al. 2011). A major reason for this lack of engaged activity might be a doubt in terms of its actual payoff for company viability. Thus, in terms of improving managerial commitment to knowledge management, it seems important to produce tangible proof of the financial benefits of engaging in knowledge management.

From the academic perspective, empirical studies are lacking that connect systematic knowledge management activities to company performance. While the knowledge management literature boasts a great deal of successful case studies demonstrating best practices in particular companies, few have examined the impact of knowledge management on performance issues in a large sample of firms. Indeed, based on views of 222 knowledge management experts in 38 countries, Heisig et al. (2016) found that the relationship between knowledge management and business performance was a major research gap in the field. Thus, demonstrating whether and how engaging in knowledge management enhances organizational performance is an important issue to examine further. Therefore, this chapter addresses the question of *how knowledge management practices impact the market performance of companies*.

Unlike many papers on knowledge management which have focused on generic knowledge processes, such as knowledge sharing and knowledge creation, we focus on knowledge management practices, which are the systematic and conscious activities applied in an organization for better leverage and utilization of knowledge (Andreeva and Kianto 2012). Specifically, we address ten such practices: strategic management of knowledge, knowledge protection, knowledge-friendly supervisory behaviors, knowledge-based recruiting, training and development, performance appraisal, and compensation practices, as well as learning mechanisms, information technology (IT) practices, and organizing work (Inkinen et al. 2015).

We provide empirical evidence on how these knowledge management practices influence firm performance. The sample consists of 259 Finnish companies with at least 100 people employed. We utilize structural equation modelling with the partial least squares with control variables to show the effects of knowledge management practices on the market performance of companies.

The results of this study increase understanding of the utilization of knowledge management by identifying the potentially most effective knowledge management practices to improve market performance of companies. It also adds to the knowledge-based view of the firm by demonstrating with a large sample of empirical data the significance of the management of knowledge for competitive advantage. Furthermore, examination of knowledge management in terms of ten knowledge management practices and provision of the validated scales for measuring them add to the general understanding of knowledge management as a field of theory and practice.

2 Theoretical Background

According to the knowledge-based view of the firm, performance differences between organizations accrue due to their heterogeneous knowledge stocks and their different capabilities in using and developing knowledge (Grant 1996; Kogut and Zander 1992; Spender and Grant 1996). This means an organization that has better access to key knowledge resources and that utilizes management practices aimed to support efficient and effective management of knowledge for organizational benefit is more likely to achieve high firm performance.

The practical execution of knowledge management in organizations takes place through various managerial activities and processes that regard knowledge as a strategic key resource. Following Andreeva and Kianto (2012), we conceptualize knowledge management practices as deliberate management activities conducted in a firm with the aim of improving the effectiveness and efficiency of organizational knowledge resources. The knowledge management practices enable the firm to capture and deliver value from its intangible knowledge-based assets (Kianto et al. 2014).

Knowledge management practices can be divided into the ten main categories described above (Fig. 10.1). The following paragraphs define and discuss each of the knowledge management practices in further detail.

The behavior of those in supervisory positions in an organization is the key issue that shapes organizational culture and climate (Marsick and Watkins 2003; Shamim et al. 2017). By setting the example for knowledge-friendly behaviors, encouraging learning and development, and tolerating divergence and mistakes, supervisors and leaders influence the knowledge-based performance of their firm (Bavik et al. 2017; DeTienne et al. 2004; Gold et al. 2001; Inkinen et al. 2015). As a result, supervisors have integral roles in any knowledge management journey, as they take major responsibilities in developing a creative organizational culture characterized by trust and respect (Holsapple and Singh 2001); at the same time, they also should coordinate knowledge integration within a firm (Grant 1996).

Knowledge can be protected from competitor imitation through formal mechanisms, such as patents, trademarks, and other intellectual property rights. Informal mechanisms, such as secrecy and employee guidance (de Faria and Sofka 2010), can be used as well (Olander et al. 2016). The ability to use both types of mechanisms enables firms to be more successful in appropriating the gains from their knowledge assets (Hurmelinna-Laukkanen and Puumalainen 2007; Teece 1998).

Strategic management of knowledge refers to the strategic planning and implementation activities related to the knowledge-based assets in the firm (Kianto et al. 2014). It includes the activities related to identifying the organization's most important strategic knowledge assets, building a knowledge-based strategy, and related assessment and auditing activities (Dalkir and Liebowitz 2011; McKeen et al. 2005; Zack 1999). Having a focused long-term approach to dealing with intangible assets enables effective knowledge-based value creation. Strategic management of knowledge creates competitive advantage by reshaping the firm's

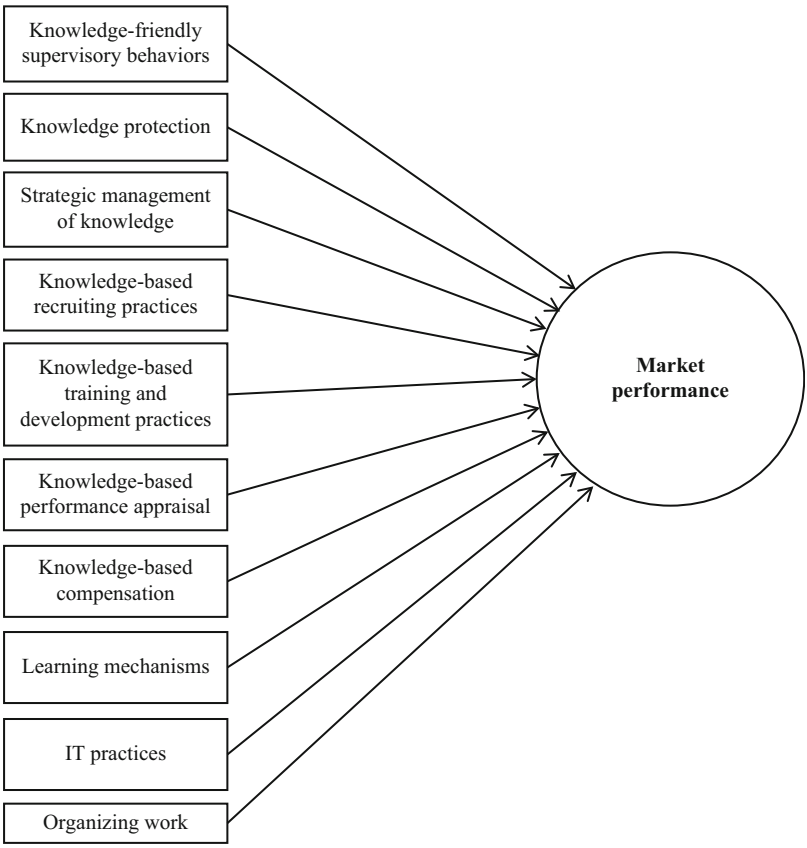

Fig. 10.1 Research model of the study

focus on the most value-generating activities, as the extant literature has demonstrated that competitive advantage accrues from possession, development, and utilization of key knowledge resources (Barney 1991; Conner and Prahalad 1996; Grant 1996). Related to that interpretation, strategic management of knowledge helps managers make more informed decisions regarding the utilization, sharing, expansion, and allocation of the company's knowledge resources, which are aligned with the company's overall strategic guidelines (Von Krogh et al. 2001; Zack 1999).

Human capital is the most significant knowledge asset in an organization (e.g., Edvinsson and Malone 1997; Sveiby 1997); thus, knowledge-based human resource management practices are in an important position in implementing knowledge management (Hislop 2003; Scarbrough 2003; Wong 2005). Specifically, four types of knowledge-based human resource management practices have been identified (Andreeva et al. 2017; Inkinen et al. 2015). First, knowledge-based recruiting practices refer to recruiting procedures which focus on the expertise, learning

potential, and collaborative capabilities of the candidates. Second, knowledge-based training and development practices provide ample possibilities for employees to both widen and deepen their expertise, and to do this on a continuous basis and in a customized fashion. Third, knowledge-based performance appraisal concerns acknowledging engagement in knowledge behaviors, such as knowledge sharing and creation, in individual performance evaluations. Fourth, knowledge-based compensation refers to utilizing these behaviors as bases for employee rewarding. These four human resource management practices represent a typical set of activities that aim to fulfill a company's human resource needs and performance targets by recruiting employees to perform duties, by monitoring their performance, and by admitting rewards when they are due (Tichy et al. 1982). The knowledge-based human resource management practices are likely to improve market performance by motivating and enabling employees to utilize and build both their personal knowledge as well as that of the firm.

The organization's learning mechanisms are based on the systems and processes that the organization has for promoting and securing organizational learning. Improvement and increase of organizational knowledge and competence happen mostly through on-the-job learning rather than formal training (Billet 2004; Gherardi 2006) and social learning (Eraut 2004; Illeris 2003). Enabling these forms of learning will help the organization to reach a better level of performance (García-Morales et al. 2012). On-the-job learning includes knowledge transfer from senior employees to junior employees by means of mentoring, apprenticeships, and job rotation (Bryant 2005; Swap et al. 2001), while systematic gathering and re-use of best practices forms another key learning mechanism (Cross and Baird 2000; O'Dell and Grayson 1998).

Many knowledge management activities in firms are related to utilizing IT for controlling, combining, re-organizing, and analyzing knowledge. Information technology can be exploited to improve information search and retrieval, data analysis and visualization, knowledge sharing, and even knowledge creation (Alavi and Leidner 2001; Davison et al. 2017; Kankanhalli et al. 2003; Lee et al. 2016). It thereby offers ample possibilities for improving organizational performance. IT practices are even more impactful when a company possesses a good understanding of both knowledge management and IT; then, IT practices can be tailored to directly support KM activities (Kamhawi 2012). For instance, supporting the key business processes with appropriate IT increases the benefits gained by the company (Cao et al. 2013).

Finally, practices for organizing work include the organizational design issues that facilitate the leverage of knowledge in an organization. These include distributing power to knowledgeable workers, empowering these workers to make decisions concerning their own work, and enabling increased knowledge application throughout the firm (Davenport and Prusak 1998; Pfeffer 1998). Also, using structural arrangements such as cross-functional teams and communities of practice will channel knowledge flows to where they are needed in the organization, and thereby improve performance (Brown and Duguid 2001; Mohrman et al. 2002; Nonaka and Takeuchi 1995; Wenger et al. 2002). Tacit quality of knowledge

(Nonaka and Takeuchi 1995) means that the valuable knowledge within a company is embedded in human and social contexts, such as individuals, teams, and communities (Tsoukas 1996). As such, companies should decentralize decision-making to all levels of the organization to facilitate quick, high-quality decision-making for complex issues at hand (Davenport and Prusak 1998; Grant 1996). In this sense, structural arrangements that support social interactions, knowledge sharing, and communication are likely to be beneficial for the company. For instance, utilization of cross-functional teams enables the integration of complementary tacit knowledge within a company, which supports the development of firm-specific products and services that in turn create competitive advantage as they are difficult to imitate (Grant 1996).

Based on the argumentation above, it can be posited that knowledge management practices increase effective and efficient performance of knowledge-intensive tasks, and thereby the market performance of a firm. More formally, we claim that the more intensively an organization applies a given knowledge management practice, the higher performance it is likely to attain (see Fig. 10.1 for the research model). We next proceed to empirically examine the validity of this argument.

3 Methodological Design

3.1 Sample and Data Collection

The data for this study were collected in Finland in 2013 by means of a structured survey utilizing the key-informant technique. The initial population comprised a cross-industry sample of Finnish companies that included all firms with at least 100 employees. The Intellia database was utilized to identify the companies. A total of 1523 companies were considered suitable for the initial sample. An external research company contacted all the eligible firms by telephone and asked the person in charge of the company or human resources to respond to the questionnaire. Confidentiality was emphasized, and a summary of the results was promised to the respondents.

From the 1523 companies, 259 responses were received, representing a response rate of 17.0%. The most represented industries were manufacturing (37.8%) and wholesale and retail trade (16.2%). Other notable industries were services (9.7%) and transportation and storage (8.1%). Most of the respondents held the position of human resources director or manager (77.9%), other director or manager (8.8%), or managing director (6.9%), indicating their expertise and key position regarding the issues of knowledge management practices and market performance of the company.

3.2 Measures

The scale for the knowledge management practices was based on work reported initially in Inkinen et al. (2015). The scale development and origins for different measures are as follows. The knowledge-friendly supervisory behaviors scale (seven items) was created by Inkinen et al. (2015). The knowledge protection scale (three items) was adapted from Levin et al. (1987), Cohen et al. (2000), Hurmelinna-Laukkanen and Puumalainen (2007), Hurmelinna-Laukkanen and Ritala (2012), and Lawson et al. (2012). The strategic management of knowledge scale (five items) was inspired by McKeen et al. (2005), Kianto et al. (2014), and Boumarafi and Jabnoun (2008). The knowledge-based recruiting practices scale (three items) was inspired by Yang and Lin (2009) and Cabello-Medina et al. (2011). The knowledge-based training and development practices scale (four items) was created by Inkinen et al. (2015), while both the knowledge-based performance appraisal scale (three items) and the knowledge-based compensation scale (three items) were inspired by Andreeva and Kianto (2012). The learning mechanisms scale (three items) was created mostly by Inkinen et al. (2015) with inspiration from Becerra-Fernandez and Sabherwal (2001). The IT practices scale (six items) was inspired by articles from Handzic (2011), Negash (2004), and Pirttimäki (2007), and the organizing work scale (six items) was the product of Inkinen et al. (2015). All the measures were based on five-point Likert scales (1-strongly disagree, 5-strongly agree). See Appendix for the wording of the items.

We measured *market performance* on a scale developed by Delaney and Huselid (1996). Three items covered the company's success against other companies in its sector in net sales growth, profitability, and market share. Respondents rated these based on a five-point Likert scale (1-very poorly, 5-very well). Again, Appendix provides the wording of the items.

We utilized three additional variables (sales, the number of employees, and industry) as control variables to eliminate whatever effects they might have had on market performance of the firm. The sales and the number of employees from 2012 were utilized as proxy values for the firm size. For the industry (eight industry classes), we used an adapted classification of economic activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne, NACE).

4 Results

We used Partial Least Squares (PLS) for the analyses (version 3.2.6 of SmartPLS; see Ringle et al. 2015). The first step was to assess the reliability and validity of the measurement model. We then used the structural model to test our research model. Thus, we followed the procedure suggested in the literature by Hair et al. (2014).

4.1 Measurement Model

To test the measurement model, we assessed both internal consistency and discriminant validity. According to different tests, the assessment offered good evidence of both validity and reliability for the operationalization of the concepts.

First, construct reliabilities for our variables were above the threshold limit of 0.7 suggested by Bagozzi and Yi (1991). The scores ranged from 0.82 for knowledge protection to 0.92 for knowledge-based compensation. Second, based on the high (varying from 0.51 to 0.94) and statistically significant (for all $p < 0.005$) factor loadings, we determined that all items are related to the variables they are meant to measure. Third, the Average Variance Extracted (AVE) met the limit of 0.5 (e.g., Fornell and Larcker 1981) for all our variables, varying from 0.50 for organizing work to 0.79 for knowledge-based compensation. Lastly, the test of discriminant validity showed that AVEs for all the variables were greater than the variance shared between a given variable and other variables (i.e., squared correlation). The closest gap was between organizing work and knowledge-based training and development (AVE 0.50 vs. squared correlation 0.42). This finding indicates that variables in our model differ from each other and are distinct constructs.

4.2 Research Model

In general, the results show that knowledge management practices (together with the control variables) could explain 17% of the variance in the market performance of companies. Regarding the control variables, we identified two statistically significant connections. Both number of employees ($B = 0.170$, $p < 0.05$) and industry ($B = 0.112$, $p < 0.05$) had an effect on market performance.

A more detailed inspection of the results provides some managerially interesting learning points. On one hand, the empirical evidence shows that four knowledge management practices were in positive connection with market performance (Fig. 10.2). Two of these, knowledge-friendly supervisory behaviors ($B = 0.176$, $p < 0.05$) and knowledge-based training and development practices ($B = 0.149$, $p < 0.05$), showcased statistically significant connections with market performance, whereas learning mechanisms ($B = 0.137$, $p < 0.10$) and IT practices ($B = 0.108$, $p < 0.10$) had a slightly less significant yet positive connection. Nevertheless, it could be stated that all the four practices mentioned above play a role in the performance of the organization.

On the other hand, the effect of organizing work to market performance was also statistically significant ($B = -0.174$, $p < 0.05$). However, contrary to the theoretical point of departure and our assumptions, the effect was found to be negative.

Finally, the remaining five knowledge management practices had insignificant (n.s.) impacts on market performance. Thus, based on our study, strategic management of knowledge ($B = 0.039$, n.s.), knowledge protection ($B = -0.033$, n.s.), knowledge-based recruiting practices ($B = -0.065$, n.s.), knowledge-based

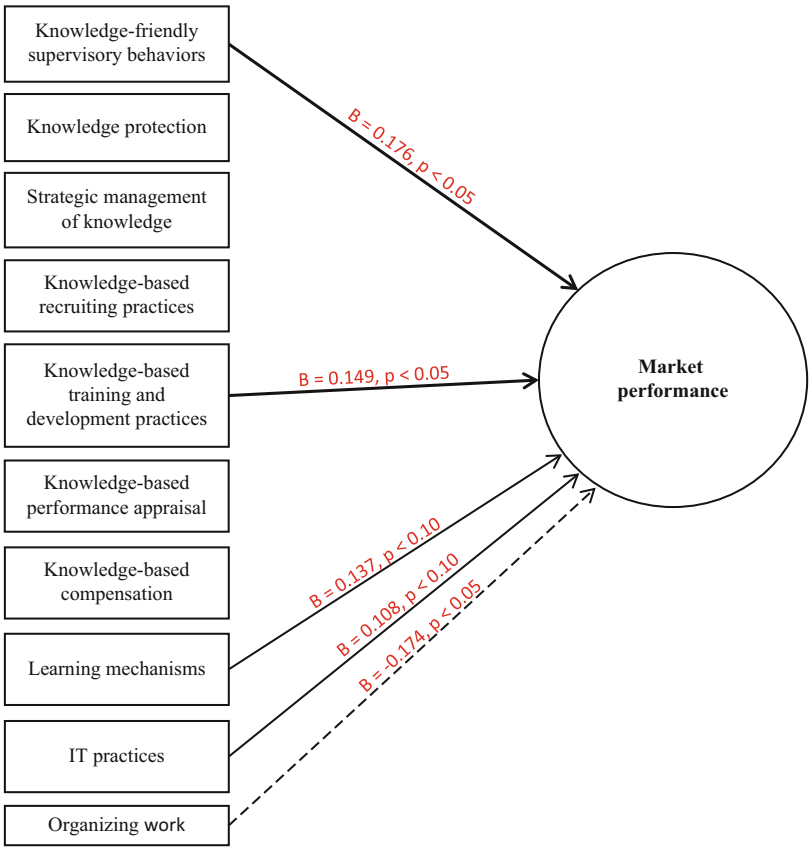

Fig. 10.2 Results of the study. Notes: A thick continuous line highlights a statistically significant ($p < 0.05$) positive (+) connection; a thin continuous line denotes a statistically moderate ($p < 0.10$) positive (+) connection; a dashed line highlights a statistically significant ($p < 0.05$) negative (−) connection

compensation ($B = 0.069$, n.s.), and knowledge-based performance appraisals ($B = -0.035$, n.s.) are ineffective means to improve the firm's market performance (see Fig. 10.2).

The results will be discussed in detail in the following section.

5 Discussion and Conclusions

This chapter examined the impact of knowledge management practices on market performance of Finnish companies. We found that knowledge-friendly supervisory behaviors and knowledge-based training and development practices had a significant positive influence on market performance. On the flipside of the coin, the

impact of organizing work seemed to be significant but negative, which went against our assumptions.

Knowledge-friendly supervisory behavior was highlighted as one of the most impactful means to support market performance. As the extant research has discussed, good leaders set examples and inspire the rest of the organization to act upon and behave in a manner that supports the knowledge management agenda (Holsapple and Singh 2001); at the same time, they should also take the wheel and primary ownership of the entire knowledge management initiative (DeTienne et al. 2004). Supervisory work is a critical function in a company, as leaders can create value by coordinating knowledge integration within a firm (Grant 1996). The findings of this chapter add weight to earlier similar contributions that have pointed out a connection between supervisory work and firm performance (Birasnav 2014; Sarin and McDermott 2003; Singh 2008).

