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## The value of trust in inter-organizational relations<sup>1</sup>

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*Monika Sulimowska-Formowicz*<sup>3</sup>

**Abstract:** The article presents the results of empirical research on the role of trust in inter-organizational relations (IORs) and its outcomes. We questioned 210 Polish large and medium sized companies in different industries, experienced in IORs of different kind with Polish and foreign partners. We used a set of non-parametric analyses: Spearman correlation, mediation analyses with bootstrapping and structural equations modeling with RML (Robust Maximum Likelihood). Our findings confirm the statistically relevant correlations between the interpersonal trust of individuals and teams, the trust-building competence of organization and the outcomes of the cooperative relationships of companies. Additionally, the trust-building competence of organization serves as a mediator in the relations of interpersonal trust and IORs outcomes.

**Keywords:** organizational trust, interpersonal trust, relational competence, inter-organizational co-operation effectiveness and efficiency.

**JEL codes:** D220, D230, L220, L250, M100.

### Introduction

Trust between partners is one of cooperation's critical success factors and a valuable resource which is decisive for the prosperity of inter-organizational relations (IORs), seen as a hybrid form of the coordination of economic activities as an alternative to transactions and hierarchy. Independent partners join the relationship in order to reach their mutual and individual business goals (e.g. gain access to rare resources, strengthen their market position, surpass com-

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petitors, innovate) and in order to succeed they try to prevent the potential risk of misunderstanding and opportunism by the use of trust-based relational mechanism as supplementary to, or instead of, relying on a formal contract.

Thus trust is seen as extremely important aspect of cooperation at all levels of analysis: interpersonal, intra- and inter-organizational [Mayer, Davis, and Schoorman 1995]. The aim of this article is to better understand how the complex nature of trust in IORs, namely the interpersonal trust of managers and teams and organizational trust-building competence (organizational trust) impact each other and the outcomes of companies involved in such business relations.

Trust, understood as a personal trait, the psychological disposition of the organization members and as a set of organizational features is conducive to building inter-organizational bonds and the effectiveness of relationships. The organizational capability to exploit the potential of employee trust and the quality of organizational trust-building procedures are core competences which should be considered as a source of value in inter-organizational cooperation. Trust in relationships fosters effective learning processes amongst the partners leading to experience-based advantages due to the development of relational and other core capabilities necessary to gain competitive advantage through participation in partnership [Foss 1996; Dyer and Singh 1998; Grant 1996; Heimeriks and Duysters 2007; Mowery, Oxley, and Silverman 1996; Zollo and Winter 2002].

Trust is examined multidimensionally: as a personal trait affecting individuals' attitudes and actions [Rousseau et al. 1998; Mayer, Davis, and Schoorman 1995] and also influencing organizational behavior [Gulati 1995a] and as an organizational feature creating the context for people's actions and a firm's credibility [Gulati and Nickerson 2008]. Although there is a vast body of research on the relationship between trust and the economic results of IORs and partnering companies [for review see e.g. Seppänen, Blomqvist, and Sundqvist 2007; Delbufalo 2012, 2014; Ashnai et al. 2015; Huang and Wilkinson 2013a; Leszczyński, Takemura, and Zieliński 2015] less attention was paid to the exploration of relationships of interpersonal and organizational trust and their joint influence on the results of inter-organizational relationships (IORs).

This paper contributes to an understanding of the multidimensional nature of trust in IORs and sheds light on the aspects of its interpersonal and organizational impact on the economic and non-economic outcomes of the relationship. Our perspective places emphasis on the sources of trust-building competence amongst cooperating organizations and provides evidence for their positive role in determining the results of IORs. An additional contribution comes from our analysis of the interdependencies between the trust of managers and their teams and the mediating role of organizational trust in the performance of IORs.

