Organizational trust as a foundation for knowledge sharing and its influence on organizational performance

Joanna Paliszkiewicz, Warsaw University of Life Sciences, Joanna_paliszkiewicz@sggw.pl
Alex Koohang, Middle Georgia State College, alex.koohang@maconstate.edu

Abstract

This study sought to investigate whether there is a positive contribution of organizational trust (OT) on organizational performance (OP) in various enterprises from the Province of Mazovia in Poland. The instrument used in this study included two parts that were used to measure the constructs of OT and OP. The instrument was then administered to 469 managers from 287 companies. A total of 468 usable data was entered into analyses using SPSS. Reliability test was conducted to determine internal consistency among the items for both OT and OP. Principal component analysis with Varimax rotation was conducted to determine the number of valid items in both OT and OP. Correlation procedure was then conducted to explore positive linear relationship between OT and OP. Finally, regression analyses were conducted to see if there is positive contribution of OT on OP. The analyses were followed by results, discussion, and implication for future research.

Keywords: Knowledge management, trust, organizational trust, organizational performance, knowledge sharing, innovation

Introduction

Organizations have recognized the importance of trust in the KM literature as a means to gain and sustain competitive advantage. Rolland and Chauvel (2000) described trust as “the single most important precondition for knowledge exchange” (p. 239). Trust has been an important topic of research in many disciplines. Streams of research on trust can be found in the fields of philosophy, sociology, psychology, management, marketing, human computer interaction, industrial psychology, and electronic commerce. Researchers from every discipline acknowledge the value of trust. Trust enables people to live in risky and uncertain situations. It provides the means to decrease complexity in a complex world by reducing the number of options one has to consider in a given situation. Trust makes coordination and cooperation between people possible. Trust is crucial to successful knowledge sharing and it appears to influence organizational performance (Bukowitz & Williams, 1999; Rolland & Chauvel, 2000; Roberts, 2000).

The purpose of this study was to investigate the organizational trust and its influence on organizational performance in various enterprises from the Province of Mazovia in Poland. The following research question (RQ) flowed from the study’s purpose:
RQ: Is there a positive contribution of organizational trust on organizational performance in various enterprises from the Province of Mazovia in Poland?

This paper is organized in a manner consistent with its purpose. First, the research background and the review of literature present the definitions of knowledge, knowledge management (KM), trust, organizational trust, and organizational trust as it influences the organizational performance. Secondly, the research methodology is described following the results of the study. Summary, discussion, and implication for the future research complete the paper.

Research Background and Literature Review

Knowledge and Knowledge Management (KM)
Knowledge is defined as “the awareness of what one knows through study, reasoning, experience or association or through various other types of learning” (McInerney, 2002, p. 1009). While knowledge is an active endeavor, it is used for solving problems and making decisions (Davenport & Prusak, 1998). There are two common types of knowledge: tacit and explicit. Tacit knowledge is unrecorded, hidden, and un-documented. While, explicit knowledge is transparent, recorded, documented, and communicated (Polanyi 1966).

Knowledge management (KM) is “[A]n entity’s systematic and deliberate efforts to expand, cultivate and apply available knowledge in ways that add value to the entity, in the sense of positive results in accomplishing its objectives or fulfilling its purpose” (Holsapple & Joshi, 2004, p 596). McInerney (2002) suggested that KM is “an effort to increase useful knowledge within the organization. Ways to do this include encouragement to communicate, offering opportunities to learn, and promoting the sharing of appropriate knowledge artifacts” (p. 1014).

According to Prusak (2001), the origin of KM is practitioner-based. Prusak (2001) further asserts that KM is the normal reaction to existing social and economic movement and is defined by many disciplines such as economics, sociology, philosophy, and psychology. KM focuses on quality and invests on human capital (Prusak, 2001).

KM is the process of discovering or creating new knowledge and refining existing knowledge (Nonaka, 1998). Furthermore, KM is the sharing of knowledge among individuals and across all organizational boundaries (Leonard-Barton, 1995). The main goal of KM is to attain superior internal operating performance and efficiencies within organization (Drucker, 2000). According to McInerney (2002), strengthening "useful knowledge within the organization ... promote the sharing of appropriate knowledge artifacts” (p. 1014).