Knowledge-based training and development emerged as another knowledge management practice that had a significant positive connection with market performance of companies. From the knowledge management practice point-of-view, management's key task is to identify the training and development needs of their staff and facilitate training accordingly (Senge 1994). Training and development provide the needed boost for market performance of a company as it adds firm-specificity to the company's knowledge base—something that is very difficult to achieve directly from the labor market. Publicly available courses and seminars are unlikely to create competitive advantage since rival companies also have access to them, but a combination of such external knowledge input with already existing firm-specific knowledge provides a golden opportunity to create new unique knowledge (Nonaka and Takeuchi 1995), which accelerates innovation and organizational renewal and helps the focal organization to outcompete the rivals (Grant 1996; Nahapiet and Ghoshal 1998; Von Krogh et al. 2001; Zack 1999). Also, employees who receive up-to-date knowledge and skills are likely to innovate and perform better than those who rely on an outdated and maybe obsolete knowledge toolkit (Noe 2010).

The apparent significant negative effect that organizing work had on the market performance of companies was unexpected, even though there is some background knowledge provided by Inkinen et al. (2015) on the inability of Finnish companies to support their innovation performance through organizing work. In this study, organizing work was operationalized as important organizing aspects that support different aspects of firm performance: employee empowerment and involvement in decision-making (Davenport and Prusak 1998; Pfeffer 1998), facilitation of informal and face-to-face interaction between organizational members (Youndt and Snell 2004), and utilization of cross-functional teams (Grant 1996; Nonaka and Takeuchi 1995) and expert communities (Brown and Duguid 2001; Mohrman et al. 2002; Wenger et al. 2002). According to the empirical evidence established in this study, it seems that those organizing approaches do not directly influence market performance of companies. Having said that, organizing work could generate positive outcomes in other organizational aspects, such as employee commitment,

employee retention, job satisfaction, and work well-being, which were not taken into account in this chapter.

Two further knowledge management practices, learning mechanisms and IT practices, had a positive but only marginally significant impact on the market performance of Finnish companies. On one hand, these findings suggest that some companies may improve their competitive position through, for instance, facilitating learning by doing (Hatch and Dyer 2004) and efficient utilization of IT functionalities (Pavlou and El Sawy 2006). On the other hand, the benefits of both these knowledge management practices are well-acknowledged in the business community and are therefore regarded more like basic competences than efficient ways to differentiate from rivals.

While the other five knowledge management practices were found to have no significant impact on the market performance of companies, this study cannot singlehandedly make such a judgment that impactful knowledge management consists only of those three highlighted knowledge management practices (plus those two that had a marginal impact). The findings on insignificant relationships could be due to the selected research design that simultaneously examined the direct effects of ten knowledge management practices over marker performance of companies. That sort of design might sometimes produce perplexing results; for example, the potential interactional joint effects of knowledge management practices on firm performance indicators might be left uncovered.

All in all, this study provided empirical evidence on the economic benefits of knowledge management utilization. It highlighted three different knowledge management practices identified as significant contributors to competitive advantage or disadvantage. Next, we discuss the managerial learning points in light of the results attained.

5.1 Managerial Implications

The findings of this chapter produced some managerially intriguing learning points. First, effective knowledge management requires managers who lead by example and inspire the rest of the organization to embark on the knowledge management journey. In more detail, good leaders encourage employees to question the prevailing knowledge and allow mistakes as they are good learning opportunities. They also emphasize the importance of openness, equality, and knowledge and idea sharing, and they show their appreciation by taking the new ideas and knowledge into account in decision-making.

Second, staff training and development are key human resource management practices that can be used to create competitive advantage. This study indicates that it is not enough to just recruit the right talent from the labor market; rather, continuous employee training and development are required to keep the company's knowledge base updated. This is a vital element of creating competitive advantage. Managers should carefully select the training and development needs based on discussions with employees and allocate the devoted resources analytically. Not all

training is equally good training: an effective knowledge combination can be achieved in a state of knowledge complementarity. If training and development are targeted only to those areas that are already a company's strong suit, then there is a risk of getting stuck in a unidimensional knowledge base, wherein the knowledge and views of organizational members are too homogeneous.

Third, the results of this chapter indicate that not all the studied knowledge management practices are equally impactful approaches to create competitive advantage. Instead, today's managers have a challenging task to select and implement the right ones to secure their companies' competitive positions. We encourage managers to revise their own behavior and employee training and development needs as the first steps towards the ultimate goal of knowledge management practice-based competitive advantage.

5.2 Limitations and Future Outlook

Despite some interesting results and managerial contributions, this chapter also has its limitations. First, we examined only the direct relationships between ten independent variables (knowledge management practices) and the single dependent variable (market performance). Future studies should use alternative approaches to confirm if our findings can be generalized. Such different approaches could include limiting the number of knowledge management practices, using different mediator and moderator models, and selecting different dependent variables. Regarding the dependent variable, we could have picked for instance job satisfaction, work well-being, or employee commitment, which could have altered the results.

Second, knowledge-based competitive advantage can be achieved when a company has access to the right knowledge resources and has the needed competences to develop and utilize knowledge (Grant 1996; Kogut and Zander 1992; Spender 1996). If companies are lacking either resources or competences, they are not likely to gain knowledge-based competitive edge; thus, future studies should incorporate knowledge resources (e.g., intellectual capital) in their knowledge management research models to increase understanding of the optimal balance of key resources and capabilities to create knowledge-based competitive advantage.

Third, we utilized data that was collected from Finnish companies with more than 100 employees. This is a very specific sample as it represents a country that is highly developed and excludes all the micro- and small-sized companies. Future studies should replicate our research model or conduct similar studies in other countries to make cross-country comparisons and discover if some of our findings were country-specific.

Appendix Measurement Items

Concept	Item
Market performance	Net sales growth
	Profitability
	Market share
Knowledge-friendly supervisory behaviors	Supervisors encourage employees to share knowledge at the workplace
	Supervisors encourage employees to question existing knowledge
	Supervisors allow employees to make mistakes, and they see mistakes as learning opportunities
	Supervisors value employees' ideas and viewpoints and take them into account
	Supervisors promote equal discussion in the workplace
	Supervisors share knowledge in an open and equal manner
	Supervisors continuously update their own knowledge
Knowledge protection	Our company's strategic knowledge is protected from those stakeholders to whom it is not intended
	If necessary, our company uses patents, agreements, legislation and other formal means to protect its strategic knowledge
	If necessary, our company uses confidentiality, employee guidance and other informal means to protect its strategic knowledge
Strategic management of knowledge	Our company strategy is formulated and updated based on company knowledge and competences
	Our company strategy addresses the development of knowledge and competences
	Our company systematically compares its strategic knowledge and competence to that of its competitors
	Our knowledge and competence management strategy is communicated to employees clearly and comprehensively
	In our company, the responsibility for strategic knowledge management has been clearly assigned to a specific person
Knowledge-based recruiting	When recruiting, we pay special attention to relevant expertise
	When recruiting, we pay special attention to learning and development ability
	When recruiting, we evaluate the candidates' ability to collaborate and work in various networks
Knowledge-based training and development	We offer our employees opportunities to deepen and expand their expertise
	We offer training that provides employees with up-to-date knowledge
	Our employees have an opportunity to develop their competence through training tailored to their specific needs

(continued)

Knowledge-based performance appraisal	Competence development needs of employees are discussed with them regularly
	The sharing of knowledge is one of our criteria for work performance assessment
	The creation of new knowledge is one of our criteria for work performance assessment
	The ability to apply knowledge acquired from others is one of our criteria for work performance assessment
Knowledge-based compensation	Our company rewards employees for sharing knowledge
	Our company rewards employees for creating new knowledge
	Our company rewards employees for applying knowledge
Learning mechanisms	Our company transfers knowledge from experienced to inexperienced employees through mentoring, apprenticeship and job orientation, for example
	Our company systematically collects best practices and lessons learned
	Our company makes systematic use of best practices and lessons learned
IT practices	Our company uses information technology to enable efficient information search and discovery
	Our company uses information technology in internal communication throughout the organisation
	Our company uses information technology to communicate with external stakeholders
	Our company uses information technology to analyse knowledge in order to make better decisions
	Our company uses information technology to collect business knowledge related to its competitors, customers and operating environment, for example
	Our company uses information technology to develop new products and services with external stakeholders
Organizing work	Our employees have an opportunity to participate in decision-making in the company
	In our company, work duties are defined in a manner that allows for independent decision-making
	We enable informal interaction between members of our organization
	Our company organises face-to-face meetings when necessary
	When necessary, we use working groups with members who possess skills and expertise in a variety of fields
	When needed, our company makes use of various expert communities

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Outsourcing and Business Networks in Top Southeastern European Banks: The Quest for Competitive Advantage

Luminiţa Nicolescu and Irina-Eugenia Iamandi

Abstract

The present chapter aims to examine the role that outsourcing and business networks play for top banks in Southeastern Europe (SEE). From a theoretical perspective, the first part of the chapter briefly examines the concepts of outsourcing and business networks, as well as their application in the banking industry, in an era of continuously changing technologies. The next section is dedicated to the banking sector in SEE, in order to identify the main characteristics that lead to competitive advantages through outsourcing and business networks. The third section provides an empirical analysis aimed at identifying whether or not SEE banks use these business processes in their daily activities, what their main reasons for applying these processes are, and what primary forms of inter-organizational collaboration are practiced in the banking system. Based on a set of cross-national empirical cases of top SEE banks, the chapter finally proposes a methodological framework for analyzing outsourcing and business networks in the respective industry, as well as some conclusions about enhancing the competitive advantages of the explored companies.

1 Introduction

In a digitalized era, where information and technology make the difference between companies operating at national and international level, consolidating this competitive advantage is one of the most critical corporate challenges. Two relevant solutions that companies have found in this regard are specialization and interconnectedness, which enable companies to better focus on their specific

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_11

capabilities and structured business partnerships. However, when different companies and partners are involved in the management of business operations, one question that arises regards the increase or decrease of competitiveness. Taking the influence of the industrial sector into account as well, one point to investigate is the analysis of strategic advantages induced by outsourcing and business networks.

Due to the relative scarceness of studies investigating both outsourcing and business networks in the banking system, we focus on exploring these two concepts in top Southeastern European (SEE) banks by considering their contribution to enhancing corporate competitiveness. There are three key aspects to this argument. Firstly, outsourcing and business networks are considered because of their key role in business specialization and consolidation, which lead to competitive advantages through cost reduction, access to expertise and shared knowledge, and a focus on high efficiency activities. Secondly, we selected the banking industry due to its regional development potential and because it concentrates on services, customer relationships, and information technology, which are usually closely associated with outsourcing and business networks. Thirdly, we were interested in the Southeastern European region, because of its increasing capacity for business growth and the progress of knowledge management in top companies.

Assuming these research interests, the chapter is structured as follows: Sect. 2 deals with both the conceptual developments and the practical challenges of outsourcing and business networks in general, and in the banking industry, in particular; Sect. 3 briefly outlines some empirical evidence regarding the role of outsourcing and business networks in Southeastern European banks on a corporate specialization-diversification continuum that is aimed at increasing their competitive advantages; Sect. 4 presents the detailed empirical analysis conducted for the top 30 SEE banks, focusing on how they strategically develop and apply the two business concepts according to a purpose-implementation-results line of investigation (this part is connected with the appendix listed at the end of the chapter, and it also includes the proposal of a methodological framework); the *final part* is dedicated to conclusions regarding the inter-collaborative business relations in the SEE banking sector.

2 Outsourcing and Business Networks: In General and in the Banking Industry

In industry research, the outsourcing and business network practices of companies are scrutinized in tight connection with the external environment, as an open system, and the ability of firms to generate and maintain business relationships is considered one of their main competencies (Håkansson and Snehota 1995; Ritter et al. 2004), highly influenced by the internal network of organizational strategies, relations, and synergies (Ritter et al. 2004). According to Mazzola and Perrone (2013), the reasons for entering into inter-organizational relationships—including outsourcing and strategic networks—involve achieving operational efficiency and

consolidating knowledge and organizational learning for business performance (Chung et al. 2015), as well as gaining access to the global market.

Outsourcing refers to companies transferring some of their business operations to outside suppliers or entities because of cost savings, a focus on distinctive capabilities, competitiveness, or access to high technology. Outsourcing is associated with business specialization, as corporations prefer to keep only those activities for which they have a higher efficiency in-house. Some of the factors that influence outsourcing choices and success are the following: cost reduction and efficiency, better service quality and operational efficiency, process improvement and standardization, risk management, customer satisfaction, access to various resources, added value, and more (Gaspareniene and Vasauskaite 2014). Appreciated because of its advantages, which are mainly based on increasing productivity and making better use of resources, outsourcing may also come with specific disadvantages, such as time spent on legal issues and operational delays, confidentiality problems, or communication breakdowns between business partners. Originally related to production processes and organizations, outsourcing is now also applicable to the service sector (Investopedia 2017).

In terms of outsourcing within the banking industry, Cantoni and Rossignoli (2013, in Spagnoletti 2013) correlate outsourcing with "smart sourcing," a practice in which in-house solutions are coherently combined with out-of-house solutions in order to increase innovation and obtain competitive advantages. In addition to the focus on developing core capabilities as a profitable business strategy, Cantoni and Rossignoli (2013) claim that the smart-sourcing model is also based on higher responsibility and trust between business partners. Using the example of Italian banks, the authors identify a link between the size of the bank, its inclusion in a larger banking or financial group, and its tendency to outsource the IT&C. Cantoni and Rossignoli (2013) conclude that, in the banking industry, IT&C outsourcing is particularly appropriate when information- and technology-related costs represent a consistent part of the total corporate assets.

Based on their empirical analysis, Delen et al. (2016) identify the following factors as potentially contributing to success in IT outsourcing: proper agreement planning, demand management, and internal communication within the provider organisation. Søderberg et al. (2013) highlight the role of strategic partnerships in IT outsourcing, and they list commitment of the provider, mutual trust, and cross-cultural understanding as the fundamentals of global IT&C outsourcing projects. Dhillon et al. (2017) acknowledge that information security is critical for IT outsourcing, and they suggest that it be based on the capabilities of the outsourcing provider, as well as on the confidence between partners regarding the adequate use of proprietary information. For complex business endeavours, IT outsourcing is also associated with multisourcing approaches (Herz et al. 2013) for dealing with suppliers from both inside and outside the organization or business network.

At the same time, knowledge-based transaction costs are one of the factors deeply hindering the implementation of IT&C outsourcing. These challenges derive from the risk of the contractual partner taking over the knowledge or the difficulty of transferring and properly integrating complex knowledge (Jain and Thietart 2013).

Knowledge transfer and assimilation also affect knowledge utilization in the case of outsourcers (Teo and Bhattacherjee 2014). The benefits and dynamics of knowledge sharing and competitive sharing should be considered against the risks of transferring the knowledge-work processes to a third party.

Initially considered just a way of reducing technology-related costs and workload, IT&C outsourcing in the banking industry has currently turned into a standard way of applying digital transformation in times of constant changes. By partnering with technological leaders and innovators through outsourcing agreements, banks are searching for better adaptation to market or legal requirements, increased flexibility, and further prediction of customers' needs, as well as inclusion of digital technologies for better business performance. As a consequence, the outsourcing agreements between banks and external providers now cover all areas of integrated information-technology, business, management, and communication solutions. According to Banking Technology (2015), the gradual commitment of banks to opt for IT&C outsourcing is perceived as the following four-stage evolutionary road, taking into account the investment level and the strategic importance of the outsourced activities: "IT Support"—"Run the Bank"—"Change the Bank"—"Digital Transformation".

A *business network* generally implies a sequence of companies that work together to achieve specific goals; these companies may be legally bonded through ownership relations or could be coordinated only by one or a few of them to achieve better efficiency in their operations. Traditionally associated with industrial markets (Håkansson and Snehota 1995), business networks have now been intimately altered by the rapid growth of information technology and communication, and they apply to other types of markets, such as services markets, as well.

Håkansson and Snehota (1995, pp. 12–18) emphasize two main types of relations that support interaction between businesses: interdependencies and connectedness. Concerning the interdependencies of business partners, the authors mainly consider the impact of technology and technical know-how, competence, and knowledge, social bonds and culture sharing, administrative and operational procedures and norms, and legal ties (Håkansson and Snehota 1995, pp. 13–17). When analyzing the legal background, the degree of ownership and control, different cooperation agreements (e.g., franchising) or acquisition formalities are the most common forms where the interaction between business partners may be noted. On the other hand, connectedness relates to business relationships that depend on each other (like, for example, trust building, network of clients and providers, links with financial institutions and non-governmental organizations) and that may influence the organizational performance in the medium- and long-term. Formalized connectedness in business relationships generates the organizational structure usually called "network," which is managed by a "hub firm" (Ritter et al. 2004, p. 177) and characterized by the "chain effect" (Håkansson and Snehota 1995, p. 20). From a structural perspective, the effectiveness of the interorganizational networks is deeply influenced by the status of the coordinator when selecting the business partners and by the reputation of the members when a higher functional diversity is needed inside the network (Chandler et al. 2013). For

the research purpose of the present study, all types of networks are taken into account, irrespective of their degree of formalism and dependency regarding the liaisons between partners.

Because a business network is made by different (more) partners, with their similarities and discrepancies continuously evolving over time, change is also reflected in the management of this type of organizational setting. Change in business networks could be due to strategy (developing capabilities), efficiency (new and/or better use of resources), or technological needs (Håkansson and Snehota 1995, p. 278). According to McClelland (2017), current digital technologies and networks are transforming business models and processes, while the changing business environment will become both cooperative (to consolidate collaboration between partners) and competitive (to enhance the position of the most adaptive and best-performing companies). McClelland (2017) considers that firms could opt to transform their business models, processes, and human resources' practices by implementing digitalised networks and develop business partnerships.

In the case of banking business networks based on ownership and control relations inside financial groups, information may be disseminated both from a central coordinator (hub company) and from different local business units (subsidiaries or affiliates), while IT&C development contributes to its rapid spread within the entire group. The efficiency of the banking network is influenced by its organizational structure (how members relate between themselves and with the central coordinator) when dealing with the issues of costs and risks (Silva et al. 2016). The in-group business network also helps banks to consolidate their social capital and reputation, as good and responsible business practices may be simultaneously "borrowed" by more companies of the group. The complexity of banking networks is partially due to inter-group intricacies, as large multinational or international financial groups may (sometimes) cooperate in order to introduce or promote new technologies in the industry (based on their own capabilities or through their outsourcing partners).

The topic of banking networks is also associated with interbank connectedness (not only intra-group linkages), and there are empirical studies (e.g., Affinito and Pozzolo 2017; Minoiu and Reyes 2013) that found relative decreases in the banks' interconnectedness during the global financial crisis, as a reaction to the instability of the market. Moreover, during periods of financial crisis, trust consolidation plays a fundamental role in determining the proper interactions within banking networks; strong contact with the central coordinator, the trustworthiness of each bank member, and its role in the group's decision-making process, as well as the background stability, contribute to trust-building in banking networks (Bülbül 2013).

When analyzing the key economic concept of resource allocation, outsourcing and business networks cover the entire span of specialization-generalization tendencies, while business relationships between partners are further deepened or extended. From a rather theoretical perspective, Ritter et al. (2004, p. 181) make the connection between business networks and outsourcing by highlighting that the integrated management of a firm's relationships transforms its previously

intra-organizational connections (in business networks) into inter-organizational interactions (through outsourcing). In addition, Ritter et al. (2004, p. 181) consider that a "networked firm" needs the ability to manage the development process both at unit and incorporated levels in order to become relationship-oriented.

3 Outsourcing and Business Networks for Competitive Advantages in the SEE Banking Sector

According to the most recent report issued by SeeNews (2016), the IT and outsourcing sectors are highly developed in Southeastern European (SEE) countries, and Romania and Bulgaria, especially, are considered top global destinations for outsourcing the IT services (e.g., development of websites and software) of international investors and multinational companies. Moreover, the main outsourcers in Romania are now competing based on their capabilities and cost effectiveness, and the main areas where they provide highly specialized services and qualified human resources (Văduva and Neagoie 2016) include the outsourcing of business processes, research programs, IT&C integrated solutions, contact centers, and customer-related operations (IDG Connect 2015).

When it comes to outsourcing in the SEE banking sector, efficiently managing business processes and human resources' applications are top priorities for the banks, which search for a thoroughly specialized external IT workforce and services. Unlike banking and financial institutions from other parts of Europe that try to find price-competitive partners in different countries for outsourcing their IT&C activities, the banks in SEE usually outsource their hi-tech services to the highly competitive firms that they find in the same country or region, due to the good availability of service providers. This peculiarity of the SEE banking system significantly contributes to an increase in competitiveness for the banks incorporated in this area, while the main competitive advantages are low prices and customization of services that they are able to offer to clients.

