
The Assessment of the Features of Inter-organisational Relationships: Benefits, Duration, Repeatability and Maturity of the Relationship with the Company's Stakeholders

Submitted 20/08/20, 1st revision 28/09/20, 2nd revision 19/10/20, accepted 11/11/20

Zbigniew Drewniak¹, Rafał Drewniak², Robert Karaszewski³

Abstract:

Purpose: A company's relational potential expresses the sum of all relations with the entities in the environment and their combinations used to achieve the company's objectives. This cooperation can be assessed in terms of the relationship's duration, repeatability, degree of maturity, and benefits. The aim of this article is to assess the importance of these features for building and maintaining inter-organizational relations in various forms.

Design/Methodology/Approach: This article presents findings from the research conducted using a sample of 66 relations developed by 10 companies operating in different sectors. The correlations between individual pairs of variables were analyzed using chi-square statistics at $\alpha = 0.05$. The strength of relations was determined using Cramer's V coefficient and Pearson's C (contingency) coefficient.

Findings: The research results indicate a significant correlation between the examined relationship characteristics (benefits, duration, maturity, and repeatability). We have shown that the more diverse the company's relational potential is, and the more benefits individual relations provide, the more often the company repeats the relations (co-operates) with external entities. Simultaneously, the most advantageous relations are those maintained for up to one year or over 7 years. Enterprises are most often willing to repeat the relations that have reached the stage of maturity.

Practical Implications: The results of this research can help modern companies to plan the duration and repeatability of relationships with selected entities considering the expected benefits and the degree of maturity of the cooperation.

Originality/Value: Understanding the correlation between the repeatability of the relationship and its benefits, as well as between the duration of the relationship and its maturity, and linking it to the types (forms) of cooperation with other entities contributes to the current state of knowledge.

Keywords: Inter-organisational relations, stakeholders, relationship benefits, co-operation.

JEL codes: J53, P13, D83.

Paper type: Research article.

Acknowledgments: Research financed by National Science Centre, Poland, research project no 2017/25/B/HS4/02135, Relational competencies in creating enterprise value. The role of leadership and communication in managing relationships with the environment.

¹Faculty of Management, UTP University of Science and Technology in Bydgoszcz, Poland, zbigniew.drewniak@utp.edu.pl;

²Same as in 1, rafal.drewniak@utp.edu.pl;

³UTP University of Science and Technology in Bydgoszcz, Poland; Nicolas Copernicus University in Torun, Poland, robkara@umk.pl;

1. Introduction

A company is an organization that operates according to the open innovation model, so it may gain knowledge from external sources and share it with other entities. A properly shaped relational potential determines collaboration with external partners. A company's success is based on the appropriate use of resources (Lee *et al.*, 2010; Pan *et al.*, 2018). Enterprises can rarely achieve market advantage using only their own resources (Brunswick and Vanhaverbeke, 2015; Ahammad *et al.*, 2014; Casanueva *et al.*, 2013; Janicki *et al.*, 2015). Therefore, proper management of the company's relationships with the environment is required. Enterprises should include in their strategies-possible co-operation with other organizations to use their limited assets more effectively or gain access to new ones (Słupska, 2019, Goździewska-Nowicka *et al.*, 2017). The importance of material resources, including tangible and financial assets, is well established; moreover, we can easily assess their potential by valuation.

Thus, the non-material resources gain significance, as often they provide a competitive advantage and determine the company's position relative to its competitors. Generally, resources are classified as material (tangible and financial assets) and non-material (people and their knowledge, skills, competencies, and experience; organizational culture; strategy; brand and reputation; structure and relations) (Barney, 2001; Pearson *et al.*, 2015). Relationships, especially between organizations, create the relational potential of an organization, i.e., the sum of all relations (bonds) between the organization and the entities in its environment (customers, suppliers, competitors, general partners, communities and local authorities, etc.), as well as their combinations, available to the organization and contributing to its success and long-term development.

Relationships with the environment also increase innovation in the company. The subject literature demonstrates that nowadays, a company's innovation potential should be based on relations in the inter-organizational space. It is emphasized that the strength of alliances and relationships between allies determine corporate innovation, and their quality positively affects the results of enterprise innovation (Xie and Jing, 2017). On the other hand, weak relationships appear to positively affect technological innovation (Wang *et al.*, 2017). Development of co-operation in an alliance can significantly promote innovation in companies, and close connections within the alliance network play an important role in stimulating radical innovation. A company is an organization that operates according to the open innovation model, so it may gain knowledge from external sources and share it with other entities. A properly shaped relational potential determines collaboration with external partners. To minimize the costs and risks associated with innovation, companies should build relationships with other market entities, based on the imperative to gain the knowledge crucial for the bilateral development of innovation. Collaboration between enterprises provides access to the resources and knowledge

of co-operating partners, strengthening the potential for the development and implementation of innovative solutions.

By building relations with other organizations, the company creates its relational potential, comprising all the relations with the environment's entities, such as customers, suppliers, competitors, communities and local authorities, universities, and research and development centers. The organization's development involves long-term goals that frequently require forming a bundle of relationships, joined by extremely diverse combinations. The relational capital, an element of the company's intellectual capital, also positively correlates with business results. Therefore, the efforts made to build and enhance the relational capital are reflected in the company's business results (*Slupska et al.*, 2019).

2. Relational Capital: Theoretical Framework

The relational capital is defined as a set of all relationships (market relations, relations of power, and co-operation between companies, institutions, and people) resulting from a strong sense of belonging and a highly developed ability to collaborate, typical for culturally similar people and institutions (Capello and Faggian, 2005). Some authors (García-Merino *et al.*, 2014) define the relational capital as the sum of silent and open knowledge about the relationship between the company and the local entities (customers are among the principal stakeholders).

