

FIGHTING KNOWLEDGE SHARING HOSTILITY IN POST-SOVIET KAZAKHSTAN

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Abstract

The purpose of this research is to empirically examine the concept of knowledge-sharing hostility. Further the study analyzes the impact of formal and informal knowledge governance mechanisms on knowledge-sharing hostility.

Keywords: knowledge sharing, knowledge management, knowledge governance mechanisms, knowledge sharing hostility.

Introduction

Knowledge has been widely recognized as an essential resource to promote social and economic development, since it brings about a key path for creating and sustaining competitive advantage (Cabrera et al., 2006) which can be built by an effective knowledge management (KM) system within an organization. This approach includes several stages such as; knowledge creation, acquisition, capture, assembly, sharing, integration and exploitation (Nielsen, 2006). The present topic attracts the interests of scholars from different perspectives. As a critical component of organizational activities, knowledge sharing enables companies to improve their outcomes of knowledge management efforts (Bock et al., 2005). But in fact, knowledge sharing does not happen automatically since particular unique attributes of knowledge can impose barriers for this process (Kogut and Zander, 1993, Szulanski, 1996). Most people believe that their knowledge resource is highly valuable and intangible. And this probably might be one of the reasons why individuals are unwilling or reluctant to share their knowledge with others (Lee et al., 2015, Caspi and Blau, 2011).

In order to overcome the obstacles related to knowledge sharing behavior, researchers have made efforts to develop a range of governance mechanisms that encourages knowledge sharing within an organization (Husted et al., 2012). Particularly, the influence of various governance mechanisms (decision rights, routines, rewards, modes of communication and so on that can be combined in multiple ways across governance structure) on different knowledge related outcomes by encouraging individual knowledge sharing behavior (or reducing knowledge hoarding intentions), which still remains as a hot research area (Grandori, 2013, Andersson et al., 2015). However, there is a lack of studies which investigate the relationship between knowledge governance and knowledge sharing (Chen and Fong, 2012, Müller et al., 2014a). A structured contributive research is essential to examine how micro- and macro-level processes are interrelated (Pemsal et al., 2014). A further point to be considered is that knowledge governance has an indirect impact on knowledge sharing through reducing such counterproductive behavior known as “knowledge sharing hostility” (Husted et al., 2012). This dysfunctional behavior was firstly described by Husted and Michailova (2002) as it was found that organizational members have well-grounded reasons for hoarding the knowledge they possess and also rejecting the knowledge they receive from external senders. The objective of this study is to analyze the effect of

knowledge governance mechanisms (both formal and informal) on knowledge sharing behavior through mediating role of knowledge-sharing hostility at large corporations operating in different industrial sectors of Kazakhstan.

Literature review

Knowledge governance mechanisms

According to Foss (2007) knowledge governance approach (KGA) can be characterized as a newly emerging approach that intersects with various disciplines such as knowledge management (Foss et al., 2010a), organization studies (Huang et al., 2013), strategy (Molina-Azorín, 2014), human resource management (Minbaeva et al., 2012) and project management (Pemsel et al., 2014). KGA assumes that particular governance mechanisms should be used in order to realize the full potential of knowledge as a strategic resource (Foss and Minbaeva, 2009). For instance, KGA examines how a specific mix of governance mechanisms (eg. decision rights, routines, rewards, modes of communication) can be combined in order to influence knowledge related processes within an organization. Therefore, the proposed knowledge governance mechanisms (KGM) have been considered as an important antecedent of knowledge related processes (Foss, 2013). Previous literature on KGM has been examined from a variety of perspectives such as partnership (Felin et al., 2009), project management (Müller et al., 2014b), organizational structure (Caimo and Lomi, 2014), work design, training and development programs, reward systems (Caligiuri, 2014), socialization practices (de Araújo Burcharth and Fosfuri, 2014) and people management practices (Cabrera and Cabrera, 2005). Only a few studies focused on developing more sophisticated (comprehensive) KGMs to promote knowledge sharing behavior.