The remainder of the article is divided into five sections. The first is devoted to the notion of interpersonal trust – its dimensions, sources and the role it

plays in inter-organizational relationships. The second section deals with the phenomenon of organizational trust rooted both in the trust of individuals who build the organization and in the organizational culture and widespread procedures used internally which also affect inter-firm cooperation, its course and results. Then we present our research model of interdependencies between trust dimensions and IOR outcomes. The next two sections present a research sample and operational variables. We present and discuss the findings in the fifth section. The article is closed by conclusions.

## **1. Interpersonal trust**

In the literature on trust we find trustworthiness – the ability, benevolence and integrity of a trustee and trust a propensity – a dispositional willingness to rely on others, as different from trust, seen as the intention to accept vulnerability to a trustee, based on positive expectations of his or her actions [Colquitt, Scott, and LePine 2007: 909; Six 2007] benevolence, and integrity of a trustee. Psychologists characterize interpersonal trust as a relatively stable trustee's disposition [Butler 1991; Gurtman 1992; Kiffin-Petersen and Cordery 2003; Mayer, Davis, and Schoorman 1995; McKnight, Cummings, and Chervany 1998; Rousseau et al. 1998] distinguish two different forms of interpersonal trust: cognition based trust and effect based trust [Paliszkievicz 2011]. This distinction could be anchored in individual's cognitive mechanism of preferable risk assessment whilst making decisions about future actions [Kahneman 2012]. Interpersonal trust is based on the mutual trustworthiness of individuals. An effective communication about a trusting attitude, a common vision of the details of the relationship, e.g. knowledge sharing, are important predictors of interpersonal trust [Wu et al. 2009; Hsu and Chang 2014], which in turn enhances people's commitment to cooperation and team work efficiency [Paul and McDaniel Jr. 2004; Muethel, Siebdrat, and Hoegl 2012] and finally can lead to the success of a trust-based IOR [Fink, Kessler, and Rößl 2007]. The diversity of interpersonal trust in small groups (teams) may lead to a negative effect, frustration and a low engagement in inter-organizational cooperation [Ferguson and Peterson 2015]. Research also confirms that the personal propensity to trust correlates with an intention to trust when information about a partner's trustworthiness is ambiguous so trust may be treated as a trait helpful in coping with uncertainty (in the case of clear information no correlation was revealed) [Gill et al. 2005].

IORs are specific forms of interpersonal relationships created in a broader context of partnering firms for which people work, therefore interpersonal trust in IORs is created by the activities of people in certain organizational roles – managers and goal executors. As organizational representatives people use their natural propensity to trust, professional competences and organizational

procedures to shape the context for trust in future relations. Development of inter-organizational relations is closely connected to strengthening interpersonal relations by organizational processes of boundary spanning, open and partner-oriented communication, mutual learning and engagement which in turn affects pro co-operational behavior [Hakansson et al. 2009; Ford et al. 2011; Blomqvist and Seppänen 2003; Creed and Miles 1996; Becerra and Gupta 2003; Dirks and Ferrin 2002; Kramer 1999; Malhotra and Murnighan 2002]. Interpersonal trust as a part of organizational social capital may affect the efficiency of IORs through employees' organizational commitment and identification processes [Bakiev 2013]. Interpersonal trust of boundary spanners influences perceptions of trustworthiness of the companies they represent and thus decisively influence the shape of inter-firm partnership [Ring and Van de Ven 1994; Zaheer, McEvily, and Perrone 1998].