Trust
There are many definitions of trust. Most of these definitions treat trust as a state, belief, or positive expectation. According to Dyer and Chu (2000), trust is based on confidence that people represent in relationships with no concern about exploiting vulnerabilities. According to Six (2007), interpersonal trust is a psychological state comprising of one’s intention to accept vulnerability to the actions of another party. This is based upon the expectation that the other
party will perform a particular action that is important to the originating one. Cook and Wall (1980) recognized trust as showing faith and confidence in the ability and intentions of individuals. Lewicki et al., (1998) asserted that trust is usually linked with one's confidence and positive expectation.

Paliszkiewicz (2010) saw trust as the belief that another party will: a) not act in a way that is harmful to the trusting firm; b) act in such a way that it is beneficial to the trusting firm; c) act reliably; and d) will behave or respond in a predictable and mutually acceptable manner. Other definitions of trust are as follows:

- “[Trust is] the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer et al., 1995, p. 712).

- “Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (Rousseau, 1998, p. 395).

- “Trust is the degree to which the trustor holds a positive attitude toward the trustee's goodwill and reliability in a risky exchange situation” (Das & Tang, 1998, p. 494).

- “Trust exists in an uncertain and risky environment; trust reflects an aspect of predictability – that is, it is an expectance” (Bhattacharya, Devinney, & Pillutla, 1998, p. 461).

- “[Trust is] one’s expectations, assumptions, or beliefs about the likelihood that another’s future actions will be beneficial, favourable, or at least not detrimental to one’s interests” (Robinson, 1996, p. 576).

Organizational Trust


Gilbert & Tang (1998) described organizational trust as “a feeling of confidence and support in an employer… organizational trust refers to employee faith in corporate goal attainment and organizational leaders, and to the belief that ultimately, organizational action will prove
beneficial for employees” (p. 322). They further believed that the determinants of organizational
trust are: a) work group cohesion; b) friendship centrality; and c) receiving information through
social integration and mentoring (Gilbert & Tang, 1998).

Bromiley & Cummings (1996) pointed out that when there is not enough trust in organization, an
individual will have to spend more time and energy to supervise others’ behaviors so as to
protect his/her own interests. Conversely, high level of trust among employees increases
performance, thus contributing to profitability.

**METHODOLOGY**

**Instrumentation**
The instrument for this study consisted of two parts that were used to measure the constructs of
organizational trust and organizational performance. These include the Measures of
Organizational Trust Questionnaire and Measure of Organizational Performance Questionnaire.

**Measures of Organizational Trust Questionnaire** was proposed by Paliszkiewicz (2010) based
on a review of literature that included research studies of Barraglio & Condrey (2009), Caldwell
& Clapham (2003), Evans & Revelle (2008), Gächter et al. (2004), Glaser et al. (2000), Jones &

The Organizational Trust (OT) measure comprised of 15 items that strived to measure
organizational trust among all levels of management. It included the following Likert-type scale:
strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree
= 1. The items comprised of the OT measure were as follows:

- OT1. There is atmosphere for honest cooperation among employees.
- OT2. Clear expectation connected with results and aims from all employees.
- OT3. Employees are willing to share knowledge.
- OT4. Employees openly admit and take responsibility for their mistakes.
- OT5. Employees avoid participating in gossip and unfair criticism of others.
- OT6. Employees are willing to take part in trainings.
- OT7. Periodic meetings take place between employees and the management.
- OT8. In general the work responsibilities are established and clear.
- OT9. The criteria of promotion are clear in every position.
- OT10. Evaluation of employees is fair.
- OT11. The relationship between employees is good.
- OT12. All employees are treated fairly
- OT13. The interests of workers are taken care of.
- OT14. Team work is encouraged and preferred.
- OT15. Employees are encouraged to take part in decision-making.
Measure of Organizational Performance Questionnaire was used to measure organizational performance (OP). This measure is based on the work of Deshpande, Jarley, & Webster (1993) as well as Drew (1997). The OP measure can be thought of as a variation of the balanced scorecard method. The organizational performance is assessed by the use of global output measures such as market share, profitability, growth rate, and successfulness in comparison with key competitors. Paliszkiewicz (2007) modified this measure to include the dimension of innovation.

