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Does coopetition pay off? Benefits of intra-organizational coopetition within business groups

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Abstract: Coopetition has gained considerable attention in the management literature. Yet, the best recognized is inter-organizational coopetition. The intra-organizational coopetition is still under-researched and there is a gap in the comprehensive evaluation of the benefits of intra-organizational coopetition. This paper attempts to identify the main positive outcomes in the coopetition relationship between affiliates within business groups based on a survey questionnaire in the largest business groups listed on the Warsaw Stock Exchange. The findings of the study reveal that coopetition at the intra-organizational level generates many benefits. The main ones are resource benefits and improved market and financial performance. The positive effects of intra-organizational coopetition are somewhat similar to the benefits of inter-organizational coopetition. However, some differences support the view on the specificity of coopetition at each level.

Keywords: advantages, benefits, business groups, intra-organizational coopetition
JEL Classification: L10, L20, M16

1 Introduction

Coopetition is defined as the interplay between competition and cooperation [Gnyawali and Charleton, 2018]. Competitors work together to collectively enhance performance and at the same time they compete by taking independent actions to improve their own performance [Luo, 2007]. Coopetition, however, creates more value than separate actions of involved parties by integrating complementary resources and knowledge exchange [Ritala and Tidström, 2014]. The value in coopetitive relationships is created by the respective idiosyncratic contributions of all partners [Volschenk et al., 2016]. Thus, coopetition is regarded as a win–win approach that is not a zero-sum game but one with a variable positive sum, which should translate into benefits for all parties involved.

Coopetition has enjoyed sustained interest across the management literature and the most frequently studied topic is an inter-organizational coopetition, that is, between legally independent companies [Gernsheimer et al., 2021]. However, coopetition can also be found within complex organizations. Previous studies refer to relationships among departments, divisions, and project teams as well as business units or subsidiaries in business groups [Benig et al., 2018; Tippmann et al., 2018; Liu et al., 2019; An and Kreutzer, 2020; Bouncken et al., 2020; Mierzejewska, 2022]. Coopetition benefits can be found both at the inter-organizational and intra-organizational levels. On the inter-organizational level, benefits include increased effectiveness and market shares, development of new technologies, cost reduction, resource acquisition, and knowledge transfer [Jankowska, 2013; Zakrzewska-Bielawska, 2014; Czakon et al., 2020a]. Coopetition

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also stimulates knowledge exchange, technological progress, and market expansion [Lado et al., 1997]. Studies of intra-organizational coopetition in multinational corporations show that coopetition allows learning, impacts positively the development of new products, generates better financial and market performance, and improves competitive position [Luo et al., 2006; Ghobadi and D'Ambra, 2012; Li et al., 2021; Mierzejewska and Dziurski, 2023].

This paper focuses on the intra-organizational coopetition that is relatively uncharted territory compared with the inter-organizational coopetition [Bendig et al., 2018; Chen and Tsou, 2020; Gernsheimer et al., 2021]. The relatively small number of studies of intra-organizational coopetition makes this an important area of research that is worth further consideration [Walley, 2007; Becker-Ritterspach and Dörrenbächer, 2011]. Additionally, prior studies of intra-organizational coopetition focus mainly on the characteristics and types of this relationship and its antecedencies [Luo, 2005; Bengtsson and Raza-Ullah, 2016]. Very little research, often merely conceptual or qualitative, on the benefits of the intra-organizational coopetition can be found [Song et al., 2016; Murmann and Zhu, 2021]. For this reason, the paper attempts to fill the gap on the benefits of intra-organizational coopetition by answering the main research question: *What are the main benefits of intra-organizational coopetition in managers' perception?*

This study focuses on the simultaneous cooperation and competition of affiliates within business groups as a type of intra-organizational coopetition. Business groups are spread worldwide, and they can be found in both developing and developed economies [Chittoor et al., 2015; Colpan and Hikino, 2018]. They have been a growing phenomenon in Asia, they are well-established in Europe, but play a marginal role in the United States [Cainelli and Iacobucci, 2011]. For example, affiliates of business groups listed on the stock exchange in Taiwan account for 56.2% of the total market capitalization [Chang, 2006]; 30 biggest business groups in South Korea generate 16.0% GDP [Bidgoli, 2010]; it is estimated that all business groups in Russia generate 35.0%–36.0% of GDP [Radygin, 2006]; and French business groups represent 56.0% of the total employment (excluding the financial sector) [Cainelli and Iacobucci, 2011]. However, business groups differ regarding organization design, strategy, cultural issues and so on, but common are the internal interconnectedness and variety of interactions.

Business groups are perceived as cohesive networks with interconnected firms sharing information and resources [Shukla and Akbar, 2018]. They consist of many legally independent entities connected by various economic and social ties with a common owner [Cainelli and Iacobucci, 2011; Belenzon et al., 2019]. Due to a wide variety of business groups, some of them are more "network-like" than others [Lincoln and Sargent, 2018]. Nevertheless, they are not loose network organizations with numerous independent upstream and downstream partners [Miles at el., 1997], but a kind of stable internal networks [Miles and Snow, 1992] with regularly and intensively interacting nodes [Snow et al., 2000]. They are perceived as organizations between markets and hierarchies [Altomonte and Rungi, 2013] with an internal ecosystem [Moore, 2006; Letaifa et al., 2013] in which individual subsidiaries follow a common vision and simultaneously obtain their own goals. The internal ecosystem reflects multiple interactions between subsidiaries in sharing some activities and competing in others that translate into internal coopetition. Prior research reveals that coopetition relationships can be found in business groups [Song et al., 2016; Liu et al., 2019] and they are even perceived as central to the operation of those with a multinational scope of activities [Tippmann et al., 2018] as their entities are interconnected throughout the global grid [Miles and Snow, 1992]. Affiliates within business group cooperate in technological, operational, organizational, and financial areas [Luo, 2005] and simultaneously compete for resources, power, position, or customer base [Luo, 2005, 2007; Lagerström et al., 2021]. Coopetition within business groups is an interesting area of study as it, on the one hand, brings together organizationally and legally independent entities, and on the other hand, takes place within a single structure and is often purposely shaped by the parent company.