A study conducted by Smojver and Blažeković (2015) regarding the outsourcing of IT systems in Croatian banks from 2005 to 2012 highlights the reasons and risks related to externalizing specific activities for the investigated companies. In terms of risks, the authors mention the existence of national regulations (in line with other SEE countries), citing the obligation of credit institutions to have strong systems in force for managing risks related to outsourcing; however, problems associated with the security and protection of personal data, loss of operational control, dependency on IT service providers, technical hindrances, social or cultural issues, and more, sometimes even leading to a decrease in competitive advantages, also appear in the relationships between banks and their outsourcers. In terms of the reasons, the research of Smojver and Blažeković (2015, p. 265) found that a propensity of Croatian banks engage in outsourcing due to their need to use available corporate resources for other projects where they have more capabilities, a lack of necessary internal resources or expertise, and requests to reconfigure existing business processes.

Furthermore, Smojver and Blažeković (2015, p. 260) suggest that outsourcing in banks is influenced by the strategic decisions of the foreign banking groups that own and control the majority of the top banks in Croatia, since they usually decide to outsource the same activities for all the subsidiaries of the group. This finding is similar to other countries in SEE (as the coming empirical analysis demonstrates for large banking and financial groups like Erste, Raiffeisen, Societe Generale, and UniCredit), and the connection between outsourcing and business networks is done through standardized practices based on knowledge sharing at the group level. Along these lines, a simultaneous analysis of outsourcing and business networks for the SEE banks becomes even more relevant in the context of debates regarding whether information sharing supports or hinders competitive advantages.

Frederick (2014) explores the business networks in the SEE banks from the perspective of the challenges that appeared in the governance of the international banking groups and their subsidiaries after the impact of the financial crisis. The study aggregates the extensive debates of experts coordinated by the International Finance Corporation (IFC, in 2010 and 2014), and, although from a rather regulatory perspective, it provides insights regarding the importance of communication, adaptive coordination, and knowledge sharing at the level of the banking groups. Some recommendations outlined in the document for properly governing the business networks of international banks also acting in SEE countries refer to the application of uniform policies for the entire group, adaptation to local conditions specific to each subsidiary, and acknowledgement of risk management and stability. The common objectives inside the business networks are put into practice by implementing uniform and coherent policies for the entire group, but the peculiarities of local subsidiaries (e.g., ownership structures, levels of control, stakeholders' management, etc.) should be taken into account when designing the strategies of the local banks; in this way, the risk of "crisis contagion" inside the entire banking group may be diminished during turbulent times. On the other hand, the negative effects inside the banking network could be reduced if each company of the group simultaneously deals with the issues of risk and stability as more relevant than simply achieving short-term business objectives (Frederick 2014).

Implementing outsourcing and business networks in SEE banks from a strategic perspective, with their corresponding advantages and disadvantages, may induce both direct (efficiency related) and indirect (risk avoidance) competitive advantages.

4 Empirical Analysis on Outsourcing and Business Networks in SEE Banks

Outsourcing and business networks in the banking industry in Southeastern Europe has not been well studied from an empirical perspective. However, dealing with this subject in a more applied way could lead to pragmatic considerations and to a higher strategic rationale. Therefore, this section focuses on specific situations in the SEE region in order to outline a common framework and a set of conclusions

dedicated to increasing the competitiveness potential of applying outsourcing and business networks in banks.

4.1 Data and Methodology

In order to analyze how outsourcing and business networks are put into practice in the SEE banking industry, the top 30 banks in the region were selected, according to SeeNews (2016, p. 14) and based on the value of their total assets (in millions of EUR) at the end of the 2015 financial year (see Appendix Investigated SEE banks). The distribution of the investigated companies is as follows: six banks incorporated in Croatia (HR), eight in Romania (RO), seven in Bulgaria (BG), six in Slovenia (SI), and three in Serbia (SB). Only the first 30 out of 100 banks in SEE were included in the analysis. While the SeeNews (2016) ranking also contains banking institutions from Albania, Bosnia and Herzegovina, Macedonia, Moldova and Montenegro, these were situated lower in the hierarchy. We conducted a comparative cross-national study in order to highlight some common features related to the development of outsourcing and business networks in the top SEE banks.

Because there is no compiled source of information with details about outsourcing and business network agreements in the banking industry in the SEE region, each company was individually searched for on the Internet (in English), and only public sources (such as corporate websites, official reports, press releases, online news and postings, etc.) were used. When dealing with the outsourcing analysis for the top 30 SEE banks, various information was compiled from the following publicly available sources: Abanka (2016b, c), Asseco South Eastern Europe (2010, 2012), Banca Intesa (2014), Bankart (2014), Banking Technology (2017), BCR (2015), Bulpros (2017), Combis (2017), Comunicatii mobile (2013), Data Solutions (2015), Euronet Worldwide (2003), IDG Connect (2015), Invest-Bulgaria Agency (2011), Market Watch (2008), Outsourcing Today (2015), SeeNews (2016), Sirma Solutions (2017), SKB (2005), Sofgen (2012), S&T (2014, 2017), TechnoLogica (2013), Tieto (2016), TotalSoft (2017b), and UniCredit Bank (2017a). For example, when investigating the case of outsourcing for Banca Comerciala Romana SA, relevant information was found in the following sources: BCR (2015) report–consolidated and separate financial statements (about quarterly monitoring of outsourced activities, BCR Payment Services for centralized processing of payments, debt instruments and accounts, workshops for a new risk assessment methodology, and management of customer relationships delivered by specialized companies); Comunicatii mobile (2013) e-news (about IT&C local service support provided at the national level by Romtelecom); S&T (2014, 2017) "Banking" and "Financial Services" sections of the corporate websites (about IT&C systems, solutions, and tools); TotalSoft (2017b) "Clients portfolio" section of the corporate website (about software business solutions and management systems for human resources and salaries).

In complementing the analysis with the business networks part for the same top 30 SEE banks, information was extracted and processed from the following

sources: Abanka (2016a, c), Addiko Bank (2017), Alpha Bank (2017), Banca Intesa (2017), BCR (2015, 2017), BRD – Groupe Societe Generale (2017a), CEC Bank (2017), DSK Bank (2010), Erste Bank (2017), Erste Group (2017), Euronet Worldwide (2003), First Investment Bank (2017), ING Group (2017), Komercijalna Banka (2017a, b), NLB Group (2017), Nova KBM (2015, 2016), Postbank (2016), Privredna Banka Zagreb (2017), Raiffeisen Bank (2017a, b), Raiffeisenbank Austria (2017), Raiffeisenbank (Bulgaria) EAD (2017), SeeNews (2016), SID Banka (2017), SKB Banka d.d. (2017), Societe Generale (2017), Societe Generale Expressbank (2016), Societe Generale – Splitska Banka (2017), UniCredit Bank (2017a, b), UniCredit Bulbank (2017), United Bulgarian Bank (2015), and Zagrebacka Banka (2017). For example, for specific details about the business network of Banca Comerciala Romana SA, information was extracted from BCR (2015) report and financial statements, "BCR Group" section of the BCR (2017) corporate website, and the "About us" section of the Erste Group (2017) site.

The situation presented and analyzed in the following lines is not exhaustive, but it does reflect some relevant examples freely available in online sources (secondary data), when specific searches were conducted according to the research interests. Taking into account the rather descriptive nature of the study, a qualitative analysis was developed in order to identify the main directions for supporting and implementing outsourcing and business networks in top SEE banks for reasons relating to competitive advantages. Each case of outsourcing and business networks are presented distinctively in this study, although they reflect the same approach, meaning the *existence* (whether or not specific examples were found on the Internet), *purpose* (why the bank is willing to be part of such an agreement or contractual relationship), *implementation* (how the respective relationship is put into practice), and *results* (what the main positive consequences are at corporate level) of the corresponding business agreements. The aggregated analysis was conducted by the authors, as well as the development of the typology of categories in which the investigated issues were included. The detailed results for each investigated company and more methodological insights may be provided by the authors at specific request.

4.2 Achieved Results, Interpretation, and Short Case Studies

The analysis of outsourcing for the top 30 SEE banks was developed by using varied online public sources. When investigating the reasons for the top 30 SEE banks to enter into an outsourcing agreement with an external provider, having access to IT&C specialized services and solutions (66.7%), support for their daily banking operations (46.7%) and the need to comply with the operational needs of their multi-channel organizations (23.3%) appear to be the main factors. At the opposite end of the spectrum, the examined companies rarely consider the implementation of environmentally friendly solutions and lower exposure to risks (with only one piece of empirical evidence noting each of them) when deciding to enter

Fig. 11.1 Purposes for outsourcing in investigated SEE banks (compiled by the authors)

into outsourcing agreements. Figure 11.1 depicts the results regarding outsourcing purposes.

We may deduce that a propensity of the leading banks in the region choose to outsource activities that are deeply connected to professional and focused information technology products and services in order to comply with the requirements of a very competitive market in a continuously changing business environment, where the clients usually select the bank they want to work with based on the efficiency, rapidity, and flexibility of the received solutions. Examples for why banks might outsource IT&C services and solutions include the needs of the banks to have access to the following: consultation and maintenance of IT systems, software development and operational support, project management (S&T 2014), rapid and large data processing, service-oriented architectures customized for specific banking solutions, re-engineering or upgrading existing IT banking systems, electronic and portable connections between clients and banks, secure access for users to access individual banking platforms/components (S&T 2014), multivariate IT solutions for integrating different banking products and services (Asseco SEE 2010), and more. Moreover, in their daily banking operations, banks may appeal to outsourcers for the following: efficient (electronic) payment processing, electronic support for main banking activities, services offered to customers through contact centers, electronic planning and budgeting processes, global coordination and management of customer data, and more. Meeting the requirements of multi-channel banking organizations mainly refers to securing authentication of customers by using multiple devices (personal computers, laptops, mobile phones, etc.), mobile banking, next-generation banking products for identifying and responding to customers' needs in a proactive way, and more.

The analysis of the implementation of outsourcing agreements between banks and external providers takes into account the type of outsourcer and the services

they offer their clients. According to the investigated cases, the top 30 SEE banks frequently collaborate with multinational, regional, and international companies (e.g., Asseco SEE, Bulpros, Combis, Infinite Solutions, Sirma Solutions, Sofica Group—TeleTech, S&T Group, TBI Info, TechnoLogica, and TotalSoft) that specialize in providing technological (43%), banking (41%), and business (16%) support based on the development of IT and professional services. The technological support is about delivering IT&C system, hardware, and software solutions, as well as customized service. In the area of dedicated banking solutions, the outsourcers provide IT&C banking products, services and applications, business and HR software solutions and services, contact centers and hosting services, full management of ATM networks and POS terminals, payment and digital payment solutions, and more. The business support includes customized business applications, services, and operational solutions delivered by Google, Xerox, IBM, Accenture, etc., service hubs in main Romanian cities managed by international banking groups, specialized audit delivered by external experts, management of non-core services (e.g., workshops), and customer relationships provided by third parties.

In direct correlation with the identified purposes for outsourcing, the achieved results contribute to the competitiveness of the top SEE banks, which are presented in Fig. 11.2. By entering into outsourcing agreements, the banking organizations benefit from better and more efficient management of technical and operational issues (including economies of scale due to focusing only on core activities), integrated and complete IT&C solutions that contribute to fast market adaptability and technology inclusion within banks, enhanced compliance with customers' expectations and their resultant trust and loyalty, and lower costs, risks, and time spent on non-strategic issues. The common point of all of the positive results identified is the competitive advantages that banks gain by obtaining greater access to information, specialization, and digitalization. Although seldom identified as positive results per se, professionally managing the specialized information and focusing on strategic partnerships are the main competitive advantages recently appreciated by banks in the SEE region. Usually structured for a long period of time, the outsourcing agreements transform the two parties into strategic partners, due to their complementarities in terms of visibility and offered services.

The outsourcing agreements should be also analyzed from the outsourcers' perspective in order to have a comprehensive image of what they offer to their banking clients. The following presents two short cases of Asseco SEE (provider of IT&C services) and TotalSoft (provider of HR and payroll services). As in the case of the 30 SEE banks, publicly available information from their corporate websites was used to determine how the two outsourcers contribute to their clients' competitiveness and knowledge management.

Case Study 1 Asseco South Eastern Europe, part of the Asseco Group, is the largest seller of IT software and services according to its total revenue. It maintains a constant presence in 13 countries, offering comprehensive IT solutions for many economic sectors. For the banking and finance system, Asseco SEE offers

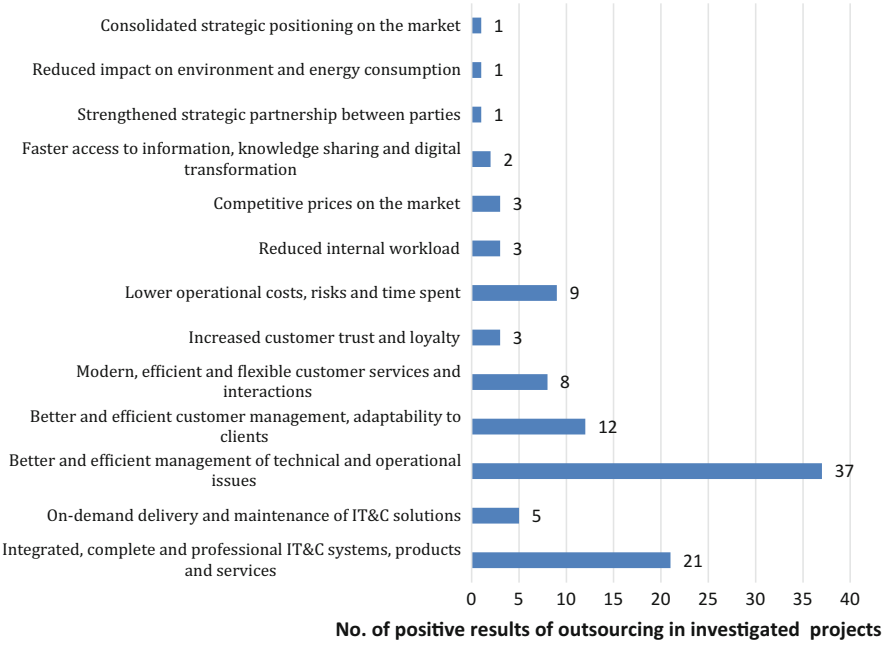

Fig. 11.2 Positive results of outsourcing in investigated SEE banks (compiled by the authors)

multivariate IT solutions for distributing banking services, integrated core banking systems using Oracle and Microsoft platforms, centralized management platforms for different operational processes, complete payment solutions for institutions, maintenance of a very large ATM and POS network, security and risk management solutions, management of regulatory compliance and information, non-stop service and consultancy regarding digital banking, and more. Asseco SEE's integrated IT solutions contribute to the development of their banking clients mainly through better efficiency in business administration, enhanced communication and business relations with customers, and reduced operational costs (Asseco South Eastern Europe 2017).

Case Study 2 TotalSoft is an international provider of business software solutions and global infrastructure. Located in Romania, it operates through its clients in 46 countries in Europe, Asia, Africa, and the Middle East. The banking and financial industries are two of the most important sectors for which TotalSoft develops integrated software solutions. TotalSoft's products(Charisma) aim to manage all types of corporate resources, while the services offered by the company deal with software development on demand, customized technical solutions for security and audit, complete payroll and human resources services, and training in various business areas (e.g., project management, software testing, and thorough business analysis). As presented in the cases related to SEE banks, TotalSoft is

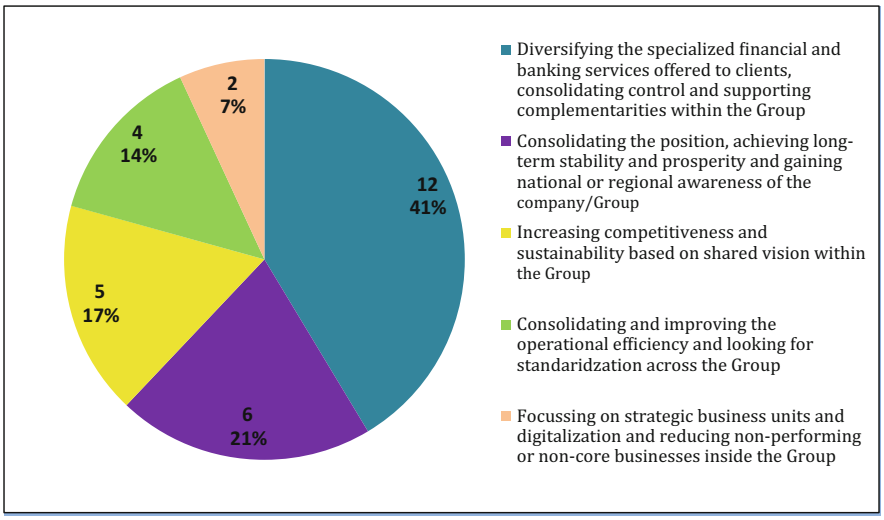

Fig. 11.3 Purposes of business networks in investigated SEE banks (compiled by the authors)

actively involved in HR outsourcing. Among the advantages that TotalSoft claims to offer its clients, increased productivity, improved efficiency, and digital business optimization are mentioned primarily (TotalSoft 2017a).

In their search for competitiveness, major SEE banks not only appeal to outsourcing agreements for more specialized and custom-made services for clients; they also try to consolidate their position at the international level through diversification of services and enhanced competencies inside the business networks of the groups they belong to. For the purpose of this study, the business network does not refer to the system of clients or branches/agencies of the banks, but to the organizational ownership and control relationships that exist between companies and subsidiaries of the same banking group (if applicable).

The purposes identified as fundamental for the SEE banking networks are quantitatively highlighted in Fig. 11.3. Offering different banking and/or financial products (like savings and loans, insurance, leasing, factoring, asset management, and real estate services) for their regional customers through interconnected companies and subsidiaries is one of the main strategies for greater control of the market. Other fundamental reasons for using banking business networks to increase competitive advantages include a stronger and more sustainable presence on the market, as well as developing a rather standardized approach to their business units. Mainly associated with the idea of integrating and (directly or indirectly) controlling more companies or operational units, the business networks in the banking field are currently in the process of reducing or restructuring their non-performing units inside the group (for example, Hypo Alpe-Adria-Bank d.d., now Addiko Bank d.d. in Croatia, which considered the strategic selling of its non-core business entities). The empirical evidence shows that being competitive and efficient is progressively becoming more appreciated than being big and

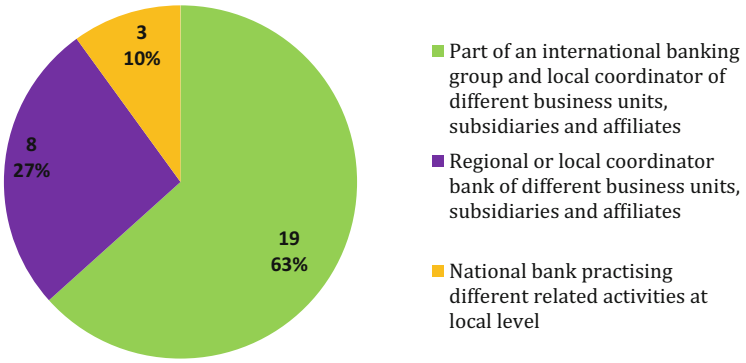

Fig. 11.4 Types of business networks in investigated SEE banks

all-inclusive, even when dealing with the business networks. This shift in approaching existing relationships inside the business networks was induced, decisively, by the technological progress that supports highly efficient and flexible companies.

For the development and implementation of business networks in top SEE banks, a detailed analysis at the corporate level was conducted. Figure 11.4 shows the types of business networks that were identified. The majority of the investigated companies belong to large international banking groups (e.g., Erste, ING, Raiffeisen, Societe Generale, and UniCredit), and, at the regional level, the SEE banks apply the main policies, products, and services of the Group, taking advantage of the created synergies and shared knowledge within the Group. Furthermore, the local banking subsidiary also coordinates and controls different related business units or affiliates that work in connected areas (e.g., leasing, factoring, insurance, asset management, etc.), and it establishes local partnerships and collaboration agreements with other public and private organizations. For example, Zagrebacka Banka d.d. (Croatia) is part of the UniCredit Group (banking and financial entity headquartered in Italy and present in more than 20 countries); in Croatia, Zagrebacka Banka d.d. controls (by direct majority ownership) different banking, leasing, financial, insurance, real estate management, and mutual funds management companies, but it also has associated firms in the areas of pension fund management, advertising and marketing services, and insurance brokerage (UniCredit Bank 2017a, b; Zagrebacka Banka 2017). In this way, the business network of the UniCredit Group in Croatia offers practically all of the main banking- and financial-related products and services to the national clients, registering a strong presence at the local level.

