DETERMINANTS OF THE DEVELOPMENT OF INTER-ORGANIZATIONAL RELATIONS

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Abstract: Nowadays, the cooperation is considered as one of the basic paths of enterprise development. For many entities, it is a chance of improving or increasing competitiveness, for others it is a necessity because the lack of cooperation could cause serious perturbations. However, it is emphasized that the decision to cooperate must be conscious. The effect can be on one hand the benefits, on the other hand there is the possibility of generating losses. Due to the fact that most of the relations between the cooperating companies are antagonistic, it is worth considering the factors that guarantee the effectiveness of cooperation. This paper attempts to identify the key factors that favour and limit the effectiveness of inter-organizational collaboration. The first part of the paper presents theoretical reflections on the essence and nature of cooperation. The second one focuses on the result analysis of a survey on determinants of cooperation conducted during the year 2015 on a sample of 192 entities.

Key words: effectiveness of cooperation, factors that favour and limit the effectiveness of inter-organizational collaboration, essence and nature of cooperation.

JEL: M10; M19; L20.

Introduction

The company’s decision to establish close and direct relationships with its contractors has many implications and consequences that may

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vary. On one hand, there are highlighted the revenue and profit growth, profitability improvements, partnership development or territorial expansion. On the other hand, there are a number of threats, including the possibility of dependency, loss of financial liquidity or a decrease in turnover. It can therefore be stressed that the decision to build a relationship of interdependence must be thought-out, based on well-chosen criteria that will allow to adequately verify the counterparties at the planning stage. It is worth emphasizing that the "effect of cooperation" in operational activity will only benefit if the cooperation is established with appropriate, reliable and above all credible co-operators. In practice, they are considered to be characterized by the right potential, adequate resources, including financial resources, and have a positive image and reputation on the market. From the point of view of the company, it is extremely important to be able to select those partners who will follow the agreed terms of cooperation, both formal and non-formal. This selection is based on a set of criteria whose significance, weight, and rank vary depending on the size of the business, domain and activity, the value of the mutual turnover, the market on which they operate, and the source of their financial resources.

It should be also stressed that the basis of the development of inter-organizational relationships depends on a number of motives and determinants which can be understood as each factor, every circumstance that causes a certain action. That is something that is causally related. In addition, the multifaceted approach to the problem and the lack of agreement on the factors affecting its development are causing a constant search for answers to issues related to the creation, development and maintenance of relevant relationships. Starting from the above conditions, the purpose of the paper was to identify and evaluate the determinants that influence the decisions of entrepreneurs in establishing, maintaining and developing Inter-organizational relationships.

1. The essence and nature of interorganizational relations

The state-of-the-art concerning connections and relation among enterprises indicates the lack of unanimity in relation to the term
"cooperation". The most simplified definition is that it is joint activity of entities in order to realize the individual or mutual aims” (Morgan, Hunt 1994, p. 26; Huxman 1996, p. 6; Turner 2000, p. 16). Thus, it may be indicated that it is “… joint action of few persons, enterprises or companies, regulated by the agreement and aiming at achieving the determined purpose. It is identified with the shared activity of economic subjects which realize tasks connected with the determined chain of value. It is emphasized that it is practice which consist in the collaboration of two or more enterprises within the same or different, but connected with oneself, production processes in order to fulfil the determined task (Wielka Encyklopedia PWN 2003, s. 332). It should be understood as joint action, collaboration, the form of the work organization, the supply, the suppliers, the production cooperation of enterprises.

Cooperation is also identified with the analogous or complementary coordinating activity, performed by the organizations in business relations in order to achieve individual or agreeable purposes with simultaneous expectation of repaying in the determined period (Wiertz, de Ruyter, Keen, Streukens 2004, s. 428). The presented definition emphasizes the reciprocity principle, i.e. expectation of the revenge of one side from the second side in return for the action carried out which they were profiting from and which the organization wouldn't obtain acting on its own.