This paper is structured as follows. The first section introduces the theoretical background of the study. The overview of the research into benefits of coopetition brings together studies of inter-organizational coopetition with studies on coopetition in multinational corporations and cross-functional coopetition due to the relative scarcity of studies into coopetition within business groups. The subsequent sections present the empirical study based on interviews with top managers of 121 parent companies of business groups listed by Warsaw Stock Exchange (WSE). This part starts with the methodology followed by the

findings from the study and its discussion. The last section contains the concluding remarks with the main contributions of this paper to the management literature. Finally, limitations and implications for further research are presented.

2 Literature review

The section consists of two parts. The first part discusses the main benefits of coopetition in general as identified from the systematic literature reviews. This follows the approach proposed by Czakon et al. [2020b]; the systematic literature reviews provide a comprehensive picture of previous research and gather key conclusions. The second part focuses on the benefits of intra-organizational coopetition. A relatively small number of empirical studies relate to coopetitive relationships in business groups and its benefits, so the list was supplemented by the benefits of cross-functional coopetition and coopetition in multinational enterprises.

2.1 Benefits of coopetition

The literature highlights a number of benefits resulting from coopetition. Table 1 collates those identified through systematic literature reviews. Due to differences in authors' approaches to the systematic review, the benefits provided herein will differ in their aggregation level.

One of the key benefits of cooperating with competitors is access to resources, the ability to put them to effective use, and capture partners' skills [Hamel, 1991; Sindakis et al., 2017]. Competitors may generate value by pooling their resources to improve their core business performance and leverage complementary resources in other fields. Cooperation makes it possible to capture a specific value with less significant resource investment or a greater value with the same investment of resources. Coopetitive partners also benefit from knowledge sharing that leads to better overall performance [Vătămănescu et al., 2021]. The research provides arguments on the importance of access to resource into high-tech companies. This particular benefit of coopetition is flagged as being of key importance [Zakrzewska-Bielawska, 2013].

Improved resource availability leads to other positive outcomes of coopetition. The most often indicated benefit of coopetition refers to innovation. Empirical studies demonstrate the existence of a link between coopetition and innovation outcomes [Gnyawali and Park, 2011; Gast et al., 2015; Le Roy and Czakon, 2016; Vanyushyn et al., 2018; Kraus et al., 2019]. Although that link is not fully clear [Bouncken et al., 2018; Dziurski, 2020], the decisive majority of research shows cooperation paired with moderate competition to increase the performance of innovation processes [Park et al., 2014]. It turns out that coopetition is strongly conducive to radical innovation and facilitates gradual (incremental) innovations, but only in circumstances of significant mutual dependence and trust between the partners [Bouncken and Fredrich, 2012; Le Roy and Czakon, 2016].

Table 1. Benefits of coopetition identified in systematic literature reviews

Authors	Benefits of coopetition					
Gernsheimer et al. [2021]	Innovation performance	Firm performance	Organizational learning	Sustainability strategies		
Dorn et al. [2016]	Innovation	Financial outcomes	Value creation			
Bouncken et al. [2015]	Cost and risk sharing	Economies of scale	Synergy effect	Access to resources and knowledge	Innovation capacity	Competitive advantage
Bengtsson and Raza-Ullah [2016]	Innovation	Knowledge related	Firm performance	Relational		
Czakon et al. [2014]	Synergistic use of resources	Competitive advantage	Innovation performance	Market performance	Financial performance	

The next advantage of coopetition refers to the market performance improvement [Ritala, 2012, 2019]. Previous studies have confirmed that coopetition enhances the market share of coopetitors, especially those with a central position in the coopetitive network [Sanou et al., 2016]. Using the pie metaphor, one could say that companies first cooperate to bake the largest pie possible and then compete to seize the largest possible piece of the pie [Bouncken et al., 2015]. This can entail the promotion of a specific technological standard and action taken to promote it [Vanhaverbeke and Noorderhaven, 2001; Chin et al., 2008]. Thus, coopetition expands existing markets by leveraging the synergies among the complementary resources belonging to competitors and sharing the costs of market development [Ritala et al., 2014]. Finally, coopetition is a strategy enabling the achievement of competitive advantage both by the individual members of the coopetition network and on the level of, and relative to, other competing networks. The competitive advantage can be the result of improvements to production quality, production effectiveness, or innovativeness [Dagnino and Padula, 2002].

Frequently, cooperation with competitors is undertaken in foreign markets. The goal is to facilitate the company's entry into such a market. In return, the foreign partner receives know-how or access to other resources. Such relations can be observed in many sectors, such as automotive, electronics, or pharmaceutical [Hamel et al., 1989; Gast et al., 2015]. This is highly visible with multinational corporations entering new markets in cooperation with local competitors so as to reduce the associated costs and risks [Hamel, 1991].

