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# RELATIONSHIP BETWEEN INSTITUTIONAL TRUST, INTRAORGANISATIONAL COLLABORATION AND COMMITMENT TO STRATEGIC BUSINESS DEVELOPMENT

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**Purpose:** The aim of this study is to identify the relationship between the two dimensions of institutional trust and collaboration and their individual and joint impact on the commitment to strategic business development.

**Design/methodology/approach:** The study included employees of innovative companies, in which collaboration is very important to create innovative solutions. The results obtained using structural equation modelling (SEM), confirmed the important role of institutional trust in the process of stimulating collaboration and the influence of both constructs, either directly or indirectly, on the commitment to the strategic enterprise development.

**Findings:** The research indicates that institutional trust, collaboration, and employee commitment to strategic business development are interrelated within organizations. Trust, particularly in terms of organizational assurance and a sense of security, serves as a foundation for collaboration, which, in turn, strongly influences employee commitment to the organization's strategic goals. These findings provide valuable insights for both researchers and practitioners interested in enhancing teamwork and commitment in organizational settings, particularly within innovative companies.

**Research limitations/implications:** By addressing these limitations and pursuing the suggested avenues for future research, scholars can continue to deepen their understanding of the complex interplay between trust, collaboration, and employee commitment in organizational settings.

**Practical implications:** The paper highlights the importance of trust, collaboration, and employee commitment in organizational contexts. Organizations that heed these findings and implement strategies to enhance trust and collaboration may experience positive outcomes in terms of teamwork, commitment, and ultimately, their competitive advantage.

**Social implications:** Research focuses on organisational dynamics. Its societal implications boil down to strengthening the social capital of the organisation and, as a result, strengthening the psychological capital of employees, improving their well-being in the workplace, fostering commitment and, as a result, the innovation and competitiveness of the organisation. Policy makers and organisations can learn from the research in order to implement human resource

policies oriented towards building social capital, which can finally contribute to improving the quality of life of employees and society as a whole.

**Originality/value:** The value of the paper lies in its contribution to understanding the relationship between the two identified dimensions of trust, collaboration and commitment in innovative organisations. The findings can also serve as a basis for the formulation of practical guidelines for managers.

**Keywords:** institutional trust, collaboration, commitment to strategic enterprise development, innovative enterprises.

Category of the paper: research paper.

# 1. Introduction

Institutional trust also called impersonal trust (T) creates the context for trust-based interpersonal relationships as it is necessary for interpersonal trust to emerge (e.g. DeOrtentis et al., 2013). Research indicates that institutional trust affects the formation of trust towards managers, as they implement the strategy of the organisation by making important decisions for employees (McKnight, Chervany, 2005). Institutional trust is based on the collective qualities of top executives, which cannot be reduced to those of individual members. However, they ensure continuity of action and direction in the organisation, even when members of top management are changing (Searle et al., 2011). Institutional trust also creates the framework and conditions for collaboration, from formal facilities that create a sense of security and stability and encourage initiative, through stimulating interpersonal trust, to an inter-organisational climate of trust. Institutional trust is an essential background for building trust between people in an organisation. Institutional solutions can therefore shape trust and reduce the risk of losing it. Although interpersonal trust is more decisive for the strength of collaboration, a certain role in this process cannot be taken away from institutional trust.

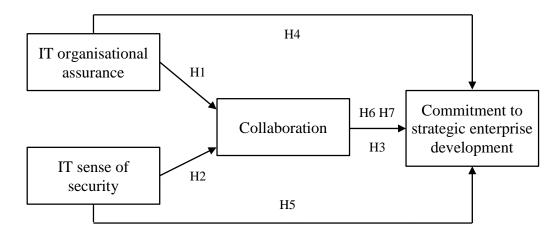
Research shows that institutional trust has a significant impact on behaviours or phenomena that are crucial for collaboration, such as: increased effectiveness and efficiency of communication (Blomqvist, 2002), knowledge sharing (Ford, 2004; Ahteela, Vanhala, 2018), job satisfaction (Shockley-Zalabak et al., 2000; Vanhala, Ahteela, 2011) or work efficiency (Robertson et al., 2013). Institutional trust is also positively linked to employee commitment and identification with the company (Ellonen et al., 2008), which should also have a positive impact on commitment to the strategic business development. Due to the fact that interpersonal trust becomes fragile, ephemeral and difficult to rebuild, institutional trust becomes important and becomes a serious source of competitive advantage (Schoorman et al., 2007; Vanhala et al., 2011). The results of the research indicate that institutional trust has a huge impact on the process of creating and sharing knowledge, which is very important for collaboration processes in the organisation. Trust helps to overcome the tension between the willingness to share