Similarly, J. C. Anderson and J. Narus (1990, p. 40) treat cooperation as similar or supplementing coordinated actions taken by companies in interdependent relations in order to achieve shared or individual results with simultaneous expectation of repaying in the determined time. Cooperation is also considered as an opposite of competition and is described as coordinating activity (Balbanis 1998, p. 27). The coordination is understood as the standard of the collaboration and joint action, in the result of which the activity of the organization is adapted for itself with the maximum effectiveness and efficiency.

According to T. K. Das and B. S. Tenga (1998, p. 491) cooperation means that partners creating the cooperative arrangement are rather prone to carry out one another compatible undertakings than to act opportunistically. The term cooperation also suggests that partners are acting according to the truth and they are involved in the creation of the
agreement. It obliges to keep the altruistic behaviour, mutual confidence and the pro-social activity. There is required an absolute and endless confidence which is treated as the basic element of the relation enabling the organizations to fully exploit their potential (Geyskens, Steenkamp, Kumar 1998, p. 224). It becomes the preliminary condition of the created relations and determines the level, the scope and conditions of future action. It is emphasized that the high level of confidence lets the enterprises coordinate activity and a joint effort causes the realization of planned purposes, the outcome of which significantly exceeds the results which companies would achieve in the case of independent action. Additionally, in the context of the relations based on the mutual confidence, the enterprises are willing for realization of their aims in the postponed period what is fundamental in expecting the reciprocity in partner channels (Anderson, Narus 1990, p. 45). And so, cooperation is an indication of willingness to compromise among companies, irrespective of the origin it comes from whether the confidence based on the relation (result of earlier interactions and mutual understanding) whether from the confidence based on the clean calculation (forced by the effective managing or realization of the strategic purposes) (Dyer 1997, p. 535). It should be also emphasized that the development of cooperation, entering higher levels of the interdependence are connected with non-coercive usage of the bargaining power of partner with the dominating position. Thus, confidence becomes the preliminary and necessary condition of every cooperation (Morgan, Hunt 1994, p. 33).

Cooperation is also treated like an idiosyncrasy of the relation which is formed between acting together participants of the market, consisting of mutual understanding, coincident purposes and values and aspiring to the joint work in order to achieve identical results. The consensus of the field and the scope of activity refers to the agreement between the participants of the arrangement in relation to the manufactured products and service of markets. However, it also refers to the function everyone performs in the formed alliance. The increase in the level of the domain compatibility and the scope of the cooperation contributes to the increase in the level of collaboration and inversely the low compatibility weakens the cooperative connections (Sibley, Michie 1982, p. 25). So that
the cooperative arrangement applies effectively as the system, it has to
work out the procedure in relation to the collaboration and the coordination.
This procedure should contain four desiderata (Sibley, Michie 1982, p. 26):
• determining the appropriate position and responsibilities of all
  participants,
• accepted norms, relations, principles and procedures serving for
  achieving their goals,
• motives and incentives for individual participants carrying out the
  project,
• locus the authority.
Therefore, it is possible to define it as the cooperation of companies
allowing them to obtain additional mutual benefits in the process of
achieving different individual aims subordinated to achieve their superior
goal for which the given agreement was appointed (Choroszczak, Ujwary-Gil
2003, p.18). Thus, it is ... “arrangement of relationships and relations
between subjects, among which one – as the producer of the manufactured
product – use the help of different subjects. In this arrangement, they are
the co-operators contributing to the manufactured product their specialist
input in the form of half-products, semi-finished products, aggregates,
componentry or other components, or specialist technological operations
essential to its production ...” (Pomykal 1995, p. 446). It is emphasized
that cooperation of enterprises results from a few premises (Kaczmarek
2000, p. 29):
• signals from the market,
• signals from other enterprises,
• signals from the national and local governments,
• strategy of functioning and development realized by the
  enterprises,
• level of use of different law - organizational forms of enterprise
  cooperation.
An appropriate selection of partners which will be responsible for
fulfilling of determined functions (Kaczmarek 2000, p. 30) is an essential
problem connected with cooperation among enterprises. It should be
carried out in the optimal way, relying on such working out of criteria which
will take into account the strategic purposes of the enterprises. In this
scope, one should subject suppliers to the stratification to individual groups according to the rank their importance (Koltewicz 2006, p. 6-12). In this process, it is possible to take into account a range of the factors, such as:

- value of supplies realized from the supplier with respect to total value of purchased goods and services from outside sources,
- the supply size in the selection depiction in terms of its wideness and depth,
- significance of supplies in the production processes of the recipient,
- availability of purchased goods on the market (competitive position of suppliers).