## **2. Organizational trust**

If trust is a sine qua non condition for effective IOR organizations not only rely on trust as a trait of their employees but should develop organizational trust-building competence to be able to trust others and also to be considered as a reliable partner. A company's success in cooperation comes from the trust originating from its attitudes, embeddedness in social norms of reciprocity, safeguards coming from legal institutions and from the partners competence-based trustworthiness (see: goodwill trust, contractual trust, competence trust) [Sako 1992]. In addition to the professional competences necessary for the purpose of a cooperation's scope, effective IOR needs also relationship management competences [Speakman, Isabella, and MacAvoy 2000; Blomqvist and Levy 2006; Mitrega et al. 2012]. We define it as relational competence, a bundle of attitudes, the organizational routines and capabilities necessary to: establish a partnership and prepare the framework for it; lead common activities and control their effects; manage knowledge creation and exchange between partners, communicate effectively, solve problems and integrate partnering firms on inter-organizational, interpersonal and inter-team level [Sulimowska-Formowicz 2015]. Some of these capabilities are tools for inter- and intra-organizational trust-building They may be helpful in the process of the minimization of uncertainty and the elimination of double contingency risk [Hakansson et al. 2009; Zaheer, Lofstrom, and George 2003]. Similarly to interpersonal trust, organizational trust may be analyzed two-dimensionally according to its sources. Organizational trust as an attitude is based on psycho-sociological mechanisms of embeddedness and reciprocity norms [Granovetter 2005], the interpersonal attractiveness of the object of trust and partners' similarity in understanding the essence of the relationship [Sztompka 2007]. Whereas organizational trust as confidence in a part-

ner's competence comes from more formalized procedures of assessment and decision making, e.g. the assessment of the partner's features and the preparation of safeguards against the partner's opportunism [Hardin 2006; Gulati 1995b; Gulati and Sytch 2008]. In this article we define organizational trust as a generally trustful attitude of a company, seen in its declarations concerning the partnership and also as an organizational trust-building competence [Möllering 2006; Young and Daniel 2003]. The latter is based upon the components of organizational relational competence that:

- assure an organization of the knowledge and safeguards necessary to have a reasonable basis to trust the partner according to experience and rationales;
- foster trust by creating reciprocity norms on an organizational level and inter-organizational bonds on the individual and team level;
- support a firm's trustworthiness by giving its partners a foundation of trust.

We refer to the integrative model of organizational trust [Mayer, Davis, and Schoorman 1995], where trust is a result of the partner's reliability stemming from its abilities, benevolence and integrity. We assume that the more knowledge about features affecting trustworthiness the trusting party has, the higher the trust. We involve trust in every stage of the cooperation process and we incorporate the notion of organizational trust in the risk taking in relationship, that are visible in the way in which firms behave towards partners. We use the terms organizational trust and organizational trust-building competence interchangeably in the text.

We define interpersonal trust in cooperation as the psychological disposition of an organization's employees to trust the others (to accept their own vulnerability) in IORs and to show positive expectations towards the partners' actions. In reference to Rousseau et al. [1998] and Mayer, Davis, and Schoorman [1995] we assume that interpersonal trust comes from an individuals' traits and is a situational result of: affective-cognitive mechanisms created during people's actions in organizations of certain trust-building procedures and by experience from previous inter-organizational and interpersonal relationships.

Organizational trust emanates from company procedures and actions that create a context for the behavior of individuals who come into an organization with their own characteristics but who incorporate organizational culture. That is why we assume that in case of IORs, both organizational trust and the interpersonal trust of employees are separately connected to the success (see H1 and H2 below). The relationship between interpersonal and organizational trust and its common influence on IORs results is also important (see H3, H4, H5 below). This approach is grounded in the theory of reasoned action, which proposes that behavioral intentions of actors and their actual actions are determined by their perception and interpretation of the environmental context, which in case of IORs is facilitated by organizational trust-building competence. Examples of this reasoning, and similar observations with reference to IORs are present in works of Huang and Wilkinson [2013a, 2013b].