The benefits of coopetition can be also found as improvements in the financial performance. Some researchers highlight the possibility of risk sharing and cost reduction in market initiatives undertaken coopetitively [Zakrzewska-Bielawska, 2013]. Coopetition parties can experience a decrease in operation costs in general and transaction costs in particular. At the same time, coopetition makes it possible to split the risk among the partners jointly pursuing the project. A good example is cooperation among tenants, although competitive among themselves, that increase the success of the shopping mall [Spasenić et al., 2022]. Additionally, previous studies show that coopetitive relationships involving a high level of both competition and cooperation lead to better economic results than low-competition and low-cooperation strategies [Liu et al., 2014]. Other studies have found that the relationship between coopetition and financial performance is nonlinear and coopetition is beneficial up to a certain extent [Crick et al., 2022]. Both "too little" and "too much" coopetition can be harmful for a company's financial performance [Crick, 2020]. In general, coopetition leads to better results and performance levels exceeding whatever could be achieved independently, although often only for a limited period of time [Robert et al., 2009; Peng et al., 2012].

2.2 Benefits of coopetition within a business group

The benefits of the coexistence of cooperation and competition are also felt in intra-organizational coopetition. Walley [2007] describes the coexistence of internal cooperation and internal competition as an important future source of benefits. However, according to Luo [2005] the positive outcomes of intra-organizational coopetition depend on the organizational infrastructure (communication and motivation systems, etc.). Unfortunately, there are limited empirical studies explaining the benefits of coopetition among affiliates within a business group [Li et al., 2021]. Thus, the research review is supplemented with cross-functional coopetition studies and coopetition within multinational enterprises, which often operate in the form of a business group.

Coopetition among affiliates within a business group may contribute both to revenue increase and cost reduction [Retrief, 2010]. The revenue increase may be the result of improved innovativeness or increased market reach. At the same time, coopetition permits cost reduction on the scale of the entire business group. Coopetition among the affiliates enables cost reduction by joint execution of certain activities such as R&D, common purchases, and so on, and through the promotion of practices that enable cost reduction and improve operation methods. Additionally, internal competition induces the affiliates to achieve better results [Birkinshaw, 2001]. The motivation to improve financial results can be very strong if the affiliates want to be seen in a better light and better rewarded by the parent company [Luo, 2005], especially when the parent company uses winner-picking strategies to allocate resources within the business group

[Dellestrand et al., 2020]. That is often the consequence of the parent company's system for the evaluation of subsidiaries from the perspective of effectiveness and the capacity for high returns [Tsai, 2002]. Affiliates in a business group compete for the best results possible, as central investment decisions depend on that. Some researchers note that internal competition may be beneficial in high ambiguity and variability of the environment [Birkinshaw and Lingblad, 2005].

Another benefit of intra-organizational coopetition is the competitive advantage. It turns out that the emergence of competition alongside cooperation enables faster introduction of new products to the market, greater diversification of strategic options, and coverage of different market segments [Birkinshaw and Lingblad, 2005]. Dorn, Schweiger, and Albers [2016] note that intra-organizational coopetition also enables better customer focus, which in effect may translate into a better market position.

Similarly, for inter-organizational coopetition, intra-organizational coopetition improves the company's capacity for innovation. Strese et al. [2016] demonstrate that the simultaneous existence of cross-functional coopetition has a significant positive influence on explanatory innovation. Strong knowledge absorption, processing, and implementation skills in the various departments are reinforced by competition. Bian [2007] confirms this in the context of intra-organizational coopetition on a sample of Chinese enterprises identifying a positive influence of cross-functional cooperation and coopetition on the efficiency of the development process of a new product. Internal coopetition appears to be especially important in the case of radical innovation that needs new competences beyond existing knowledge. A good example is Samsung, in which internal coopetition has strengthened dynamic capabilities (mainly technological) that allowed for the innovative development of many products [Song et al., 2016]. Previous studies show that simultaneous cooperation and competition promote both process and product innovations. Li et al. [2021] highlight that cooperation between subsidiaries within the business group enhance process and product innovation, while competition has a *U*-shaped relationship with product and process innovation.

The benefits of intra-organizational coopetition can also be felt in the organizational dimension. Internal competition and cooperation contribute to the refinement of internal processes, more effective application of resources, and competence development. Intra-group coopetition improves internal capabilities and increases flexibility that is difficult for business group to maintain [Song et al., 2016]. Jacobs [2015] suggests that intense intra-organizational coopetition positively influences the organizational learning process. The latter is confirmed by studies undertaken by Bendig et al. [2018] on the example of cross-functional coopetition in large German corporations. They observed the existence of a positive relationship between intra-organizational coopetition and organizational learning, especially in product development processes.

One of the key benefits of internal coopetition among the affiliates of a business group is the creation and utilization of knowledge [Dorn et al., 2016]. Bendig et al. [2018] argue that the simultaneous existence of cross-functional cooperation and competition creates the conditions for better transformation and utilization of knowledge. Intense cooperation among competing departments promotes the development of latent knowledge and its transformation into a common understanding of customer needs [Luo et al., 2006]. Additionally, Luo [2005] notes that cooperation enables better knowledge creation, absorption, and sharing, while competition enables the improvement of the individual results. Knowledge transfer is excessively important in business groups operating globally. Each member of such a global network may develop different competences, skills, practices, and operating procedures as a result of interactions with local environments. This provides the basis for knowledge transfers among affiliates located in different countries and on different tiers of the internal structure. However, the effectiveness of knowledge sharing depends on coordination mechanisms between organizational units anchored in a social coopetition structure [Tsai, 2002].