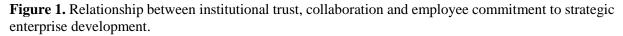
knowledge and the belief in the need to protect it (Bogers, 2011). That is why it is so important that there are mechanisms in the organisation that stimulate the dissemination of information and learning from each other, preventing distrust, cynicism and excessive caution in collaboration processes (Ford, 2004). Sharing knowledge can be risky behaviour, as it can have unpredictable consequences, including loss of professional position, use of knowledge for an inappropriate purpose, depreciation of its value and so on. A special role in the creation of knowledge is assigned to the process of its codification. In this case, institutional trust is a guarantee that the knowledge generated is properly stored and protected from persons who should not have access to it (especially in an external context) and that it will be used properly. In other words, it reduces the uncertainties and risks associated with this process by ensuring the protection of each party (Ford, 2004).

The results presented above confirm the important role of institutional trust in collaboration by creating a framework, a climate for collaboration and organisational learning, reducing fears and risks of opportunistic behaviour by colleagues (Lewicka, Zakrzewska-Bielawska, 2016). However, so far, little attention has been paid to institutional trust in the context of stimulating collaboration or commitment to strategic enterprise development.

Therefore, the main aim of this study is to identify the impact of two distinct dimensions of interpersonal trust on stimulating collaboration. In addition, to demonstrate that both institutional trust and collaboration has an impact on the commitment to strategic enterprise development.

The described assumptions are presented in Figure 1.





Source: Own study.

### 2. Collaboration and trust

Almost every organisation operating in a knowledge-based economy sets up teams of employees to achieve its objectives. Collaboration in often very complex projects is associated with the need to rely on the results of the work of others and entails a greater need for trust in teams (Tseng, Ku, 2011). Trust is therefore an essential condition for relations based on collaboration. Additionally, it increases the willingness to continue the relationship (Sankowska, 2011 p. 73). The relationship between trust and collaboration seems to be of a bilateral nature, i.e. trust is a prerequisite for the quality of collaboration, while collaboration and related past experience may be a factor in increasing trust. Trust affects the way the team operates and the results achieved (Gazley, 2008; Bryson et al., 2015). Collaboration can, of course, occur under conditions of constraint. However, there is a fundamental difference between voluntary and forced collaboration, especially in the long term. It seems that only voluntary collaboration based on trust can lead to above-average results. It is therefore important that collaboration should be based not only on positive interpersonal relationships, but also on a framework built on institutional trust. These include, for example, the conditions for taking risks, tolerating mistakes and failures, the willingness to learn from each other, the conviction of the possibility of sharing doubts, reporting a problem situation, and others (Lewicka et al., 2017).

This gives rise to the formulation of the following research hypotheses:

- H1: Institutional trust in the dimension of organisational assurance is positively and directly linked to collaboration.
- H2: Institutional trust in the dimension of sense of security is positively and directly linked to collaboration.

# 3. Commitment of employees to the strategic enterprise development

Researchers emphasise the link between institutional trust and employee commitment, pointing out that it gives employees an overall view of the meaning and benefits of the venture they intend to engage in (Vanhala et al., 2011). Institutional trust is built primarily through the effectiveness and fairness of the rules governing the operation of the entire company, also on the basis of the policies and practices of the HRM (Dietz, Den Hartog, 2006; Searle et al., 2011), and therefore provides a basis for commitment to the organisation. A number of studies have been devoted to the influence of trust on commitment (Lewicka, 2019). However, these studies were mainly concerned with interpersonal trust. It is believed that trust strengthens commitment to the organisation, which is particularly valuable when the organisation is experiencing

problems or crisis situations. This study tested the impact of institutional trust on one aspect of commitment to strategic enterprise development. The choice of this observable variable is related to the belief that commitment should have a specific behavioural dimension, and one of its most significant manifestations seems to be precisely the commitment to the implementation and development of the business strategy (Bashynska et al., 2023).