Although to a smaller extent, when the investigated bank is the local coordinator of the group, the banking business network could also be based on a regional-only presence. For example, Nova KBM d.d. in Slovenia is the parent company of the Nova KBM Group, and the Group is formed by nine companies acting in banking, leasing (liquidation), investment management, real estate transactions, electronic

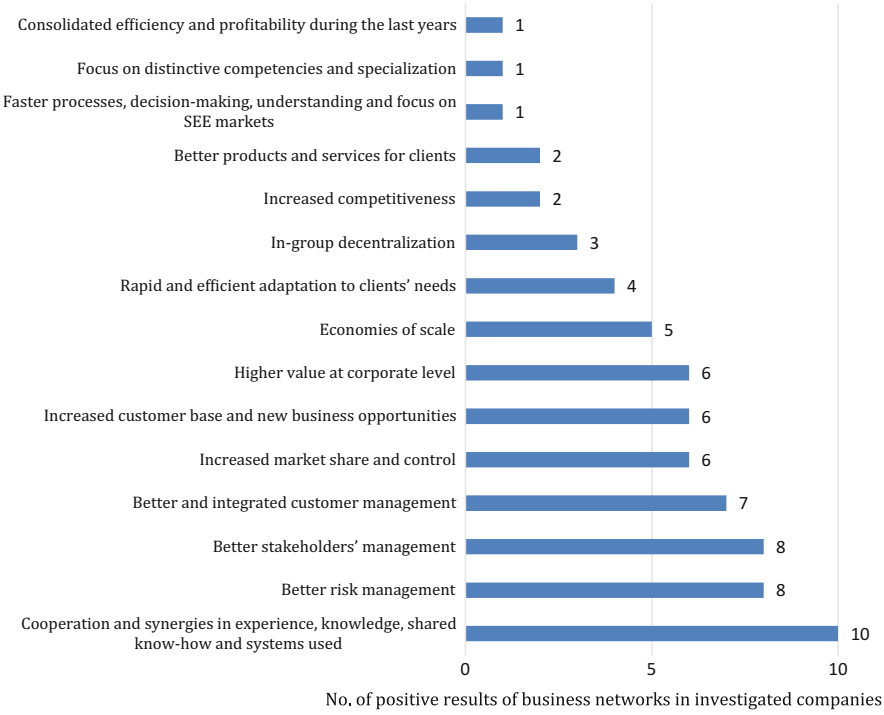

Fig. 11.5 Positive results of business networks in investigated SEE banks

payment solutions and instruments, and property management; Nova KBM owns more than 50% in the Group's companies, which leads to strong coordination among their businesses in Slovenia (Nova KBM 2015, 2016). Finally, only 10% of the top 30 investigated banks in SEE were identified as exclusively national banks that exercise their banking-related activities at a local-only level.

Figure 11.5 synthesizes the positive results that business networks produce at the corporate and group level, as identified in the analysis of the publicly available information for the 30 SEE banks. As in the case of outsourcing agreements, achieving competitive advantages is the main driver for engaging in business networks, but the strategic focus is not on specialization and differentiation (as in the case of outsourcing); instead, it is on consolidation and integration. Advantages like higher cooperation and internal synergies, shared knowledge and know-how, better stakeholders' and risk management, better management of more customers, and increased market share and corporate control are positive results usually associated with the consolidation of business networks in the SEE banking system. In more specific terms, considering the implications for the analyzed banking and financial groups, a more efficient management of higher business opportunities may be identified by taking into account the expansion and depth of the products and services offered to SEE clients. Although less acknowledged than the rest of the

positive results associated with business networks, searching for consolidated efficiency, faster decision-making processes, and distinctive competencies may be also considered for in-group consolidation.

Case Study 3 As a more detailed example of putting into practice a business network in the SEE banking system, the case of *BRD—Groupe Societe Generale* (Romania) is presented, as it was compiled from the available sources (BRD—Groupe Societe Generale 2017a, b, c, d, e, f, g; Societe Generale 2017). BRD-GSG is part of the Societe Generale Group (SG Group), which is one of the largest European financial groups, with operations in 66 countries around the world. The Group specializes in offering banking (retail, corporate, and investment banking at national and international level), financing and insurance, asset management, and securities management. Taking into account the focus of the SG Group on "complementary businesses" and "meeting diverse customers' needs" (Societe Generale 2017), the strategy of the Group is to consolidate its position and business network by diversifying the banking and financial services it offers globally. In Romania, BRD-GSG is formed by six subsidiaries acting in finance-related areas: ALD Automotive (complete operational leasing: BRD—20%, ALD International Gmbh—80%), BRD Asset Management (management of investment funds: BRD—99.97%), BRD Life Insurance (life insurance: BRD—49%, SOGECAP—51%), BRD Finance (diversified financial products and services for the consumer loan market: BRD—49%, SG Consumer Finance—51%), BRD Pension Fund (management of private pension funds: BRD—49%, SOGECAP—51%), and BRD Sogelease (full leasing operations: BRD—99.98%). Based on the experience of the SG Group, the business network of BRD-GSG achieved increased market share and control, in-group consolidation (second largest Romanian bank according to the total assets), and integrated customer management (2.3 million customers).

Both outsourcing and business networks contribute in complementary ways to the competitiveness of the companies entering into these corporate agreements: inter-organizational business connections based on specialization and distinctive competencies (in the case of outsourcing), and intra-organizational business connections based on consolidation and diversification (in the case of business networks). The main challenge but also competitive advantage of the investigated top 30 banks in the SEE region is their capacity to simultaneously manage these types of relationships in order to maintain their position in the market. With only a few exceptions that were due to their relative size (banks acting only at national level), all the examined banks outsource their IT&C related activities to internationally specialized companies in the field and are part of regional or international financial business networks.

4.3 Proposal of a Methodological Framework for Strategic Analysis

The empirical evidence presented above indicates that leading SEE banks achieve their competitive advantages on the market by focusing on two balanced strategies:

1. *Outsourcing for operational issues*: externalizing the non-core activities that could be done more efficiently by a third party; and
2. *Business networks for strategic issues*: incorporating strategic businesses that have proven growth potential for the coming years.

Based on earlier aggregated information, the proposed methodological framework for strategically analyzing outsourcing and business networks includes the following three stages (as depicted in Fig. 11.6):

1. *Planning*: A thorough development and implementation of outsourcing and business networks should begin with establishing the organizational objectives for achieving a specific identity on the market; when dealing with the empirical analysis, we identified the purposes of the two types of business relationships.
2. *Developing*: The implementation of outsourcing and business networks considers the proper selection and good management of (a) the external business partners for the outsourcing contractual agreements, and (b) the internal growth direction for the business network. This second stage of the strategic analysis was highlighted in the study through the implementation details related to the two concepts analyzed in this research.
3. *Assessing*: Finally, the success of the business' endeavours is quantified through the achieved results at both the strategic and the operational level. Identifying these results represents the third part of our analysis both for outsourcing and business networks.

Among the positive results produced by outsourcing and business networks, two main types of benefits may be emphasized for top SEE banks: strategic benefits, which support collaboration, including industry collaboration, for achieving corporate synergies, and operational benefits, which support competition by promoting better or more efficient outputs than their competitors on the market. Some examples of strategic benefits include strengthened partnerships, cooperation in shared knowledge, experience and systems used, increased business opportunities and economies of scale, and more. Moreover, relevant operational benefits include increased operational and technical efficiency, enhanced customer management and loyalty, flexibility and specialization, higher responsiveness, lower prices, better market positioning and control, and more.

Irrespective of the degree of centralization, faster access to information, digital transformation, and more proficient knowledge management are the fundamental competitive advantages obtained by firms (in general, and banks, in particular)

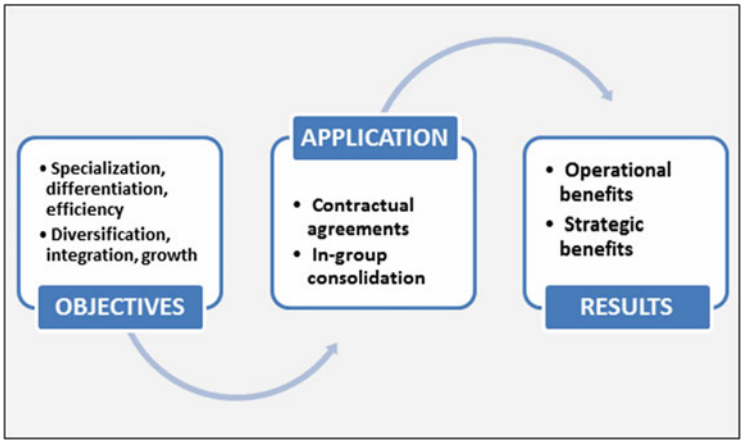

Fig. 11.6 Methodological framework for strategic analysis of outsourcing and business networks (developed by the authors)

through outsourcing and business networks. In the case of outsourcing, the external partners are the ones that have the technical requirements and the ability to process information faster, while in the case of business networks, an aggregated understanding of the market and more rapid decision-making takes place within groups. As a concluding remark for the proposed methodological framework, outsourcing and business networks contribute to the development of competitive advantages and are naturally supported by information sharing and knowledge management. As in the case of continuous training of employees, the focus on improvement of work processes and increased collaboration and contacts for knowledge sharing and value creation are specific to "learning" and "modular" business organizations.

5 Conclusions

The analysis in the present study broadly supports a causal relationship between existence—purpose—implementation—results of outsourcing and business networks. Taking into account the type of SEE companies investigated (top banks), their main strategies are not only related to survival, but specifically to achieving competitive growth in the market as a result of outsourcing activities and efficient management of business networks. Other frequently found outcomes of inter-collaborative business relations in the banking sector deal with counteracting increased competition at global and regional levels, better sharing of resources and risks, entering new markets (if the case), gaining access to new or "disruptive" technologies, and increased responsibility and accountability toward the communities they serve.

Both outsourcing and business networks in SEE banks (but also in general) are supporting the importance of shared knowledge and information inside and outside

business organizations. On the one hand, outsourcing is based on business specialization and core competencies, and the banks need the particular knowledge and experience of their outsourcers; on the other hand, business networks inside banking or financial groups are grounded in internal consolidation, while all component companies benefit, to a greater or lesser extent, from the shared knowledge and generated synergies. In this way, outsourcing and business networks are considered corporate agreements that support the broader area of knowledge management (Teo and Bhattacherjee 2014), and they contribute to the co-creation of value based on shared knowledge, experience, context, and changing business architecture. Through outsourcing and business networks, SEE banks achieve inter- and intra-organizational cooperation, leading them to consolidation of competitive advantages and differentiation—sensitivity, reaction, and efficiency—when compared to their main competitors on the market. One practical confirmation of this reasoning is found in the analysis provided here, where the investigated companies are top SEE banks that (with few exceptions, partially due to lack of information) offer strong evidence for outsourcing and business networks.

Future research could offer more extensive or deeper analysis, mostly based on the methodological framework proposed in this chapter. The extended study may cover a larger number of SEE banks in order to produce a broader picture of the outsourcing and business networks in the area—not only the one generated by the top performers in the field. Moreover, the analysis could be enlarged by considering other types of business networks (for example, long-term partnerships and contractual agreements) and not only those based on ownership and control inside financial groups. In order to deepen the investigation, a quantitative analysis may be also conducted for assessing the value of the business relationships or increase in competitiveness; it could be complemented (if needed) with a more systematic approach to the potential negative effects (loss of control, security issues, coordination difficulties, etc.) of these business relations. However, in order to further develop the analysis, direct data is needed from the investigated companies.

Appendix 1 Investigated SEE Banks (SEENews 2016, p. 14)

No.	Company	Country	Total assets (million EUR, 2015)	Website
1.	Zagrebacka Banka d.d.	HR	13,882	http://www.zaba.hr/home/en
2.	Banca Comerciala Romana SA	RO	13,142	https://www.bcr.ro/en/
3.	BRD—Groupe Societe Generale SA	RO	10,873	https://www.brd.ro/en
4.	Banca Transilvania SA	RO	10,464	https://www.bancatransilvania.ro/en/

(continued)

5.	Privredna Banka Zagreb d.d.	HR	9065	https://www.pbz.hr/en
6.	UniCredit Bulbank AD	BG	8880	https://www.unicreditbulbank.bg/en/
7.	Nova Ljubljanska Banka d.d.	SI	8707	https://www.nlb.si/en
8.	Erste & Steiermarkische Bank d.d.	HR	7727	https://www.erstebank.hr/en/
9.	Raiffeisen Bank SA	RO	6950	https://www.raiffeisen.ro/
10.	UniCredit Bank SA	RO	6766	https://www.unicredit.ro/en/persoane-fizice.html
11.	CEC Bank SA	RO	6080	https://www.cec.ro/en
12.	DSK Bank EAD	BG	5681	https://dskbank.bg/page/default.aspx?xml_id=/en-US/
13.	ING Bank N.V. Amsterdam Branch Bucharest	RO	5165	https://www.ing.ro/persoane-fizice
14.	First Investment Bank AD	BG	4439	https://www.fibank.bg/en
15.	Raiffeisenbank Austria d.d.	HR	4084	https://www.rba.hr/en/
16.	Banca Intesa AD	SB	4023	http://www.bancaintesa.rs/home.42.html
17.	Abanka d.d.	SI	3828	https://www.abanka.si/en/
18.	Nova KBM d.d.	SI	3563	https://www.nkbm.si/homepage
19.	Societe Generale—Splitska Banka d.d.	HR	3543	https://www.splitskabanka.hr/en/
20.	United Bulgarian Bank AD	BG	3346	https://www.ubb.bg/eng
21.	Hypo Alpe-Adria-Bank d.d.	HR	3338	https://www.addiko.com/
22.	Alpha Bank Romania SA	RO	3318	https://www.alphabank.ro/home.htm
23.	Raiffeisenbank (Bulgaria) EAD	BG	3303	https://www.rbb.bg/en/
24.	Komercijalna Banka AD	SB	3232	http://www.kombank.com/en
25.	SID—Slovenska Izvozna in Razvojna Banka d.d.	SI	3199	http://www.sid.si/en-gb/
26.	Eurobank Bulgaria AD	BG	2941	https://www.postbank.bg/en
27.	Societe Generale Expressbank AD	BG	2699	https://www.sgeb.bg/en
28.	SKB Banka d.d.	SI	2561	http://www.skb.si/en/
29.	UniCredit Banka Slovenija d.d.	SI	2545	https://www.unicreditbank.si/en/pi.html
30.	Unicredit Bank Srbija AD	SB	2542	https://www.unicreditbank.rs/en/pi.html

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Developing Instruments for Evidence-Based Policy Making: A Case Study in Knowledge Management for the Public Sector

Loredana Radu, Alina Bârgăoanu, Flavia Durach, and Georgiana Udrea

Abstract

This paper addresses the topic of knowledge management (KM) in the public sector. More precisely, we explore some conceptual, methodological and technical possibilities for the implementation of a national online data aggregator covering multiple areas, such as economic development, health, education, sustainable development, R&D, science and technology in Romania. The data aggregator is a means of ensuring knowledge transfer, science popularization and, most importantly, facilitating evidence-based policy making. The aggregator will support policy and decision makers in identifying and exploiting the country's competitive advantages in a European and global setting. The urgency of the topic results from the well-recognized gap between the production of scientific evidence and the use of that evidence by policy-making bodies, public administration, and designated agencies (Jacobs et al., *BMC Health Services Research, 12*(1), 1–9, 2012). Closing the gap is possible via knowledge transfer and the dissemination and implementation of research. However, one must take into consideration that "policymakers operate on a different hierarchy of evidence than scientists, leaving the two groups to live in so-called parallel universes" (Brownson et al., *American Journal of Public Health, 99*(9), 1576–1583, 2009). Having large amounts of data available is insufficient. The limited technical and individual capabilities of policymakers to operate with "big" data need to be expanded through a tool for drafting well-grounded strategies and policies. Starting from the aforementioned shortcomings in knowledge management for the public sector, the case study we put forward in this paper refers to the creation of an innovative online data aggregator to enhance the evidence-based

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_12

policy making capabilities of the Romanian government. Upon completion, the aggregator will be the first of its kind in the CEE. The data aggregator is the main output of a EU-funded project—"*State of the Nation: developing an innovative instrument for supporting evidence-based policy making in Romania*"—jointly implemented by the Romanian Government and the National University for Political Studies and Public Administration (Bucharest).

1 Introduction

The fact that we live in a globalized world, characterized by instant information transfer across vast geographic areas and domains is no longer debatable. In recent years, the consequence of globalization is the emergence of knowledge-based economies that emphasize the effective management of knowledge, a key ingredient for organizational, and, on a much larger scale, societal performance and competitiveness. Conventional wisdom says that knowledge is power. Based on this assumption, we may say that creating, managing, sharing and utilizing knowledge effectively are the key to power and success.

The importance of knowledge management as a critical tool in an organization and society has been widely recognized in the context of industrialized societies, where the intellectual (i.e., knowledge-based) assets have become essential. Put differently, since knowledge has become the new competitive advantage in business (Omotayo 2015; Butler et al. 2003), the concept and good practices of knowledge management have been developed and expanded to all societal sectors, from education, banking or telecommunications to the public sectors. In a knowledge-based economy, having access to the right data at the right time is viewed as a prerequisite for higher productivity and flexibility (Martensson 2000). Successful organizations and societies increasingly understand that they must manage knowledge; most specifically, use what they know in order to learn and to create economic and social value for the community. This happens also because in the mainstream literature KM has often been described as a key driver of organizational performance (Bousa and Venkitachalam 2013), and one of the necessary factors for the maintenance of competitive strength (Chua 2009). However, in order to remain innovative and perform better, organizations must firstly identify the resources that allow them to recognize, create, transform and distribute knowledge. In this regard, as most scholars say, there are several inter-related components that must be paid attention to: the people, the processes and the technology (Desouza 2011).

Our paper focuses on the topic of knowledge management in the public sector, by discussing the creation and implementation of an online data aggregator designed for improving evidence-based decision-making of the public servants. The goal of the instrument is to improve many of the processes of KM, as a means of multiplying Romania's competitive advantages in a global setting. The national online data aggregator will cover multiple areas, and is a highly innovative initiative in the CEE region.

The paper is organized into four sections. The first is devoted to discussing the pivotal components of knowledge management, the second looks at KM systems in the public sector, and the third approaches the evidence-based policy-making as a

practice relying on good KM. The national online data aggregator, and the first phase of its implementation, are presented in section four, where we highlight the role of knowledge management, knowledge-transfer and diffusion in improving the way government institutions operate and deliver public services to citizens.

2 The Key Components of Knowledge Management

Knowledge has become the new edge in business and a strategic resource that allows people to function intelligently. It is increasingly recognized as a crucial asset by all types of institutions and organizations, whether private or public, service or production oriented. Knowledge economy is guided by knowledge transfer, because knowledge becomes ineffective if not used or shared.

Hislop (2013, p. 56) defines knowledge management as "an umbrella term which refers to any deliberate efforts to manage the knowledge of an organisation's workforce, which can be achieved via a wide range of methods including directly, through the use of particular types of ICT, or more indirectly through the management of social processes, the structuring of organisation in particular ways or via the use of particular culture and people management practices". Basically, a KM system refers to the identification and achievement of knowledge.

Knowledge is much more than just mere data and information. It is a collection of information "processed" by people that is relevant for individual, team, and organizational performance (Wang and Noe 2010). Thus, the first key component of KM is information. In a nutshell, knowledge may be understood as information combined with experience, ideas, values, know-how, contextual interpretations, judgements, reflections and expert insights that provide relevant frameworks for evaluating new facts and experiences (Davenport et al. 1998; Davenport and Prusak 1998; Sveiby 1997).

It has been found that organizational performance is improved by the ability to transfer knowledge from one unit to another (Argote 2012; Argote and Ingram 2000). Nowadays, in a world where competitive advantages are transient and provisional, many organizations have realized that information alone is not enough to drive an organization and, ultimately, a society to favorable outcomes. Rather, it is its human capital that may be found at the very heart of efficiency and accomplishment (Baloh et al. 2011). So, the second component of KM refers to people, who are the most valuable sources of knowledge. In different terms, knowledge is created, classified and organized in the minds of people. Then, through the process of sharing, it is recreated, modified and enlarged. In essence, knowledge management begins, evolves around and finishes with people. Individuals are those who, through their ability of thinking creatively and other talents, explore knowledge, experiment with it, learn from it and promote it in order to foster innovation and change.

