

Cooperation Between Competing Companies: The Example of Polish and Belarusian Enterprises



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Abstract Enterprises today have to deal with increasingly difficult and very complicated development conditions and such circumstances force them not only to compete, but also to cooperate with other entities in order to use their potential more efficiently. Wide availability of studies on cooperation between both national and regional enterprises results from the growing importance of cooperation in development strategies. This article attempts to fill in the gaps concerning cooperation on the regional level. The study covers neighboring regions of Poland and Belarus. The purpose of the article is to identify the level of cooperation with competitors in selected sectors of Polish and Belarusian enterprises and to define the prospects of its strengthening in the near future. The research involves more than 500 companies. It is found that both low level of current cooperation with competitors as well as insufficient optimism which can be observed in the assessment level of interest by surveyed enterprises which are interested in cooperation in the near future.

Keywords Cooperation · Enterprise · Region · Poland · Republic of Belarus

1 Introduction

For many years, businesses have been taking note of profits stemming from cooperation (Powell 1990; Powell et al. 1996; Świadek and Wiśniewska 2015), and the economic effects of sharing the resources of firms are becoming key success factors (Strzyżewska 2011). The ability to build partnerships with business partners is one of the signs of the ability to achieve competitiveness (Adamik and Staniszevska 2008), and the situation of a large number of businesses—in particular those faced with a lack of capital means that cooperation with the competition becomes an interesting alternative.

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This issue becomes particularly significant in areas of inadequate investment, which could include the Podlaskie Province in the northeast of Poland, as well as neighboring Belarus. In relation to this, this article attempts to explore whether businesses based in the aforementioned areas make use of the opportunities presented by cooperation with their competitors. The aim of this article is to identify the level of cooperation of businesses with their Polish and Belarusian competitors and the possibility of its strengthening in the near future. The issue was examined by researching answers to the following questions: how do respondents rate current cooperation with competitors? To what extent do individual factors affect the current level of cooperation with competitors? To what extent are the respondent firms interested in strengthening cooperation with their competitors in the near future? To what extent can positive changes in individual factors influence an improvement in the cooperation of businesses with their competitors in the near future?

Critical literary analysis and statistical analysis of research conducted among 502 companies—381 Polish companies based in the Podlaskie Province (Poland) and 121 Belarusian companies have been used in this paper. Spearman's rank correlations have been used in the statistical analysis to determine the relationship between the current level of cooperation and possibilities of its strengthening in the future.

2 Overview of the Literature

Although a widely understood concept, cooperation can be interpreted in different ways (Karwacka 2016; Daniluk and Tomaszuk 2016). In addition, many authors draw attention to the difficulties in interpreting this concept (Nowak 2012; Mazur 2011)—this can be justified by the large number of terms in literature and those used to define organizational cooperation. The most commonly used include cooperation, co-working and collaboration (Pierścieniak 2015). Regardless of the chosen term, a key element linking the definitions of cooperation is the awareness of a common goal. On this foundation, ties linking together individual entities are formed, based on the principle of inter-communication and leading to working in the common interest (Bembenek 2006). One can therefore claim that the premise to engaging in cooperation is a common goal, which brings about a necessity to strengthen one's potential in a given arena. (Hamel 1991; Håkansson 1987; Inkpen and Crossan 1996).

It is difficult to point out the best way of cooperation—in each individual case there is usually a unique and specific configuration of characteristics of both the organization and the environment that dictate the optimal method of structuring cooperation (Williamson 1991; Madhok 1995, 2006; Mayer and Argyres 2004). This stems from the differentiation of the specificity of individual organizations engaging in cooperation (Kozłmiński and Latusek-Jurczak 2014; Sampson 2007; Sarkar et al. 2009). It is possible, however, to distinguish certain activities that can be undertaken by organizations aiming to achieve successful cooperation. These

include strategic planning of the cooperation within on organizational entity level; a system of communication in the partnership and the cooperation group; obtaining financial resources for the partnership; the decision-making process; the organization of a cooperation unit in the organizational entity; the division of tasks, obligations and responsibilities; the process of selecting employees for cooperation, the competency and attitude of employees towards cooperation; leadership; external support for the idea of cooperation and the reputation of the organization (Pierścieniak 2015).