3 Research design

Studies of intra-organizational coopetition are highly diversified, dealing with relationships across the functional area of a single company [Luo et al., 2006], as well as among the subsidiaries of a business group or multinational corporation [Liu et al., 2019]. This study adopts the latter perspective, focusing on the

identification of the benefits of intra-organizational coopetition among affiliates within a business group. A business group was understood as a set of firms having a common owner [Almeida et al., 2011], or in other words, a set of subsidiaries owned by the parent company [Iacobucci and Rosa, 2005].

The study was carried out on parent companies of business groups listed by the WSE on its Main Market. Out of 277 identified entities (after the exclusion of financial groups), 121 parent companies were randomized to form the study sample. The sample is moderately diversified. The entities mainly originate from three sectors according to NACE Rev 2. Main sections: C. Manufacturing (38.8%), G. Wholesale and retail trade; repair of motor vehicles and motorcycles (14.9%), and F. Construction (12.4%). The controlling shareholder is usually domestic (81.0%), with a foreign major shareholder identified in as few as 17.4%, and mixed shareholder in 1.6% entities. Most entities operate on international markets (66.9%) and only 25.6% confine themselves to the domestic market. The entities in the sample represent production (44.6%), trade (14.0%), services (32.2%), or mixed-type (9.1%) businesses. According to the size measured by employment, the entities are large and very large; 61.2% employ more than 250 people, 15.7% have 51–250, and 8.3% more than 50 people on their payroll.

For data collection, the base method was a computer-assisted diagnostic questionnaire survey and the respondents were the top managers of the parent companies. There were 121 interviews carried out. One top manager was interviewed in each of the parent companies. The questionnaire survey is a frequently used method in coopetition studies [Tsai, 2002], giving insight into managers' perceptions [Czakon et al., 2020b]. Interviews were held in the November–December period of 2019. The questionnaire contained 38 closed questions covering intra-organizational coopetition aspects such as the characteristics, determinants, and outcomes of coopetition. This paper presents the part of the study relating to the perceived benefits of simultaneous cooperation and competition among affiliates in a business group.

In order to identify the perceived benefits of coopetition within business groups, 16 claims were formulated in the questionnaire survey. The respondents were asked to select whether each such benefit was found as a consequence of coopetition among the affiliates of their business group. Thus, the binary scale is used in appraising benefits of intra-organizational coopetition (1 for "yes" and 0 for "no"). Additionally, the study identifies the characteristics of business groups in the sample on the basis of information acquired from the Amadeus database and financial statements published by business groups. First is the origin of the dominant investor that enables identification of three types of business groups: domestic, foreign, and with mixed shareholder. Second is the size of the business group (measured by employment). On that basis, three types of business groups are identified: employing less than 50 people [small], employing between 50 and 250 people [medium], and employing over 250 people [large]. Next, the type of the business group's activity is identified as production, trade, services, and mixed activity. Finally, the geographic area of activity permits to distinguish two types of business groups: domestic and foreign.

4 Results

The study identifies 16 potential benefits of the simultaneous competition and cooperation among affiliates in the business group. The benefits included into the questionnaire survey are: reduction in general costs of operation; reduction in R&D costs; reduction in transaction costs; resource and competence development; increased number of new products and services in portfolio; introduction of new organizational solutions; increased scale of foreign expansion/easier entry onto foreign markets; fuller use of market opportunities; improved competitive advantage; improved market position; improved profitability; increased value; improved position relative to suppliers; improved position relative to buyers; splitting of operational risk; and better knowledge creation and sharing. The respondents selected whether in their perception the simultaneous cooperation and competition among the affiliates in the business group did or did not trigger the respective benefit on the group level (1 for "yes" and 0 for "no"). Table 2 shows the percentages of respondent identifications of each respective benefit of intra-organizational coopetition.

Table 2. Benefits of intra-organizational coopetition indicated by surveyed managers [%]

Benefits of intra-organizational coopetition	Checked	Did not check
Resource and competence development	85.1	14.9
Improved competitive advantage	85.1	14.9
Improved market position	84.3	15.7
Reduction in general costs of operation	83.5	16.5
Increased value	76.0	24
Increased number of new products or services in portfolio	72.7	27.3
Improved position relative to suppliers	71.9	28.1
Introduction of new organizational solutions	71.1	28.9
Splitting of operational risk	71.1	28.9
Improved profitability	69.4	30.6
Increased scale of foreign expansion/easier entry onto foreign markets	62.8	37.2
Reducion in transaction costs	59.5	40.5
Better knowledge creation and sharing	58.7	41.3
Improved position relative to buyers	57.9	42.1
Fuller use of market opportunities	56.2	43.8
Reduction in R&D costs	54.5	45.5

It should be highlighted that at least 50% of the respondents indicated each of the benefits listed. Therefore, managers appreciate the positive sides of simultaneous competition and cooperation among companies in a business group, in a variety of areas. The most frequently reported benefits refer to the development of the resource base (85.1%), the building of the competitive advantage (85.1%) and market position (84.3%), as well as reduced operation costs (83.5%). Other benefits marked by the respondents are, respectively, increased value (76.0%), increased numbers of new products or services in the portfolio (72.7%), improved position relative to suppliers (71.9%), splitting of operation risks (71.1%), the introduction of new organizational solutions (71.1%), improved profitability (69.4%), and increased scale of foreign expansion or easier entry onto foreign markets (62.8%). These are both benefits of operational nature, such as the introduction of new organizational solutions, and benefits of strategic-financial nature, such as increased value of the business group. They can be regarded as the group of positive sides of intra-organizational coopetition with moderate relevance. The least often reported are such benefits as reduced R&D costs (54.5%), fuller use of market opportunities (56.2%), improved position relative to suppliers (57.9%), better knowledge creation and sharing (58.7%), and reduction of transaction costs (59.5%).