Another KM component refers to processes, which define and govern how work is conducted in organizations, thus becoming crucial to their functioning (Baloh et al. 2011). An essential requirement for KM is to be able to understand work processes, to depict what is really going on in the organization and how tasks are being accomplished in order to improve organizational performance and effectiveness. In the case of KM in the public sector, the understanding of broad, societal

processes is as essential for good decision-making processes as is the understanding of the workflow in a private organization.

The last component of KM is technology, which is often seen as a foundational element, as the key pillar of any KM plan or program (Omotayo 2015; Desouza 2011; McNabb 2007). The current advancements in Information and Communication Technologies (ICTs) facilitate KM activities by increasing the reach and scope of knowledge exchanges among people and institutions in real time. Technology has made it possible for KM to evolve into what has lately become—"a key management tool that is necessary for agencies and institutions to function and flourish in today's knowledge economy" (McNabb 2007, p. 7).

Still, as already mentioned, KM is not just about technology. It is about individuals, experience, information, and about understanding work flows, processes, and implementing technology—to name just a few factors. Hence, rather than stress one component over the other, scholars commonly argue that the focus of KM is to connect people, processes, and technology for the purpose of leveraging the organizational knowledge and experience.

3 KM Systems in the Public Sector

A common place in dedicated research is that public and private sector management are different in terms of personnel management, decision making, information systems and many other aspects (Watson and Carte 2000). Yet, many management concepts and processes, such as knowledge management, are equally applicable to both sectors (McNabb 2007).

According to most scholars, KM is not new but rather "the latest component in the government's fifty-plus-year effort to integrate information technology (IT) into operations to improve performance and make government agencies and departments more accountable" (McNabb 2007, p. 6). The latest development in this progression has become a global movement (commonly referred to as *e-government*) to reform the way governments carry out their missions (i.e., serve their citizens). Put differently, KM represents an essential component in transforming government and e-government movements that enable greater innovation, transparency and creativity in government organizations. Theocharis and Isihritnzis (2016) emphasize that the optimal use of knowledge by the public sector is particularly crucial, because it is linked to (1) the efficiency of the public sector, (2) saving resources and (3) the adoption of innovative services. As Powell (1998, p. 229) notes, "the locus of innovation is found in networks of learning, rather than in individual organizations", highlighting the role of professional networks and communities of practice as important resources of information and innovation in terms of best practices, policies and services.

As public sectors worldwide are facing numerous challenges and concerns (e.g., paperwork-reduction mandates, increased workloads to be handled by fewer personnel, growing need for a better control of their information infrastructure, electronic communication channels replacing old communication systems, etc.), they started to introduce various reforms (including knowledge management and most recently, e-government) to deal with these challenges. McNabb (2007) and Al-Khouri

(2014), among others, underline that knowledge management provides the overall strategy and techniques to manage the e-content of e-governments in order to make the most of knowledge, i.e., to make it more usable, more accessible and keep it constantly updated. Furthermore, regarding its impact on the performance of governments, sharing knowledge is a viable approach for service integration, increased governmental programs' effectiveness, and improved decision-making processes (McNabb 2007; Al-Khouri 2014).

As briefly suggested before, knowledge is not an advantage in its own right. Rather, in order to be effective and relevant, it must be diffused and transferred across multidisciplinary areas within society. Knowledge sharing has been described as a key activity of effective KM, involving a mix of tacit, explicit, and interactional forms of sharing across organizational boundaries (Pardo et al. 2006). The assumption driving knowledge sharing and collaborative actions in both the private and the public sectors is that by acting alone or competitively one will achieve fewer benefits than by engaging with others. With more consistent, comprehensive and up-to-date data bases to rely on, government organization structures will be able to build coordinated policies, implement innovation in products or processes and thus provide better services for their citizens. Advocates of collaboration (including knowledge sharing as a form of collaboration) speak about the fundamental advantages resulting from joint action and interaction such as: effectiveness, efficiency and responsiveness (Gil-Garcia et al. 2007; Dawes 1996). Furthermore, knowledge sharing is motivated by the need to gain access to valuable resources of know-how and it can only be a powerful tool if successfully implemented (Ackoff 1999; Ahn and Chang 2004; Benassi et al. 2002). Skyrme (2002) lists seven recurring levers of common knowledge management practices: customer knowledge, knowledge-enhanced products and services, knowledge in people, organizational memory, knowledge in processes, knowledge in relationships (stakeholders), and knowledge assets (business environment insights).

Many scholars (i.e. Al-Khouri 2014; Theocharis and Isihritnzis 2016; OECD 2015) highlight the topical importance of IT systems in connecting and integrating information networks, thus creating the proper support for knowledge sharing. Few organizations afford to capitalize upon all knowledge management practices. Yet, the critical role played by IT platforms is rarely contested and it is often privileged when it comes to prioritizing the implementation of KM solutions. Information technology is potentially capable of changing government organizational structures by facilitating the sharing of knowledge among individuals, institutions and organizations, an action that becomes of topical importance in the process of grounding and developing strategic documents, such as public policies.

In line with OECD experts (2015), we could say that open government data is at the very heart of the change that is taking place in governments worldwide. Information technology has a strong role in designing how governments deliver services and information to citizens and businesses. In the new public management paradigm, the data become the "platform" to be used in order to encourage the development of new and more feasible solutions to a vast array of social and economic problems. Noteworthy, data accessibility and availability are necessary but

insufficient conditions to deliver the expected value from socio, economic and good governance perspectives (e.g. transparency, integrity, accountability). The re-use of data by the public sector, by civil society organizations, by the private sector and by other actors is a *sine qua non condition* to deliver the benefits of data management. Importantly, data management entails first and foremost a significant change in the way governments operate and conceive their role in managing societal changes—from a service provider to the "data steward" (Helbig et al. 2012).

With respect to the Romanian public administration in particular, although there is an enormous amount of statistical data available for different domains, there is no database to contain all the relevant public information needed for the foundation of the decisional processes. This is the context in which the online data aggregator we describe in section four comes to the fore, seeking to offer an accurate and reality-based solution to the existing limited institutional capacity of the Romanian central administration in terms of knowledge sharing, decision-making processes and public policies development. This innovative instrument will not be merely an information-sharing project; rather, it is designed to contribute to increasing government efficiency and performance by initiating a new set of working practices and by transforming a traditional government bureaucracy into a more transparent and accessible structure that is better able to perform its many services.

4 Evidence-Based Policymaking as a Practice for Good KM

Using evidence to inform policy is not a new idea. What is new is the emphasis that has been placed on the concept in the last two decades. Nowadays, EBP has become a focus for a wide range of policy communities, from government departments and research organizations to think-tanks, and others alike. The evidence-based policy making refers to a method or a set of methods which have the ability to inform the policy process. It is associated with a systematic, rational and rigorous approach. The main interest of evidence-based policy (EBP) is focused on the assumption that policy decisions have to be better informed by accessible evidence and should include rational analysis. Mainly, it is a mixture of expertise, judgement and experience integrated with external evidence from systematic research (Sutcliffe and Court 2005; Flyvbjerg 2001).

There is a well-recognized gap between the production of scientific evidence and the use of that evidence by policy-making bodies, public administration, and designated agencies (Jacobs et al. 2012). What is clear from the literature is that a more evidence-based approach to policy and practice would result in a positive development (Howlett 2009; Head 2008). However, in order to increase evidence use, policymakers need to understand the value of evidence and be able to identify the best available one among the wide breadth of evidence that exists. Also, increased communication between the research community and the policy world (through discussion forums, consultation sessions, joint training, etc.) should also be encouraged as a way of replacing ideologically-driven politics with rational decision-making. As several studies argue, social science research evidence is central to understanding the policy environment and its possible evolution, the

effects of policy changes, the steps to be taken in order to achieve strategic goals such as economic performance, etc. Evidence is usually described as an apolitical, neutral and objective policy tool, and empirical research is viewed as the most reliable form of evidence (Sutcliffe and Court 2005). Still, researchers and policymakers usually operate on different hierarchies of evidence, and have different agendas, different priorities and goals. Furthermore, as Brownson et al. (2009) show, most policymakers are not trained to distinguish between good and bad data sets, being often inclined to consider and use the facts presented by interest groups or lobbyists, a fact that may seriously compromise the policy-making process. Therefore, it is essential that decision makers are constantly updated with relevant information regarding their area of expertise, and provided with the tools that are necessary for a better and more efficient drafting of public policies which have a vast impact on people's daily life (Bogenschneider and Corbett 2011).

Policy-relevant evidence includes both quantitative and qualitative information, involving both objective and subjective forms. It is known that the strongest evidence comes from quantitative, "hard" (i.e., statistically representative) data collected by means of quantitative methodologies (experiments or questionnaire-based social surveys). Qualitative or "soft" evidence comes from non-numerical observations, collected through focus groups, participant observations or interviews. Although qualitative methodologies receive little attention in the social sciences, narrative accounts also have the ability to provide a powerful lever in the policymaking process. Yet, in order to have a stronger persuasive impact and offer general guidance on policy approaches, a combination of the two types of scientific evidence is needed.

According to Brownson et al. (2009), there are three key domains that are relevant for evidence-based policymaking. The first of them is the *process* of understanding approaches to enhance the likelihood of policy adoption. The second is the *content* relevant for the identification of specific policy elements that could be effective. Finally, there are the *outcomes* that help document the results and the potential impact of the policy. In the public health field, for instance, only 6.5% of the laws are based on scientific research (Brownson et al. 2009). In other words, there is a considerable gap between what research underlines as effective and the policies that are enacted and enforced. This means that although evidence can matter, it may often not be taken into consideration. As scholars argue, policymaking is inherently a political process, hence there are other factors (such as: pressure groups, interests, resources, habits and tradition, opinion-based judgements, pragmatics and contingencies, etc.) that may weigh more than evidence in policy formation (Head 2008; Sutcliffe and Court 2005).

The case study we will be focusing upon for the rest of this chapter addresses some key issues related to the processes of knowledge management, the creation of information sharing networks, and the consolidation of evidence-based policy-making in Romania. More precisely, we propose the creation and implementation of an online tool for the aggregation of big data series to help public servants "make sense" of the country's progress. Hopefully, this innovative instrument will contribute to the crystallization of a long-term vision on what the country's competitive advantages are, and how to enhance them. We chose to refer in particular to the first phase of the project,

the creation of a system of socio-economic indicators to evaluate the state of the nation. The rationale for our choice is that, during this phase, we gathered feedback from highly reputed national and international experts, members of the administration, scholars, as well as representatives of relevant international institutions on the main methodological and practical challenges. Their answers provide insights on the KM processes in Romania, the current practices in sharing and relying on statistical data for public policy formulation, and the overall importance of sharing information in the age of sharing economies.

5 Context

Since April 2016, the Secretariat-General of the Romanian Government (SGG)/the Chancellery of the Prime Minister—the Department for Governmental Strategies, in partnership with the National University of Political Studies and Public Administration (Bucharest, Romania) have been implementing the project entitled "The State of the Nation—the development of an innovative instrument for founding the development of public policies in Romania". The project is co-financed from the European Social Fund through the Operational Programme for Administrative Capacity Development, and has a duration of 36 months.

6 Methodology

The solution envisaged by the project addresses the topic of shared knowledge management in the public sector. The project's goal is to create and institutionalize a statistical data aggregator covering multidisciplinary areas, to be used in the process of grounding and developing strategic documents, such as public policies. Furthermore, the aggregator will ease the access of media representatives and the general public to statistical data, thus providing solutions for knowledge management in the sharing economy.

Its objectives are:

(1) The development of a coherent and robust system of approximately 100 indicators relevant for measuring Romania's development.
(2) The development of the technical solution—an online data aggregator called "The State of the Nation", which will integrate all the statistical data collected by relevant institutions in the post-communist period (after 1990). The aggregator will reflect the system of indicators developed according to objective (1).
(3) The regular collection of sociological data (public opinion barometers) with respect to a variety of issues, such as: the labour market, the business environment, the industry, the state of the agriculture, health, the quality of life, the environment, etc. The barometer questions will reflect the system of indicators developed according to objective (1).

(4) The support/assistance of the Romanian Government in its decision-making processes and the contribution to grounding and developing strategic documents, such as public policies.
(5) The implementation of a training programme for the end users of the online data aggregator (e.g. the representatives of the central and local administration).

The project consists of four key phases. During the first one, a system of socio-economic indicators to be used for grounding political decisions is to be created. Next, the project moves to the implementation of the "State of the Nation" data aggregator tool—an online user-friendly statistical data aggregator including data from all the fields which are relevant for measuring Romania's current well-being, as well as its sustainability potential. Thirdly, "soft" data regarding the public perception (public opinion barometers, periodically updated) will be collected. This phase is necessary in order to document subjective indicators, such as the self-perceived well-being of Romanians. The project will end with the development of a public policy project aimed at raising decision-makers' awareness of the use of statistical and research data in policy-making.

In the following pages, we will refer to the first phase of the project, the methodological design for the development of a system of socio-economic indicators, grouped under 12 areas: "Demography. The quality of life. The labour market", "Economic development and infrastructure", "Finances and financial capital", "Energy and natural resources", "Agriculture", "Governance and social capital", "Environment. Sustainable development", "Health", "Education and culture", "Research, innovation, technology", "The European and global development environment", and "National security, public order and cybersecurity".

This first phase is dedicated mainly to methodological clarifications necessary to ensure the relevance and robustness of the indicators. Its aim is to identify sequentially the network of areas, topics and indicators relevant to the measurement of development in a nation state. Each methodological step contributes to the continuous improvement of the system of indicators. More precisely, we will refer to some key actions: firstly, the implementation of several filed trips to European and national institutions providing good practice examples in the thematic area of the project; secondly, the implementation of in-depth interviews with renowned experts in the fields covered by the project; and lastly, the implementation of three national workshops with a wide variety of professionals, experts, and representatives of the central and local administration.

These steps, together with other forms of research and public discussions, will lead to the development of the final system of indicators.

7 Analysis

In the following pages, we will focus on the key findings of the aforementioned exploratory methodological steps, by connecting them to the scope and aims of the "State of the Nation" aggregator, as well as to the broad societal debate on how

evidence-based policy making should be implemented. We share some first-hand empirical insights on the need for a better popularization of science and on the imperative of a more efficient use of statistical data in the public sector.

7.1 Results of the Field Trips to European and National Institutions Providing Good Practice Examples in the Thematic Area of the Project

Between September and November 2016, representatives of the project team conducted field trips to the following organizations: (1) GESIS—Leibniz-Institute for the Social Sciences, which renders substantial nationally and internationally relevant research-based infrastructure services; (2) The European Foundation for the Improvement of Living and Working Conditions (Eurofound), a tripartite European Union Agency, whose role is to provide knowledge and to assist in the development of better social, employment and work-related policies; (3) The European University Institute (EUI), a unique international centre for doctoral and post-doctoral studies and research; (4) Eurostat, whose main role is to process and publish comparable statistical information at European level; (5) Sciences Po, an international research university ranking among the finest institutions in the fields of humanities and social sciences; (6) The Organisation for Economic Co-operation and Development (OECD), which promotes policies that will improve the economic and social well-being of people around the world.

The goals of the field trips were to identify best practices in the field of statistical data collection and aggregation, to clarify methodological issues, and to receive feedback on the preliminary draft of the system of indicators.

Regarding the role the aggregator should play for the Romanian government, the experts emphasized that the main purpose should be to provide a basis for grounding public policies. Nevertheless, they stressed that subjective interpretations of the data are inherent to any political decision. Therefore, any data aggregator should aspire first and foremost to increase the transparency of policy-making, not to dictate the content of the policy intervention.

Regarding the choice of indicators and subsequent data, some important methodological insights must be mentioned. An essential one is that the aggregation of data should not be a stand-alone objective, but a means to an end, by closely mirroring the national priorities and medium-term strategies of Romania. In a nutshell, data cannot replace adequate reasoning. Secondly, the relevance of the selected indicators must be judged according to several criteria: firstly, they should be comparable to the indicators used by the European or worldwide highly-reputed institutions, think thanks and research centres. Furthermore, they should cater to the specific need for information and data of the end users. Lastly, they must allow comparability with other countries/regions, as only few data series speak for themselves (without any benchmarking being done).

Additionally, accessibility for the general public must be ensured. The project team must consider the best means to make methodological and strategic choices

easily understandable for non-experts and the end users of the aggregator (i.e., the representatives of the public administration). For these stakeholders, methodological issues may seem opaque and difficult to understand. Overcoming this drawback needs to be a priority.

7.2 Results of the National Workshops on Methodology

During November 2016, three workshops on methodology and related issues were implemented, gathering a total number of 92 participants. The general purpose was to consult the main stakeholders of the project. The specific objectives were to receive extensive feedback on the sets of indicators, based on the experience and point of view of different stakeholders, to foster a debate on methodological issues, and to discuss the participants' previous practical experience with statistical data (e.g. accessibility and uses). The participants included representatives of a diverse range of public (national and local) bodies, public/private agencies, the academia, NGOs, and representatives of trade unions and employers.

The main insight stemming from the workshops was that many of the participants needed to use statistical data in their professional activity. Unfortunately, they reported difficulties with respect to the proper identification of sources, limited data availability, the existence of data gaps, complete lack of data in some areas, and data discontinuities between the European and the national level. Consequently, there was broad consensus on the usefulness of a nation-wide tool to gather data from multiple fields.

In the view of the participants, the aggregator will contribute towards the alleviation of a long-standing problem for the Romanian administration after 1990: the discontinuity between the strategies implemented by successive governments. The experts drew attention to the difficulty of fostering development through structural changes, when each strategy is replaced by another before it gets the chance to deliver the expected results. The aggregator may help solve this problem by underlining, via statistical data, the long-term tendencies at national and regional level. Provided that the central administration becomes more aware of these trends, less sudden shifts in strategy are expected.

Lastly, the participants stressed the importance of the visual representation of data. The project researchers, together with the IT team, ought to find technical solutions that will allow comparative visualization of data, inside Romania (between regions), and inside the EU (between Romania and other member states). Additionally, the experts expressed an interest in receiving background information on the historic, social, political and economic events that can explain variations of the values registered for a given indicator in time. Overall, the graphic representation of data must be user friendly, relevant for the type of indicator it expresses, and highly intuitive.

7.3 In-depth Interviews with Renowned Experts in Areas Relevant for the Project

Between September and November 2016, the project team implemented 16 face-to-face semi-structured in-depth interviews, each with an average duration of 45 min. We have inquired high-rank civil servants, media representatives, and members of the Romanian academia about the design and implementation of the system of indicators for measuring the state of the Romanian nation.

This research aimed at collecting data on the opinions and attitudes of highly skilled and experienced specialists towards the relevance and design of a system of indicators aimed at measuring development in Romania.

Irrespective of the experts' area of expertise, the interview was organized around four topics: (1) The evaluation of the necessity to ground public policies in statistical data; (2) The expert's perspective on how an ideal tool for the aggregation of statistical data should look like in terms of design and content, together with an assessment of its benefits; (3) The opinions on what should be included ideally in a system of indicators to faithfully reflect the state of the nation at all times; (4) Favourable or unfavourable arguments for measuring public perception with respect to the grand issues of development, in different areas.

There was broad agreement on the utility of an online tool to aggregate data from various sources and institutions under the same umbrella. Such a tool could be put to good use by the public sector both at national and local level. Respondents drew attention to an unsettling fact: despite the significant quantity of data being collected in Romania, there is no red thread to unite it, no correlations made, and contradictions between different figures and values do exist. In this context, it is quite difficult for policy makers to analyse and interpret the statistical data, as long as they must go to extreme lengths to identify the sources, gain access to data, and ensure the proper communication flow among their peers, or between the administration and research institutes.

Referring to the indicators, the interviewees stressed the importance of the economy and associate indicators as being the most faithful barometer of the efficiency and good practices of any government. For the regular Romanian citizen, indicators related to well-being, standard of living and quality of life would be of great interest. Since a nation's development depends on its social capital, demography was mentioned as another crucial topic, especially in what birth and death rates, immigration and emigration are concerned. Thirdly, education must be considered as a complex area of analysis. In conclusion, the system of indicators must be simultaneously complex, yet flexible, in order to mirror the inherent complexity of state governance.