Other authors (Pralhad and Ramaswamy, 2000) suggest that customers become a new organizational competency source. They update the organization's general competencies and renew the database, preventing it from becoming outdated in the turbulent environment (Gilbert *et al.*, 2001). According to Welbourne and Pardo del Val (2009), the relational capital affects the organization's adjustment potential and its results. Customer's knowledge may provide economic value in three ways, contributing to a better quality of services, individualized services, and increased control (Mills and Morris, 1986).

According to Cabrita and Vaz (2006), relational capital is positively associated with business performance, especially with financial results. Wang and Chang (2005) also explain how in the information technology industry, various intellectual capital dimensions positively affect the company's business results, where the statistical significance of the relational capital is the highest. Cohen and Kaimenakis (2007) studied similar correlations – all the analyzed elements of the intellectual capital demonstrate positive effects on the results, defined as returns and sales per employee. It has been demonstrated that investments in the management of relations with customers and investments in process and quality enhancement actually contribute to increased revenues, profitability, and other financial indexes and market results. Some authors revealed a direct correlation between the parameters of customer satisfaction, value and/or loyalty, and the measures of actual market or financial results (Tornoy and Wiley, 1991). It appears that a dynamic approach to

initiation and continuation of relationships with other entities (concerning both durability and maturity) is the most beneficial for the company. Thus, we verified the following research hypotheses:

H1: *Repeatability of relationships with stakeholders is beneficial for the company.*

H2: *Relationships in the mature stage are more frequently repeatable.*

H3: *Relations in the mature stage last longer than those in the formative stage.*

The relational capital is associated with (and shapes) the competitive potential of the company. The relational competencies of the enterprise shape this potential. A relational competency is defined as an operational model learned by the company, describing acquisition and shared exploitation of resources, implementing a deliberately formed institutional framework, and targeting a specific partner. It is identified as one of the sources of sustainable and difficult to imitate competitive advantage. The resource-based concept of an organization (approach focusing on the company's resources) and relational approach to management are considered key theoretical frameworks for its competitive advantage. Supporters of the resource-based theory claim that the enterprise's competitive advantage is based primarily on valuable, unique, and shaped organizational level resources and competencies, which are difficult or impossible to copy.

The representatives of the other school of thought propose that competitiveness of the company does not originate within the company but is shaped or acquired as a result of relationships between organizations, and it is based on the sources of competitive advantage from the co-operating entities (Barney, 1991; Lavie, 2006; Drewniak, 2019). By combining the two approaches, we may posit that agreement based on knowledge and technology transfer helps obtain the desired resources and competencies from the allies. In this respect, many diverse conditions determine the ability to acquire the missing skills and key resources, including technology, innovation, and knowledge, as well as the scope of such acquisition (Cao *et al.*, 2009; Anand and Khanna, 2000; Dyer and Hatch, 2006). Simultaneously, taking into account the dynamic character of competitive advantage, and considering its future continuation and enhancement, the ability to constantly increase knowledge in order to adjust and modernize the company in response to the changing conditions (technological progress, quickly and frequently changing expectations of customers and suppliers, internalization of operations, increased competition, etc.) is of key importance.

A relational approach to management indicates that the company's competitiveness does not originate within the company but is shaped or acquired due to relationships between enterprises, and it is based on the sources of competitive advantage from the co-operating entities (Lavie, 2006). The relational strategic approach seeks modern organizations' sources of success to start favorable market relations with other enterprises. Moreover, it has been emphasized that companies' functioning and

their results are significantly determined by the patterns of relationships with other enterprises (Ritala and Ellonen, 2010; Lechner *et al.*, 2006). Combining the relational and resource-based approaches, we may conclude that knowledge-based alliances facilitate the acquisition of the desired resources and competencies, as they can be obtained from the allies.

The relational capital is formed throughout the enterprise's historical development, so the competition cannot copy it. Its unique character is due to a complex and inimitable network of contacts with various partners. Certainly, the sum of relationships formed and maintained by the company is an important source of competitive advantage, as interactions with stakeholders create a unique asset of specific skills and values. Due to collaboration with other entities (customers, authorities, enterprises, and competitors), the company becomes more innovative, as long-term relations may result in new ideas about products and processes. Other benefits of co-operation with stakeholders include reducing operational costs, distributing the risk associated with business activity, exchanging knowledge, and using other entities' resources. Also, due to the complexity and uniqueness of relational capital, based on a network of connections between the company and its stakeholders (internal and external), it cannot be reproduced, which increases the competitive advantage of the enterprise.

3. Methodology

The results and conclusions presented below are based on the empirical research conducted in 2019, involving 10 companies operating internationally in different sectors. The sample was selected to include large enterprises, leading in their respective sectors, and characterized by a high innovation potential. The applied research method was PAPI, i.e., direct surveys with an interviewer. Structured and standardized paper questionnaires were used. Respondents were the top-level managers (presidents and directors). Also, individual companies' choice was dictated by their high potential for the development of relational competencies. The analyzed enterprises comprised primarily production and service companies representing internationally promising sectors. Representatives of the management in the studied companies assessed the presented characteristics of relationships with external stakeholders. The basic characteristics included: repeatability of the relationship, its benefit, duration, and maturity. Each feature of the presented relationships was assigned a scale. The qualitative data were analyzed for correlations to evaluate the relationship between two analyzed characteristics. To identify a relationship between these characteristics, the chi-square (χ^2) test was applied in the following form:

$$\chi^2 = \sum_{i=1}^k \sum_{j=1}^r \frac{(n_{ij} - \hat{n}_{ij})^2}{\hat{n}_{ij}} \quad (1)$$

where:

r - number of feature Y variants,
 r - number of feature X variants,
 n_{ij} - empirical numbers for X variant and j-Y variant,
 \hat{n}_{ij} - theoretical numbers for i-th X variant and j-th Y variant.