In this context, it is also worth pointing out that the identification of the observable variable of commitment to strategic enterprise development is related to the increasingly widespread concept of commitment relating to diverse facilities (Klein et al., 2012). Commitment is treated as a kind of bond that motivates further activities for the facility, i.e. the company, with increased spending of forces and resources. These may include initiatives aimed at clarifying the strategy or adapting it to the adopted goals and values, as well as taking action in line with the company's strategy. The authors of the model emphasise the relationship of trust with commitment, treating trust as its determinant (Klein et al., 2012).

It is difficult to imagine the implementation of complex projects without effective teamwork (Robbins, Judge, 2011). Research indicates that the experience of successful collaboration has the potential to build commitment in the implemented projects (Trespalacios et al., 2011). In this case, it is about commitment to strategic enterprise development. The above reasoning gave rise to the formulation of further research hypotheses:

- H3: Collaboration is directly and positively linked to the employee commitment to strategic enterprise development.
- H4: Institutional trust in the dimension of organisational assurance is positively and directly linked to employee commitment to strategic enterprise development.
- H5: Institutional trust in the dimension of sense of security is positively and directly linked to the commitment to strategic enterprise development.

In the context of considerations concerning the relationship between trust and collaboration, it is pointed out that there is a close link between them, as trust creates conditions for collaboration, establishing and maintaining relations (Sankowska, 2011), making them more satisfactory and influencing the results of actions taken. Therefore, both these constructs are treated as determinants of organisational success. Thanks to trust, also impersonal, it is possible to cooperate and commit to the strategic development of the company and the achievement of its goals. The above reasoning gave rise to further hypotheses:

- H6: Collaboration mediates the relationship between institutional trust in the dimension of organisational assurance and employee commitment to strategic enterprise development.
- H7: Collaboration mediates the relationship between institutional trust in the sense of security and employee commitment to strategic enterprise development.

### 4. Method

To verify the theoretical model, structural equations modelling (SEM) was used, which is a statistical modelling technique including path analysis and regression analysis (Rodríguez, Pérez, 2007). Institutional trust was tested with 14 statements (Ellonen et al., 2008), on a fivestep Likert scale. In this case, the exploratory factor analysis led to separating two dimensions: the organisational assurance and the sense of security. They both have satisfactory Alfa Cronbach factor: the sense of security: 0.87 and the organisational assurance - 0.90. The organisational assurance as a dimension of impersonal trust is a conviction about the clarity of rules and principles, open communication and the staff feels included in the organisational processes. In turn, the sense of security is largely shaped by the belief that, in the enterprise, employees are offered development conditions which are right for their needs. The collaboration construct, on the other hand, has also been examined by three statements on a five-step Likert scale. The reliability of the variable measured by the α-Cronbach coefficient is satisfactory and amounts to 0,70. The collaboration structure is associated with the existence of optimal conditions for collaboration at various levels, including between departments or departments, the willingness to help colleagues from other departments and share ideas with them and the awareness of creating a strong team. The "output" variable, i.e. the commitment to strategic enterprise development was a variable that was observed and measured by means of a claim: "I am committed to the strategic planning of my company's development" using a five-step Likert scale.

The survey was attended by 1769 people - employees - representing innovative companies selected in a quota manner. The recruitment criteria for selecting company's/employees for the survey were innovation diagnosed using an additional form and the sector (industry or services). The sample consisted of 50.4% women and 49.6% men. Most of them were in the 25-35 age group (42.2%). Production companies accounted for 56% of the sample and 44% of service providers. The majority of the respondents were recruited from companies employing up to 200 people, i.e. 53.1%, and the rest from companies employing over 200 people (46.9%).

### 5. Results

The results of the study indicate that the model of the impact of institutional trust and collaboration between employees on employee commitment to enterprise development is statistically significant. The parameters of the model's matching make it possible to conclude that the assumed relationships between the institutional trust of the other constructs correspond well to the collected empirical data. The main model parameters are: chi-quadrate = 642.44 at

95 degrees of freedom (p = 0.00), CMIN/DF = 6.76, GFI = 0.96, CFI = 0.96, RMSEA = 0.06, HOELTER (0.01) = 358.

The analyses carried out justify the acceptance of six research hypotheses and rejection of one - H5. Institutional trust in both dimensions - organisational assurance and the sense of security - creates conditions for initiating collaborative projects (H1 and H2), while the sense of security motivates employees to cooperate more strongly.