Furthermore, the interviewees stressed the importance of another component of the project: the investigation of the public opinion. There was no broad consensus on this topic. Some of the respondents support the need to include subjective indicators—which would help measure the softer side of development, the general opinion on the direction in which Romania is going. This type of feedback can be

crucial for sustainable strategies. However, some respondents highlighted the vulnerabilities resulting from the volatility of the public opinion in general.

8 Discussion

The first phase of the project, as described in this chapter, was dedicated to exploring the challenges associated with the implementation of a very innovative project in Romania, a tool for the aggregation of multi-source statistical data. First of all, we were interested in collecting lessons learned and best practices concerning the measurement of the state of a nation via a unitary system of socio-economic indicators. Secondly, the project team needed to be aware and prepare for the technical requirements and possible difficulties of creating an online platform with such a broad scope. Thirdly, the team members explored the methodological opportunities and limitations, and were able to establish some ground rules on selection criteria for the indicators, their measurement, and the choice of sources. Furthermore, we identified some enabling factors that will allow the data aggregator to become a truly practical tool for policy makers. Lastly, we explored the range of options for the proper public dissemination strategy, as well as for the high quality management of the stakeholders.

The key issues prompted by the implementation of the field trips, the workshops and the interviews refer to four broad topics. We looked for lessons learned related to the design and implementation of strategic systems of indicators, aimed at measuring the current well-being (i.e. security, health, education), as well as the available resources (i.e. capital, demographics, knowledge) within a country or region. Additionally, we discussed the key challenges in developing a research methodology for measuring the "state of the nation/region" (such as selection criteria for key indicators, measurement techniques, main data sources). Next, we investigated challenges related to the technical development of an online statistical tool to be used by both specialists and non-specialists in public administration. At the same time, we looked for the most appropriate communication tools for disseminating the research results (i.e. the state-of-the-nation data aggregator) to key decision makers and other stakeholders.

The relevance of the online statistical data aggregator "State of the Nation" There is broad consensus among the representatives of the professional community, as well as in the academia, on the relevance of the project. Its necessity results mainly from the observation that no such tool exists in Romania at the time being, whereas there is a strong need for better, easier access to data. Many participants in the three studies emphasized the imperative of a strong focus on the concept of development. The selection of the relevant items?, as well as of the relevant sets of indicators must be considered through the lenses of sustainable, durable, long term development, in accordance with the most important strategies at EU level, and in Romania.

The features and aims of the online statistical data aggregator "State of the Nation" The aggregator must employ transparent and reliable instruments of data collection. All the data must come from credible sources, such as international institutions highly specialized in the collection of big data series, or from the National Institute of Statistics. The relevance of the data must be unquestionable (validated by long-term collection and use).

In order to reach its full potential, the aggregator must reflect some key features. It must allow comparisons between indicators, countries and/ or regions. Furthermore, the aggregator must make sense of the large volume of data by structuring it in a coherent fashion (through the system of indicators). It must remove contradictions successfully, by harmonizing the data sources, and by relying only on prestigious/ trustworthy data bases. Being an online tool dedicated to non-specialists in statistics, it is very important for the data to be expressed in easy-to-understand graphic depictions, accompanied by clear explanations and/or correlations. Another aspect that enhances the intrinsic value of the aggregator would be to obtain access to data that are otherwise unavailable for the general public.

IT requirements Being an innovative project, the development of the online statistical data aggregator "State of the Nation" raises not only methodological, but also technical issues. From the experience of other institutions beyond the borders of Romania, a tool with such an extensive scope needs highly performant servers. Beyond that, the team must identify the proper technical solutions to allow multiple interrogations of the database, according to different criteria, as well as the aggregation, but also "disaggregation" of data, based on different criteria. Very important for the efficacy of such a tool is the automatization of data upload, harmonization, and transfer processes. Flexibility is another key feature: the aggregator must allow multiple upgrades, and any changes deemed necessary (adding/deleting topics/ areas, and indicators, changing categories, changing chart types etc.).

Communication and training The development of the online data aggregator must be accompanied by a strong focus on communication and competencies formation. The capacity of the end users to grasp the significance of the data and to use the aggregator in an effective and useful manner must be gradually built through systematic training. Otherwise, the aggregator will not reach its fullest potential for grounding public policies.

Other recommendations related to public communication include: making detailed reports available for the general public (to ensure the credibility of the project), and raising the public awareness regarding the aggregator, its scope, its technical capabilities and general purpose. Beyond its direct use by the public administration, the aggregator should be included in a wider network of databases, providing interconnectivity with existing tools and practices in the field.

Lastly, the "State of the Nation" data aggregator is seen as a means of popularising relevant data for all kinds of publics, not only for the specialists or for public servants. Making research more visible could build up important capabilities of giving and receiving feedback, thus smoothing the policy-making process.

All the experts and participants emphasized the aggregator's future role in increasing the competences of the public administration to use, interpret and rely on statistical data when drafting policy proposals or when making decisions. Until now, the data were more difficult to access, due to the multiplicity of sources and public servants' lack of skills in "reading" the statistics. With the right technical and methodological solutions and adequate training, the aggregator will help alleviate this problem.

Another strength of the project is its dashboard approach. The tool will make evaluations on the state of the nation, and will ideally contribute to shaping better medium and long term strategies for development at country level. Arguably, the aggregator is progress-oriented, aiming to measure the impact of public policies and strategies.

The added value of the online data aggregator is given by some key features. Firstly, it will gather data into a single source. At the moment, statistical data is available in a multitude of sources and data bases. Sometimes, decision-makers may ignore the data because they do not know where to find a particular piece of information. By gathering it all under the umbrella of a single tool, we will make access to data easier, more transparent and more efficient. Secondly, it fosters a normative approach. Data must be accompanied by interpretation, and correlation between indicators and dimensions, in order to become suggestive for the state of development. The team of researchers in this project will provide not only data, but also analysis reports, additional explanations stressing the significance of the data for Romania's development and its current state of well-being. Furthermore, the tool will make a clear demarcation between hard and soft indicators. Whereas the former will be gathered from reputable data sources, the latter will be collected by the project team though surveys dedicated to different topics, in order to connect the national/regional statistical evidence with the public perceptions on the implications for development implied by the statistics. Fourthly, the aggregation can be used as a fact-checking tool by the media and the general public, thus contributing to diffusing information freely at societal level.

9 Conclusion

The online data aggregator "State of the Nation" is a highly innovative project in Romania. To the best of our knowledge, no other tool of similar scope and aims was ever designed and implemented in the country. Furthermore, the philosophy behind the aggregator is also a novelty, in the sense that it aims at finding the most adequate selection criteria for the relevant indicators of development, thus contributing to identifying Romania's priorities for a better, more prosperous and sustainable future.

In sum, the aggregator, as envisaged by the main stakeholders of the project, will contribute to the improvement of KM processes at the level of the public sector. The tool will respond to the growing need of governments for a better control of their information infrastructure that is needed in order to adapt to the fast pace of the knowledge economy, and the tendencies towards digitalization of many professional areas. The aggregator provides the instruments for the public servants to

manage the e-content to make the most of knowledge. It will make statistical data more accessible, easier to use, and faster "to digest". Given its current design, the "State of the nation" aggregator will lead to the effective diffusion of data across multidisciplinary areas, ranging from economy to the environment, from education to culture, from health to good governance and well-being of the citizens. As underlined in the literature on knowledge management in the public sector, sharing knowledge has a strong impact on the performance of governments, by increasing governmental programs' effectiveness, and by improving decision making processes.

Furthermore, given the strong public communication component of the aggregator, it can be used in the public or NGO sector as well, whenever there is a need for statistical data to ground strategies and decisions. Irrespective of who the end user is (private, non-profit, mass media, governmental agencies), having access to the best available evidence will lead to a competitive advantage, by replacing opinion or ideological decision making with the rational approaches.

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Knowledge Risks in the Sharing Economy

Malgorzata Zieba and Susanne Durst

Abstract

The purpose of this chapter is to present and analyze potential risks connected with knowledge that organizations operating in the sharing economy might potentially face. The chapter concentrates on knowledge risks resulting from the characteristics of the sharing economy, which encourages individuals and organizations to share their goods and services with each other. Sharing, however, does not only lead to benefits, but to risks as well. Against this background, the chapter discusses such risks as: risk of knowledge loss, risk of knowledge leakage, risk of knowledge spillover, or knowledge outsourcing risks. Apart from the examination of knowledge risks, it also discusses knowledge types, potential sources of the risks and controllability/influence on companies. The chapter contributes to a better understanding of the knowledge risks faced by organizations operating in the sharing economy, their characteristics and relations. The proposed list of knowledge risks in conjunction with the mentioned characteristics can be viewed as a promising step to a rigor development of this field of research, which in turn will complement our understanding of knowledge management.

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_13

1 Introduction

This chapter presents a theoretical analysis of potential risks connected with knowledge that organizations operating in the sharing economy might potentially face. Nowadays, it can be stated that an increasing amount of individuals and organizations participate in sharing and exchanging data, information, and knowledge, as well as physical goods and services (Botsman and Rogers 2011). The development of the sharing economy has been stimulated to some extent by the growing availability of ICT solutions. Concurrently, the lack of time combined with finite resources has encouraged individuals and organizations to share their goods and services with each other, which in turn have put forth a number of new businesses and business models. Sharing, however, does not only lead to benefits, but to risks as well.

Against this background, the aim of the chapter is to present and discuss various knowledge risks an organization might face, resulting from the specific characteristics of the sharing economy. Among these risks there are for example: risk of knowledge loss (e.g. Durst and Wilhelm 2011; Joe et al. 2013; Martins and Martins 2011; Treleaven and Sykes 2005), risk of knowledge leakage (Ahmad et al. 2014; Mohamed et al. 2007; Parker 2012), risk of knowledge spillover (Cohen and Levinthal 1990), or risk of knowledge hiding (Cerne et al. 2014; Connelly and Zweig 2014; Connelly et al. 2012). Apart from the identification of knowledge risks, we also examine potential sources of these risks and the aspect of controllability (possibility of influencing the risk somehow) by the organization.

The remaining part of this chapter is structured as follows. Next, a short introduction to the sharing economy and its underlying pillars is provided. This is followed by a section about knowledge risks, which covers definition of the term and a presentation of different types of knowledge risks. These risks are then discussed in conjunction with the sharing economy and the extent to which they can be controlled and managed is outlined. Finally, the chapter terminates with a conclusion and discussion about the limitations of the research, as well as future research directions.

2 Sharing Economy

While the term "Share Economy" was already proposed by Weitzman in 1984, the phenomenon of the sharing economy is rather new. Sharing, which is defined by Belk (2014, p. 127) as "the act and process of distributing what is ours to others for their use as well as the act and process of receiving something from others for our use", is viewed as an alternative to private ownership and includes the voluntary lending, pooling, and allocation of resources (Demsetz 2002).

Bendel (2014) defines the sharing economy as the systematic lending and borrowing of objects, especially by private individuals, which is in line with Botsman's definition (2013) that identifies the phenomenon as an economic model in which individuals share under-utilized assets for monetary and non-monetary benefits.

The aftermath of the economic crisis, raising environmental concerns, advances in the ICT sector and a (re-)found favor in the idea of sharing has created a new generation of business models (Sacks 2011). The sharing economy is an approach that involves a sustainability element and can be considered as a strategic niche in the field of sustainable innovation (Schot and Geels 2008). The sharing of common resources has been facilitated by Web 2.0 and social media as they have provided structures for online platforms which promote business models for swapping, sharing, and lending (Trumm et al. 2013). Therefore, online sharing can be regarded as a natural outcome of "the digital revolution, from Web 2.0, social networks, or the generation of 'digital natives'" (Grassmuck 2012, p. 18) and is already considered as a successful business model in the digital economy (Denning 2014). Prominent examples are "Uber", "Airbnb", and "Wikipedia". Consumers have left their traditional role and transformed into "micro-entrepreneurs" (Balck and Cracau 2015, p. 1) or "prosumers" (Rathnayaka et al. 2014, p. 41); consequently, the distinction between production, trade, and consumption has softened.

To build successful businesses based on sharing, different dimensions can be considered, e.g. (1) the sharing of digital content, (2) the sharing of physical goods, and (3) crowdfunding. The origins of the sharing economy can be found in the *sharing of digital content* (Shapiro and Varian 1998), which did not require a physical medium any longer, but rather peer-to-peer (P2P) models, such as networks or file sharing. These models, in turn, enabled the distribution, circulation, and reformatting of any digitalized content (Castells 2011). Sharing of digital content offers favorable conditions as, due to digitalization, the unlimited copying of digital data or objects without any material costs or loss of quality is enabled and with only a minimum of effort (Unger 2012). However, the sharing and distribution of digital content provide hurdles as well. For example, data protection and copyright pose heavy challenges to entrepreneurs (Fodor and Brem 2015).

The business model of *sharing physical goods* is also facilitated by the digitalization and is increasingly being accepted by consumers as well. As the production of physical goods is costly in contrast to the production of information (Seidenfaden 2006), entrepreneurs should turn to those business models that provide an infrastructure for sharing and trading and make ownership of physical goods obsolete. As before, some obstacles are given, such as a lack of legal bases for user protection and clear operating guidelines (Gerom 2013).

Finally, there is *crowdfunding* which can be defined as an initiative in which an individual raises capital by asking a crowd of people to provide small to medium-sized investments for a project or a start-up business through an online platform. To do that, intermediaries who offer online platforms to manage these investments are included. Consequently, the project initiator is less dependent on his or her own financial resources (Estellés-Arolas and González-Ladrón-de-Guevara 2012). The initiator of the project, however, is obliged to reward the crowd investors in the form of monetary benefits or with shares in their business or project (Pelzer et al. 2012). Offering an intermediary provider of an infrastructure or a platform is a further prospective business model for entrepreneurs of this dimension of the sharing economy.

This short introduction clarifies that the sharing economy provides both new opportunities and risks. It also emerged that the sharing economy depends on the sharing of knowledge and information to be successful. This sharing brings many potential risks for companies, such as knowledge spillover or knowledge hiding. These and other knowledge risks are defined and explained in the following section of the chapter.

3 Knowledge Risks

Knowledge risks encompass many terms, such as knowledge loss, knowledge attrition or knowledge hoarding. In the literature, knowledge risks have not been explicitly defined and even studies devoted to knowledge risks or their management do not offer a definition (Massingham 2010; Trkman and Desouza 2012). To compose a definition of knowledge risk, one needs to examine the term "risk" first. According to (Haimes 2009), risk can be defined as "a measure of the probability and severity of adverse effects (i.e., consequences)". In other words, when analyzing risk, it is useful to ask the following questions: "What can go wrong? What is the likelihood? What are the consequences?" (Kaplan and Garrick 1981). Applying this general approach to knowledge risk, we propose the following definition: *knowledge risk is a measure of the probability and severity of adverse effects of any activities engaging or related somehow to knowledge that can affect the functioning of an organization on any level*.

There are many potential knowledge risks connected with the functioning of an organization. In a recent paper by (Durst and Zieba 2017), the authors proposed a taxonomy of knowledge risks indicating that some of these originate from the inside, while others from the outside of the organization. The internal risks are for example knowledge attrition, knowledge waste or knowledge hoarding, while among the external ones are: knowledge leakage or knowledge spillover. There is also a group of risks that can be identified at the intersection of the organization and its external environment (e.g., knowledge outsourcing risks or knowledge loss) (Fig. 1).

From the perspective of the sharing economy, it is particularly important to examine the external risks and the ones appearing at the intersection between the organization and its external environment. Among these risks one can list:

- Knowledge loss;
- Knowledge leakage;
- Knowledge spillover;
- Knowledge outsourcing risks;
- Risks related to knowledge gaps;
- Relational risks;
- Risk of applying wrong (i.e. obsolete/false) knowledge;
- Risk of improper application of knowledge.

Below these types of risks are described in detail.

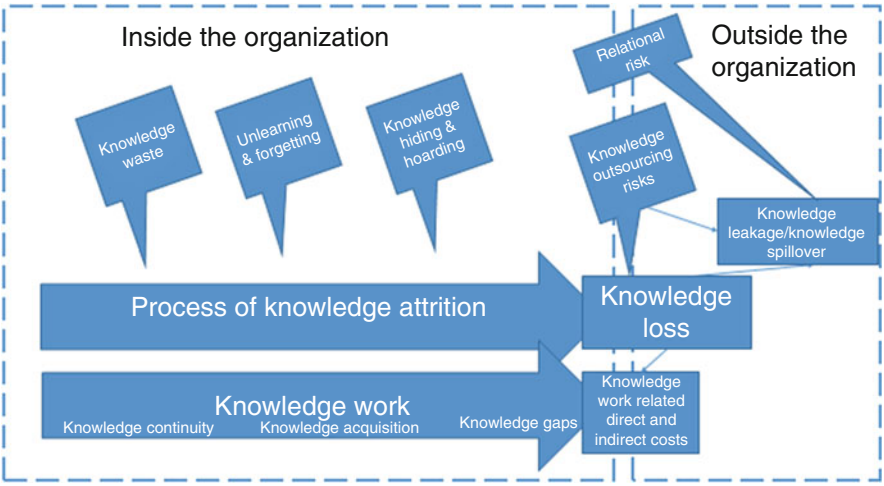

Fig. 1 Knowledge risks inside and outside the organization (Durst and Zieba 2017)

3.1 Knowledge Loss

Knowledge loss is one of the potential reasons for losing competitive advantage by organizations and therefore, it has become a critical issue that cannot be ignored (Parise et al. 2006). At the same time, although there are many different reasons why organizations might lose their knowledge, employee turnover seems to be the most highlighted in the literature (Durst and Wilhelm 2011; Parise et al. 2006). As Massingham (2008) stated, to understand the impact of knowledge loss, it is necessary to go beyond the human capital construct (i.e. individual knowledge) and examine how employees create value for the organization. To analyse that, not only employee knowledge or information should be considered, but also their relational and social capital. Particularly harmful knowledge loss for the organization results from employee poaching when employees are "stolen away" by other organisations, often competitive ones (Zieba 2016). In such a case, it can be assumed that lost knowledge is of particular importance and its lack will cause serious problems at the company level. Employee poaching can be a side effect of "sharing" employee for a common project with a competitive organization. Some companies, especially from the small and medium-sized sector, need to cooperate with other similar firms to realize large projects. In some cases, it can lead to employee poaching.

As DeLong stated, "in a knowledge-based economy, effectively developing and applying intellectual capital is the key to creating value. Thus, the potential costs of losing knowledge should be intuitively obvious. But knowledge is a multi- dimensional concept and its value is determined by circumstances, so diagnosing lost knowledge threats is more complicated than it first appears" (DeLong 2004, p. 9). Therefore, apart from the search for potential causes of knowledge loss, it would

also be valid to examine what kind of knowledge could be lost in organizations. In addition to the traditional division of knowledge into tacit and explicit, new taxonomies should also be applied in order to address this issue. An example could be the model of knowledge dynamics which is based on the energy metaphor and proposed by Brătianu (2015, 2016). The author defines three fundamental fields of knowledge, which are rational knowledge, emotional knowledge, and spiritual knowledge. All these fields are characterized by a different nature and are found at any organizational level. The first type, the rational knowledge is objective and is represented mainly by explicit knowledge, as it results from conscious cognitive thinking. The second type, the emotional knowledge, results from the processing of information collected by our emotions and feelings and can be defined as "the capacity to reason about emotions, and of emotions to enhance thinking" (Caruso and Salovey 2004, p. 197). Finally, the spiritual knowledge "reflects our understanding of the meaning of our existence" and is valid for individuals working together in one organization, sharing "their values and beliefs about life, work and the future generating in time organizational culture" (Brătianu 2016, p. 330). All these types of knowledge can be potentially lost due to the exit of an employee in the organization. As the identification of these fields of knowledge in a company is quite challenging, it is also difficult to restore all the types of knowledge after their loss. This discussion clarifies the need for dealing with the danger of knowledge loss and developing and undertaking preventive actions.

3.2 Knowledge Leakage

Knowledge leakage occurs "when sensitive organizational knowledge such as strategies, policies, product knowledge, and sensitive client information ends up in the hands of unauthorized parties" (Ahmad et al. 2014, p. 28) and it can be viewed as a sub-form of knowledge loss (Durst et al. 2015). In other words, knowledge leakage can be defined as "the deliberate or accidental loss of knowledge to unauthorized personnel within or outside of an organisational boundary" (Annansingh 2012, p. 269). The leakage may occur as a result of deliberate actions or as an outcome of unintentional actions, e.g. human mistake or poor management strategies. A potential source of knowledge leakage is offshoring and outsourcing of operations, during which accidental leak of sensitive organization knowledge to unauthorized parties might occur (Ahmad et al. 2014). This knowledge can be applied for the sake of other firms, for example in the situation when a consulting firm applies knowledge gained from one customer (e.g. about the product or market conditions) in the processes of another client.