The concept of cooperation is a phenomenon analyzed in management theory on many levels, including the aspect of undertaking cooperation by competing businesses (Karwacka 2016; Wasiluk 2016, 2017). The most common sources of achieving a competitive edge by cooperating businesses include relationship-specific resources created as a result of adaptation measures and investments made as part of the given relationship; activities stemming from the learning process; the replenishment and possibility of exchange of the resources of businesses in the given relationship and lower transaction costs as a result of mutual trust (Dyer and Singh 1998).

It is accepted that the main objectives of the cooperation of businesses are the combining of strength that facilitates the building of a coalition to help achieve common goals, the combining of complementary elements allowing for the creation of synergic effects and the common acquisition of knowledge and learning—both with and from the partner (Doz, Hamel 2006; Koźmiński and Latusek-Jurczak 2014). The most common motives for businesses undertaking cooperation are striving for innovation growth, filling a lack of resources, an increase in effectiveness, obtaining benefits from the learning process and lowering the level of uncertainty of the environment (Sudolska 2011).

Factors that encourage cooperation between organizations are above all mutually compatible goals, the complementarity of activities, an awareness of the positive significance of reaching common goals, the common realization of partial tasks, the voluntary nature of cooperation (freedom of accession and exit), formalism or non-formalism and the maintaining of economic and legal independence by the partners (Bembenek 2006). However, the most important factors obstructing cooperation include, above all, the constant rivalry stemming from the scarcity of market resources, a lack of trust between entities, legal obstacles linked with anti-monopoly measures as well as a strong culture of individualism that makes the realization of common goals difficult, if not impossible, as a result of the will of individual players to satisfy their own individual interests (Pachciarek 2011).

The elaboration of a model of cooperation that will contribute to a rise in the competitiveness of a business is not simple, and the effects of functioning in inter-organizational relations can have negative as well as positive effects (Smith-Doerr and Powell 2005). One has to keep in mind that despite the anticipated added effect, a large proportion of alliances does not achieve the goals and anticipated benefits set out by the cooperating businesses (Kale and Singh 2009; Lunnan and Haugland 2008; Das and Teng 2000; Keasler and Denning 2009).

3 Research Methodology

The research part of this paper presents the partial results of research conducted within the international research project “Readiness of enterprises to create cross-border networks” implemented as a result of agreement between the Polish Academy of Science and the Belarusian State Academy of Science in the years 2014–2016. Representatives of companies (managerial staff) on both Polish and Belarusian side participated in the study. The research sample consisted of 502 companies—381 Polish companies and 121 Belarusian companies.

The research approach based on desk research was used to achieve the set goals, which allowed defining the level of cooperation and the factors that influence the level of cooperation. The following cooperation areas have been identified:

- between companies in the industry,
- between competing companies,
- with business environment institutions,
- with the science and research sphere,
- with authorities (local and national level).

Respondents were asked to comment on the level of cooperation in each area and to indicate the degree of interest in cooperation (1–7 scale). Next, after a critical analysis of literature (e.g. Strzyżewska 2011; Górzyński 2006; Czakon 2007; Bengtsson and Kock 2014; Romanowska 1997; Ford and Håkansson 2013; Skalik 2002; Daszkiewicz 2007) and discussions with experts of the academic and business environment within each area, several to a dozen factors influencing the level of cooperation were identified. In terms of the area of cooperation with competing companies a list of 14 factors has been made:

1. extending the sales market;
2. joint advertising activities/product promotion;
3. subcontracting;
4. operation cost reduction (coordination of purchases, joint transport, storage);
5. rise of innovation potential (faster generating and implementing product and technology innovations);
6. products/services quality improvement;
7. access to the competitor’s resources (personnel, technology, machines, equipment etc.);
8. possibility of realization of bigger contracts/projects;
9. possibility of participation in tenders/projects;
10. possibility of implementation of joint investment projects (ex. joint purchase of expensive technologies, equipment, etc.);
11. possibilities of implementation joint research and development activities;
12. access to financial institutions, support programs;
13. influencing the national and local authorities;
14. experience from previous cooperation.