### 3. Trust and the outcomes of and inter-organizational relationships

Entering business relationships is considered as effective strategy when striving for competitive advantage and enriching the competitive potential of a company thanks to: joining forces with partners and getting more bargaining power, mutual learning, complementary knowledge and others. These are common motives for involvement in IORs [Zollo, Reuer, and Singh 2002; Holtbrügge 2004]. Cooperating with an independent partner, sometimes a competitor brings also some risks of opportunistic behavior by the partner which needs to be managed. Prior research has shown that trust in IORs is conducive to a relationship's results by creating an appropriate climate for collaborative activities [for detailed review see e.g. Delbufalo 2014]. The trust and trustworthiness of partners are seen as important predictors for building relational norms – non-contractual mechanisms for relationship management, which in turn positively impact upon a relationship's outcomes [Światowiec-Szczepańska 2012; Małys 2013]. Trust is a factor facilitating inter-partner adaptation which also effects the positive results of IORs [Leszczyński 2014]. Since a trusting attitude and the behavior of people are the results of a trust enhancing organizational context, different processes and procedures making up organizational trust-building competence not only affect the positive results of cooperation (see H1) but also play a mediating role in the relationship between people's trust and relationship outcomes [Ashnai, Henneberg, and Naude 2013; Ashnai et al. 2015; Huang and Wilkinson 2013b; Delbufalo 2014] (see H6).

### 4. Analytical framework

According to the theories presented above we propose the following set of hypotheses. The overall analytical framework is shown in Figure 1.

*H1:* Organizational trust positively affects IORs' and results in both the achievement of goals and efficiency.

*H2:* Interpersonal trust positively affects IORs' and results in both the achievement of goals and efficiency.

*H3:* The higher the level of interpersonal trust of managers and teams, the higher the organizational trust.

*H4:* Organizational trust affects the relationship of interpersonal trust and the results of IORs.

*H5:* Interpersonal team trust affects the relationship of manager and organizational trust.

*H6:* Organizational trust affects the relationship of manager trust and the results of IORs.