In literature there is a dominating view according to which the ranking of suppliers should be connected with the kind of material which is delivered by them. In this scope, it is possible to indicate the following groups (Surówka – Marszałek 1995, s. 157):

- strategic materials with the great result influence and the considerable risk of purchasing,
- “bottle neck” materials with the small result influence but with the great risk of purchasing,
- materials of the “magnet” type with the great result influence and the small risk of purchasing,
- neutral materials with the small result influence and the slight risk of purchasing.

In order to determine correctly the role of the supplier in the recipient structure, the risk connected with the given good purchase frequency, should also be determined. In this scope a new, modified and routine purchases are pointed out.

It is also underlined that in the context of the initial assumptions and decisions the managing of cooperative relations is very essential. The collaboration between partners is based on a mutual confidence and commitment which constitute the critical factors in formal and unofficial meetings and they enable to avoid post-contractual conflicts. And so essential significance is given to the opened flow of information, the willingness to share the experience and abilities with the partner what in consequences contributes to the reduction in the IT asymmetry, contract
monitoring costs and the possibility of opportunist action (Dyer 1997, p. 535). It should be emphasized that already several dozen years ago, the purpose of creating the relation and connections resulted from the desire for the rational production and sale arrangement, and creating such conditions which basic task was increase in profitability of economical action. It concerned mainly the reduction of own costs of manufacturing products at simultaneous improvement of the products quality and keeping up the required dates (Smoliński 1982, p. 100).

Finally, it could be emphasized that according to Prasad cooperation is kind of philosophy of the enterprise and consist of seven elements (called “7c”) (Prasad 1998, p. 143-144):

- **Collaboration**: this describes a process of value creation that a traditional structure of communication and teamwork cannot achieve. Instead of focusing on methods of communication (such as teams with definite roles and set of operating procedures), collaboration seeks out the unplanned and unpredictable events in product development.

- **Commitment**: empowered teams define the tasks and prioritize areas to make breakthrough opportunities. Goals and objectives, duration, utility, complexity, expected results, and key success factors are outlined as much as possible. Management is fully committed to meeting the goals.

- **Communications**: effective communication is the precursor to meaningful collaboration. Communication is a free and open exchange of information among the teams, whereas the collaboration is a commitment to create a shared understanding and work together.

- **Compromise**: there is compromise and input from every discipline so that simultaneous development of the product, process, and associated tooling can be achieved.

- **Consensus**: project team and management members may disagree on some issues, but teams’ support on the requirements and a commitment to project objectives from the very outset is essential. These common objectives are reinforced throughout the life of the project.
Continuous improvement: product or process design teams work toward the total elimination of waste. The concept focuses on enhancing productivity and profitability through continuous improvements of product quality and reduction in product development cycle-time.

Coordination: coordination is the act of managing interdependencies between activities. Coordination involves actors performing interdependent activities that achieve goals, and its analysis includes goal decomposition, resource allocation, synchronization, group decision making, communication and the preparation of common objectives. Partnerships are formed among all disciplines involved in the project and communication links are formally established and utilized. Suppliers are involved in the early stages of the project.

2. Characteristics of the examined companies

Empirical research on the relationship between cooperating companies was conducted in year 2015, as part of a broader cooperation theme. A number of specific problems have been identified, including the character and nature of the relationships that occur between business entities in the process of cooperation and collaboration.