This OP measure consisted of six items. It included the following Likert-type scale: strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree = 1. The items comprised of the OP measure were as follows:

OP1. In comparison with the competitors, this company is more profitable.
OP2. In comparison with the competitors, this company has a larger market share.
OP3. In comparison with the competitors, this company is growing faster.
OP4. In comparison with the competitors, this company is more innovative.
OP5. In comparison with the competitors, this company is more successful.
OP6. In comparison with the competitors, this company has lower costs.

Subjects and Procedure
The survey instrument was distributed to 469 managers (205 – upper management, 203 middle management, and 61 – lower management) from 287 companies identified as the best enterprises according to the Forbes Journal in Mazovia Province in 2009. Collection of data was from November 2010 to February 2011.

Data Analyses
Collected data were analyzed using a popular statistical analysis software known as SPSS. Reliability test was conducted to determine internal consistency among the items for both OT and OP. This followed by Principal component analysis with Varimax rotation, which forced to determine the number of valid items in both OT and OP. Correlation procedure was then conducted aiming to explore positive linear relationship between OT and OP. Finally, regression analyses were conducted to see if there is positive contribution of OT on OP.

Results
Outlier analysis was conducted. One case was found to be extreme multivariate outlier. This case was removed before conducting further analyses. This yielded a final sample population of 468 subjects for inclusion in the analyses.

Reliability and Construct Validity
Cronbach Alpha for the 15 OT items was conducted. The overall OT Alpha was .87. This result was reasonable, however; for the analysis revealed that OT6 and OT7 are problematic items and without them the overall Conbach Alpha of the whole construct may increase. Removing these
items out of the construct, the overall Cronbach Alpha for OT (13 items) yielded the value of .88 with no other item showing additional increase in overall Cronbach Alpha if removed. This means that the 13 OT items appear to be strongly bonded as a measure of the construct.

Cronbach Alpha was conducted for the 6 OT items. The overall Cronbach Alpha for the 6 items was .84. As the number of items goes down, Cronbach Alpha usually goes down. If Cronbach remains high, then the overall construct is stronger. The analyses revealed that OP6 is a problematic item in the construct. Removing OP6 out of the construct gave an overall Cronbach Alpha for OP (5 items) of .87 with no other item showing additional increase in overall Cronbach Alpha if removed. This means that these 5 items are strongly bonded as a measure of the construct.

All valid items (13 OT items and the 5 OP items) were placed into Principal Component Analysis - Factor Analysis with Varimax rotation to test for validity of the constructs. It was confirmed (validated) that these items belong to the two separate factors. See Table 1.

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT1. There is atmosphere for honest cooperation among employees.</td>
<td>.761</td>
<td>.058</td>
</tr>
<tr>
<td>OT2. Clear expectation connected with results and aims from all employees.</td>
<td>.629</td>
<td>.106</td>
</tr>
<tr>
<td>OT3. Employees are willing to share knowledge.</td>
<td>.683</td>
<td>.017</td>
</tr>
<tr>
<td>OT4. Employees openly admit and take responsibility for their mistakes.</td>
<td>.612</td>
<td>-.003</td>
</tr>
<tr>
<td>OT5. Employees avoid participating in gossip and unfair criticism of others.</td>
<td>.588</td>
<td>.092</td>
</tr>
<tr>
<td>OT8. In general the work responsibilities are established and clear.</td>
<td>.485</td>
<td>.216</td>
</tr>
<tr>
<td>OT9. The criteria of promotion are clear in every position.</td>
<td>.563</td>
<td>.186</td>
</tr>
<tr>
<td>OT10. Evaluation of employees is fair.</td>
<td>.698</td>
<td>.189</td>
</tr>
<tr>
<td>OT11. The relationship between employees is good.</td>
<td>.718</td>
<td>.126</td>
</tr>
<tr>
<td>OT12. All employees are treated fairly</td>
<td>.753</td>
<td>.153</td>
</tr>
<tr>
<td>OT13. The interests of workers are taken care of.</td>
<td>.632</td>
<td>.200</td>
</tr>
<tr>
<td>OT14. Team work is encouraged and preferred.</td>
<td>.562</td>
<td>.074</td>
</tr>
<tr>
<td>OT15. Employees are encouraged to take part in decision-making.</td>
<td>.553</td>
<td>.123</td>
</tr>
<tr>
<td>OP1. In comparison with the competitors, this company is more profitable.</td>
<td>.041</td>
<td>.798</td>
</tr>
<tr>
<td>OP2. In comparison with the competitors, this company has a larger market share.</td>
<td>.056</td>
<td>.784</td>
</tr>
<tr>
<td>OP3. In comparison with the competitors, this company is growing faster.</td>
<td>.158</td>
<td>.810</td>
</tr>
<tr>
<td>OP4. In comparison with the competitors, this company is more innovative.</td>
<td>.233</td>
<td>.734</td>
</tr>
<tr>
<td>OP5. In comparison with the competitors, this company is more successful.</td>
<td>.187</td>
<td>.861</td>
</tr>
</tbody>
</table>