Knowledge governance and knowledge sharing:

Recently, knowledge sharing has become an area of increasing interest in the field of human resource (Williams and Lee, 2014), team management (He et al., 2014) and inter-organizational partnership (Manlio et al., 2014). Generally speaking, knowledge sharing can be beneficial in terms of transferring tacit knowledge into explicit knowledge (Cruz et al., 2009) which is characterized by easily accessed, shared and formally transmitted between individuals (Nonaka and Takeuchi, 1996). However, certain governance mechanisms are suggested to encourage people to share their knowledge. Intensive social interactions are an essential requirement for promoting knowledge sharing in organizations (Huang et al., 2013).

In line with our objectives, the study distinguishes KGMs either as being formal or informal. Formal KGM's refer to a set of activities (eg. cross-functional teams, co-location and regularly scheduled meetings) scheduled within the hierarchical structure of an organization to strengthen the communication among staff members. This may lead to achieve a common language and value, which in turn is expected to affect knowledge sharing behavior positively. Thus, it is sensible to argue that formal KGMs aim to facilitate intra-firm relational capital by eliminating the barriers for inter-personal communication and trust (Cousins et al., 2006). Like formal KGMs, informal KGM's refer to managerial practices to empower interpersonal relationships (eg. friendship, trust and sense of community), but the difference between the two is that such practices are not implemented within the hierarchical structure of an organization in an informal KGM's. More specifically, informal KGMs are like stimulating tools (eg. social events, workshops, off-site meetings, and communication guidelines), which facilitate social interactions among member staff to promote knowledge sharing and skill building (Lawson et al., 2009).

Management's informal events aims to enhance mutual respect and trust by giving employees more time and opportunities to build relationships, social capital, and thus enhance knowledge sharing (Cousins, 2002). Since, management can use both formal and informal KGM's to intensify knowledge sharing behavior among the organizational members, we hypothesize the following:

H1a. Formal knowledge governance has positive effect on individual knowledge sharing

H1b. Informal knowledge governance has positive effect on individual knowledge sharing

Knowledge sharing hostility and governance mechanisms:

The knowledge sharing hostility and knowledge sharing behavior. The changing technological and marketing environment calls for a continuous flow of information and knowledge among individual entities to keep up with the upcoming trends. Knowledge management practices aim to ensure a stable and healthy flow of information within an

organization (King and Marks Jr, 2008). Transfer and sharing of knowledge have been recognized as an essential pillar for knowledge management initiatives. However, individuals are more likely to hoard their valuable knowledge, in spite of the reward offered (Bock et al., 2005). Many scholars have tried to explain the reason why people prefer to hoard their knowledge (Evans et al., 2014, He, 2013). Knowledge hoarding, as a dysfunctional workplace behavior is a multi-factorial phenomenon that has numerous explanations.

Apparently, to hoard or to share knowledge is any individuals' personal choice. Hence, people act differently in a complex set of contexts (cultural, social, economic and organizational), which might be a well-grounded rationale for not sharing their internal knowledge and/or rejecting external knowledge. This phenomenon was initially labeled by Husted and Michailova (2002) as "knowledge-sharing hostility" and conceptualized as 1) the sender's behavior, 2) the receiver's behavior and 3) general attitudes toward mistake, all of which can be a ranged continuum from mild to strong. The model proposes that knowledge-sharing hostility on the sender side is related to knowledge hoarding, whereas knowledge-sharing hostility on the receiver side is associated with knowledge rejecting. The negative attitude towards mistakes is also reflected in the model. To better understand this dysfunctional norm, three dimensions of individual behavior as related to 1) sender's reasons for hoarding 2) reasons for rejecting and 3) attitudes toward mistakes and failures. This study proposes the following hypothesis:

H2. The knowledge sharing hostility negatively affects knowledge sharing behavior.