The analysis and evaluation of the processes between the cooperating companies was based on the results of in-depth surveys conducted in 192 manufacturing companies and companies with manufacturing services on the Polish market of industrial goods of various types and different domain of activity. Sampling was non-random, targeted, typical, and well-structured. A number of parameters characterized the test sample such as domain and activity profile, size of employment, location, activity duration, legal form, served markets and type of used base strategy. Detailed sample characteristics are presented in Table 1.
Table 1
Characteristics of the enterprises according to the accepted criteria

<table>
<thead>
<tr>
<th>No.</th>
<th>Characteristic</th>
<th>No. of indications N=192</th>
<th>Share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enterprises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Small</td>
<td>124</td>
<td>64,58</td>
</tr>
<tr>
<td>2.</td>
<td>Medium</td>
<td>51</td>
<td>26,56</td>
</tr>
<tr>
<td>3.</td>
<td>Big</td>
<td>17</td>
<td>8,86</td>
</tr>
<tr>
<td></td>
<td>Respondent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Owner/chairman</td>
<td>70</td>
<td>36,46</td>
</tr>
<tr>
<td>2.</td>
<td>Director / accountant / manager</td>
<td>66</td>
<td>34,37</td>
</tr>
<tr>
<td>3.</td>
<td>Specialist</td>
<td>56</td>
<td>29,17</td>
</tr>
<tr>
<td></td>
<td>Year of foundation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>To 1990</td>
<td>21</td>
<td>10,94</td>
</tr>
<tr>
<td>2.</td>
<td>1991-2000</td>
<td>70</td>
<td>36,46</td>
</tr>
<tr>
<td>3.</td>
<td>2001-2010</td>
<td>71</td>
<td>36,98</td>
</tr>
<tr>
<td>4.</td>
<td>After 2010</td>
<td>30</td>
<td>15,62</td>
</tr>
<tr>
<td></td>
<td>Business profile ^1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Production</td>
<td>100</td>
<td>52,08</td>
</tr>
<tr>
<td>2.</td>
<td>Production services</td>
<td>73</td>
<td>38,02</td>
</tr>
<tr>
<td>3.</td>
<td>Services around production</td>
<td>19</td>
<td>9,99</td>
</tr>
<tr>
<td></td>
<td>Legal form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Enterprises of natural person</td>
<td>77</td>
<td>40,10</td>
</tr>
<tr>
<td>2.</td>
<td>Limited liability company</td>
<td>64</td>
<td>33,33</td>
</tr>
<tr>
<td>3.</td>
<td>General partnership</td>
<td>15</td>
<td>7,81</td>
</tr>
<tr>
<td>4.</td>
<td>Public limited company</td>
<td>13</td>
<td>6,77</td>
</tr>
<tr>
<td>5.</td>
<td>Partnership</td>
<td>11</td>
<td>5,73</td>
</tr>
<tr>
<td>6.</td>
<td>Other forms</td>
<td>10</td>
<td>5,21</td>
</tr>
<tr>
<td>7.</td>
<td>Limited partnership</td>
<td>2</td>
<td>1,04</td>
</tr>
<tr>
<td></td>
<td>Market ^2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Local market</td>
<td>98</td>
<td>51,04</td>
</tr>
<tr>
<td>2.</td>
<td>Regional market</td>
<td>70</td>
<td>36,46</td>
</tr>
<tr>
<td>3.</td>
<td>Domestic market</td>
<td>92</td>
<td>47,92</td>
</tr>
<tr>
<td>4.</td>
<td>International market</td>
<td>54</td>
<td>28,12</td>
</tr>
<tr>
<td>5.</td>
<td>Global market</td>
<td>6</td>
<td>3,12</td>
</tr>
</tbody>
</table>
### Basic strategy