To determine the strength of the correlation, Cramer's V coefficient and Pearson's c coefficient were determined.

Cramer's V coefficient is derived from:

$$V = \sqrt{\frac{\chi^2}{n \cdot \min(k - 1, r - 1)}} \quad (2)$$

where:

χ^2 - calculated χ^2 value,
 n - number of all observations,
 k - number of columns in the contingency table without total (number of variants of the first characteristic),
 r - number of rows in the contingency table without total (number of variants of the second characteristic),

Pearson's contingency coefficient is derived using the formula:

$$C = \sqrt{\frac{\chi^2}{\chi^2 + n}} \quad (3)$$

where:

χ^2 - calculated χ^2 value,
 n - number of observations

The following conventional interpretation thresholds are adopted:

- from 0.00 to 0.29 – weak correlation between the variables;
- from 0.30 to 0.49 – moderate correlation between the variables;
- from 0.50 to 1.00 – strong correlation between the variables.

Relationships were analyzed in a few dimensions. The relationships were classified according to the stakeholders' point of view (universities, R&D centers, suppliers, franchise, outsourcing, contract, holding, cluster, joint-venture, licenses, virtual

organizations, networks). Next, respondents characterized the relationships in terms of their repeatability, benefit, duration, and maturity.

4. Findings

Correlations between individual pairs of variables were analyzed. The chi-square test demonstrated significance, which enabled analysis of relationships from the perspective of stakeholders and type of relationship, stakeholders, and repeatability of relationship and the type of relationship and repeatability, duration, and maturity. The correlations between the repeatability of relationships and their benefit, duration, and maturity offer interesting conclusions. Also, the correlations between the benefit of relationships and their duration and the duration and maturity of relationships were significant. Table 1 presents the results of the chi-square test at $\alpha = 0.05$. The strength of individual correlations was determined using Cramer's V and Pearson's C coefficients. Cramer's V coefficient values indicate a moderate strength of significant correlations, whereas Pearson's contingency coefficients may be interpreted as strong correlations.

Table 1. Results of chi-square test for individual pairs of variables

	Stakeholder	Type	Repeatability	Benefit	Length	Maturity
Stakeholder		77.95	41.65	25.42	23.60	17.55
Significance		0.028	0.047	0.23	0.72	0.677432
Type	77.95		49.87	29.71	54.48	42.15
Significance	0.028		0.023	0.194675	0.007884	0.012418
Repeatability	41.65	49.873		30.58	41.73	23.70
Significance	0.047	0.023		0.002281	P < 0.001	0.022318
Benefit	25.42	29.71	30.58		25.78	14.67*
Significance	0.23	0.194675	0.002281		0.011523	0.100546
Length	23.60	54.48	41.73	25.78		45.16
Significance	0.72	0.007884	P < 0.001	0.011523		P < 0.001
Maturity	17.55	42.15	23.70	14.67	45.16	
Significance	0.677432	0.012418	0.022318	0.100546	P < 0.001	

Note: *Significance at $\alpha = 0.10$.

Source: Authors' calculations.

Table 2. Values of Cramer's V

	Stakeholder	Type	Repeatability	Benefit	Length	Maturity
Stakeholder		0.41	0.40	0.36	0.30	0.30
Type	0.41		0.43	0.39	0.45	0.46
Repeatability	0.40	0.43		0.39	0.40	0.35
Benefit	0.36	0.39	0.39		0.36	0.27
Length	0.30	0.45	0.40	0.36		0.48
Maturity	0.30	0.46	0.35	0.27	0.48	

Source: Authors' calculations.

Table 3. *Values of Pearson's C*

	Stakeholder	Type	Repeatability	Benefit	Length	Maturity
Stakeholder		0.74	0.62	0.53	0.51	0.46
Type	0.74		0.66	0.56	0.67	0.62
Repeatability	0.62	0.66		0.56	0.62	0.51
Benefit	0.53	0.56	0.56		0.53	0.43
Length	0.51	0.67	0.62	0.53		0.64
Maturity	0.46	0.62	0.51	0.43	0.64	

Source: Authors' calculations.

The figures illustrating the presented correlations between characteristics of relationships between the analyzed enterprises and different stakeholders are presented in the Appendix to this manuscript.

5. Discussion

The presented data demonstrate that the studied companies developed broad relationships with their external stakeholders. It should be emphasized that their intensity varied between individual enterprises. The relationships were created mostly with suppliers, customers, R&D centers, universities, competitors, and local communities. The last group is particularly interesting. Many types of relationships modify the inter-organizational dynamics, creating a space where the traditional innovative activity is conducted in an atypical manner. The co-existence of personal and professional relations increases the probability of introducing innovation. Moreover, the multidimensional nature of relationships and relationship networks accelerates innovation diffusion (Drewniak and Karaszewski, 2020; Ceci and Lubatti, 2012).

Asked about the organizational form of the relations with the key stakeholders, respondent most frequently mentioned contracts. The obtained data demonstrate that contracts were the dominant form for individual groups of stakeholders in all the studied cases. This, unfortunately, reveals a lack of belief in and/or knowledge about other forms of co-operation that help to generate additional synergy that occurs only with close collaboration. This type of relationships is based on the awareness of common interests and mutual trust, supported by proper legal regulations. Strategic alliances and clusters are examples of such co-operation, although enterprises still rarely use these forms. This problem may have adverse effects on the development of competitive advantage of the analyzed enterprises, as operating on the global market, they encounter players who can considerably increase their potential due to the synergistic effect. Most co-operative alliances still expire after projects are completed.