Knowledge governance and knowledge sharing hostility Different components of the knowledge-sharing hostility phenomena have been observed in different fields of science (Husted et al., 2012). Within the last decade, several researchers have devoted a considerable effort to develop governance mechanisms to cope up with various dimensions of the knowledge sharing hostility. For example, Lam and Lambermont-Ford (2010), Ford and Staples (2010), Minbaeva et al. (2012) suggested different practical solutions to cope with knowledge hoarding behavior. A more recent study conducted by Husted et al. (2012) found that commitment-based mechanisms can erode the knowledge-sharing hostility among individuals. Other researchers suggested that professional training programs associated with innovation and creativity can diminish the reasons behind knowledge sharing hostility (Burcharth et al., 2014). In addition, Tsay et al. (2014) asserted that task interdependence may also affect knowledge withholding behavior.

It should be noted that various levels of knowledge-sharing hostility (i.e. from mild to strong) requires various governance and managerial practices (Husted and Michailova, 2002). From one side, encouraging or stimulating approaches can be used by enterprises with mild knowledge-sharing hostility. On the other, primary forcing mechanisms are required to organizations with strong knowledge-sharing hostility. However, recent studies found that encouraging or stimulating mechanisms can also effectively dealt with strong knowledge sharing hostility (Husted et al., 2012). As it was mentioned, exchange of knowledge between individuals doesn't happen by itself, but requires governance mechanisms that promote effective knowledge-sharing among organizational members. Socialization mechanisms is one wide set of KGMs, which might effectively facilitate knowledge sharing across organizational boundaries as determined by Lawson et al. (2009). This proposed approach has also been adopted by different researchers to elucidate human relations within organizations. Especially in the area of HRM (Williams and Lee, 2014) and knowledge governance (Huang et al., 2013).

Socialization mechanisms are the process by which individuals learning about other's culture and adjusting its attitudes to establish effective results. Such socialization tactics as team group meetings, cross-functional teams, and joint workshops offer practical solutions for connecting people to each other. This approach will help to improve dialogue among individuals, boost trust and respect across teams. A close communication between employees will lead to better knowledge exchange within organizational teams (Lawson et al., 2009). Other authors determine that socialization mechanisms as an organizational tool that can improve interpersonal familiarity, communication among individuals and problem solving capabilities. Personal affinity and openness of communication between the interacting parties may have positive effect on the richness of transmission channels (Gupta and Govindarajan, 2000). Knowledge governance mechanisms have been conceptualized as formal and informal KGM's (Foss et al., 2010b). Since, both formal and informal KGM's can be used to facilitate knowledge sharing behavior among the employees, we expect the following:

H3a. The use of KGM (formal) is negatively related with knowledge sharing hostility

H3b. The use of KGM (informal) will weaken such norms as knowledge sharing hostility

Mediating Role of Knowledge Sharing Hostility

Formal KGMs mainly comprises such organizational antecedents as: cross functional teams, matrix style reporting structure, joint workshops (Lawson et al., 2009), organizational structure and job design all of which may negatively affect knowledge sharing hostility (Foss et al., 2010a). Less formalized or decentralized organizational structure will encourage the flow of knowledge among organizational members and help to develop a culture of cooperation and collaboration (Amayah, 2013). Besides, cross functional teams will improve the process of knowledge transfer across organizational boundaries (Kubo et al., 2001), thereby reducing any negative impact of organizational KSH. Informal KGMs comprise the antecedents such as: social events, communication guidelines and team building exercises, all of which may enhance mutual trust in the organization to facilitate knowledge transfer. To sum up, informal KGM's can be used to manage knowledge sharing behavior through creating a strong culture of interpersonal trust, collaboration, shared responsibility and openness to others' ideas (Cao and Yang, 2012).

Consequently, it can be hypothesized that the implementation of formal and informal governance mechanisms can ultimately erode such dysfunctional norms as "knowledge sharing hostility". According to Michailova and Husted (2003) knowledge sharing hostility is defined as negative attitudes of individuals for knowledge sharing processes in the organization. This phenomenon is based on the fact that employees have well-defined reasons for not sharing their knowledge and for rejecting external knowledge. The scholars have placed the sender's behavior, the receiver's behavior, and the substance-related behavior on a continuum from mild to strong hostility. The findings of previous studies indicate strong reasons for knowledge hoarding and rejection, together with a negative attitude towards mistakes, negatively affect individual knowledge sharing. Based on the arguments presented above the following hypotheses are proposed:

H4a. The knowledge sharing hostility mediates the relationship between formal KGM's and knowledge sharing.