<table>
<thead>
<tr>
<th></th>
<th>Quality strategy</th>
<th></th>
<th>54.69</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Price strategy (cost leadership)</td>
<td>83</td>
<td>43.23</td>
</tr>
<tr>
<td>3</td>
<td>Differentiated strategy - depending on the supported regions, businesses</td>
<td>59</td>
<td>30.73</td>
</tr>
<tr>
<td>4</td>
<td>Niche strategy</td>
<td>32</td>
<td>16.67</td>
</tr>
<tr>
<td>5</td>
<td>Mixed strategy (average quality for average price)</td>
<td>25</td>
<td>13.02</td>
</tr>
<tr>
<td>6</td>
<td>Lack of strategy</td>
<td>12</td>
<td>6.25</td>
</tr>
<tr>
<td>7</td>
<td>Strategy of imitators</td>
<td>9</td>
<td>4.69</td>
</tr>
</tbody>
</table>

**Location by size of locality**

<table>
<thead>
<tr>
<th></th>
<th>Locality to 50 thousand inhabitants</th>
<th>95</th>
<th>49.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Locality from 50 to 100 thousand inhibitions</td>
<td>28</td>
<td>14.5</td>
</tr>
<tr>
<td>3</td>
<td>Locality from 101 to 250 thousand inhabitants</td>
<td>29</td>
<td>15.1</td>
</tr>
<tr>
<td>4</td>
<td>Locality over 250 thousand of inhabitants</td>
<td>40</td>
<td>20.8</td>
</tr>
</tbody>
</table>

1 The company could indicate more than one option.  
Source: own study.

### 3. Conditions for effective cooperation – results of research

This part of the paper presents the results of the study concerning determinants influencing the development of relations between cooperating companies. Variables taken into account by the companies in the decision-making process, were identified on the basis of critical bibliography analysis, own observations and reflections, and interviews with entrepreneurs who indicated their priority criteria. They were classified in groups that deal with the following aspects: financial, reference, organizational, relational and market ones. Their detailed description is presented in Table 2.
Table 2
The main determinants of relationships

<table>
<thead>
<tr>
<th>Financial</th>
<th>Referential</th>
<th>Organizational</th>
<th>Relational</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial condition of the partner</td>
<td>References of other companies cooperating with the contractor</td>
<td>Audits, controls and inspections</td>
<td>Period of previous cooperation</td>
<td>Image of the contractor</td>
</tr>
<tr>
<td>Value of realized contracts</td>
<td>References from other market participants</td>
<td>Level of cooperation risk</td>
<td>Experiences of previous cooperation</td>
<td>Competitive position of the market partner</td>
</tr>
<tr>
<td>Profitability of sales</td>
<td>Certainty in long-term cooperation</td>
<td>Type of partner sector</td>
<td>Scope and form of the relationship</td>
<td>Large bargain force of partner</td>
</tr>
<tr>
<td>Company financial policy</td>
<td>Trust to partner</td>
<td>The credibility of the partner</td>
<td>Subjective evaluation of company employees</td>
<td>Opinion and reputation of the market partner</td>
</tr>
<tr>
<td>Partner’s financial policy</td>
<td>Pressure of external entities</td>
<td>Joint implementation of projects</td>
<td>Impressions of direct contact</td>
<td>Informal relationships</td>
</tr>
<tr>
<td></td>
<td>Force and pressure</td>
<td>Future prospects for future cooperation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own study.

During the study, the companies were asked to evaluate individual variables using the five-point Likert scale. Respondents might consider that the criterion is irrelevant and give 1 point, or is of small, medium and high significance, and give 2, 3 and 4 points respectively. The very important significance was for 5 points. The obtained data allowed to calculate a number of statistical parameters, including the mean value of all indications, which is defined in this article as the significance factor (R). The distribution of individual responses is shown in Figure 1.
Figure 1. Layout of answers about factors considered in the process of building and developing relationships

Source: own study
By analysing the obtained results, it can be stated that 5 criteria are particularly important, i.e.: experience from previous cooperation (significance factor R = 4.4), period of previous cooperation (significance factor R = 4.4), financial condition of the recipient (significance factor R = 4.0), its reliability (significance factor R = 4.0) and trust in the partner (significance factor R = 4.0). On the other hand, the factors with relatively low impact were constraints and pressures (significance factor R = 2.5), subjective assessment of employees (significance factor R = 2.5), informal relations (significance factor R = 2.3) and pressure of exterior entities (significance factor R = 2.3). Other criteria, which according to the significance factor ranged from 2.6 to 3.9, had a medium impact.