Entrepreneurs seem to be unable to overcome their fear of full openness in co-operation and perceive other entities primarily as potential competitors. They are also scared of partners' opportunistic behaviors (Phelps *et al.*, 2012; Das and Teng, 2000). According to one of the key principles in business, long-term co-operation

always yields better results than the temporary effects of competitive battle; yet it appears to be an empty slogan and not everyday business practice. The repeatability of the relationships with external stakeholders varied.

However, most of the relations are repeated cyclically, and only a few were single occurrences. The study results demonstrate that contracts were the most frequent form of initiating relationships, followed by outsourcing and alliances. It suggests that the analyzed enterprises were willing to renew the relationships in which the goal and expected results could be clearly defined. It should also be noted that the contracts were usually for long periods of over 7 years, which may indicate that co-operation was based on bilateral trust and effectiveness in achieving common goals. The most frequently repeated relationships were those with suppliers and customers.

It seems to be rather unsurprising, given the measurable effects for all the parties involved in the chain of creating value for the company. A contract and outsourcing typically renewed the co-operation, and to a lesser degree, by alliance and partnership network. About the latter, it concerned repeatable relationships with other companies, including competitors. However, it seems that this type of collaboration will gain popularity, as its long-term outcomes include increased innovation and degree of competitiveness of the co-operating entities (Drewniak, 2019). A review of numerous studies (Donaldson and O'Toole, 2007; Shipilov and Li 2014; Baum *et al.*, 2014; Drewniak, 2016) demonstrated inter-organizational relationships with the fundamental strategy in modern enterprises due to the competitive advantage they provide. Properly shaped and used relational potential results in a range of benefits, including access to unique resources (especially knowledge) and increase of the currently possessed assets and competencies; reduction of costs (primarily transactional ones); reduced risks and limited uncertainty of business activities; increased potential for organizational learning, and increased innovation (Parung and Bititci, 2006).

This is supported by the results demonstrating that the significant majority of relationships with external stakeholders were beneficial or highly beneficial. This study confirmed unambiguously that the repeatability of relationships and the effect they generate are very closely correlated. When a company forms repeated alliances with a selected group of partners, it can rely on the established arrangements and channels to facilitate the accessibility and transfer of the knowledge existing in the network of direct allies. In this context, Beckman *et al.* (2004) postulated that creating new alliances with the present partners is a form of seeking knowledge in which the company strengthens the existing relationships to use its database. By creating alliances with already known partners, companies can also use previous experience and trust to increase the predictability and reliability of the co-operation (Verspagen and Duysters, 2004; Li and Rowley, 2002). Seeing the positive effects of collaboration, enterprises naturally continue or repeat it. Careful cultivation of relationships, usually reflected in their duration, translates into positive effects.

The obtained results also demonstrate that enterprises-maintained relationships with external stakeholders for different periods of time. Some of them were continued for 1 to 3 years. The same number of relationships lasted 3 to 5 years. Interestingly, the greatest number of relationships reported by respondents continued for 7 years or longer. They may be interpreted as long-term relationships with the key external stakeholders. Simultaneously, the data reveal diversity in the assessment of the maturity of the reported relationships. The majority of relations were at the maturity stage, and nearly the same amount was in the development phase. Only in two cases, respondents reported a terminal stage.

These results support an optimistic view of the studied problem. Development of durable, long-term relationships involves a significant effort on the participating entities (Posadzińska *et al.*, 2020), and resignation from co-operation is the last resort. Participation in an institutionalized network affects product innovations significantly, whereas participation in a market network is associated more with creating organizational innovations. Being a member of a business group affects both product-related and organizational innovations. (Kim and Lui, 2015). Also, many studies confirmed the number and diversity of relationships maintained by the company (i.e., the size and diversity of its relational potential) directly correlates with the innovation of the enterprise (Calighirou *et al.*, 2004; Laursen and Salter, 2006; Frenz and Ietto-Gillies, 2009; Duysters and Lokshin, 2011).

Therefore, the relational potential and its application in co-operative operations, both in a dyad or in network structures, accelerate the innovation process and increase its innovativeness. The results of his study confirm our hypotheses that the developed mechanisms of co-operation thus enter the catalog of the enterprise's key assets, translating directly into its market value. The positive effects of co-operation on innovation are associated primarily with the extension of the asset portfolio due to the access to complementary resources and specific resources of the network, sharing of the cost of research and development, or transfer of knowledge. Moreover, the development of relationships with other organizations increases the knowledge available and improves the absorption potential of the organization, which results in a higher degree of innovation (Drewniak and Karaszewski, 2020).

6. Conclusions

Relationships, especially between organizations, create the relational potential of an organization, i.e., the sum of all relations (bonds) between the organization and the entities in its environment (customers, suppliers, competitors, universities, communities, and local authorities, etc.), as well as their combinations, available to the organization and contributing to its success and long-term development. It should be emphasized that relational resources are renewable after use and can remain at the same level or increase in quantity and/or quality during their application (Diefenbach, 2006). The team conducting this research also considers

building relationships between companies and universities, reported by the respondents, as a positive finding. Previously, a collaboration between the world of science and the world of business generated various problems, despite its great pro-innovation potential and the beneficial effects on socio-economic systems' functioning. The presented results demonstrate that the European Union's measures to create in the Member States economic systems characterized by technological pioneering are effective. Without the involvement of the scientific community, this ambitious endeavour could not be successful. The attempts to bring these two environments together, based merely on the presentation of potential collaboration benefits, proved ineffective. Only the implementation of research and development projects, supported by a significant financial incentive from the public resources, can generate real outcomes.