#### Table 1.

Standardized Regression Weights

	Relationships tested		Estimate	P-value	Status	
H1:	Collaboration	$\leftarrow$	Organisational assurance	0,36	0,00	Accepted
H2:	Collaboration	$\leftarrow$	Sense of security	0,50	0,00	Accepted
H3:	Commitment to strategic enterprise development	Ļ	Collaboration	0,63	0,00	Accepted
H4:	Commitment to strategic enterprise development	Ļ	Organisational assurance	0,23	0,00	Accepted
H5:	Commitment to strategic enterprise development	Ļ	Sense of security	-	0,06	Rejected
H6:	Collaboration mediates the relationship between institutional trust in the dimension of organisational assurance and commitment to strategic enterprise development.			0,22	0,00	Accepted
H7:	Collaboration mediates the relat the sense of security and con deve	0,31	0,00	Accepted		

Source: Own study.

At the same time, collaboration between employees, even from different departments, is conducive to increasing commitment to strategic enterprise development (H3). It is worth noting that the impact of collaboration on this type of commitment is extremely strong. Additionally, it has been verified that there is a direct impact of institutional trust in the organisational assurance on commitment to strategic enterprise development. However, the direct impact of trust in the sense of security proved to be statistically insignificant, hence the H5 hypothesis was rejected.

In addition, the existence of a mediation effect was also confirmed, i.e. it was recognised that collaboration can strengthen the relationship between the institutional trust in both dimensions and the commitment of employees to strategic enterprise development. It turned out that, in the case of the organisational assurance, there is, apart from the direct, indirect relationship (through collaboration) with the commitment of employees to strategic development (see Table 2). The H6 hypothesis was therefore confirmed. In the case of trust in the sense of security dimension, the mediation of the construct turns the sign of dependence, i.e. the strength of the indirect relationship between this dimension of trust in the sense of security and commitment to strategic enterprise development becomes statistically significant. Thus, the H7 hypothesis about the mediation role of collaboration in the relationship between the sense of security dimension and commitment to strategic enterprise development was confirmed.

	Sense of security	Organisational assurance	Collaboration				
Total effect							
Collaboration	0,50	0,36	-				
Commitment to strategic enterprise development	0,13	0,44	0,63				
Direct effect							
Collaboration	0,50	0,36	-				
Commitment to strategic enterprise development	-0,18	0,22	0,63				
Indirect effect							
Collaboration	-	-	-				
Commitment to strategic enterprise development	0,31	0,22	-				

#### Table 2.

Standardised total, indirect and direct effects

Source: Own study.

## 6. Discussion

The results of the study indicate that both dimensions of trust are strongly linked to collaboration, but with a sense of security with a little more strength. A sense of security in the workplace, by guaranteeing stability and sustainability, creates conditions for collaboration. Many authors stress that a supportive and secure climate is extremely important for collaboration (Erden, Erden, 2009; Bertels et al., 2011).

Organisational assurance i.e. the conviction of clarity of rules and principles in the organisation as well as open communication has a slightly weaker, but significant connection with collaboration. This relationship is also confirmed by the results of research by other authors (Bachmann, Inkpen, 2011; Hakanen, Soudunsaari, 2012; Nancarrow et al., 2013). The research also showed that variable collaboration is strongly linked to the commitment to strategic enterprise development.

Collaboration also turns out to be a partial mediator of this relationship, which means that it stimulates the impact of organisational assurance on the commitment to strategic enterprise development. In turn, the dimension of institutional trust sense of security does not significantly direct affect the commitment to strategic enterprise development, which does not allow to accept the H5 hypothesis. However, the introduction of variable collaboration as a mediating factor strengthens, although indirectly, the impact of this dimension of institutional trust. It can be argued that collaboration helps to decode the perceived trust in an organisation in the sense of security, towards a more active commitment with the company. It is worth noting that many studies indicate a stimulating effect of trust on commitment (Katou, 2013), which confirms the identified relationship.