Summarizing, it can be stressed that the majority of enterprises, in the process of building relationships, take into account the traditional determinants of relational and financial aspects. However, they give them different meaning, different rank and different interpretation. There is also a tendency for consumers to take on increasingly higher demands and new criteria not yet applied. Among such variables it is worth to pay attention to the level of risk, the prospect of future cooperation and the image and reputation of the potential recipient.

It should be stressed, however, that the decision-making process concerning the establishment, creation and maintenance of inter-organizational relationships is very complex and labour-intensive and does not always produce the expected result of optimum choice. Companies often use a number of criteria with relatively low specificity, the selection of which is subjective or random. Furthermore, by analysing the obtained results, it can be noted that the difference in values of the significance coefficients of the variables is small, often within the statistical error. This problem can be solved by reducing the primary variables and assigning them the appropriate rank. For this purpose, a factor analysis was used to simplify the complex structure into a form that clarifies the problem on the basis of a limited number of factors. According to the procedure, a correlation matrix was constructed which was observed and further analysed. As a result, it was found that a large number of variables show
an average and high correlation with other variables. In addition, we tested the assumptions using the Bartlett test and The Kaiser-Mayer-Olkin coefficient (KMO) was used to assess the adequacy. The value of the KMO measure is 0.780 which means that the factor analysis is reliable. Analysing the resulting matrix, it was found that high correlation occurs between variables such as:

- the period of previous cooperation with joint implementation of projects and references from other market participants,
- certainty in long-term cooperation with value of realized contracts, audits, controls and inspections and references of other companies cooperating with the contractor,
- profitability of sales with the period of previous cooperation, trust to partner and future prospects for future cooperation,
- future prospects for future cooperation with audits, controls and inspections and profitability of sales,
- subjective evaluation of company employees with financial condition of the partner
- pressure of external entities with subjective evaluation of company employees and financial condition of the partner,
- informal relationships with certainty in long-term cooperation,
- image of the contractor with pressure of external entities,
- type of partner sector with financial condition of the partner.

Moreover, many interdependencies have been identified at medium and unclear levels. The high and medium correlations between the primary variables imply that there is a structure in the matrix that affects a number of variables. Thus, the decision was made to continue the calculations that resulted in a matrix of raw loads that had been rotated using the Varimax method. As a result, seven main factors have been identified that explain the phenomenon to a high degree.
The selection of factors was verified by a screen test (Figure 2). The analysis of the graph presents that the mild drop in own values occur at the seventh factor. Thus, it was decided that all identified factors, which together explain more than 60% of the variance, would be subject to further analysis.

When analysing the results, it should be emphasized that the most important factor is the first one which is characterized by both high value (6.56) and explains to a high degree the presented phenomenon (24.3%). Another factor already has a much lower own value (2.63) and it explains lower percentage of variance (9.74). The last one, the least significant one, has a value of 1.1 and applies to 4.1% of the problem. The own value of all factors is 16.38 and they account for over 60% of the phenomenon. It entitles to skip the remaining factors whose own value is less than unity (Table 3).