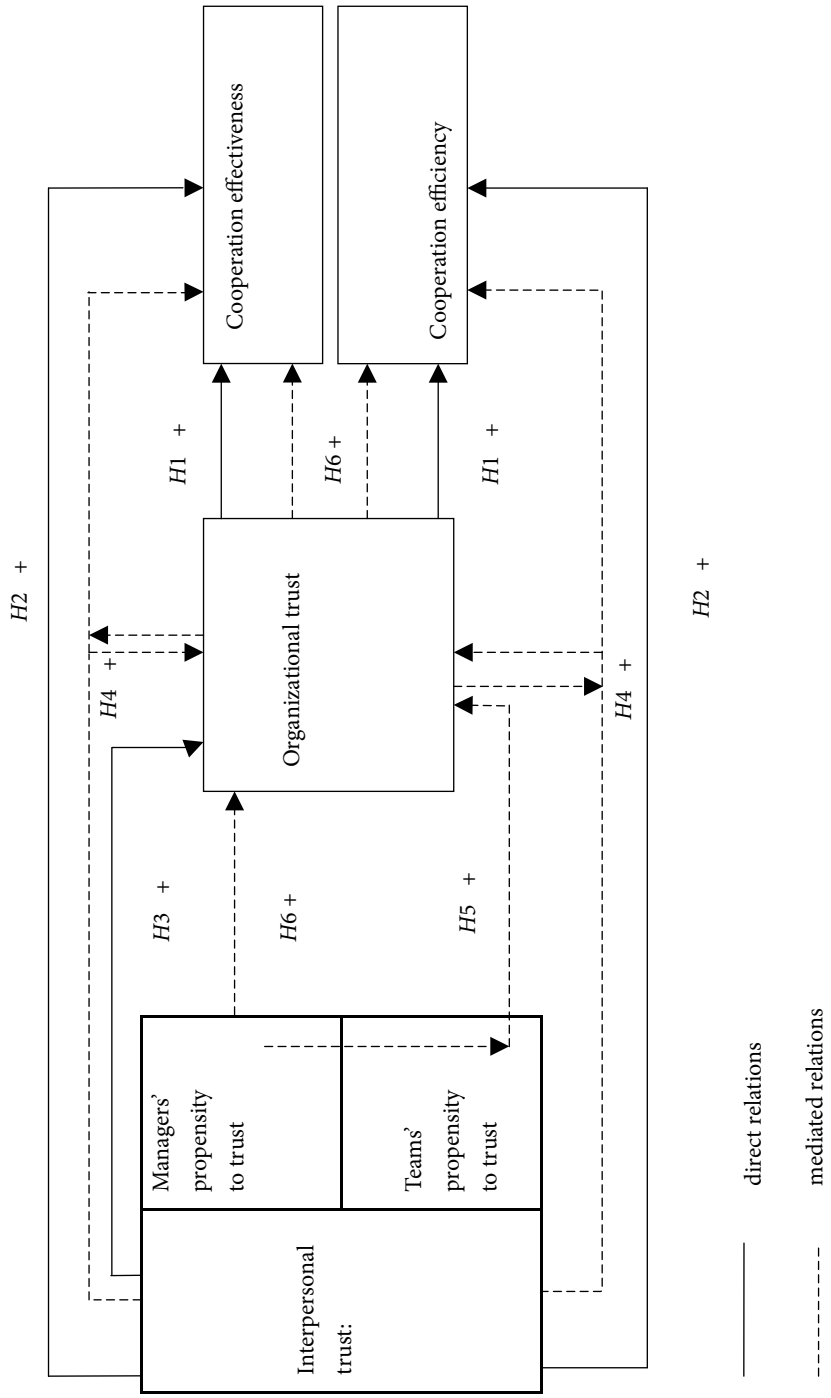


Figure 1. Analytical model

## 5. Sample

We questioned 210 Polish large and medium sized companies in different industries (81% production, 14% service, 5% trading companies). Respondents were experienced in value chain cooperation, coproduction, supplementary services outsourcing, horizontal marketing and sales cooperation, strategic alliances and clusters. They had roles of equal power, dominant and/or subordinate partners of Polish and foreign companies. Employees surveyed were: 210 managers of cooperative projects (79% male, 21% female, average age – 42 years, SD = 6.96) and 983 cooperating team members (71% male, 29% female, 70% of the sample under 45 years).

## 6. Operationalization of variables

Organizational trust was operationalized with a set of 35 items – statements concerning procedures and behaviors of organizational trust-building competence before and during the cooperation process. The questionnaire used refers to the above approaches and tested operationalizations of trust and relational capabilities [Human and Naudé 2009; Human 2009; Kale and Singh 2007; Lambe, Spekman, and Hunt 2002; Mitrega et al. 2011; Reina and Reina 2006; Ritter, Wilkinson, and Johnston, 2002; Schreiner, Kale, and Corsten 2009; Walter, Auer, and Ritter 2006]. A reliability analysis of this nominal scale showed satisfactory Cronbach alpha coefficient of 0.78.

Interpersonal trust (trust propensity) was analyzed separately for managers and team members using a two-item scale based on the concepts of Rousseau et al. [1998] and Mayer, Davis, and Schoorman [1995], similar to the items of trust used in The European Values Study EVS project. The Cronbach alpha coefficients obtained of 0.55 (for managers' trust) and 0.63 (for teams' trust) were satisfactory for a two-item scale.

As a dependent variable we chose the results of the measures, namely the effectiveness and efficiency of IORs analyzed from one partner perspective with two perceptive scales (items used are presented in Table 1). IOR outcomes were evaluated by managers responsible for relationships. This approach is based on a widespread belief of researchers that measuring the results of IORs should be based on assessment of partner satisfaction with the relationship in both financial and non-financial aspects [for review see e.g. Palmatier, Dant, and Dhruw 2007; Światowiec-Szczepeńska 2012; Ashnai, Henneberg, and Naude 2013].