As it results from the conducted research, trust should be classified in a category of exceptional importance in the modern business environment. Therefore, many authors point to the need to build organisational trust, which increases the effectiveness of the company's

competitiveness and improves its reputation (Nemiro et al., 2008). In particular, it is important to build impersonal trust, which so far has not been the focus of attention from researchers and practitioners (Searle et al., 2011). This is due to the fact that, similarly to the processes of introducing change, building trust in an organisation should start from the 'top', i.e. impersonal trust, which forms the basis for building interpersonal trust (Pennington et al., 2003). This article confirms the significant role of institutional trust in stimulating collaboration, as well as employee commitment to strategic enterprise development.

The results of this survey may provide managers with guidance to help them build teams of committed employees. It turns out that in order to achieve this goal, managers need support at the organisation level in addition to their own efforts to create optimal conditions for employees to cooperate. Institutional trust built at the level of the whole organisation through a system of procedures and creating a sense of security provides the necessary background for managers' actions. Managers based on institutional trust should effectively use the potential of a credible organisation. An interesting direction of further research could be to test these relationships in organisations that are diversified in terms of industry and work organisation.

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#### References

- 1. Ahteela, R., Vanhala, M. (2018). HRM bundles and organizational trust. *Knowledge and Process Management, Vol. 25, No. 1*, pp. 3-11.
- 2. Bachmann, R., Inkpen, A.C. (2011). Understanding Institutional-based Trust Building Processes in Inter-organizational Relationships. *Organization Studies* 32(2), pp. 281-301.
- Bashynska, I., Mukhamejanuly, S., Malynovska, Y., Bortnikova, M., Saiensus, M., Malynovskyy, Y. (2023). Assessing the Outcomes of Digital Transformation Smartization Projects in Industrial Enterprises: A Model for Enabling Sustainability. *Sustainability*, 15, 14075. https://doi.org/10.3390/su151914075
- Bertels, H.M.J., Kleinschmidt, E., Koen, P. (2011). Communities of Practice versus Organizational Climate: Which One Matters More to Dispersed Collaboration in the Front End of Innovation? *Journal of Product Innovation Management, Vol. 28, No. 5*, pp. 757-72.

- 5. Blomqvist, K. (2002). Partnering in the Dynamic Environment: The Role of Trust in Asymmetric Technology Partnership Formation (Doctoral dissertation). Lappeenranta Polytechnic.
- Bogers, M. (2011). The open innovation paradox: knowledge sharing and protection in R&D collaborations. *European Journal of Innovation Management*, Vol. 14, No. 1, pp. 93-117.
- Bryson, J.M., Crosby, B.C., Stone, M.M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review, Vol.* 75, pp. 647-663.
- 8. DeOrtentiis, P.K., Summers, J.P., Ammeter, A., Douglas, C., Ferris, R.G. (2013). Cohesion and satisfaction as mediators of the team trust-team effectiveness relationship: an interdependence theory perspective. *Career Development International, Vol. 18, No. 5*, pp. 521-543.
- 9. Dietzc, G., den Hartog, D. (2006). Measuring trust in organisations. *Personnel Review*, *T.* 35(5), p. 557.
- 10. Ellonen, R., Blomqvist, K., Puumalainen, K. (2008). The role of trust in organisational innovativeness. *European Journal of Innovation Management*, *T.* 11(2), pp. 160-181.
- 11. Erden, A., Erden, H. (2009). Predicting organizational trust level of school managers and teachers at elementary schools. *Procedia Social and Behavioral Sciences, Vol. 1, Iss. 1,* pp. 2180-2190.
- 12. Ford, D.P. (2004). Trust and knowledge management: the seeds of success. *Handbook on Knowledge Management*.
- 13. Gazley, B. (2008). Inter-sectoral collaboration and the motivation to collaborate: Toward an integrated theory. In: L.B. Bingham, O'Leary, R. (Eds.), *Big ideas in collaborative public management*. Armonk, NY: M.E. Sharpe, pp. 36-54.
- 14. Glińska-Neweś, A. (2008). Budowanie pozytywnego potencjału jako czynnik sukcesu organizacji. *Studia i Prace Uniwersytetu Ekonomicznego w Krakowie, T. 1*, pp. 343-349.
- 15. Hakanen, M., Soudunsaari, A. (2012). Building trust in high-performing teams. *Technology Innovation Management Review*, 2.6.
- 16. Hardwick, J.Y., Anderson, A.R., Douglas, C. (2013). Trust formation processes in innovative collaborations: networking as knowledge building practices. *European Journal of Innovation Management, 16* (1). pp. 4-21.
- 17. Katou, A.A. (2013). Justice, trust and employee reactions: an empirical examination of the HRM system. *Management Research Review, Vol. 36c, No. 7*, pp. 674-699.
- 18. Klein, H.J., Becker, T.E., Mayer, J.P. (2012). *Commitment in Organisation, Accumulated Wisdom and New Directions*. New York: Routledge.
- 19. Lewicka, D. (2019). *Zarządzanie kapitałem ludzkim a zaangażowanie pracowników*. Warszawa: CH Beck.