Table 3
Own value of mega factors

<table>
<thead>
<tr>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
<th>F7</th>
<th>...</th>
<th>Fn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own value</td>
<td>6.56</td>
<td>2.63</td>
<td>1.90</td>
<td>1.53</td>
<td>1.36</td>
<td>1.30</td>
<td>1.10</td>
<td>...</td>
</tr>
<tr>
<td>% variance</td>
<td>24.3</td>
<td>9.74</td>
<td>7.04</td>
<td>5.68</td>
<td>5.03</td>
<td>4.81</td>
<td>4.09</td>
<td>...</td>
</tr>
<tr>
<td>Cumulated own value</td>
<td>6.56</td>
<td>9.18</td>
<td>11.09</td>
<td>12.62</td>
<td>13.98</td>
<td>15.28</td>
<td>16.38</td>
<td>...</td>
</tr>
<tr>
<td>Cumulated % of variance</td>
<td>24.3</td>
<td>34.0</td>
<td>41.1</td>
<td>46.8</td>
<td>51.80</td>
<td>56.6</td>
<td>60.7</td>
<td>...</td>
</tr>
</tbody>
</table>

Source: own study.
Rotation made by Varimax method allowed to maximize the variances of raw load factors variable for each factor, while at the same time allowing the variables to be sorted and identifying seven groups of factors that determine the development of inter-organizational relationships. Consequently, the correlation between the identified mega factor and the primary variables was calculated. In practice, it is assumed that loads bigger than 0.7 have a significant effect on the cognitive value and the information contained in a particular main factor. The results are presented in Table 4.

Table 4
Variable load matrix after Varimax rotation

<table>
<thead>
<tr>
<th>Determinants of relationship</th>
<th>Varimax loads factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F1</td>
</tr>
<tr>
<td>Certainty in long-term cooperation</td>
<td>.415</td>
</tr>
<tr>
<td>Trust to partner</td>
<td>.758</td>
</tr>
<tr>
<td>Future prospects for future cooperation</td>
<td>.655</td>
</tr>
<tr>
<td>The credibility of the partner</td>
<td>.453</td>
</tr>
<tr>
<td>Joint implementation of projects</td>
<td>.418</td>
</tr>
<tr>
<td>Partner's financial policy</td>
<td>.213</td>
</tr>
<tr>
<td>Company financial policy</td>
<td>.223</td>
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<tr>
<td>Scope and form of the relationship</td>
<td>.151</td>
</tr>
<tr>
<td>Profitability of sales</td>
<td>-.182</td>
</tr>
<tr>
<td>Financial condition of the partner</td>
<td>.093</td>
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<tr>
<td>Competitive position of the market partner</td>
<td>.207</td>
</tr>
<tr>
<td>References from other market participants</td>
<td>-.133</td>
</tr>
<tr>
<td>Audits, controls and inspections</td>
<td>-.137</td>
</tr>
<tr>
<td>References of other companies cooperating with the contractor</td>
<td>.071</td>
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<td>Opinion and reputation of the market partner</td>
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<td>Subjective evaluation of company employees</td>
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<tr>
<td>Period of previous cooperation</td>
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<td>Force and pressure</td>
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<td>Large bargain force of partner</td>
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<td>Level of cooperation risk</td>
<td>.163</td>
</tr>
<tr>
<td>Type of partner sector</td>
<td>.077</td>
</tr>
</tbody>
</table>

Loads are marked over .600.

Source: own study.
Analysis of factorial loads revealed that only two of them (F2 and F4) have a slightly lower cognitive value, since the characterizing them primary factors have values below the limit point (0.7). However, it should be emphasized that the factor which load value is above 0.6 also contains a lot of information and has a significant impact on the development of inter-organizational relationships.

Table 5
Mega-factors (main determinants) of the interorganizational relationship development

<table>
<thead>
<tr>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
<th>F7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Finance</td>
<td>Reference</td>
<td>Relationship</td>
<td>Experience</td>
<td>Lobby</td>
<td>Risk</td>
</tr>
<tr>
<td>Certainty in long-term cooperation</td>
<td>Partner’s financial policy</td>
<td>References from other market participants</td>
<td>Impressions of direct contact</td>
<td>Period of previous cooperation</td>
<td>Pressure of external entities</td>
<td>Level of cooperation risk</td>
</tr>
<tr>
<td>Trust to partner</td>
<td>Company financial policy</td>
<td>Audits, controls and inspections</td>
<td>Informal relationships</td>
<td>Experiences of previous cooperation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future prospects for future cooperation</td>
<td>Scope and form of the relationship</td>
<td>References of other companies cooperating with the contractor</td>
<td>Subjective evaluation of company employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability of sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% variance</td>
<td>24.31</td>
<td>9.74</td>
<td>7.04</td>
<td>5.68</td>
<td>5.03</td>
<td>4.81</td>
</tr>
<tr>
<td>Cumulated % of variance</td>
<td>24.3</td>
<td>34.0</td>
<td>41.1</td>
<td>46.8</td>
<td>51.80</td>
<td>56.6</td>
</tr>
</tbody>
</table>

Source: own study.