Respondents commented on how each factor influences the level of cooperation and the extent to which positive changes in particular factors can improve the level of cooperation (in 1–7 scale). The aim of this article is to identify the level of Polish and Belarussian companies' cooperation with the competition and the prospects of its strengthening in the near future. The research problem was solved by answering the following research questions: How do respondents rate the level of current cooperation with competitors? To what extent do individual factors affect the current level of companies' cooperation with competitors? What is the degree of the researched companies' interest to strengthen their cooperation with competitors in the near future? To what extent can positive changes in particular factors contribute to improving business cooperation with competitors in the near future?

For the research results interpretation the following tools were used: the tabular form of data presentation which allowed to determine how the different categories were distributed in the research sample, the descriptive statistics which allowed to determine what was the ratio of the answers on the given answer variant to all answers given and nonparametric statistics which allowed to verify important differences in the answers.

4 Research Results Interpretation

Respondents assessed the level of cooperation in six aspects, as shown in Table 1. When analyzing the respondents' assessments on the basis of arithmetic means it can be noticed that in every aspect the Belarussian respondents declared a higher level of cooperation. This was also confirmed by the analysis of the dominant value indicator

Table 1 Evaluation of the current level of cooperation (in the opinion of Polish and Belarussian respondents)

Level of cooperation	Country	\bar{x}	Me	D	n_D	V
Cooperation between companies in the industry	Poland	3.94	4	4	90	40.29
	Belarussian	4.38	4	5	34	36.01
Cooperation between competing company	Poland	2.80	3	2	94	51.90
	Belarussian	3.23	3	3	41	44.98
Cooperation with business environment institutions	Poland	3.07	3	3	93	49.88
	Belarussian	4.21	4	4	31	38.40
Cooperation companies with science-research sphere	Poland	2.51	2	1	134	62.05
	Belarussian	3.64	3	3	34	44.63
Cooperation companies with the national authorities	Poland	2.34	2	1	153	63.21
	Belarussian	3.78	4	4	31	49.94
Cooperation companies with the local authorities	Poland	3.92	3	4	91	46.23
	Belarussian	4.07	4	4	24	47.76

Source: own study

Statistical measures: mean (\bar{x}), median (Me), dominant (D), size dominant (n_D), coefficient of variation (V)

Table 2 Impact of individual factors on the current level of cooperation between competing companies (in the opinion of Polish respondents)

Factor	\bar{x}	Me	D	n_D	V
Extending the sales market	3.14	3	1	100	58.47
Joint advertising activities/promotion	2.51	2	1	151	64.56
Subcontracting	3.07	3	1	107	56.33
Operation cost reduction	2.86	3	1	127	61.03
Rise of innovation potential	2.80	3	1	120	59.62
Products/services quality improvement	3.09	3	1	109	57.64
Access to the competitor's resources	2.75	2	1	128	62.28
Possibility of realization of bigger contracts/projects	3.38	3	1	90	55.21
Possibility of participation in tenders/projects	3.17	3	1	105	58.60
Possibility of implementation of joint investment projects	2.72	2	1	148	66.22
Possibilities of implementation joint research and development activities	2.59	2	1	147	63.85
Access to financial institutions, support programs	2.83	2	1	131	64.24
Influencing the national and local authorities	2.79	2	1	128	62.11
Experience from previous cooperation	3.08	3	1	100	56.79

Source: own study

Statistical measures: mean (\bar{x}), median (*Me*), dominant (D), size dominant (n_D), coefficient of variation (V)

(the same level was declared only in the case of cooperation with local authorities) and the median (which is concurrent for cooperation between companies in the industry and competing companies, in other cases a higher indicator for Belarusian respondents was observed).