Effectiveness was measured with 11 statements referring to the perceived degree of satisfaction with reaching the company goals – motives for entering the business relationship [Zollo, Reuer, and Singh 2002; Holtbrügge 2004]. These eleven indicators were standardized and added together to construct a global measure in which the Cronbach alpha coefficient reached 0.89.

Efficiency was measured with 4 statements referring to the perceived economic efficiency of cooperation: cost, work and time efficiency and tacit resources obtained. These four indicators were also standardized and summed to construct a global measurement in which the Cronbach alpha coefficient reached 0.83.

**Table 1. Items used in effectiveness and efficiency scales**

<p><b>Efficiency scale</b></p> <p>Respondents were asked to rate on a five-point Likert scale the degree of their satisfaction with the achievement of the following objectives of the IOR:</p> <ol style="list-style-type: none"> <li>1. to enhance sales and customer loyalty</li> <li>1. to improve offer quality</li> <li>2. to learn new ways to act</li> <li>3. to launch new technologies</li> <li>4. to obtain access to skills and information that is not in our possession</li> <li>5. to lower activity costs</li> <li>6. to easily enter new markets</li> <li>7. to efficiently affect competitors thanks to joining forces with a partner or partners</li> <li>8. to strengthen the general position of a company in the environment</li> <li>9. to enhance chances of access to public orders</li> <li>10. to create permanent interpersonal relationships between our company and a partner</li> </ol>
<p><b>Effectiveness scale</b></p> <p>Respondents were asked to indicate on a five-point Likert scale their satisfaction with meeting economic efficiency criteria whilst operating in the IOR:</p> <ol style="list-style-type: none"> <li>1. positive financial input to financial output ratio</li> <li>2. achieving better or similar results but in a shorter time span thanks to cooperation</li> <li>3. we have learnt things otherwise unavailable on the market</li> <li>4. the sum of benefits from cooperation is much higher than the effort made by our employees</li> </ol>

## 7. Results

We used Statistica, SPSS.22 and Lisrel 9.2 software. Due to the moderate and extreme left-side skewness of variables and to verify hypotheses we used a set of non-parametric analyses: Spearman correlation, mediation analyses with bootstrapping and structural equations modeling with RML (Robust Maximum Likelihood). The results allow us to accept hypotheses 1, 3 and 6 and 2, 4 and 5 partially.

The correlation analysis results (see Table 2) confirm the positive relationships of almost all trust measures and relationship results, apart from manager trust. The most significant are the moderate relationships of organizational trust and the effectiveness of IORs ( $r^2 = 0.1303$ ) and team trust and the effectiveness of IORs ( $r^2 = 0.1211$ ). These variables share up to 13% of common variance. Manager trust shows only a weak relation with effectiveness, the re-

lation with efficiency shows no relevance. Organizational and team trust show a weak correlation with the relationship's efficiency ( $r^2$  from 0.058 to 0.05) and share approximately 5–6% of common variance.

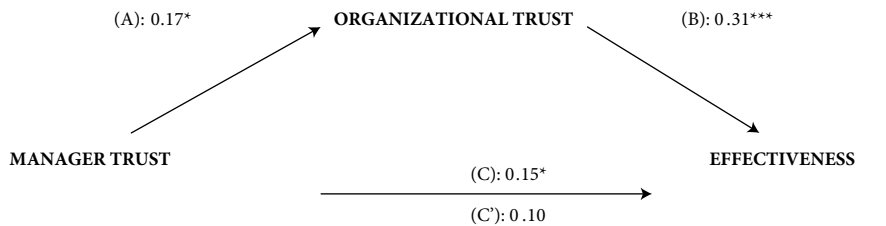
Correlations of manager interpersonal trust and team trust as well as team trust and organizational trust are confirmed (see Table 2). Relations are statistically relevant but weak. The variables share approximately 7% of common variance.