Analysis of factorial loads reveals that the most important determinant influencing the development of relationships is safety, which should be understood as the ability to a certain, peaceful and balanced functioning in a dynamically changing environment. Stabilization of relationships with contractors contributes to increased mutual engagement, common goals, prioritization and thus increase in contract value. Three primary variables describe this factor, including long-term reliability (0.815), confidence (0.758) and at slightly less degree the probability of future
relationships (load of 0.655). This mega factor explains the problem up to 24.3%.

The second mega factor, defined as financial, explains nearly 10% of the problem of developing inter-organizational relationships. It is under the influence of four primary variables relating to the financial policy of the cooperating entities both from the perspective of the company (load of 0.695) and its partner (load of 0.659), and the type of relationship between the cooperating companies (load 0.656) and profitability of the sale (load 0.619). When analysing the obtained data, it is worth to notice the problem of relationships between enterprises, which may take different character, scope and impact. The essence of interdependence is related to the asymmetry of the force which makes relations between the cooperating companies rather antagonistic, in which the dominant entity pursues its goals at the expense of a weaker partner. Moving to higher levels of cooperation, including partnership, alliances and alignments, will increase the turnover and thus the development of the relationship.

The first mega factor is joined by the third one which was referred to in the present paper as reference, because it is conditional upon recommendations, including various types of institutions (load of 0.734) and other enterprises (load of 0.620). In addition, its impact is enhanced by audits and controls at the premises of the contractor (charge 0.654), which can be identified with its verification by the company seeking partners. It explains over 7% of the problem.

The next, fourth mega factor, is described by the prism of interdependence, because three primary factors of a relational tone influence it. Particularly important are direct impressions and feelings of mutual contact (load of 0.678). In addition, slightly less information includes such primary variables as informal relations (load of 0.640) and subjective feelings (load of 0.628). However, it should be emphasized in the context of this research that this mega factor has a considerably less influence on the development of relations, since all loads are less than 0.7, but it explains as much as 5.5% of the discussed issues.

Relationship development is also significantly influenced by experience, which is the fifth mega factor, explaining more than 5% of the
research problem in question. It is under the influence of two primary factors, i.e.: period (load of 0.776) and experience from previous cooperation (load of 0.685). Long-term positive cooperation undoubtedly contributes to mutual trust which can lead to closer relationships and increased turnover.

Next determinant is the pressure of external entities (load of 0.749). Attempts to pressure are associated with a large asymmetry of bargaining power, emphasizing that many dominant companies try to exert pressure on suppliers.

The last determinant is related to the risk (load of 0.702) and is rather of a character limiting the development of inter-organizational relationships. Lack of systemic regulation, prolonged court proceedings, unreliable partners effectively hamper the tendency of manufacturers to establish close relationships. They often prefer to make less revenue and profit to avoid disputes and conflicts with dishonest partners. The last mega factor explains about 4% of the problem.

Conclusions

The focus of the above considerations was the aspects of determinants deciding on the extent, level and quality of inter-organizational relationships. Preliminary studies have shown that most companies focus on simple factors related to relational and financial criteria. It should be emphasized, however, that diversity and multiplicity of criteria do not precisely define those determinants that most significantly determine the degree of interaction. The applied factor analysis procedure allowed to reduce several dozen primary variables to 7 determinants which determine the success of joint ventures. They include security, finances, references from other market participants, partnership, experience, lobbying, and risk level.
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