The indicator of the declared level of existing cooperation in the examined aspects on the Polish side ranged from 2.34 to 3.94; for cooperation between competing companies it amounted to 2.80—only cooperation with national authorities and with the science-research sphere was lower (respectively 2.34 and 2.51). The results in all analyzed aspects can be considered very low—none of them reached the average level (in the scale 1 to 7 it is 4). This may be due to the low need for cooperation in general and no awareness of the benefits of synergy in many aspects. Representatives of Belarusian companies declared the level of cooperation respectively in the range of 3.23–4.38 and cooperation between competing companies was rated lowest.

Respondents assessed also the extent to which the individual factors affect the level of cooperation with competitors in the 1–7 scale where 1—no cooperation; 7—very strong cooperation (Table 2). When analyzing the opinions of Polish respondents the impact of each factor can be assessed as low (from 2.51 to 3.38 according to the arithmetic mean); in addition, for all the tested factors the dominant response was “complete lack of influence”.

The most important factors for starting cooperation by Polish companies include the possibility of realization of bigger projects (3.38), the possibility of participating in tenders and projects (3.17) and extending the sales market (3.14). This is due in

Table 3 Impact of individual factors on the current level of cooperation between competing companies (in the opinion of Belarusian respondents)

Factor	\bar{x}	Me	D	n_D	V
Extending the sales market	3.52	3	1	25	53.02
Joint advertising activities/promotion	2.98	3	1	42	60.73
Subcontracting	3.93	4	4	27	44.99
Operation cost reduction	3.41	3	1	24	54.24
Rise of innovation potential	3.44	3	5	24	50.22
Products/services quality improvement	4.09	4	4/ 5	24	46.38
Access to the competitor's resources	3.40	3	1/ 4	23	52.75
Possibility of realization of bigger contracts/projects	4.12	4	4/ 5	22	46.65
Possibility of participation in tenders/projects	4.12	4	5	28	45.15
Possibility of implementation of joint investment projects	3.40	3	1	34	59.91
Possibilities of implementation joint research and development activities	3.26	3	1	29	57.03
Access to financial institutions, support programs	3.26	3	1	33	59.15
Influencing the national and local authorities	3.09	3	1	37	63.06
Experience from previous cooperation	3.87	4	5	24	48.59

Source: own study

Statistical measures: mean (\bar{x}), median (*Me*), dominant (D), size dominant (n_D), coefficient of variation (V)

part to the specific nature of individual industries when a project may exceed the capacity of individual companies and decisions regarding selection are made by tender (Wasiluk 2016). The factors of the smallest importance were: joint promotional activities (2.51), the possibility of implementation joint research and development activities (2.59) and the possibility of joint investment projects (2.72). These results are in line with the image of Polish companies presented in papers on innovation which show that Polish companies are not interested in undertaking R&D activities (Baczko 2012) and money on innovation is spent more often on purchasing of machinery and equipment rather than on conducting research and development activities (Bromski 2013).

When analyzing the opinions of Belarusian respondents (Table 3) much higher significance of each of the examined factors can be noticed in terms of its impact on the current level of cooperation between competing companies. This results among others from the declared higher level of cooperation with the competition. The biggest differences in assessments of individual factors are evident in case of products and services quality improvement (difference 1 according to the arithmetic mean), possibility of participation in tenders and projects (0.95) and subcontracting (0.86). The most important factors include the possibility of participation in tenders and projects (4.12), the possibility of implementation joint contracts and projects

Table 4 The degree of the examined companies' interest in closer cooperation in the near future

Level of cooperation	Country	\bar{x}	Me	D	n_D	V
Cooperation between companies in the industry	Poland	3.62	4	4	98	41.89
	Belarusian	4.81	5	5	33	33.45
Cooperation between competing company	Poland	3.01	3	3	93	50.20
	Belarusian	3.95	4	5	28	37.47
Cooperation with business environment institutions	Poland	3.69	4	4	84	43.49
	Belarusian	4.29	4	4	39	35.79
Cooperation companies with science-research sphere	Poland	3.20	3	3	88	52.00
	Belarusian	3.99	4	4	46	37.92
Cooperation companies with the national authorities	Poland	2.92	3	1	101	56.92
	Belarusian	3.79	4	4	27	51.94
Cooperation companies with the local authorities	Poland	3.75	4	4	91	46.76
	Belarusian	4.03	4	4	31	46.49

Source: own study

Statistical measures: mean (\bar{x}), median (Me), dominant (D), size dominant (n_D), coefficient of variation (V)

(4.12) and the possibility of products and services quality improvement (4.09)—therefore some analogy can be noted with the Polish respondents.