Additional analyses permitted the indications of the benefits of intra-organizational coopetition to be distinguished on the basis of the main investor's origin, the business group's geographic area, its size as measured by payroll, and the type of business engaged in (Table 3). The chi-squared test and Phi coefficient as a measure of effect size were applied. Unfortunately, in most cases, these four variables are not factors that differentiate the indications of the benefits of intra-organizational coopetition. Statistically significant differences among groups are reported in only three cases. The first is the increased number of new products or services in the portfolio, somewhat more frequently reported by production groups. The second case refers to improved profitability as a result of coopetition in business groups, more frequently reported in groups with international reach. The third statistically significant difference refers to improved position relative to buyers as a result of internal coopetition that is more often indicated by respondents from foreign business groups. However, in all three cases the effect size is low to moderate.

Table 3. Benefits of intra-organizational coopetition differentiated by geographic area of activity, major shareholder, size of business group, and type of activity

Benefits of intra-organizational coopetition		Type of dominant investor			Size of a business group by payroll			Type of activity				Geographic area of activity	
		Domestic	Mixed	Foreign	50 or fewer	52–250	More than 250	Production	Trade	Services	Mixed	Domestic	Foreign
Reduction in general costs of operation	Did not check	16.5%	33.3%	14.3%	10.0%	10.5%	14.9%	11.1%	17.6%	20.5%	27.3%	12.9%	17.3%
	Checked	83.5%	66.7%	85.7%	90.0%	89.5%	85.1%	88.9%	82.4%	79.5%	72.7%	87.1%	82.7%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.691$ df = 2 $p = 0.708$ Phi = 0.076			$\chi 2 = 4.638$ df = 3 $p = 0.200$ Phi = 0.196			$\chi^2 = 2.533$ df = 3 $p = 0{,}469$ Phi = 0.145				$\chi^2 = 0.319$ df = 1 $p = 0{,}572$ Phi = −0.053	
Reduction in R&D costs	Did not check	49.5%	33.3%	28.6%	60.0%	63.2%	41.9%	50.0%	47.1%	33.3%	63.6%	51.6%	42.0%
	Checked	50.5%	66.7%	71.4%	40.0%	36.8%	58.1%	50.0%	52.9%	66.7%	36.4%	48.4%	58.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 3.227$ df = 2 $p = 0.199$ Phi = 0.163			$\chi^2 = 4.701$ df = 3 $p = 0.195$ Phi = 0.197			$\chi^2 = 4.245$ df = 3 $p = 0.236$ Phi = 0.187				$\chi^2 = 0.843$ df = 1 $p = 0.359$ Phi = 0.087	
Reduction in transaction costs	Did not check	41.2%	33.3%	38.1%	50.0%	47.4%	35.1%	35.2%	29.4%	48.7%	54.5%	48.4%	35.8%
	Checked	58.8%	66.7%	61.9%	50.0%	52.6%	64.9%	64.8%	70.6%	51.3%	45.5%	51.6%	64.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.136$ df = 2 $p = 0.934$ Phi = 0.034			$\chi^2 = 2.305$ df = 3 $p = 0.512$ Phi = 0.138			$\chi^2 = 3.494$ df = 3 $p = 0.322$ Phi = 0.170				$\chi^2 = 1.489$ df = 1 $p = 0.222$ Phi = 0.115	
Resource and competence development	Did not check	15.5%		14.3%	20.0%	15.8%	13.5%	9.3%	35.3%	12.8%	18.2%	22.6%	12.3%
	Checked	84.5%	100.0%	85.7%	80.0%	84.2%	86.5%	90.7%	64.7%	87.2%	81.8%	77.4%	87.7%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.557$ df = 2 $p = 0.757$ Phi = 0.068			$\chi^2 = 0.374$ df = 3 $p = 0.946$ Phi = 0.056			$\chi^2 = 7.167$ df = 3 $p = 0.067$Phi = 0.243				$\chi^2 = 1.824$ df = 1 $p = 0.177$ Phi = 0.128	

(*Continued*)