Knowledge leakage is somehow naturally linked with knowledge sharing and knowledge exchange involving various parties from both inside and outside the organisation. For example, Mohamed et al. (2007) proposed in their analytic framework five key drivers of knowledge leakage: suppliers, customers, competitors, non-competitive organisations, and human resources. Knowledge interactions with these five types of actors could result in intentional or unintentional knowledge leakage.

3.3 Knowledge Spillover

Knowledge spillover is another type of knowledge risk closely related to the functioning of the sharing economy and involving in alliances or networks (Inkpen 2000). It can be defined as a situation when valuable knowledge spills out of the organisation to competitors who use this knowledge to gain competitive advantage (Durst and Zieba 2017). Knowledge spillovers have been examined in the literature mostly from the perspective of geographical and regional economics (Audretsch and Feldman 2004; Döring and Schnellenbach 2006), or growth of regions or cities (Vernon Henderson 2007). This topic has also been examined in the context of knowledge-intensive business services (KIBS) sector (Shearmur 2012; Windrum and Tomlinson 1999). In general, knowledge spillovers tend to be considered as a positive phenomenon. For example, as Acs et al. (2009) stated, knowledge and knowledge spillovers can generate opportunities for the creation of new firms. So, on one hand, a company might benefit from knowledge spillover, when it considers, for example, the knowledge of a competitor, but on the other hand, it might be harmful if the knowledge of a company spills over and is taken over by competing companies. Formal knowledge protection mechanisms are aimed to reduce the risk of the second situation to happen (de Faria and Sofka 2010). Sometimes, knowledge spillover can be intentionally harmful to the entities applying spilled knowledge. It happens when a company releases some information that is out of date or false aiming to cause its improper application by company's competitors with the following negative consequences.

3.4 Knowledge Outsourcing Risks

This risk can be defined as the outcome of transferring a business activity or function from an organisation to an external contractor who takes control of activity inputs, performs that function, and sells it back to the organisation (Tadelis 2007). Knowledge outsourcing risks might be the outcome of knowledge leakage or, in a worse scenario, knowledge loss. Thus, the latter terms can be regarded as higher level terms.

As companies are making heavy use of the outsourcing of business functions, such as accounting or human resources management, this risk should not be underestimated (Durst et al. 2015). As (Lambe 2013) stated, "the need for knowledge transfer to the outsourcees is well recognized—and this is frequently done through clear documentation as well as by having the organisation's experienced employees in those areas re-employed by the outsourcees". In other words, outsourcing in its nature is interlinked with sharing the knowledge of an organization and, during this process, some knowledge can be endangered with some negative phenomena. It can relate to a special kind of knowledge leakage that arises when business organisations collaborate in order to gain access to knowledge and expertise that they cannot develop on their own (Trott and Hoecht 2009).

Knowledge outsourcing risks increase with the scale of outsourcing arrangements and with the non-peripheral business functions. They can be connected not only with losing crucial knowledge or information, but also becoming too dependent on a supplier. The organization might naturally loose the necessary knowledge and therefore, its ability to perform the previously outsourced tasks. It can lead to a loss of vital know-how, especially with respect to core competencies (Doig et al. 2001).

Another valid knowledge risk connected with outsourcing relates to innovation perspective. Too high reliance on external providers can lead not only to a gradual loss in key areas of expertise but also to a mismatch between the external provider's expertise and the current needs of a company (Earl 1996). Next possible problem originates from the fact that external providers deal not only with a single company, but with many firms and the knowledge they share with the companies, may stop being distinctive. In other words, not only external providers may share similar solutions between companies, but even a solution applied in one firm that appeared to be successful may be transferred to other firms and loose its competitive advantage. Additionally, the company using services of external providers may as well lose its ability to innovate due to lack of abilities and skills possessed internally. It is worth to remember that the magnitude of knowledge risks related to outsourcing may depend on the number of partners and network arrangements (Trott and Hoecht 2009).

3.5 Risks Related to Knowledge Gaps

A knowledge gap shows a deficit between what an organization must know, and what it actually does know (Perrot 2007). As a consequence, the organization might be hampered in meeting its objectives or putting its strategies into action.

The potential risks related to knowledge gaps and thus faced by organizations might be connected with the lack of knowledge regarding the functioning of the sharing economy. Or put it differently, organizations, which are not aware of the rules could face serious problems in operating in this type of economy. For example, the fact that many companies imitate others and use their ideas can bring severe consequences to company's competitive advantage. If a company does not protect its most valuable resources or does not know how to do it, it might easily loose them. Therefore, established organizations interested in entering the market of the sharing economy are rather likely to face a particular knowledge risk and thus, are set about doing something to reduce this gap in order to increase the likelihood of success.

3.6 Relational Risks

In a sharing economy, collaborations of different actors can be considered a necessity to make possible the different initiatives and business models. Thus, knowledge sharing is needed to increase the effects of those collaborations,

e.g. to achieve the goals associated with the collaboration (Ritala et al. 2015). However, collaborations with others are not per se positive. A positive example of collaboration could be a form of knowledge spillover between partners. For example, the internet (e.g. a specific social media channel) is used to get in touch with a large undefined number of actors and to take advantage of these actors' knowledge and expertise to develop something new. On the other hand, a negative example could be a situation when one of these actors, consciously or not, leaks information or knowledge about the local organization/actor to another organization/actor (Durst et al. 2015).

Thus, relational risk can be described as the probability and consequence of having dissatisfactory cooperation and/or opportunistic behavior by partners (Delerue 2005). As indicated above, relational risk also comprises the risk of knowledge sharing, which may end in the strengthening of the partner at the expense of the SMEs' (small and medium-sized enterprises) own competitive standing (Coras and Tantau 2013), which clarifies the close link to the higher-level term of knowledge leakage. The reduction of the scope of partners to collaborate with may be advisable in competitive environments and could act as an alternative to more protective mechanisms (Durst and Aisenberg Ferenhof 2014).

3.7 Risk of Applying Wrong (i.e. Obsolete/False) Knowledge

The knowledge that has been relevant in the past may become obsolete over time or it can simply be forgotten because of time elapses (Tan et al. 2006). Therefore, knowledge is in a constant state of change and should be continuously updated. If a company does not keep its knowledge up-to-date or validated, there is a risk that it will apply wrong knowledge in its operations. The risk of applying wrong knowledge may appear in two situations. The first one is when the out-of-date knowledge is applied in the organizational context or in inter-organizational settings. For example, a company might enter a network of collaborators and, base on its obsolete knowledge (e.g. old market research report), propose a solution to be introduced on the market. The second situation takes place when a company applies false knowledge, for example, received from its unethical partner. Both situations can potentially cause not only the loss of business opportunities but also profits or trust among business partners.

3.8 Risk of Improper Application of Knowledge

With the abundant amounts of available information and knowledge that organizations face nowadays, there is a risk of improper application of knowledge or its misinterpretation. For example, a company might obtain knowledge about a certain business opportunity, but due to the lack of abilities and skills to critically analyse it, the company might misinterpret it and make the wrong decision. As

Jennex (2010) highlights, it is crucial to use knowledge correctly; it is not sufficient just, for example, to capture it in a repository. Improper application of knowledge (for example without considering its context or culture) can lead to applying wrong knowledge in the wrong situation, which often ends in making wrong decisions and undertaking wrong actions.

Although the risk of applying wrong knowledge and risk of improper application of knowledge seem to be similar, there is a difference between the two. In the first case, the knowledge that is used for approaching a specific situation in the organization is inappropriate, not the process of its application. For example, the company finds a report about the business-to-business market in China and applies this knowledge to make own strategical decisions about entering the Chinese market. It appears that the report was out of date and the characteristics of the market have changed and are no longer favourable for the company. One consequence will be that the company loses money due to the application of wrong knowledge. Another consequence could be that the company (the persons involved) will need to unlearn (i.e. forget) this knowledge again. Even though the knowledge application process is correct in this situation—in the sense that on the basis of particular knowledge the course of action is determined—the problem lies in the wrong (in this case—obsolete) knowledge.

In the second case, the problem lies in the improper application (e.g. interpretation) of knowledge. Using the same example of the Chinese market, the company finds a report about the situation in the Chinese market and applies this knowledge to make a decision about entering this market. The knowledge about the Chinese business to business market presented in the report is up-to-date, but it is improperly applied by the persons involved to make decisions about entering this market, because, for instance, the company assumes too high sales volumes on the basis of the possessed knowledge. The problem is therefore not with the knowledge itself, but with its improper application for the activities of the company.

All in all, many potential knowledge risks have been identified that are somehow connected with the functioning of the sharing economy. In the next chapter, more detailed characteristics of these risks will be presented.

4 Potential Sources of Knowledge Risks and Their Controllability

Knowledge risks can be characterized by (a) the knowledge type they are related to, (b) their potential sources, and (c) their controllability/reversibility. As can be seen in Table 1, most knowledge risks concern both types of knowledge: tacit and explicit. Some of them concern mostly explicit knowledge, e.g. knowledge outsourcing risks, as this type of knowledge is the easiest to transfer between an outsourcer and outsourcee (and something that is predominately found in the area of Business Process Outsourcing). Other examples are risks of applying wrong knowledge and risk of improper application of knowledge. Some knowledge risks concern to a greater extent the tacit knowledge (e.g. knowledge loss or risks related to knowledge gaps). When an employee leaves a company (either voluntarily or not), he or she takes all the

Table 1 Characteristics of knowledge risks

Knowledge risk	Knowledge type	Potential sources of risk	Controllability/ influence on companies
Knowledge loss	Mainly tacit knowledge, explicit to a lesser extent	Employee retirement Employee resignation Organizational downsizing Outsourcing	Controllable/ predictable Uncontrollable/non-predictable Controllable/ predictable Uncontrollable/non-predictable All are irreversible
Knowledge leakage	Explicit and tacit	Suppliers, customers, competitors, non-competitive organizations, human resources (e.g. unsatisfied employees or ex-employees) Collaborations/networking Outsourcing	To some extent controllable Irreversible
Knowledge spillover	Explicit and tacit	Alliance or network involvement	To some extent controllable Irreversible
Risks related to knowledge gaps	Mainly tacit knowledge, explicit to a lesser extent	Lack of competencies and skills Inability to select a reliable source for filling knowledge gaps	To some extent controllable Reversibility dependant on the situation
Relational risks	Tacit and explicit	Collaboration and Networking with a number of different stakeholders	To some extent controllable Reversibility dependant on the situation
Knowledge outsourcing risks	Mainly explicit knowledge, tacit to lesser extent	Lack of analysis which knowledge has to be kept in the organization Lack of preventive actions to keep the knowledge in the organization Wrong selection of partners	To some extent controllable Reversibility dependant on the situation, but generally, irreversible
Risk of applying wrong (i.e. obsolete/ false) knowledge	Mainly explicit knowledge, tacit to a lesser extent	Lack of abilities and skills to evaluate knowledge	Uncontrollable/Non-predicable Reversibility dependant on the situation, but generally, irreversible
Risk of improper application of knowledge	Mainly explicit knowledge, tacit to a lesser extent	Lack of abilities and skills to interpret and apply knowledge	Uncontrollable/Non-predicable Reversibility dependant on the situation, but generally, irreversible

knowledge possessed in his or her head (tacit knowledge). That is why this type of risk (knowledge loss) is connected mostly with tacit knowledge. Similarly, with knowledge gaps—they in many cases concern lack of tacit, unarticulated knowledge that is missing in the organization.

As far as the potential sources of risks are concerned, they are threefold. First, they are related to internal resources of a different kind (e.g. employees). Here we may talk about knowledge loss and knowledge leakage that relate to the situation when knowledge is possessed by an organization and then is somehow lost, and also about the cases when an organization internally does not possess appropriate resources (e.g. human resources) and therefore, is faced with risks related to knowledge gaps and risks of applying wrong knowledge or improper application of knowledge. Second, they may result from various cooperation schemes with suppliers, customers, competitors, non-competitive organizations, networking partners or other stakeholders. Examples here are knowledge leakage, knowledge spillover, relational risks and knowledge outsourcing risks. For example, when a networking organization does not undertake preventive actions, its knowledge may be endangered with all these risks. Similar is the case with a company outsourcing its services to an external entity. Third, knowledge risks may originate from various deficits of skills, abilities or competencies on the side of the organization. As an example, one may take risks related to knowledge gaps or risks of applying wrong knowledge or applying it improperly.

These three types of potential sources have some implications for the controllability and irreversibility of the different knowledge risks. Some risks are controllable to much extent (e.g. knowledge loss related to organizational downsizing or employee retirement), while others are hardly even controllable (e.g. risks of applying wrong knowledge or applying it improperly). The risk of applying wrong knowledge or applying knowledge improperly is uncontrollable insofar that the organization, which applies it, is not aware of it and thus cannot control this risk. In many cases, the controllability is much limited, e.g. with knowledge spillover or relational risks, but can be reduced by appropriate preventive actions, e.g. legal arrangements with networking partners or outsourcing companies.

As far as reversibility is concerned, in most cases, the impact of knowledge risks cannot be reversed. For example, if knowledge is spilled over, it cannot be placed back in the organization. The same applies to the improper application of knowledge or situations when an employee left an organization or was being made redundant and thus took all the knowledge with him or her. Keeping that in mind, it seems of particular importance to prevent the appearance of knowledge risks, especially of those possibly severely damaging the organization.

Additionally, the content of Table 1 makes it possible to understand the link between the different risks. As already mentioned above, knowledge leakage is a sub-form of knowledge loss. The risk of knowledge spillover increases with the number of relations a company has, indicating the close link between the spillover risk and the relational risk. Putting a strong emphasis on relations may also increase the risk of applying wrong knowledge as the organization member may trust the

partners and thus refrain from questioning the quality of information and knowledge provided. The risk of applying wrong knowledge in the form of obsolete knowledge is the higher the greater the gap between the knowledge an organization must have, and the one it actually does have.

5 Conclusions

The chapter contributes to a better understanding of knowledge risks faced by organizations operating in the sharing economy. As the study of knowledge risks is underdeveloped in general and with regard to the sharing economy, the chapter novelty originates from the fact of identifying potential knowledge risk and analyzing its characteristics (e.g. potential sources or controllability). The proposed list of knowledge risks in conjunction with the characteristics provided can be viewed as a promising step to a rigor development of this field of research, which in turn will complement our understanding of knowledge management.

Even though the chapter presents a theoretical approach concerning knowledge risks, the practical consequences are obvious. It is crucial to develop and implement knowledge (risk) management strategies and methods that take a holistic perspective (i.e. looking at knowledge from both sides: being an asset and a liability) in order to address and ideally reduce the potential of knowledge risks in a given organization. Given the specific nature of the sharing economy, this applies to companies operating in this type of economy in particular. As all risks, also knowledge risks, are associated with some sort of uncertainty—it means that in any organizational setting, when decisions are made under conditions of uncertainty, some associated risks will appear. The present chapter demonstrates that some of these risks can be anticipated and as a consequence, managers or the people in charge can implement measures in order to reduce their negative impact. Thus, in order to reach this, the persons in charge will be required to critically assess their current approach to risk management and adapt it accordingly to make sure that all types of risks are addressed. The framework for Knowledge Risk Management developed by Durst and Aisenberg Fehrenhof (2016) could be a good starting point for this vital activity.

What is important to keep in mind is that organizations need to analyse the costs of actual knowledge risks versus the costs of undertaking preventive actions against them. In some cases, it will be reasonable to aim for reducing the knowledge risks while in others the costs of this reduction (or elimination when possible) will exceed the actual loss resulting from knowledge risk appearance. As Trkman and Desouza (2012) stated, knowledge risk management needs to be economical. This is of particular importance, as many companies have devoted large amounts of time and resources to manage their knowledge resources, which in some cases jeopardized their effectiveness.

6 Study Limitations and Future Research Avenues

The chapter presents and analyzes the most common situations when knowledge processing and activities may lead to some significant risks such as knowledge loss, knowledge spillover, knowledge leakage, knowledge gaps, etc. All these risks should be incorporated in the process of creating and executing an efficient approach to knowledge management that is also closely linked with the strategic thinking of the organization.

The study is not free from certain limitations. First, the discussion provided in this chapter is of a theoretical character and as such, does not offer empirical evidence on the existence of the discussed knowledge risks among companies. Second, our approach may have overlooked some additional relevant knowledge risks that may impact business operations in the sharing economy. As far as future research avenues are concerned, there are many possibilities to explore the field of knowledge risks in the context of sharing economy. The first aspect that could be examined relates to the awareness of knowledge risks by organizations and its members and how the latter perceive the topic. It would be beneficial to answer the question: From an everyday perspective of organizations, how important knowledge risks actually are? The second field could be the exploration of preventive actions taken by firms. Do they, for example, restrain from cooperation and networking to prevent knowledge leakage? Considering the underlying nature of the sharing economy, it is rather likely to assume that instead of restraining from cooperation and networking the individuals involved will turn to other mechanisms. How do they look like, how are they formed and do they show differences with regard to the other companies who are not active in the sharing economy but still very much dependent on cooperation and networking (e.g. the majority of small firms)? The third issue could relate to examining the efficiency of preventive actions and whether its pays off to undertake them. Finally, the execution of a quantitative study on knowledge risks faced by organisations, which are differentiated by size and cooperation schemes (e.g. with suppliers, competitors, customers, etc.), would also add some beneficial data to our understanding of the topic.

Acknowledgements Malgorzata Zieba gratefully acknowledges support from the National Science Centre (Poland) in the context of a research project "Knowledge management strategies and their determinants in companies from the knowledge-intensive business service sector" (No. 2016/21/B/HS4/03051).

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Beyond Innovation: The Crazy New World of Industrial Mash-ups

Elena-Mădălina Vătămănescu and Vlad-Andrei Alexandru

Abstract

In today's business environment, the fast-shrinking innovation cycle has availed new types of deals fit to mitigate business friction and accelerate the pace of innovation. After a first stream of disruptive tech-driven businesses which reshaped the P2P landscape and created "the sharing economy", industrial mash-ups set themselves up as highly transformative actors, remodeling industries in a groundbreaking manner. Along with the extension of the principles of the sharing economy to the organizational level, an "emerging industrial sharing economy" steadily streams, substantively reforming the corporate ecosystem. The focus shifts from P2P to B2B flows, by means of leading-edge technologies, such as the IoT, social media, cloud computing, data mining, big data analytics, business intelligence, etc. Challenging the status quo, the interplay between technology and industrial assets promises to generate a genuine disruption in economic efficiency and productivity in various industries, especially in the asset-intensive sectors. In this way, the business landscape is expected to witness the dawn of novel actors tying together services from dynamic networks of collaborators which remap the organizational agility and capabilities, and create value via capitalizing underutilized assets, sharing specialized knowledge and building trust within the overall ecosystem. Industrial mash-ups will, thus, lay the foundation of knowledge networks

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E.-M. Vătămănescu, F. Pînzaru (eds.), *Knowledge Management in the Sharing Economy*, Knowledge Management and Organizational Learning 6,
https://doi.org/10.1007/978-3-319-66890-1_14

which invite both people and companies to collaborate, interact, and learn from each other. What would have been once deemed as a crazy new idea, it is nowadays transforming the corporate environment, conceptually and practically puzzling the way we see the world around us.

1 Introduction

In the last three decades, the evolution of the Information and Communication Technologies (ICTs) has led to the rise of a new economic model, often labeled in the literature as 'digital economy' (Van Gorp and Batura 2015; Vătămănescu et al. 2017a). Progressively, the digital economy has affirmed itself as a complex structure comprising a fast-growing number of nodes and links, assets and services which are connected via complex networks, made of intertwined value chains. Based on technologies implying a strong connection to the Internet, the digital economy has triggered new challenges in terms of market dynamics, with an unprecedented rapid rhythm, as different facts and figures report (Gazzola et al. 2017). According to the World Bank (2016, p. 5), the main benefits yielded by the use of digital technologies to all the industrial sectors have objectivized themselves via information costs decrease—thus lowering the costs of transactions—, advent of innovation, improved efficiency through quicker and more convenient activities and services, and stronger inclusion, as services which were previously inaccessible come within reach for more actors.