In the case of the least significant factors the Belarusian respondents' opinions are also partly similar to those of Polish respondents. The following factors may be distinguished: joint advertising and promotional activities (2.98) and the possibility of implementing joint R&D projects (3.26); in addition, there are also factors regarding influence on the national and local authorities (3.09) and access to financial institutions and support programs (3.26), which may be related to the economic system in which the examined entities are located.

In view of these considerations, it seems interesting to examine the degree of interest in cooperation with competitors in the near future (Table 4). Similarly to the current level of cooperation all aspects of cooperation examined with the prism of the surveyed companies' interest in its development were assessed higher by the Belarusian respondents. Differences in perceptions are in the range of 0.28 (for the degree of interest in closer cooperation with local authorities) to 1.19 (for the degree of interest in closer cooperation within the industry); in the case of the examined companies' interest in closer cooperation with the competition the difference is 0.94. In both cases the optimism about interest in closer cooperation with competitors is very moderate (3.01 for Polish respondents and 3.95 for Belarusian respondents)—only the interest in cooperation with the national authorities was ranked lower (2.92 and 3.79 respectively).

Moderate optimism can be observed when comparing the current level of cooperation in each aspect with the degree of interest in strengthening it in almost all the studied areas. Only in the case of cooperation with local authorities the declared level of strengthening cooperation is lower in both countries, which can be explained by the fact that the circumstances of cooperation with the sphere of authorities in the

Table 5 Influence of positive changes within particular factors on improving cooperation between competing companies in the near future in the opinion of Polish respondents

Factor	\bar{x}	Me	D	n_D	V
Extending the sales market	3.65	4	1	72	53.44
Joint advertising activities/promotion	3.17	3	1	96	54.84
Subcontracting	3.44	3	1	78	51.85
Operation cost reduction	3.58	4	1	78	51.36
Rise of innovation potential	3.41	4	4	88	52.69
Products/services quality improvement	3.52	3	1	80	53.33
Access to the competitor's resources	3.24	3	1	95	56.02
Possibility of realization of bigger contracts/projects	3.83	4	5	79	47.99
Possibility of participation in tenders/projects	3.59	4	1	75	51.19
Possibility of implementation of joint investment projects	3.28	3	1	97	55.95
Possibilities of implementation joint research and development activities	3.14	3	1	99	56.22
Access to financial institutions, support programs	3.38	3	1	90	54.75
Influencing the national and local authorities	3.21	3	1	96	57.02
Experience from previous cooperation	3.00	3	1	87	54.84

Source: own study

Statistical measures: mean (\bar{x}), median (*Me*), dominant (D), size dominant (n_D), coefficient of variation (V)

past were not favorable (Wasiluk 2016). In addition, Polish respondents are not interested in maintaining even their current level of cooperation within the industry.

Optimistic in terms of strengthening cooperation with the competition seems to be the fact that in both cases the dominant indicator turned out to be higher than the declared level of cooperation (the dominant assessment of the current level of cooperation on the Polish side was 2; indicator of interest in strengthening cooperation was 3 and in the case of Belarusian companies the indicator increased from 2 for the current level of cooperation to 4 for the degree of strengthening it). However, in both countries, the degree of strengthening cooperation with competitors is below the average (analyzing the arithmetic mean).