Considering the relational potential of enterprises and assessments of the characteristics of relationships with stakeholders, a chi-square test was conducted, and the strength of demonstrated correlations was evaluated using Cramer's V and Pearson's C coefficients (at $p < 0.05$). The results supported the following conclusions:

1. Enterprises most frequently initiated relationships in the form of contracts, participation in clusters, and alliances with suppliers, customers, R&D centres, universities, and competitors.
2. The most often renewed and repeated relations were the ones with suppliers, customers, competitors, and local communities, as well as relationships in the development phase and in the maturity stage, and those lasting for over 3 years.
3. Higher repeatability of the relations with stakeholders was associated with greater benefits for the co-operating entities.
4. The more numerous and diverse the company's relationships are, the more frequently they are repeated, and the resulting benefits are assessed higher; therefore, the maturity of relationships can lead to increased ability of the enterprise to create, implement, and commercialise innovations, which is conducive to intensive co-operation with external entities, in line with the findings by other authors (Martinez *et al.*, 2017; Zhao *et al.*, 2016; Duysters and Lokshin, 2011).
5. The relationships at a higher maturity stage in the relationship's life cycle last longer, and are more often renewed (repeated).
6. Relational benefits are largely determined by the repeatability of relationships and their maturity: the frequency of relationships with stakeholders, and their maturity (i.e. the stage of maturity in the life cycle of relationship) directly correlate with the benefits for the company, regardless of the length of their duration.
7. The type of relationships does not affect the resulting benefits, which are primarily determined by the durability of relation; whereas the repeatability and type of relationships (form of co-operation) depend on the type of stakeholders involved in the relations.

Many studies demonstrate that inter-organizational relationships are of key importance in the modern world, which supports the adoption of the network-based paradigm in management science (Hakanson and Snehota, 2006; Waters and Bortree, 2012). The benefits of co-operation increase the competitiveness of enterprises and stimulate their innovation. Broad collaboration with external entities entails equal use of internal and external resources by the companies, both about material assets (technology, infrastructure) and non-material resources (knowledge, skills, and contacts).

Therefore, companies should build relational potential and develop it properly, as it determines to a large extent their innovation potential. A review of many studies on innovation in modern enterprises (Drewniak and Posadzińska, 2020; Donaldson and O'Toole, 2007; Shipilov and Li, 2014; Baum *et al.*, 2014) demonstrates that their strategy is based on relationships between organizations as a source of competitive advantage. Due to these relationships, extraordinary results are reported by the co-operating companies, which could not be achieved if they operated individually. Simultaneously, the key determinant of continued partner relationships in the future is the imperative of partnership and mutual trust between the allies (Thorgren *et al.*, 2010). Creating relationships of mutual trust affect knowledge management and indirectly influences the alliance's success from a long perspective (Khan *et al.*, 2015).

Properly shaped and used relational potential results in a range of benefits, including access to unique resources (knowledge, skills, technology, human resources) and increase of the currently possessed assets and competencies; reduction of costs and risks associated with joint endeavours; increased potential for organizational learning and increased innovation. The innovativeness of modern enterprises, in particular, is determined by the relational potential, due to the displacement of innovation processes from within the company to the inter-organizational space, and the associated change from the entirely intra-organizational innovation model to the open innovation model, which comprises all kinds of innovation-related activities, also beyond the organizational limits of one company. It requires intensification of co-operation with external partners and is largely shaped by the relational potential.

References:

- Ahammad, M.F., Tarba, S.Y., Liu, Y., Glaister, K.W. 2014. Knowledge transfer and cross-border acquisition performance: The impact of cultural distance and employee retention. *International Business Review*, 25(1), 66-75.
- Anand, B.N., Khanna, T. 2000. Do firms learn to create value? The case of alliances. *Strategic Management Journal*, 21, 295-315.
- Barney, J.B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 1, 99-120.
- Barney, J.B. 2001. Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review*, 26(1), 41-56.