H4b. The knowledge sharing hostility mediates the relationship between informal KGM's and knowledge sharing

Research Methodology

Research Design

The survey method has been identified as the most appropriate data collection tool to empirically test hypothesized relationships and the research model. The targeted population of this study was the employees of large industrial companies operating in Kazakhstan. The list of the firms was obtained from the "National Business Journal", a journal which regularly publishes the "top 500" business enterprises according to their market capitalization or turnover. Sampling framework consisted of those "top 500" business enterprises and then stratified random sampling method was conducted to identify the candidate firms. Selected companies exhibit a wide range of sectors and they were located at different parts of Kazakhstan to avoid biased selection.

In the end, 200 business enterprises were randomly chosen. The final version of the survey was sent to representatives of the companies via email as a hyperlink. In order to increase response rate, the participants were guaranteed anonymity and confidentiality. In addition, participants were reminded by follow-up emails and telephone calls. Of the 700 questionnaires that were sent out, 391 were returned, i.e. a 55.8 percent response rate. However, 25 of returned questionnaires were not usable because of incomplete data or invalid response. The respondents were from 61 companies operating in Kazakhstan, among them, 39% were local companies while the remaining, 61% were foreign owned or joint-ventures. Those 61 companies represented a wide range of industry groups: manufacturing, IT industry, commerce, education, tourism, entertainment, publishing, telecommunication, services, finance and banking, logistics and transportation.