Respondents were also asked to what extent the positive changes in individual factors could influence improvement of the level of cooperation with competitors (Tables 5 and 6). Very moderate optimism can be noticed when analyzing the assessments of Polish respondents. The impact of each factor was ranked as at least 3 (analyzing the arithmetic mean for the assessments rate), but none of the factors reached the mean level (4). This is probably due to quite low interest in strengthening cooperation with competition in general. The most important factors include: the possibility of realization of bigger orders and projects (3.83); the opportunity to participate in tenders and projects (3.59) and the expansion of sales markets (3.65)—therefore the same factors that had the greatest impact on the level of the existing cooperation. On the other hand, while analyzing factors of the least importance in the creation of future cooperation we can notice the low impact of prior cooperation (3.00)—which is quite obvious given the low level of current

Table 6 Correlations of Spearman's ranks for evaluation of the current level of cooperation and possibilities of its strengthening in the future

	Poland	Belarus
Evaluation of the current level of cooperation and possibilities of its strengthening in the future	0.653	0.574
Factors		
Extending the sales market	0.678	0.785
Joint advertising activities/promotion	0.664	0.755
Subcontracting	0.656	0.748
Operation cost reduction	0.651	0.639
Rise of innovation potential	0.652	0.718
Products/services quality improvement	0.663	0.675
Access to the competitor's resources	0.684	0.655
Possibility of realization of bigger contracts/projects	0.655	0.673
Possibility of participation in tenders/projects	0.681	0.687
Possibility of implementation of joint investment projects	0.627	0.672
Possibilities of implementation joint research and development activities	0.639	0.761
Access to financial institutions, support programs	0.646	0.724
Influencing the national and local authorities	0.694	0.756
Experience from previous cooperation	0.730	0.613

Source: own study

Note: For all correlation coefficients, $p < 0.05$

cooperation; opportunity to participate in joint R&D projects—3.14 (respondents considered this factor insignificant also when examining the influence of different factors on current level of cooperation) and joint promotional and advertising activities—3.17 (this factor was also of minor importance when examining its influence on current level of cooperation).

Slightly higher optimism can be noticed when analyzing the answers of the Belarusian respondents. In their opinion positive changes in each identified factor will contribute to improving cooperation between competitors to a higher degree than indicated by Polish respondents (analyzing the assessment indicator according to arithmetic mean the influence of five factors was ranked as at least average). Respondents ranked the highest importance to the possibility of realization of bigger contracts/projects (4.50); opportunity to participate in projects (4.43) and products and services quality improvement (4.32). There were also no changes of the least significant factors in the opinion of Belarusian respondents—the respondents rated lowest the influence on national and local authorities (3.25); joint promotional and advertising activities (3.32) and access to financial institutions and support programs (3.43).

A number of positive correlations were also noted in the respondents' answers (Table 6) with the use of Spearman's correlations. By analyzing the relationship between the current level of cooperation and the interest in its strengthening it can be stated that there is a high positive relationship in the case of Polish companies and moderate in the case of Belarusian companies. When analyzing the dependency

between the assessment of the influence of factors on existing cooperation and the assessment of possibilities for its improvement in the future we can notice a significant correlation for all responses, with a higher dependence (for 11 factors) on the Belarusian side. This leads to the conclusion that the increase in rating the factors that influence the current level of cooperation is accompanied by the increase in the average level of assessments of influence of positive changes in these factors on starting cooperation in the future.

5 Conclusion

The analyses carried out point to a low level both of current cooperation and of the readiness to strengthen it in both research groups. The higher level of most indicators in the case of Belarusian firms can be explained by the somewhat higher level of psychological readiness to undertake cooperation as a whole—Poland is a nation with a deeply rooted culture of individualism.

Regardless of the country of origin, cooperation with the competition is one of the lowest (in the case of Polish firms) or even the lowest (in the case of Belarusian firms) rated areas of cooperation, with the level of readiness to undertake cooperation in the future also below average. In addition to this, an analysis of the factors that influence the current level of cooperation (as well as an analysis of the effect of positive changes of given factors on the improvement of cooperation) show their low significance in the researched aspect. Therefore, one should consider which factors could improve the readiness of businesses to undertake cooperation with their competitors, wherein the awareness of business owners that building partnerships with competitors can have a meaningful influence on a later rise in their competitiveness can have a key significance.

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