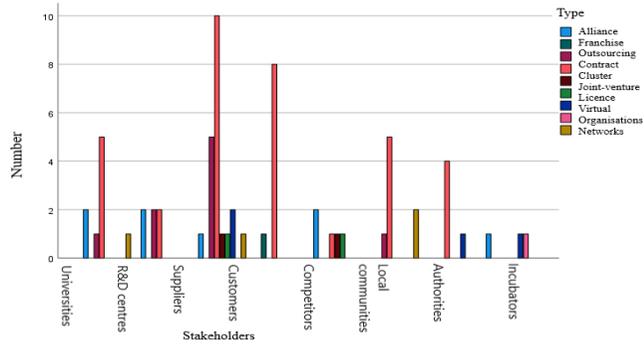
- Baum, J.A.C., Cowan, R., Jonard, N. 2014. Does evidence of network effects on firm performance in pooled cross-section support prescriptions for network strategy? *Strategic Management Journal*, 35(5), 652-667.
- Beckman, C.M., Haunschild, P.R., Phillips, D.J. 2004. Friends or strangers? Firm-specific uncertainty, market uncertainty, and network partner selection. *Organization Science*, 15, 259-275.
- Brunswick, S., Vanhaverbeke, W. 2015. Open Innovation in Small and Medium-Sized Enterprises (SMEs): External Knowledge Sourcing Strategies and Internal Organizational Facilitators. *Journal of Small Business Management*, 53(4), 1241-1263.
- Cabrita, M., Vaz, J. 2006. Intellectual Capital and Value Creation: Evidencing in Portuguese Banking Industry. *The Electronic Journal of Knowledge Management*, 4(1), 11-20.
- Calighirou, Y., Kastelli, I., Tsakanikas, A. 2004. Internal capabilities and external knowledge sources: Complement or substitutes for innovative performance? *Technovation*, 24(1), 29-39.
- Capello, R., Faggian, A. 2005. Collective learning and relational capital in local innovation processes. *Regional Studies*, 39(1), 75-87.
- Casanueva, C., Castro, I., Galán, J.L. 2013. Informational networks and innovation in mature industrial clusters. *Journal of Business Research*, 66, 603-613.
- Cao, Q., Gedajlovic, E., Zhang, H. 2009. Unpacking Organizational Ambidexterity: Dimensions, Contingencies, and Synergistic Effects. *Organization Science*, 20(4), 781-796.
- Ceci, F., Lubatti, D. 2012. Personal relationships and innovation diffusion in SME networks: A content analysis approach. *Research Policy*, 41(3), 565-579.
- Cohen, S., Kaimenakis, N. 2007. Intellectual Capital and Corporate Performance in Knowledge-Intensive SMEs. *The Learning Organization*, 14(3), 241-262.
- Das, T.K., Teng, B.S. 2000. Instabilities of strategic alliances: An internal tensions perspective. *Organization Science*, 11(1), 77-101.
- Diefenbach, T. 2006. Intangible resources: a categorical system of knowledge and other intangible assets. *Journal of Intellectual Capital*, 3(3), 406-420.
- Donaldson, A., O'Toole, T. 2007. *Strategic Market Relationships*. John Wiley & Sons, Ltd. Chichester.
- Drewniak, R. 2016. Model of the Knowledge Value Chain in Strategic Alliances: Conditions of the Knowledge Flows between Companies. *Global Management Journal*, 8(1), 116-126.
- Drewniak, R. 2019. Process Innovations Through a Strategic Alliance: The Importance of the Alliance Duration and the Size of Enterprises. *Proceedings from Theory and Applications in the Knowledge Economy TAKE 2019*, 478-496.
- Drewniak, R., Karaszewski, R. 2020. Diffusion of knowledge in strategic alliance: empirical evidence. *International Entrepreneurship and Management Journal*, 16(2), 387-416.
- Drewniak, Z., Posadzińska, I. 2020. Learning and Development Tools and the Innovative Potential of Artificial Intelligence Companies. *European Research Studies Journal*, 23(2), 388-404.
- Duysters, G., Lokshin, B. 2011. Determinants of alliance portfolio complexity and its effect on innovative performance of companies. *Journal of Product Innovation Management*, 28(4), 570-585.
- Dyer, J.H., Hatch, N.W. 2006. Relation-specific capabilities and barriers to knowledge transfers: creating advantage through network relationships. *Strategic Management Journal*, 5, 701-719.

- Frenz, M., Ietto-Gillies, G. 2009. The impact on innovation performance of different sources of knowledge: Evidence from the UK Community Innovation Survey. *Research Policy*, 38(7), 1125-1135.
- García-Merino, J.D., García-Zambrano, L., Rodriguez-Castellanos, A. 2014. Impact of Relational Capital on Business Value. *Journal of Information & Knowledge Management*, 13(1). DOI: <https://doi.org/10.1142/S0219649214500026>.
- Gilbert, D.G., Sigman, M., Crist, R.E. 2001. The Neural basis of perceptual learning. *Neuron*, 31(5), 681-697.
- Goździewska-Nowicka, A., Janicki, T., Popławski, W., Słupska, U. 2017. Virtual organizing of collaborative networks of business entities. *Ekonomika i Organizacja Przedsiębiorstwa*, 11, 111-124.
- Hakanson, H., Snehota, I. 2006. No Business is an island: The network concept of business strategy. *Scandinavian Journal of Management*, 22(3), 256-270.
- Janicki, T., Popławski, W., Słupska, U. 2015. The Concept and the Level of Virtualization in Contemporary Companies (Based on the Example of Polish Companies). *Social Sciences*, 40(4), 19-31.
- Khan, Z., Shenkar, O., Lew, Y.K. 2015. Knowledge transfer from international joint ventures to local suppliers in a developing economy. *Journal of International Business Studies*, 46, 656-675.
- Kim, Y., Lui, S. 2015. The impacts of external network and business group on innovation: Do the types of innovation matter? *Journal of Business Research*, 68(9), 1964-1973.
- Laursen, K., Salter, A. 2006. Open for innovation: The role of openness in explaining innovation performance among U.K. manufacturing firms. *Strategic Management Journal*, 27(2), 131-150.
- Lavie, D. 2006. The competitive advantage of interconnected firms: an extension of the resource-based view. *Academy of Management Review*, 3, 153-174.
- Lechner, C., Dowling, M., Welpel, I. 2006. Firm Networks and Firms Development: The Role of the Relational Mix. *Journal of Business Venturing*, 21, 514-540.
- Lee, S., Park, G., Yoon, B., Park, J. 2010. Open Innovation in SMEs-An Intermediated Network Model. *Research Policy*, 39(2), 290-300.
- Li, S.X., Rowley, T.J. 2002. Inertia and evaluation mechanisms in interorganizational partner selection: Syndicate formation among U.S. investment banks. *Academy of Management Journal*, 45, 1104-1119.
- Martinez, M.G., Zouaghi, F., Garcia, M.S. 2017. Capturing value from alliance portfolio diversity: the mediating role of R&D human capital in high- and low-tech industries. *Technovation*, 59, 55-67.
- Mills, P.K., Morris, J.H. 1986. Clients as partial employees of service organizations: Role development in client participation. *Academy of Management Review*. 11(4), 726-735.
- Pan, X., Zhang, J., Song, M., Ai, B. 2018. Innovation resources integration pattern in high-tech entrepreneurial enterprises. *International Entrepreneurship and Management Journal*, 14(1), 51-66.
- Parung, J., Bititci, U.S. 2006. A conceptual metric for managing collaborative networks. *Journal of Modelling in Management*, 1(2), 116
- Pearson, J., Pitfield, D., Ryley, T. 2015. Intangible resources of competitive advantage: Analysis of 49 Asian airlines across three business models. *Journal of Air Transport Management*, 47, 179-189.
- Phelps, C., Heidl, R., Wadhwa, A. 2012. Knowledge, networks, and knowledge networks: a review and research agenda. *Journal of Management*, 38(4), 1115-1166.