a. Rotation converged in 3 iterations.
The descriptive statistics for OT and OP are shown in Table 2.

### Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT_Total13</td>
<td>48.0192</td>
<td>6.95578</td>
<td>468</td>
</tr>
<tr>
<td>OT_Mean13</td>
<td>3.6938</td>
<td>5.3506</td>
<td>468</td>
</tr>
<tr>
<td>OP_Total5</td>
<td>17.3632</td>
<td>3.61186</td>
<td>468</td>
</tr>
<tr>
<td>OP_Mean5</td>
<td>3.4726</td>
<td>7.2237</td>
<td>468</td>
</tr>
</tbody>
</table>

**Correlation**

Pearson (linear) and non-parametric (non-linear) Correlation tests for the Totals and Means were conducted. The analyses revealed that it doesn't matter if using the mean or the total, the correlations are the same and significant at P < .0001 between all pairs OT_Total13 * OP_Total5; OT_Total13 * OP_Mean5; OT_Mean13 * OP_Total5; and OT_Mean13 * OP_Mean5. See Tables 3 & 4.

### Table 3: Pearson (linear) Correlations

<table>
<thead>
<tr>
<th></th>
<th>OT_Total13</th>
<th>OT_Mean13</th>
<th>OP_Total5</th>
<th>OP_Mean5</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT_Total13</td>
<td>1</td>
<td>1.000</td>
<td>.335**</td>
<td>.335**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OT_Mean13</td>
<td>1.000</td>
<td>1.000</td>
<td>.335**</td>
<td>.335**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OP_Total5</td>
<td>.335**</td>
<td>.335**</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OP_Mean5</td>
<td>.335**</td>
<td>.335**</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
</tbody>
</table>

### Table 4: Non-parametric (non-linear) Correlation

<table>
<thead>
<tr>
<th></th>
<th>OT_Total13</th>
<th>OT_Mean13</th>
<th>OP_Total5</th>
<th>OP_Mean5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's rho</td>
<td>OT_Total13</td>
<td>1.000</td>
<td>.256**</td>
<td>.256**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OT_Mean13</td>
<td>1.000**</td>
<td>1.000</td>
<td>.256**</td>
<td>.256**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OP_Total5</td>
<td>.256**</td>
<td>.256**</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
<tr>
<td>OP_Mean5</td>
<td>.256**</td>
<td>.256**</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>468</td>
<td>468</td>
<td>468</td>
<td>468</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (1-tailed).**
Regression
Ordinal Logistic Regression (OLR) was computed in order to test non-linear regressions. Results indicated an overall model that is valid (-2 Log Likelihood = 2,286.55, Chi-Square = 57.9, df=13 --> Sig. p <.0001), which appeared to indicate that the relationship between OP_Total5 and the 13 OT items isn't linear.

Results indicated that OT8 is a significant (p=.005) item contributing to OP_Total5. The rest of the items were not significant at p<.05.

OT8. In general the work responsibilities are established and clear.

Conducting the OLR for OT_Total13 based on the five OP items also yielded a valid model (-2 Log Likelihood = 1,987.58, Chi-Square = 69.3, df=5 --> Sig. p <.0001), which appeared to indicate that the relationship between OT_Total13 and the 5 OP items isn't linear. Results indicated that two items OP4 and OP5 are significant (p(OP4) <.001; p (OP5)=.002) items contributing to OT_Total13. The rest of items were not significant at p<.05.

OP4. In comparison with the competitors, this company is more innovative.
OP5. In comparison with the competitors, this company is more successful.