**Table 2. Correlations of organizational and interpersonal trust and IOR results**

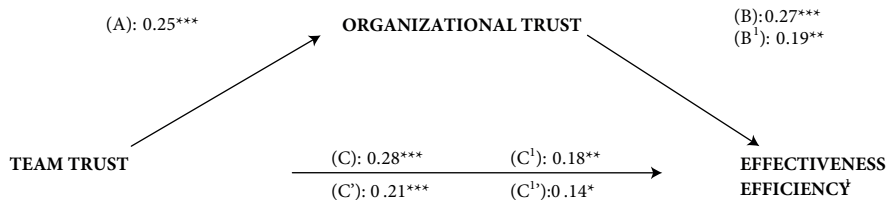
	Organi- zational trust	Manager trust	Team trust	Relationship's effectiveness	Relationship's efficiency
Spearman rho					
Organizational trust		0.129	0.271**	0.361***	0.224**
Manager trust			0.261**	0.197**	0.091
Team trust				0.348**	0.241**

\*\*\* p < 0,001; \*\* p < 0,01; \* p < 0,05, N = 210.

The mediation analysis and bootstrap for 5000 samples (see Figure 2) show complete mediation for the relation of manager trust and the effectiveness of



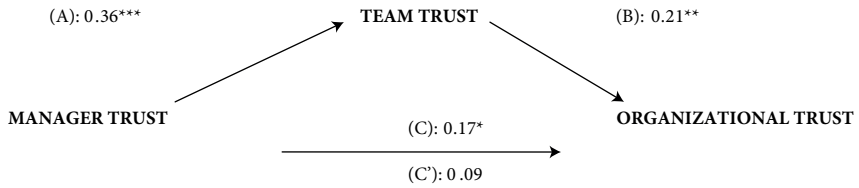
Sobel test Z = 2.12, p < 0.05; bootstrap analysis for 5000 samples, 95% confidence interval 0.01÷0.11; \*\*\* p < 0.001 ; \* p < 0.05; N = 210



C¹ B¹ – values of standardized beta for efficiency  
 Effectiveness: Sobel test Z = 2.70, p < 0.01; bootstrap analysis for 5000 samples, 95% confidence interval 0.02÷0.12  
 Efficiency: Sobel test Z = 2.14, p < 0.05; bootstrap analysis for 5000 samples, 95% confidence interval 0.008÷0.12  
 \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; N = 210

**Figure 2. Mediation analysis: organizational trust as a mediator in relation to manager and team trust with the relationship's results**

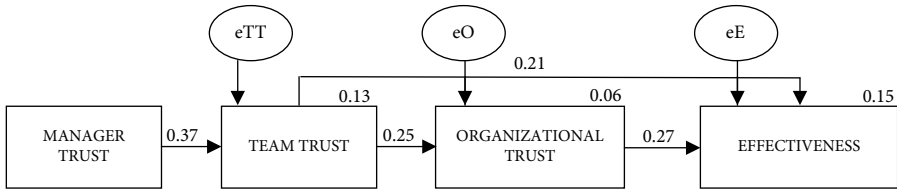
IORs. Organizational trust is the complete mediator here. When added to the correlation equation the primary effect of path C appears statistically irrelevant. Slightly different is team trust which shows relevant correlations with both the IORs' effectiveness and efficiency, which is only weaker after adding the mediator – organizational trust. The mediation here is partial. Another complete mediator is team trust for the relation of manager trust with organizational trust (see Figure 3).



Sobel test  $Z = 2.58, p < 0.01$ ; bootstrap analysis for 5000 samples, 95% confidence interval 0.02+0.16  
 \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ ;  $N = 210$

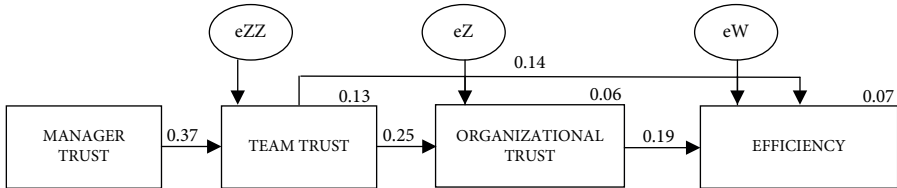
**Figure 3. Mediation analysis: team trust as a mediator in the relation of manager and organizational trust**

Finally, we made structural equation modeling (SEM). Figures 4 and 5 show the models with the best fit [see Schermelleh-Engel, Moorsbrugger, and Müller 2003: 52].