-
- Posadzińska, I., Słupska, U., Karaszewski, R. 2020. The Attitudes and Actions of the Superior and the Participative Management Style. *European Research Studies Journal*, 23(S1), 488-501.
- Prahalad, C.K., Ramaswamy, V. 2000. Co-opting customer competence. *Harvard Business Review*, 78(1), 79-87.
- Ritala, P., Ellonen, H.K. 2010. Competitive Advantage in Interfirm Cooperation: Old and New Explanations. *Competitiveness Review*, 20, 367-383
- Shipilov, A.V., Li, S.X. 2014. Towards the Relational Multiplexity Perspective on Inter-Firm Networks. In: Borgatti, S.P., Brass, D., Halgin, D., Labianca, G., Mehra, A. (eds) *Contemporary Perspectives on Organizational Social Network Analysis*. Bingley, Emerald Group Publishing.
- Słupska, U. 2019. The importance of knowledge in building relational competences in virtual organizations. In: A. P. Balcerzak, I. Pietryka (Eds). *Proceedings of the 10th International Conference on Applied Economics Contemporary Issues in Economy: Entrepreneurship and Management*. Institute of Economic Research, 161-170.
- Słupska, U., Posadzińska, I., Karaszewski, R. Knowledge Management and Internal Relational Capital versus the Development of Environmental Relations. *Proceedings of the 15th European Conference on Management, Leadership and Governance, ECMLG 2019*. Portugal. 349-356.
- Thorgren, S., Wincent, J., Eriksson, J. 2010. Too small or too large to trust your partners in multipartner alliances? The role of effort in initiating generalized exchanges. *Scandinavian Journal of Management*, 27(1), 99-112.
- Tornoy, W., Wiley, J.W. 1991. Customer satisfaction: A supportive work environment and its financial costs. *Human Resource Planning*, 14(2), 117-127.
- Verspagen, B., Duysters, G. 2004. The small world of strategic technology alliances. *Technovation*, 24, 563-571.
- Wang, W.Y., Chang, C. 2005. Intellectual Capital and Performance in Causal Models Evidence from the Information Technology Industry in Taiwan. *Journal of Intellectual Capital*, 6(2), 222-236.
- Wang, J.Y., Liu, Y.Q., Ari, K. 2017. Industrial network technology innovation from the perspective of social network. An empirical study of China's new energy automotive industry Alliance. *China Science and Technology Forum*, 5, 186-192.
- Waters, R.D., Bortree, D.S. 2012. Advancing relationship management theory: Mapping the continuum of relationship types. *Public Relations Review*, 38(1), 123-127.
- Welbourne, T., Pardo del Val, M. 2009. Relational Capital: Strategic Advantage for Small and Medium-Size Enterprises (SMEs) Through Negotiation and Collaboration. *Group Decision and Negotiation*, 18, 483-497.
- Xie, Y.P., Jing, W. 2017. Research on the influence of Alliance relationship on innovation performance under technological uncertainty. *Science and Technology Management*, 5, 60-71.
- Zhao, Y., Feng, W.Y., Zheng, X.J. 2016. Influence of coupling of factions and knowledge flows on innovation capability of alliance networks. *Research Management*, 37(3), 51-58.

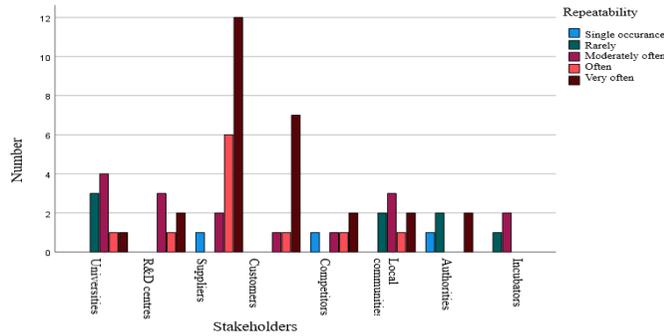
Appendix:

Figure 1. Correlation between the group of stakeholders and the form of the relationship



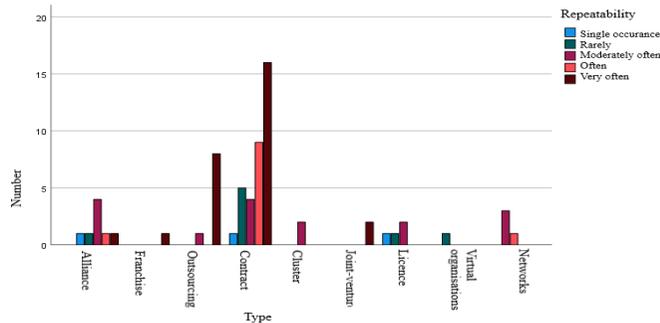
Source: Authors' calculations.

Figure 2. Correlation between the group of stakeholders and the repeatability of the relationship



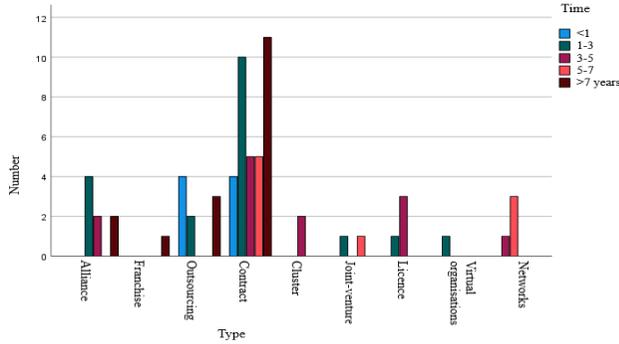
Source: Authors' calculations.