Summary and Discussion
Cronbach Alpha for the original 15 OT items was conducted, but yielded unsatisfactory results because of 2 problematic items in the construct, mainly OT6 and OT7. Further test eliminated these two items yielding 13 items in the construct, which strongly bonded as a measure of the construct. Furthermore, Cronbach Alpha for the original 6 OP items was conducted, resulting in OP6 being a problematic item in the construct. Further test eliminated this item yielding 5 items in the construct that strongly bonded as a measure of the construct.

Principal Component Analysis - Factor Analysis with Varimax rotation results showed the validity of the constructs, which meant that all 13 OT items belonged in one component - OT and all 5 OP items belong to the second component - OP.

The overall means for OT and OP were 3.6938 and 3.4726 respectively suggesting that both OT and OP were above the average. Pearson (linear) and non-parametric (non-linear) Correlation tests for the Totals and Means were conducted to see whether there is positive linear relationship between OT and OP. The results showed significant positive relationship between organizational performance and organizational trust.

Regression analyses revealed a valid model and that the relationship between OP and the OT isn't linear. It was found that OT8 - establishing clear work responsibilities is a significant item contributing to OP.
Establishing clear work responsibilities for all employees, an element of organizational trust, was found to be a significant element that contributes significantly to organizational performance. This finding suggests that organizational trust depends upon clear establishment of the work responsibilities among all employees. Needless to say that the work responsibilities must be communicated to all employees in order to flourish organizational performance.

Regression results for the OT on the five OP items also revealed a valid model, indicating that the relationship between OT and OP isn't linear. It was found that OP4 - innovation and OP5 - success were significant items contributing to OT.

As previous literature has documented, trust among employees is an essential prerequisite for knowledge sharing or knowledge transfer. For people to share knowledge willingly, trust must be built into the organizational culture (Davenport & Prusak, 1998; Roberts, 2000; Rolland & Chauvel, 2000). In the present study, innovation and success, two elements of organizational performance, were found to significantly contribute to organizational trust. Therefore, to successfully manage knowledge sharing within organizations, innovation as an element of organizational performance that positively influences organizational trust must be encouraged and practiced among employees. Furthermore, success as an element of organizational performance that positively affects organizational trust must be celebrated and acknowledged within organizations. Employees must be rewarded for contributing to the success of organization.

Given the limitations of self-reported data, further studies need to fully explore various means to gather data on organizational trust as it affects organizational performance. In addition, this study took place in one province in Poland. Further studies should focus on broader geographical areas with different population sample within Poland and other countries.

Acknowledgements

This work was supported by Ministry of Science and Higher Education in Poland. Article is connected with realization of research project entitled “Orientation on trust and organizational performance” (No. N N115 549238). The authors extend their sincere gratitude and appreciation to Dr. Yair Levy for his guidance in data analyses for this study.

References


Biographies

Joanna Paliszkiewicz is a specialist in management issues connected with knowledge management, intellectual capital and trust management. She holds the rank of University Professor of Warsaw University of Life Sciences and Polish-Japanese Institute of Computer Technologies. Prof. J. Paliszkiewicz is well recognized in Poland and abroad with her expertise in management issues. She has published over 115 original papers and 3 books. She serves on the editorial board for several international journals. She is the deputy editor-in-chief of Management and Production Engineering Review Journal. Prof. J. Paliszkiewicz has been awarded a number of grants sponsored by Polish Ministry of Sciences. In recognition in her outstanding teaching and research, Professor J. Paliszkiewicz has been the recipient of the two awards of excellence from the Rector of the Warsaw University of Life Sciences.

Alex Koohang has spent more than twenty five years in the academic community. Dr. Koohang has served as Assistant Professor, Associate Professor, Full Professor, Program Coordinator, Program Director, Division Head, and Dean. He has published and presented numerous papers. His scholarly activities also include serving as the editor-in-chief of JCIS and serving on the editorial review board of several IS publications. Dr. Koohang is active in IS/IT curriculum design and has recently helped design a world-class IT program for Middle Georgia State College's School of IT leading it to ABET accreditation. He is the Peyton Anderson Eminent Scholar and Endowed Chair in Information Technology. He was named the 2009 Computer Educator of the Year by IACIS.