$\chi^2(df) = 1.72(2) (p > 0,1), \chi^2/df = 0.86$ ; RMSEA = 0.00; CFI = 1.00; NFI = 0.98; SRMR = 0.029; GFI = 1.00  
 All path coefficients greater than 0.12 are significant ( $p < 0.05$ )

**Figure 4. Mediation model: team trust and organizational trust in relation to manager trust with effectiveness**



$\chi^2(df) = 1.52(2) (p > 0,1), \chi^2/df = 0.76$ ; RMSEA = 0.00; CFI = 1.00; NFI = 0.98; SRMR = 0.024; GFI = 1.00  
 All path coefficients greater than 0.12 are significant ( $p < 0.05$ )

**Figure 5. Mediation model: team trust and organizational trust in relation to manager trust with efficiency**

An SEM analysis did not show any direct relations of manager trust and organizational trust. Manager trust is related mostly to team trust, which is directly related to effectiveness and efficiency, similar to organizational trust. This model explains better the variation of effectiveness – 15% (see Figure 4) than efficiency – approximately 7% (see Figure 5). Comparison of both models leads to the conclusion that trust at all levels is especially valuable for reaching a IORs' goals, its influence on efficiency is visibly lower. Data in Figures 4 and 5 confirm the mediating effect of organizational trust-building competence on all aspects of IOR outcomes.

## **Conclusions**

The findings of the quantitative analysis on a sample of Polish cooperating companies corroborate the hypotheses concerning positive relations between IORs outcomes and inter-personal trust and trust-building competence of organization and the mediating role of the latter.

These results are similar to other research and support the ideas of the mechanism of trust creation in IORs through the activities of people in a boundary spanner role, who emanate organizational norms and processes, thus interpersonal trust influences IORs outcomes through organizational trust-building mechanisms [Gulati and Sytch 2008].

Although the role of manager seems to be crucial in successful team leading, our research shows that the outcomes of IORs depend directly on team trust, which is previously determined by manager trust. In social modeling processes team leaders shape trust of their teams. At team level the essence of a successful inter-organizational relationship comes from the routinized personal attitudes and behaviors of team members which become incorporated into organizational routines.

Our findings correspond with propositions that organizational trust is a semi-strong and strong factor building relational and contractual foundations of organizational behavior [Barney and Hansen 1994]. In surveyed Polish companies, organizational mechanisms for the minimization of uncertainty and vulnerability and for building trustworthiness of organization serve as the foundations for the trust used as regulatory mechanism in IORs.

It is worth noticing that our results may be strongly context determined – Polish society is generally mistrustful in social and economic relations, so trust-building based on contractual mechanism and institutional norms seems to prevail. Mistrust is especially visible in international IORs, and in our sample the cooperation with foreign partners is the dominant experience. Contextual differences affecting trust building mechanisms in IORs still need further research. Other limitations of this study are: its cross-sectional and self-descriptive character, unilateralism of the study (mutual trust was not measured). Our

respondents were mostly managers – people of high social status, so obtained results may be burdened with an error of social approval or mutuality norm, which is partly indicated by strong left skewness of obtained data. Further research should also investigate both sides of partnership (at least dyadic IORs), which would enhance more objective analysis of the phenomenon of trust in IORs and give the researcher possibility to compare the basis of trust of both partners and their fit or misfit in this sphere. Broader analysis also requires controlling situational, cultural and psychological variables influencing the IOR.

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