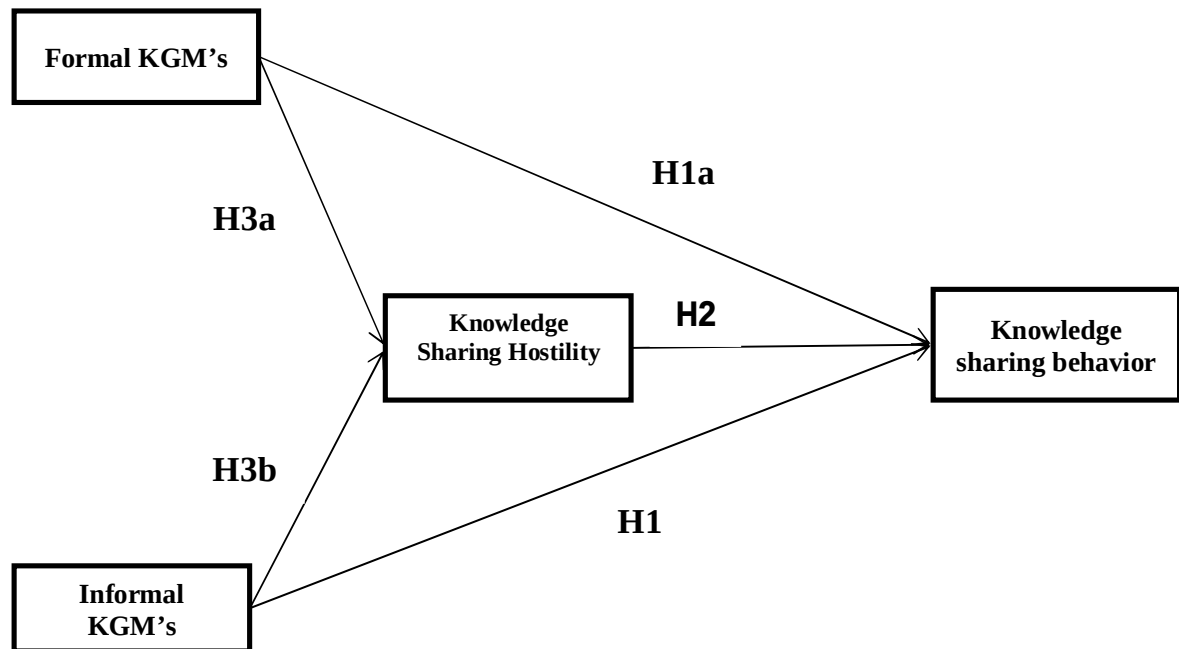


Figure 1. Theoretical framework and conceptual model

Measurement

In this study, the items of the questionnaire were derived from previously validated instruments and adopted in this work. All constructs were measured by multiple-items rated on a five-point Likert scale ranging from strongly disagree to strongly agree (5). The main constructs are formal knowledge governance, informal knowledge governance, the knowledge sharing hostility and knowledge sharing behavior. The *knowledge governance mechanisms* categorized as formal and informal governance. Eight items representing these KGMs were adopted from the work of (Lawson et al., 2009, Cousins and Menguc, 2006, Cousins et al., 2006). The four item scale of *knowledge sharing behavior*, was adopted from the work of Bock and Kim (2002) and Bock et al. (2005), which refers to the degree to which one actually shares knowledge with others. The *knowledge sharing hostility* has three dimensions: reasons for hoarding knowledge, reasons for rejecting knowledge, and attitudes towards mistakes. In total, nine questions were used to measure this concept, all items were derived from Husted et al. (2012), which referred to sender's behavior, the receiver's behavior, and the substance-related behavior.

Measurement model

The SPSS and AMOS statistical software were used to examine the validity and reliability of the hypothesized research model. Particularly, confirmatory factory analysis (CFA) was applied using AMOS 18.0 (Arbuckle, 2003). All variables and measures were encompassed by the CFA model (4 latent constructs and a total of 23 measures). The overall model fits the data reasonably well: goodness-of fit indexes (GFI) were 0.94, $p=.00$, RMSEA = 0.048, NNFI = 0.92, CFI = 0.93, SRMR = 0.056, RMSEA = 0.048 and AGFI = 0.91. Lastly, the discriminant and convergent validity and the internal consistency of measures of latent constructs in the model were assessed.

Validity and Reliability

The Discriminant validity is the degree to which measures of different concepts are distinct. It was assessed by using confirmation factor analysis (CFA) via AMOS 18.0. To evaluate discriminant validity, Fornell and Larcker (1981) recommended that the root of one construct's AVE should be greater than the correlation coefficient in the corresponding columns and rows. In our **Table 1** construct's discriminant validity is satisfactory as well. In addition, in order to assess convergent validity of the measures, the average variance extracted (AVE) by each construct exceed the for that construct (i.e., should exceed 0.5) (Fornell and Larcker, 1981). As shown in **Table 1**, all AVE were greater than the recommended level, thus supporting convergent validity. Finally, internal consistency was estimated by

calculating Cronbach's alpha coefficient for each scale. The Cronbach's alphas of the four constructs are above 0.70 which considered supportive of internal consistency (Hair et al., 2006).

Table 1

	Cronbach Alpha	CR	AVE	MSV	ASV	KSB	FKGM	KS Hostility	IFKGM
Knowledge Sharing	0,79	0,76	0,519	0,372	0,270	0,721			
Formal KGM's	0,72	0,78	0,548	0,491	0,290	0,584	0,740		
Informal FKGM's	0,76	0,79	0,558	0,491	0,338	0,610	0,701	-0,387	0,747
KS Hostility	0,71	0,90	0,548	0,150	0,095	0,309	-0,197	0,740	

Lastly, as it was suggested by Podsakoff and Organ (1986) in order to avoid common method variance, the Harman's one-factor test conducted on all variables. The results of the factor analysis revealed that there were **6** factors with Eigenvalues above 1.0 which explain **64.138%** of the total variance. The variance of the first factor is **17.538%**, which indicates that it is below the cut-off point of 50% as suggested by (Hair et al., 2006). This implies that a single factor did not explain the majority of the covariance, thus our data sample was not seriously contaminated by common method bias.