Table 3. Continued

Benefits of intra-organizational coopetition		Type of dominant investor			Size of a business group by payroll			Type of activity				Geographic area of activity	
		Domestic	Mixed	Foreign	50 or fewer	52–250	More than 250	Production	Trade	Services	Mixed	Domestic	Foreign
Increased number of new products or services in portfolio	Did not check	25.8%	33.3%	33.3%	40.0%	42.1%	21.6%	13.0%	23.5%	43.6%	45.5%	25.8%	24.7%
	Checked	74.2%	66.7%	66.7%	60.0%	57.9%	78.4%	87.0%	76.5%	56.4%	54.5%	74.2%	75.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.554$ df = 2 $p = 0.758$ Phi = 0.068			$\chi^2 = 4.118$ df = 3 $p = 0.249$ Phi = 0.184				$\chi^2 = 12.763$ df = 3 $p = 0.005$ Phi = 0.325			$\chi^2 = 0.015$ df = 1 $p = 0.903$ Phi = 0.012	
Introduction of new organizational solutions	Did not check	30.9%	33.3%	19.0%	60.0%	21.1%	28.4%	24.1%	35.3%	38.5%	9.1%	38.7%	28.4%
	Checked	69.1%	66.7%	81.0%	40.0%	78.9%	71.6%	75.9%	64.7%	61.5%	90.9%	61.3%	71.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 1.214$ df = 2 $p = 0.545$ Phi = 0.100			$\chi^2 = 5.674$ df = 3 $p = 0.129$ Phi = 0.217				$\chi^2 = 4.784$ df = 3 $p = 0.188$ Phi = 0.199			$\chi^2 = 1.110$ df = 1 $p = 0.292$ Phi = 0.100	
Increased scale of foreign expansion/ easier entry onto foreign markets	Did not check	41.2%	33.3%	19.0%	50.0%	47.4%	33.8%	38.9%	35.3%	33.3%	45.5%	32.3%	38.3%
	Checked	58.8%	66.7%	81.0%	50.0%	52.6%	66.2%	61.1%	64.7%	66.7%	54.5%	67.7%	61.7%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 3.658$ df = 2 $p = 0.161$ Phi = 0.174			$\chi^2 = 2.027$ df = 3 $p = 0.567$ Phi = 0.129				$\chi^2 = 0.663$ df = 3 $p = 0.882$ Phi = 0.074			$\chi^2 = 0.349$ df = 1 $p = 0.554$ Phi = −0.056	
Fuller use of market opportunities	Did not check	43.3%	66.7%	42.9%	40.0%	36.8%	45.9%	33.3%	41.2%	56.4%	54.5%	45.2%	44.4%
	Checked	56.7%	33.3%	57.1%	60.0%	63.2%	54.1%	66.7%	58.8%	43.6%	45.5%	54.8%	55.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.665$ df = 2 $p = 0.721$ Phi = 0.074			$\chi^2 = 0.574$ df = 3 $p = 0.902$ Phi = 0.069				$\chi^2 = 5.486$ df = 3 $p = 0.139$ Phi = 0.213			$\chi^2 = 0.005$ df = 1 $p = 0.946$ Phi = 0.006	

(*Continued*)

Table 3. Continued

Benefits of intra-organizational coopetition		Type of dominant investor			Size of a business group by payroll			Type of activity				Geographic area of activity	
		Domestic	Mixed	Foreign	50 or fewer	52–250	More than 250	Production	Trade	Services	Mixed	Domestic	Foreign
Improved competitive advantage	Did not check	17.5%		4.8%	10.0%	26.3%	14.9%	13.0%	17.6%	12.8%	27.3%	25.8%	11.1%
	Checked	82.5%	100.0%	95.2%	90.0%	73.7%	85.1%	87.0%	82.4%	87.2%	72.7%	74.2%	88.9%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 2.759$ df = 2 $p = 0.252$ Phi = 0.151			$\chi^2 = 3.386$ df = 3 $p = 0.336$ Phi = 0.167			$\chi^2 = 1.724$ df = 3 $p = 0.632$ Phi = 0.119				$\chi^2 = 3.761$ df = 1 $p = 0.052$ Phi = 0.183	
Improved market position	Did not check	17.5%	33.3%	4.8%	40.0%	15.8%	12.2%	11.1%	17.6%	23.1%	9.1%	22.6%	13.6%
	Checked	82.5%	66.7%	95.2%	60.0%	84.2%	87.8%	88.9%	82.4%	76.9%	90.9%	77.4%	86.4%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 2.847$ df = 2 $p = 0.241$ Phi = 0.153			$\chi^2 = 5.174$ df = 3 $p = 0.160$ Phi = 0.207			$\chi^2 = 2.874$ df = 3 $p = 0.411$ Phi = 0.154				$\chi^2 = 1.346$ df = 1 $p = 0.246$ Phi = 0.110	
Improved profitability	Did not check	35.1%		14.3%	20.0%	36.8%	29.7%	20.4%	35.3%	38.5%	45.5%	45.2%	24.7%
	Checked	64.9%	100.0%	85.7%	80.0%	63.2%	70.3%	79.6%	64.7%	61.5%	54.5%	54.8%	75.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 4.862$ df = 2 $p = 0.088$ Phi = 0.200			$\chi^2 = 0.968$ df = 3 $p = 0.809$ Phi = 0.089			$\chi^2 = 5.117$ df = 3 $p = 0.163$ Phi = 0.206				$\chi^2 = 4.443$ df = 1 $p = 0.035$ Phi = 0.199	
Increased value	Did not check	25.8%	66.7%	9.5%	30.0%	31.6%	23.0%	14.8%	23.5%	35.9%	27.3%	29.0%	19.8%
	Checked	74.2%	33.3%	90.5%	70.0%	68.4%	77.0%	85.2%	76.5%	64.1%	72.7%	71.0%	80.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 5.579$ df = 2 $p = 0.061$ Phi = 0.215			$\chi^2 = 1.370$ df = 3 $p = 0.712$ Phi = 0.106			$\chi^2 = 5.596$ df = 3 $p = 0.133$ Phi = 0.215				$\chi^2 = 1.113$ df = 1 $p = 0.291$ Phi = 0.100	

(*Continued*)