The promising landscape of the digital revolution, steadily taking over the world economies, is accompanied by a series of issues regarding the capacity to control the ongoing transformative processes. It is in this particular point that the concept of "organizational agility" sets itself up as a topical and compelling perspective when discussing business dynamics in a highly competitive environment. The interconnected world and time-to-market pressures have placed agility to the core of current studies and investigations, both scholars and practitioners focusing on the main paths towards achieving and preserving organizational agility (Pînzaru et al. 2016). Special attention has been attached to the technological development, operation and process coordination, knowledge management strategies and to continuous improvement and integrated change management in versatile contexts (Sherehiy et al. 2007; Williams et al. 2013). In this vein, Davis (2009) talks about the "restructuring of the business order" on purpose to attain competitiveness, speed and responsiveness to the evolving market conditions. Similarly, Bi et al. (2012) and Ghasemi (2015) posit that organizational agility potentiate the achievement of competitive capabilities in fast-changing business environments.

Pursuant to Pînzaru et al. (2016), the operationalization of agility covers a wide range of dimensions such as the response capability, adaptability, alertness, flexibility, development, all of them defining the primacies of agile organizations irrespective of the sector or industry. These agility drivers engender the attainment of the competitive advantage "that requires strategic thinking, an innovative

mindset, exploitation of change and an unrelenting need to be adaptable and proactive" (Harraf et al. 2015, p. 675). Agility claims more than adaptive behaviors and relies on seizing a wide spectrum of opportunities of development and progress. This is why all the organizational dimensions should adhere to the consistent improvement and update of technology, management, communication and collaboration infrastructure, coordination and general harmonization of priorities (Ghasemi 2015).

Placing the issue of organization agility in the framework of the sharing economy, new research avenues emerge by means of the inter-influences and sectorial effects from a network perspective (Swafford et al. 2006; Braunscheidel and Suresh 2009). The focus shifts from the organizational to the network level given the fact that the technological architecture and processes directly influence interlinked capabilities, activities and flows across organizations. To provide a pertinent and quick response to marketplace changes as well as to potential and actual disruptions, organizations should envision a network-driven solution which would allow sharing knowledge, tangible and intangible assets within an inter-organizational setting, in a speedy manner (Braunscheidel and Suresh 2009; Alexandru 2016).

Against this backdrop, the promise of the future points to the emergence of new organizations open to integrate or interconnect services from extensive networks of suppliers and consumers with a view to develop more agile goods and services, all the more so as the disruptive digital technologies have set the scene for novel platforms and business innovation. Under the catalyzing effect of leading-edge technologies and their inherent applications—i.e., the Internet of Things, social media, cloud computing, data mining, big data analytics, business intelligence, etc.—innovation springs at the core of collaboration. As Liu and Brody reveal (2016, p. 1): "We've seen companies use this simple form of partnering to pursue new opportunities before they've figured out the precise percentages of business value that each partner will contribute. We've seen companies open their information, assets, and services, making them available to others to create new business value. We've seen companies establish digital marketplaces to provide a forum for sharing information about the nature and availability of many businesses' assets and capabilities". In other words, social and structural exchanges through active networks and collaboration are prone to boost strategic growth within organizations and, consequently, to improve their position and access to resources within networks, catalyzed by a capital of trust and shared interest (Cannone and Ughetto 2014; Hohenthal et al. 2014).

It is in this particular framework that Jeff Liu (Global Technology Transactions Leader, Ernst & Young) and Paul Brody (Global Innovation Leader, Blockchain Technology, Ernst & Young) introduce a new concept able to depict the translation from the P2P sharing economy to the B2B sharing economy, that is "industrial mash-ups". Consistent with EY representatives' approach, "Industrial mash-ups borrow from the informality and flexibility of internet mash-ups—companies that emerge rapidly by making use of others' internet services, often made publicly

available through an application programming interface (API)—to gain the high-speed innovation. . .” (Liu and Brody 2016, p. 1).

B2B sharing platforms strive to develop a “user-friendly spot market” for resources which were available only for some organizations or hard to achieve due to time-consuming procedures. Rewarding agility and focus, the brand-new digital marketplace reconfigures the terms of inter-organizational collaboration by linking assets with needs and by sharing relevant information about the involved actors’ capabilities (Liu and Brody 2016; Vătămănescu et al. 2016a, b, 2017a, b). The shortcomings entailed by traditional alliances are thus overcome, and overarching edges are now within reach—quicker transactions, greater flexibility, agility, and efficiency. In this front, the striking “transformative power of technology-enabled collaborative partnerships cuts both ways—creating big winners and also big losers” (Liu and Brody 2016, p. 7).

Building on this logic, the present chapter advances a preliminary discussion on a paradigm shift from the P2P sharing economy to a B2B “emerging industrial sharing economy”, as coined by Liu and Brody (2016). The overall perspective is anchored in the realms of crazy new ideas coming forth as built-in realities, consistent with Bratianu’s (2017) vision on the revolutionary phenomena:

> Any new idea that shakes the existing model of thinking and cannot be explained by the known laws of science and technology is considered “a crazy idea” in a first stage of its life cycle. (. . .) Crazy new ideas cannot be confined to the existing framework of normal science, technology or business. They get outside the box and try hardly to create a new perspective of thinking. But they should be also able to endure the energetic opposition coming from the establishment, by finding solid facts and arguments for their further development. When their coherence and validity are demonstrated and people can accept them, a shifting paradigm takes place.

2 Knowledge Networks and the Competitive Advantage

When speaking about the dynamics of today’s society, we come across two major frames that are rather complementary than concurrent: the *knowledge society* and the *network society* (Castells 2000a, b; Vătămănescu et al. 2016c). Beyond what was previously seen as the “information society”, the knowledge society focuses not so much on the informational content, but on fostering knowledge-sharing and knowledge-transfer flows, thus favoring a more process-based approach. Knowledge societies move the boundaries of the informational society further and lay stress on how both the outstanding amount of information available, as well as the speed of its transmission can be leveraged on (Wang 2015; Fang et al. 2013; Ferguson and Taminiau 2014).

Molded to the sharing economy, knowledge has been invested with distinctive features: “(1) it is focused on intangible resources rather that tangibles resources (Edvinsson and Malone 1997), (2) it has a hyper-competitive business environment, (3) it is digital, (4) it is virtual and (5) it is networked” (Ordóñez de Pablos 2013).

Consequently, knowledge sharing and transfer involve connectivity, which is a core-element of the network society, hereby providing the basis for hybrid forms of *knowledge networks* (Vătămănescu et al. 2016a).

When operationalizing the concept of "social networks", D'Andrea et al. (2010) described them as encompassing nodes (actors) and ties (connections) with different degrees of interdependency and influence, while Scott (2000) pointed out that the importance and the function of each actor might be provided by its position and ties. In this respect, Palmatier (2008) suggests that the "network theory developed in sociology provides valuable insights into the impact of the structural characteristics of interaction among multiple entities (e.g., individuals, firms) within an overall network". Translated into a business framework, knowledge networks go beyond the organization's boundaries as its actors develop intra-organizational and inter-organizational relationships at the same time, within a collaborative macro-environment (Nowicka et al. 2012). To be competitive in this new context implies the intertwinement of knowledge and network axes within a complex ecosystem (Uzzi and Lancaster 2003; Rathi et al. 2014). It is thus not so much about the knowledge of individual actors as it is about them searching, accessing and using the available knowledge through different networks.

This is mainly why studies have focused on the process of knowledge transfer at the inter-unit level, building on two general premises: the fact that knowledge is mainly generated through social interaction (Brown and Duguid 2002; Wang 2015) and that the mere process of knowledge transfer is a key-driver in the overall emergence of innovation (Owen-Smith and Powell 2004; Shu et al. 2012). In this respect, Valkokari et al. (2012) identify a strong relationship between knowledge management and networked innovation, emphasizing that collaboration for networked innovation—rather than simply the formation of innovation networks—plays a crucial role. What gives value and substance to the network resides in the strong ties among members, the shared vision and purpose and the awareness of being part of an organic system.

In 1999, Porter urged that the competitive advantage is system-driven and it does not rely on remote capabilities or activities. Since then, agile organizations have struggled to establish a culture of sharing and exchanging knowledge through knowledge networks—at both intra- and inter-organizational levels, hence acknowledging the substantial benefits for individuals, groups, organizations and networks (Sharkie 2003; Ordóñez de Pablos 2010; Leung et al. 2013). In the same line of thought, Malone (2004) speaks about the emergence of a collective intelligence brought forward by the intensive usage of the information technology, keeping people connected and stimulating cohesive network structures, all the more so as "networking is easy to engage in as a result of advances in technology and is also quite effective" (Shaladi 2012). Moreover, these web affiliations link people, knowledge, information, ideas, competences, stimulating the collective intelligence, as underscored by Soto-Acosta et al. (2014) when discussing web knowledge sharing and its effect on innovation.

Nowadays, leveraging ITCs novelties facilitates the emergence of the competitive advantage and, which is more, cements the organizational intellectual capital

and innovation as prerequisites of long-term competitiveness and performance (Adams and Lamont 2003; Gokmen 2009; Gunsel et al. 2011; Martín and Delgado 2012). Even since 2000, Carneiro referred to the knowledge and the information technology as critical success factors, positing that "new management philosophies are aware that information is the result of knowledge evolution and that a solid network between intellectual effort and technological innovations is enlarging" (p. 92). That being the case, new business models emerge, driven by consistent interaction among people, organizations, knowledge, information, expertise, competences, know-how within complex and dynamic collaborative networks.

Advancing a complementary viewpoint, Sharkie (2003, p. 20) underlines that "the development of sustainable competitive advantage is a vital management function and an important requirement is the nurturing of a knowledge creating environment". This setting is liable to improve the organizational competitiveness within the setup of a larger ecosystem and would support it in the process of meeting the industry's success factors. By means of collaboration, agile organizations have the ability to integrate and harmonize knowledge in "competitively valuable ways" and to develop their capabilities on purpose to achieve performance goals (Carneiro 2000; Ordóñez de Pablos 2010; Ling 2013). As du Plessis (2007) and Vătămănescu et al. (2015, 2016a, b) also underscore, the rapid rhythm of capturing, creating, disseminating and re-using knowledge will generate competitive edges for all the actors involved.

The coordinates of the new sharing environment flow steadily into the managerial mindset, as well. Organizations cannot be seen anymore as self-sufficient in terms of internal knowledge and capabilities and, as a consequence, the propensity for value and knowledge networks becomes strategic (Ordóñez de Pablos 2010). Hereby, a suitable answer to the competitiveness pressure is the valuation of knowledge as a strategic building block for B2B relationships and, to do so, organizations should open their gates for knowledge sharing. Nevertheless, in many cases, they fail in their endeavors as they are not prepared to see themselves as nodes in the network ecosystem, where global objectives should be accepted as a common value. Placing knowledge sharing risks and skepticism in the front row of their preoccupations, managers often lose sight that the value of organizational assets accrues only when they are properly leveraged. Valuing external relationships and the related knowledge arises as a difficult task to perform, even when a company has the necessary resources. In this regard, Kale et al. (2000) show that there is a tension between a company's desire to acquire and value the knowledge of partners, and the desire to protect its own knowledge assets against opportunists. Extending the discussion to both intangible and tangible assets, Liu and Brody (2016, p. 3) clearly posit that "not all industrial assets can be shared. But once information about a shareable asset (e.g., availability, condition, access) can be captured and communicated securely, the asset itself can be shared".

Therefore, the real challenge for organizations is to assume the pivotal role of collaborative networks, of mutual trust and commitment for knowledge sharing and exchange on purpose to ensure a consistent flow of innovation (Fernando 2010; Tzortzaki and Mihiotis 2014; Kruse and Geißler 2014). Albeit the speed and

wide-scale dimension that are made possible by the digital landscape, these flows of knowledge go from an incremental knowledge accumulation to exponential innovation hops that are triggered by the combination phase of knowledge connectivity (Brown and Duguid 2001; Contu and Willmott 2003; Rathi et al. 2014). This is why harnessing trust and reciprocity works effectively in this direction and are liable to enhance the networks' power.

3 "Is Collaboration the New Innovation?"[1] The Promise of Industrial Mash-ups

Underlining the imperative to give "voice and dignity" to individuals and to bring "every brain into the game", Welch (2005, p. 56) affirmed the importance of the collaboration-driven vision. Further, Adler et al. (2011) deemed that sustainable organizational performance and competitiveness rely on shared purpose, on the pursuit of the same goal, on a collaborative culture "in which collaboration is valued and rewarded" (p. 97). In this context, by bridging the temporal and space gap, disruptive technologies not only contribute to the development of the cognitive capital across organizational boundaries, but also increase the opportunities that people from different organizational and social settings have to engage one another and to collaborate (Bharati et al. 2015).

Going beyond the organization's hedges, underlining how out-group entities may reconfigure in-group activities, and how all these entities collaborate and co-evolve, the process of value creation from the individual's micro-universe to the entire ecosystem is remapped, by linking people, knowledge, information, expertise, competence, know-how within complex and dynamic collaborative networks. Hereby, the goal to access the network's resources for organizational and overall improvement and competitiveness is directly linked to cross-organizational collaboration. As an inherent part of collaboration, the inter-organizational partnering contributes to the competitive advantage of companies (Daou et al. 2013; Jardon 2015; Wang 2014; Zaragoza-Sáez and Claver-Cortés 2011), by improving organizational innovative capabilities (Delgado-Verde et al. 2011; Jardon and Martos 2012), catalyzing tenable partnerships with other companies (Jensen 2010) and by developing and absorbing digital technologies (Soto-Acosta et al. 2014). Among networked organizations, collaboration is strongly connected with the overall knowledge acquired and transferred at the network level, thus facilitating the organizational integration into a knowledge-centric system. New knowledge combinations are generated by the experiences and savvy of the network's members (Jensen 2010), the creation and share of knowledge being facilitated by easy interaction and accessibility allowed to the network members. In many cases, none of the actors is able to bring unique business value to market without the assets

[1] *The title of a seminal article on industrial mash-ups* (see Liu and Brody 2016).

and specific expertise of the others, thus engendering a crowdsourced platform for innovation.

Assuming the collaboration edges, organizations have opened themselves to the development of strategic alliances and set the scene for a shared approach on business opportunities (Lin and Chaney 2007) and innovation (Jardon 2015; Jensen and Schott 2014; Zucchella and Siano 2014). This situation is illustrative of industrial organizations and networks which can be defined as complex aggregations of relationships, sometimes hard to plan, predict or manage while the process of aggregation is far from being simple or additive (Fernandes and Proença 2005; Păduraru et al. 2016; Vătămănescu et al. 2016b, 2017a, b). "Increasingly, a large industrial company cannot think about itself as simply a company (. . .). It needs to think about itself as a node in a much broader network, and it needs to see 'competition' as not simply about how we build market share but about how we capture innovation share from across a very broad ecosystem" (Gary Hamel cited in Liu and Brody 2016, p. 2).

At this point, "a powerful new way for businesses to collaboratively innovate is beginning to emerge" (EY 2016, p. 3), that is, new types of dynamic alliances will flourish in order to capture the rhythm of fast-evolving business relationships. Placed within the paradigm of the digital economy, "industrial mash-ups"—as they were coined by EY (2016)—come forward to describe "an emerging 'industrial sharing' economy," based on automated, yet dynamic, collaboration. "Collaboration is essential. These new ventures depend not only on sector-specific domain knowledge and customer relationships, but also on expertise in analytics, cloud services, wireless connectivity, software, and security" (Liu and Brody 2016, p. 2).

From a conceptual viewpoint, the term "borrows from the open source movement and internet "mash-ups" that are able to rapidly create new business value by incorporating specialized services via application programming interfaces (APIs). Applied to incumbent technology and tech-enabled companies, it will soon start a next wave of accelerated innovation—along with many unlikely partnerships" (EY 2016, p. 3).

After a first stream of disruptive tech-driven businesses which reshaped the P2P landscape (e.g., Uber, Airbnb) and created "the sharing economy", industrial mash-ups set themselves up as highly transformative actors, remodeling industries in a groundbreaking manner. As the principles of the sharing economy expand to the inter-organizational level, the focus shifts from P2P to B2B flows, the IoT, social media, cloud computing, data mining, big data analytics, business intelligence substantively reforming the corporate ecosystem. Industrial mash-ups translate three sharing economy principles to B2B opportunities, i.e., "Sharing services/data or property (i.e., capital assets) via increasingly automated methods; Separating the original, or orthodox, value of a service or asset from potential new business value; Integrating other organizations' specialized services into your own solution (mash-ups)" (EY 2016, p. 4).

Pursuant to Liu and Brody (2016, p. 2), in an industrial mash-up, the organization "shares an asset or capability with one or more partners in a way that creates new possibilities for all—without infringing on the company's ongoing use of the

asset". Under the aegis of an ecosystem of collaborating partners, new products and services are developed by piecing together capabilities from all the actors involved. The collaboration agreements are less restrictive than in the case of M&A or JVs, where procedures are often time-consuming, costly and risky and the negotiation and documentation processes are slow and excessively laborious. In what industrial mash-ups are concerned, the goal is to yield mutual benefits by means of efficient sharing and capitalization of resources through open-ended partnerships.

A speaking example in this vein is brought to the fore by the B2B collaboration between Microsoft and ThyssenKrupp. Considering that the elevator is the most used transportation system, Microsoft and ThyssenKrupp decided to partner for diminishing the workers' waiting time by making elevators smarter via connections to the cloud. ThyssenKrupp Elevator approached tech firms, but none of them managed to make sense of the elevator data. Microsoft Azure's CEO lent data scientists to the German company with a view to assist it in analyzing the collected information. In 2015, the collaboration between the two companies resulted in a common solution—named MAX—which offers remote monitoring capabilities and empowers ThyssenKrupp to predict the need of repairs, service and maintenance. Complementarily, the launching of the HoloLens (product and service) in 2016 took elevator service to a whole new level. Over 24,000 service engineers at ThyssenKrupp can now receive hands-free guidance on site, doing their jobs more efficiently and safer by leveraging the data collected by Microsoft Azure Internet of Things Suite (e.g. speed, motor temperature, door functioning for diagnostics), by combining it with the use of Skype and by sharing holographic information. Presently, iconic buildings, such as One World Trade Center, are equipped with elevators that are connected to the cloud through MAX and can travel from ground to top floor in 60 s, establishing new standards in terms of sustainability and reliability.

Other topical examples are provided by the oil and gas industry giants. In this sector, the exponentially increasing volume of technology, research sharing and cooperation can be easily spotted. For instance, two oil companies are in advanced talks about sharing drilling technology. An alliance between Russia and Saudi Arabia having oil as reference was once unthinkable, a sheer crazy idea, but when companies in the field are facing turmoil, Gazprom Neft and Saudi Aramco collaborate against the common threat of US shale. The collaboration terms focus on drilling, but officials stated that there are also discussions about partnering for research and development. Similar news is currently being published regarding the collaboration between Rosneft and Saudi Aramco on LNG, between Gazprom and OMV to develop strategic cooperation which includes swap of assets, sponsoring of cultural events in Vienna and St. Petersburg, between Gazprom and Halliburton in developing technologies for drilling multi-lateral wells and for repeated multi-stage fracturing in horizontal wells.

Among others, these examples confirm to a great extent that "major industrial companies are recognizing they need to switch from a model based on sole control to one anchored in collaboration, and from partnerships of only two to partnerships with potentially many members" (Liu and Brody 2016, p. 2). Hereby, underutilized

or industry-centric assets and capabilities could be capitalized in extrapolated trans-organizational and trans-industrial partnerships. Via increasing productivity—by enabling asset sharing and by availing the generation of new capabilities, industrial mash-ups would thus be able to boost utilization of assets significantly—by 50%, 100%, or more (Liu and Brody 2016, p. 3).

4 From the Crazy New Ideas Towards Built-in Realities

By revolutionizing the way organizations co-create value and foster innovation, industrial mash-ups evolve vertiginously from an emerging crazy idea towards a built-in reality fit to match the rhythm of breakthrough business transformations. As the industrial mash-ups environment thrives, new benefits are yielded from developing knowledge networks, bringing together idle or underused assets and sharing capabilities and unique expertise via inter-organizational exchanges.

Forged in the heat of the sharing economy, industrial mash-ups have come to build higher value and a faster track to innovation and growth than traditional businesses, by assuming an API-driven, self-organizing, self-optimizing ecosystem and daring the vertically integrated organization. Exponentially to a great extent, they develop a new culture where sharing, collaboration, ownership and networks are acquiring new meanings.

Collaboration-driven, the emerging industrial sharing economy sets the scene for a digital future where the mechanisms of deal making promise unprecedented flexibility, agility and competitiveness. Moreover, putting an end to the monolithic business era, industrial mash-ups will nurture scale across ecosystems of collaborating partners with specialized expertise, often favoring cooperation to the detriment of competition.

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