- 20. Lewicka, D., Zakrzewska-Bielawska, A. (2016). Rola zaufania w relacyjnej orientacji przedsiębiorstwa. In: G. Osbert-Pociecha, S. Nowosielski (eds.), *Meandry teorii i praktyki zarządzania*. Wrocław: Wydawnictwo UE we Wrocławiu, pp. 105-127.
- Lewicka, D., Karp-Zawlik, P., Pec, M. (2017). Organizational trust and normative commitment. *Annales Universitatis Mariae Curie-Skłodowska, sectio H Oeconomia, Vol. 51, No. 3*, pp. 72-83.
- 22. Maguire, S., Phillips, N. (2008). Citibankers' at citigroup: a study of the loss of institutional trust after a merger. *Journal of Management Studies, Vol. 45*, pp. 372-401.
- 23. Mcknight, D.H., Chervany, N.L. (2001). Trust and Distrust Definitions: One Bite at a Time. *Trust in Cyber-societies*. Berlin/Heidelberg: Springer.
- 24. Nancarrow, S.A., Booth, A., Ariss, S., Smith, T., Enderby, P., Roots, A. (2013). Ten principles of good interdisciplinary team work. *Human Resources for Health*, *11*(19).
- 25. Nemiro, J., Beyerlein, M.M., Bradley, L., Beyerlein, S. (Eds.) (2008). *The handbook of high performance virtual teams: A toolkit for collaborating across boundaries*. John Wiley & Sons.
- 26. Podsakoff, P.M., MacKenzie, S.B., Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, Vol. 63, No. 1*, pp. 539-569.
- 27. Robbins, S.P., Judge, T.A. (2011). *Organizational behavior*. Upper Saddle River, NJ: PPH Prentice Hall.
- 28. Robertson, R., Gockel, C., Brauner, E. (2013). Trust your teammates or bosses? Differential effects of trust on transactive memory, job satisfaction, and performance. *Employee Relations, Vol. 35, No. 2*, pp. 222-242.
- 29. Rodríguez, N.G., Pérez, J.A.M.J.S. (2007). Trespalacios Gutiérrez, Interfunctional trust as a determining factor of a new product performance. *European Journal of Marketing*, *Vol. 41(5/6)*, pp. 678-702.
- 30. Sankowska, A. (2011). Wpływ zaufania na zarządzanie przedsiębiorstwem, perspektywa wewnątrzorganizacyjna. *Difin, Warszawa*.
- 31. Schoorman, F.D., Mayer, R.C., Davis, J.H. (2007). An integrative model of organizational trust: past, present and future. *Academy of Management Review, Vol. 32*, pp. 344-54.
- 32. Searle, R., Den Hartog, D.N., Weibel, A., Gillespie, N., Six, F.E., Hatzakis, H., Skinner, D. (2011). Trust in the employer: the role of high-involvement work practices and procedural justice in European organizations. *International Journal of Human Resource Management, Vol. 22, No. 5*, pp. 1069-1092.
- Trespalacios, J., Chamberlin, B., Gallagher, R. (2011). Collaboration, engagement and fun: How youth preferences in video gaming can inform 21st century education. *TechTrends Vol. 55, no. 2, pp. 49-54.*

- 34. Tseng, H., Ku, H. (2011). The relationships between trust, performance, satisfaction, and development progressions among virtual teams. *Quarterly Review of Distance Education, Vol. 12, No. 2,* pp. 81-94.
- 35. Vanhala, M., Ahteela, R. (2011). The effect of HRM practices on impersonal organizational trust. *Management Research Review, Vol. 34, No. 8*, pp. 869-888.
- 36. Vanhala, M., Puumalainen, K., Blomqvist, K. (2011). Impersonal trust–the development of the construct and the scale. *Personnel Review, Vol. 40, No. 4*, pp. 485-513.