Table 3. Continued

Benefits of intra-organizational coopetition		Type of dominant investor			Size of a business group by payroll			Type of activity				Geographic area of activity	
		Domestic	Mixed	Foreign	50 or fewer	52–250	More than 250	Production	Trade	Services	Mixed	Domestic	Foreign
Improved position relative to suppliers	Did not check	28.9%	66.7%	19.0%	50.0%	36.8%	24.3%	27.8%	17.6%	35.9%	18.2%	35.5%	28.4%
	Checked	71.1%	33.3%	81.0%	50.0%	63.2%	75.7%	72.2%	82.4%	64.1%	81.8%	64.5%	71.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 3.089$ df = 2 $p = 0.213$ Phi = 0.160			$\chi^2 = 3.923$ df = 3 $p = 0.270$ Phi = 0.180				$\chi^2 = 2.631$ df = 3 $p = 0.452$ Phi = 0.147			$\chi^2 = 0.533$ df = 1 $p = 0.465$ Phi = 0.069	
Improved position relative to buyers	Did not check	44.3%		38.1%	70.0%	47.4%	40.5%	35.2%	29.4%	59.0%	36.4%	64.5%	35.8%
	Checked	55.7%	100.0%	61.9%	30.0%	52.6%	59.5%	64.8%	70.6%	41.0%	63.6%	35.5%	64.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 2.516$ df = 2 $p = 0.284$ Phi = 0.144			$\chi^2 = 4.997$ df = 3 $p = 0.172$ Phi = 0.203				$\chi^2 = 6.884$ df = 3 $p = 0.076$ Phi = 0.239			$\chi^2 = 7.511$ df = 1 $p = 0.006$ Phi = 0.259	
Splitting of operational risk	Did not check	29.9%		28.6%	50.0%	26.3%	25.7%	22.2%	35.3%	33.3%	36.4%	41.9%	24.7%
	Checked	70.1%	100.0%	71.4%	50.0%	73.7%	74.3%	77.8%	64.7%	66.7%	63.6%	58.1%	75.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 1.267$ df = 2 $p = 0.531$ Phi = 0.102			$\chi^2 = 2.774$ df = 3 $p = 0.428$ Phi = 0.151				$\chi^2 = 2.180$ df = 3 $p = 0.536$ Phi = 0.134			$\chi^2 = 3.208$ df = 1 $p = 0.073$ Phi = 0.169	
Better knowledge creation and sharing	Did not check	41.2%	33.3%	42.9%	30.0%	47.4%	43.2%	33.3%	47.1%	41.0%	72.7%	35.5%	44.4%
	Checked	58.8%	66.7%	57.1%	70.0%	52.6%	56.8%	66.7%	52.9%	59.0%	27.3%	64.5%	55.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Statistics	$\chi^2 = 0.100$ df = 2 $p = 0.951$ Phi = 0.029			$\chi^2 = 1.402$ df = 3 $p = 0.705$ Phi = 0.108				$\chi^2 = 6.128$ df = 3 $p = 0.106$ Phi = 0.225			$\chi^2 = 0.739$ df = 1 $p = 0.390$ Phi = –0.081	

5 Discussion

The literature highlights a number of benefits resulting from coopetition. The most frequently reported areas are financial performance, market performance, innovation performance and organizational learning [Czakon et al., 2014; Gernsheimer et al., 2021]. The benefits identified in this study cover these four groups.

All benefits in the questionnaire survey are marked by at least 50% of the respondents. It means that managers perceive the benefits of simultaneous cooperation and competition within the business group. However, one of the main benefits of coopetition mentioned in the literature—the increased innovativeness of the parties [Vanyushyn et al., 2018; Kraus et al., 2019]—is not revealed in this study as the main outcome of intra-organizational coopetition. This is a moderate benefit in this study, while other intra-organizational studies emphasize the role of internal coopetition in the creation of innovative products and services enabling the business group to compete successfully on the external market [Song, 2016]. Nevertheless, this study finds that managers from production business groups are more aware of increased innovativeness as a benefit of internal coopetition. They marked this advantage of simultaneous cooperation and competition more often that others and the differences are statistically significant. It supports other studies proving that internal coopetition enhances mostly product innovations [Chen et al., 2021].

The most often indicated benefits of internal coopetition in this study are development of resources and competences; improved competitive advantage; improved market position; and reduced general costs of operation. These benefits are marked by over 80% of the respondents. The first benefit is in line with other studies that highlight the resource context of coopetition [Rusko et al., 2013; Bengtsson et al., 2016]. Researchers indicate that resource access is one of the key motivations behind coopetition. Competitors create value by pooling their resources to increase the effectiveness of their core business [Ritala et al., 2014]. Additionally, coopetition with entities relying on complementary resources triggers the synergic benefits of such pooling [Cygler et al., 2018]. This study shows that such effects may also arise within a business group. Resource concentration is one of the purposes for which business groups are created [Chen and Chu, 2012]. Thus, cooperation among affiliates generates synergies by resource pooling, while competition may additionally drive resource refinement, thereby contributing to resource development on the scale of the group as a whole.

The next two benefits of coopetition relate to market performance. The literature on inter-organizational coopetition emphasizes the role of coopetition in improving the market position and building the competitive advantage of the parties. Cooperation with competitors enhances the competitive advantage through resource pooling, knowledge transfers, and other joint activities [Luo, 2005]. The simultaneous cooperation and competition in the business group also leads to the improvement of affiliates' market activities through better customer focus [Dorn et al., 2016] and better knowledge exchange [Liu et al., 2019]. This study reveals that positive market outcomes are generated in intra-organizational coopetition. This is consistent with other research (including inter-organizational), proving that coopetition is driven by the pursuit of the best market performance [Ritala, 2012; Le Roy and Sanou, 2014].