Data analysis and results

Table 2 reports descriptive statistics and correlations among the study variables

	Mean	SD	1	2	3	4	5	6	7	8	9
Educational background	0,75	0,27	0,06	0,38	1,00						
Working Experience	0,44	0,18	0,02	0,57	0,21	1,00					
Position	0,39	0,17	-0,08	0,33	0,19	0,22	1,00				
KS Hostility	3,24	0,89	0,01	-0,11	-0,07	-0,01	0,00	1,00			
Informal KGMs	2,46	0,39	0,01	0,01	-0,04	0,03	0,05	-0,28*	1,00		
Formal KGMs	2,39	0,43	0,01	-0,02	-0,07	-0,01	0,07	-0,11*	0,48*	1,00	
KS Behavior	2,60	0,41	-0,01	0,04	0,04	-0,01	0,08	-0,23*	0,49*	0,40*	1,00

Note: $p^* < 0.01$.

Regression Analysis

The SPSS 21.0 software was used for statistical analysis. The hypothesized relationships in the **Figure 1** were tested by regression analysis. The Model 1 in table 3 indicates that formal KGMs ($B=0.217$, $p<0.001$) has significant positive effect on knowledge sharing behavior, which supports the H1a. Similarly, informal KGMs ($B=0.362$, $p<0.001$) remarkably affect knowledge sharing, and this supports the H1b. Lastly, knowledge sharing hostility was a significant negative predictor of knowledge sharing behavior. Hence the H2 is also supported by this data. The Model 2 shows that informal KGMs ($B= -0.303$, $p<0.001$) have a significant negative impact on the knowledge sharing

hostility, which supports H3b. However, the results also shows that the H3a (formal KGMs → knowledge sharing hostility) was not significant ($B = 0.023$, $p < 0.001$).

Table 3

	KS Behavior Model 1	KS Hostility Model 2
Gender	-0.420	0.020
Age	0.354	-0.154**
Educational background	1.119	0.086
Working Experience	-0.862	-0.052
Position	0.814	0.063
KS Hostility	-0.094**	
Informal KGMs	0.362*	- 0.303*
Formal KGMs	0.217*	0.023
KS Behavior		
R2	0.294	0.086
Adjusted R2	0.278	0.081
F-value	18.051*	17.024*
Note: $p^* < 0.01$, $p^{**} < 0.05$		

To further test the direct and indirect effects among the constructs, the structural equation modeling (SEM) was employed. The ability to simultaneously analyze multiple indicators, as well as mediating effects, and causality hypotheses was the main reason why this technique was selected. A number of scholars have suggested a two-step model development procedure for using SEM (Jöreskog and Sörbom, 1996). The hypothesized relationships were examined in a proposed structural model. The results of structural model analysis are shown in Figure 2. All goodness-of-fit indices reached adequate values ($\chi^2 = 254$, $df = 70$, $\chi^2/df = 3.628$, $RMSEA = 0.054$, $GFI = 0.959$ and $CFI = 0.978$), which indicates that model fits reasonably well to the data. The standardized coefficient of the relationship between formal KGMs and knowledge sharing behavior was 0.23 ($p < 0.01$), which support the argument that formal KGMs positively influence knowledge sharing behavior (H1a). The standardized estimates of the path of informal KGMs to the knowledge sharing behavior are 0.38 ($p < 0.01$), which supports H1b. However, the standardized path coefficient of the relationship between formal KGMs and knowledge sharing hostility was not significant ($B = 0.02$, $p > .05$). Thus, the H3a was not confirmed. Lastly, the standardized path coefficient of the informal KGMs to the knowledge sharing hostility was 0.3 ($p < 0.01$), which proved H3b.