Figure 3. Correlation between the type and repeatability of the relationship



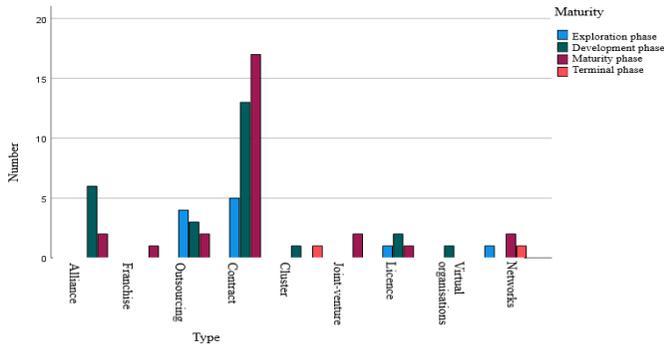
Source: Authors' calculations.

Figure 4. Correlation between the type of the relationship and its duration



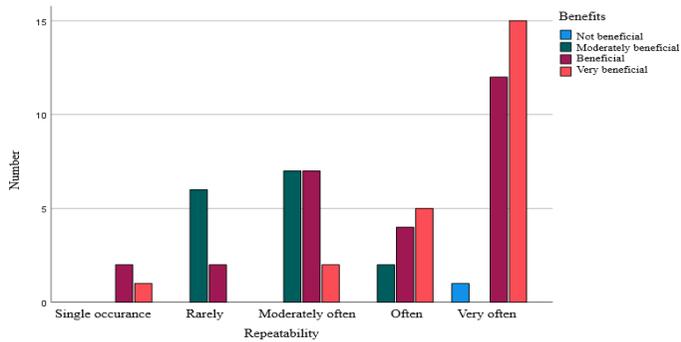
Source: Authors' calculations.

Figure 5. Correlation between the type of the relationship and its maturity



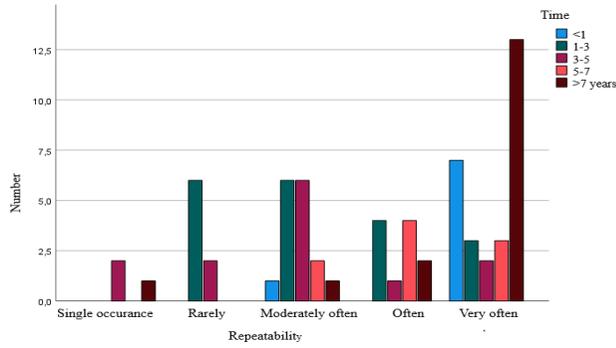
Source: Authors' calculations.

Figure 6. Correlation between the repeatability and benefits of the relationship



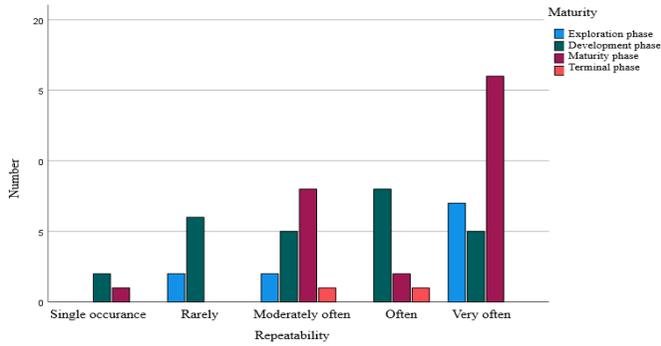
Source: Authors' calculations.

Figure 7. Correlation between the durability and repeatability of the relationship



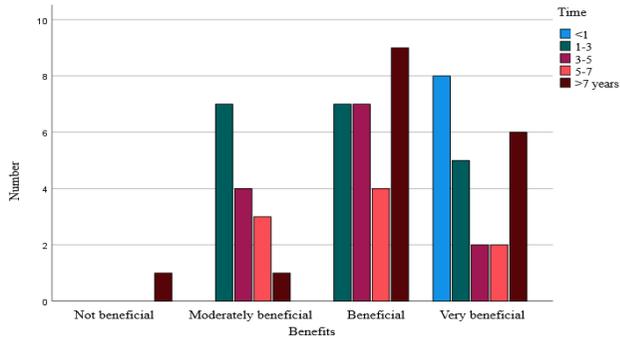
Source: Authors' calculations.

Figure 8. Correlation between the maturity and repeatability of the relationship



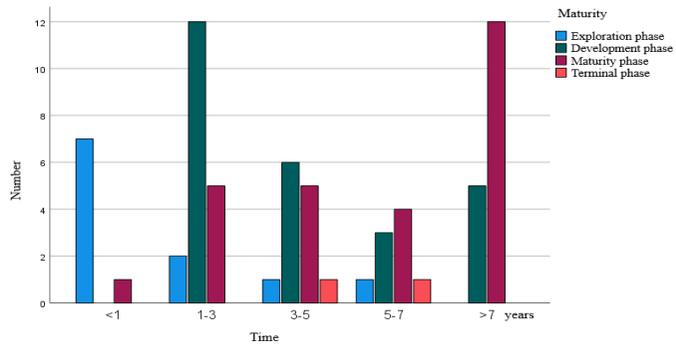
Source: Authors' calculations.

Figure 9. Correlation between the durability and benefits of the relationship



Source: Authors' calculations.

Figure 10. Correlation between the durability and maturity of the relationship



Source: Authors' calculations.