The important coopetition benefit is improvement of financial performance. It could be related to cost reduction, improved financial results, increased group value, split operation risks, and better profitability. For inter-organizational coopetition, reduction of overall operation costs is often the result of more effective resource acquisition, better resource management, and higher productiveness [Luo, 2004; Dagnino, 2009]. This study highlights the importance of intra-organizational coopetition in reducing operating costs and mitigating operating risks. The general costs of operation within a business group can be reduced by resource pooling, joint procurement, and other cooperative activities. Simultaneously, the parent company's pressure on the effectiveness of each unit and the competition for results may also contribute to cost reduction and better profitability [Becker-Ritterspach and Dörrenbächer, 2009]. Internal coopetition is a factor influencing better results as subsidiaries strive to obtain the best possible performance ratios. It mostly occurs in multinational corporations, in relations between units operating in different geographical locations [Birkinshaw, 2001; Gviliya and Mikhailova, 2019]. This study confirms this, as better profitability was a benefit much more often indicated (and statistically significant) by managers in business groups

with an international geographical scope. However, other benefits related to the financial performance of business groups—reduction of transaction costs—is not listed as frequently in this study. Business groups reduce them through the inclusion of appropriate companies in their structures and by creating an internal ecosystem. For this reason, on the scale of the group as a whole, a reduction of transaction cost is achieved through mechanisms other than coopetition, for example, internal coordination and internal market. Therefore, the benefits of intra-organizational coopetition differ from the benefits of inter-organizational coopetition, as one of the reasons for entering into inter-organizational coopetitive relationships is the desire to reduce transaction costs [Lado et al., 1997; Cygler et al., 2018].

Other benefits of intra-organizational coopetition within business groups are indicated less frequently in this study. Interestingly, the reduction of R&D costs is the less frequently marked positive outcome of intra-group coopetition. In the research sample the proportion of R&D expenditure to revenues is less than 5% in almost 92.6% of the studied business groups. Thus, there is no significant R&D spend and perhaps for some entities its reduction is not the main goal. Also, knowledge creation and sharing are among the less frequently reported benefits by respondents from the studied business groups. This is interesting in light of how other researchers indicate the large importance of knowledge sharing among competing entities, resulting in positive effects [Tsai, 2002]. Perhaps for the business groups in this study, the flow of knowledge among the affiliates takes place simultaneously or through the coordination of the parent company as the need arises. Therefore, the respondents may not perceive the existence of a link between internal coopetition and the transfer of knowledge within their business group.

In summary, researchers usually identify the financial and strategic benefits of intra-organizational coopetition, but positive outcomes of coopetition are also reflected in organizational refinement, increased innovation, and improved knowledge flows [Czakon et al., 2014; Crick and Crick, 2021; Gernsheimer et al., 2021]. In this study, the respondents perceive all the positive sides of coopetition. Those noted in the inter-organizational coopetition studies can also be found in the intra-organizational coopetition studies. Although each benefit's meaning is different, on an intra-organizational level resource-driven benefits, market performance, and financial performance improvement are crucial. Innovation performance is not a key benefit of intra-organizational coopetition as it is in inter-organizational coopetition. It supports the opinion that intra-organizational coopetition differs from an inter-organizational one [Dorn et al., 2016; Gernsheimer et al., 2021] also in relation to its crucial outcomes. However, intra-organizational coopetition is still similar to inter-organizational coopetition, which is beneficial for the parties involved.

6 Conclusion

The literature notes a number of benefits brought about by participation in coopetitive relationships [Crick and Crick, 2021]. The most frequently mentioned among these are cost reduction, risk splitting, knowledge sharing, synergies, increased market shares, improved effectiveness ratios, development of new technologies, and resource acquisition [Cygler et al., 2018]. Also in business groups, the optimum level of competition and simultaneous cooperative relationships should positively impact the group's performance as a whole, creating the motivation for innovativeness, refinement of operations, and search for new sources of revenue and profit.

The main contribution of this paper is to extend knowledge on intra-organizational coopetition that is still under-researched [Gernsheimer et al., 2021]. The findings from this study demonstrate the positive impact of intra-organizational coopetition on different spheres of business group performance. The respondents recognize the benefits of simultaneous cooperation and competition among the affiliates within the business group, given that the listed benefits are reported by at least 50% of the respondents. The benefits reported are similar to the benefits brought about by inter-organizational coopetition. However, it does turn out that in business groups, resource issues and market performance move to the forefront. In the respondents' opinion, the first place is occupied by benefits linked to the development of resources and competences and the building of competitive advantage and market position. Interestingly, benefits relating to R&D cost reduction or knowledge creation and transfer are not very important in business

groups, which is an element distinguishing coopetition within the business groups studied from inter-organizational coopetition.

Additionally, this study contributes to the business group research stream as it explains the complex relationship among affiliates within the business group from the perspective of coopetition. The discussed benefits of intra-organizational coopetition are the main drivers of coopetitive behavior emergence within the business group. Business group affiliates implement a wide range of cooperative as well as competitive behavior [Luo, 2005; Tippmann et al., 2018] that affect the business group performance. This study extends the knowledge about the benefits of coopetition between affiliates and simultaneously increases the awareness of managers about the need to manage cooperation and competition relationship within the business group.

The above-presented findings are not free of limitations. The main limitation of this study is the size of the sample, even though the latter incorporates a relatively large percentage of entities listed on the stock exchange. Studies of business groups are usually fraught with the small sample risk due to the relatively low population of such entities, as well as difficulties reaching them. A certain solution and indication for future studies would be to conduct international research encompassing entities from different geographical regions. That would allow cross-country comparative analyses and identification of the specific benefits of internal coopetition in the perception of managers from the respective countries. Another limitation at once setting the direction for future studies is the problem of the inclusion of affiliates. It would be worth reflecting the perspectives of both the parent company and the affiliated companies of the same business group. These perspectives can differ about the existence and importance of the benefits of internal coopetition. An important direction for further research is also to measure the intensity of coopetition and the results (benefits and risks) separately, and then look at the relationship between these variables, both at the level of the whole group and the individual subsidiary.

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