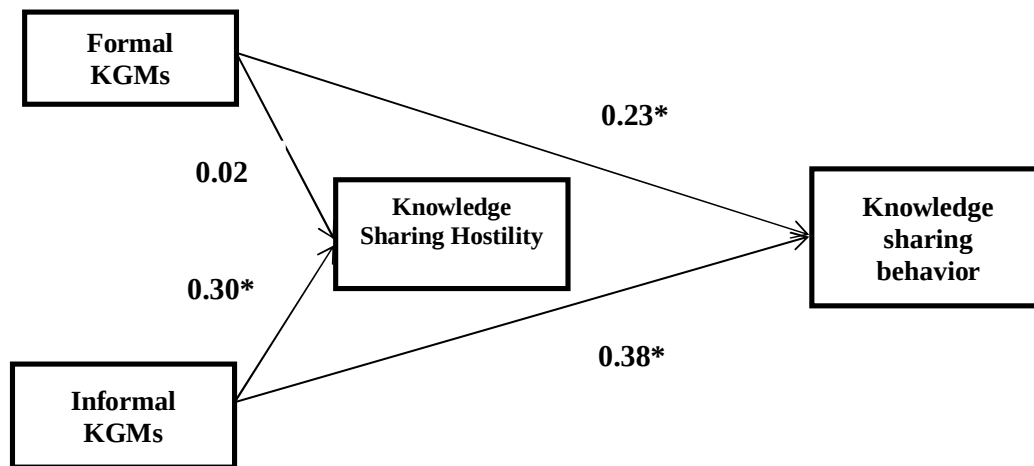


Figure 2

The first hypothesis on the impact of informal KGMs on knowledge-sharing hostility was supported ($B = 0.304$, $p < 0.05$). If management can build the right conditions (networks, company culture, management style, organization fairness and managerial support.) for encouraging knowledge sharing behavior of individuals. It might help to

deconstruct this counterproductive phenomenon which widely dominates organizational reality (Husted and Michailova, 2002). The test of second hypothesis indicated that the formal KGMs have no significant effect on knowledge sharing hostility (B = 0,025, $p > 0,05$). Thus, the proposed hypothesis that the formal KGMs will weaken knowledge sharing hostility is not confirmed. Generally speaking, the only adoptions of formal KGM's are not enough to weaken knowledge sharing hostility. To sum up, only second hypothesis was statistically supported by analyses. Nevertheless, the research outcome provides significant insight into the governance mechanisms that can affect the level of knowledge-sharing hostility. This, in turn, affects the knowledge sharing behavior of individuals.

The mediating role of the knowledge sharing hostility

According to Baron and Kenny (1986) three main requirements should be met in order to examine mediating effect of knowledge sharing hostility on the relationship between formal and informal KGMs and knowledge sharing behavior:

1. Both informal and formal KGMs should have significant effect on knowledge sharing behavior.
2. Both informal and formal KGMs should have significant effect on knowledge sharing hostility
3. When the knowledge sharing hostility variable is added to the models of knowledge governance and knowledge sharing respectively, the standardized estimates of the path of knowledge governance to knowledge sharing may become insignificant (whole mediation), and may weaken before adding the knowledge sharing hostility (part of mediation)

At the same time, it should be noted that knowledge sharing hostility had significant impact on knowledge sharing behavior. In general, H1a, H1b, H2, H3a, and H3b have met the first and second requirements. Consequently, the model (Figure 3) was designed to test mediation effect of knowledge sharing hostility. The overall goodness-of fit indices of the model were sufficient ($\chi^2 = 90$, $df = 26$, $\chi^2/df = 3.461$, RMSEA = 0.028, GFI = 0.954 and CFI = 0.968). As it is seen, several hypothesized relationships were supported. Particularly, the standardized coefficient of the relationship between formal KGMs and knowledge sharing behavior was 0.39 ($p < 0.01$). The standardized estimates of the path of knowledge sharing hostility to the knowledge sharing behavior are - 0.20 ($p < 0.01$). However, the standardized path coefficient of the relationship between formal KGMs and knowledge sharing hostility was not significant (B = 0.05, $p > .05$). Thus, hypothesis 4a which called for knowledge sharing hostility to mediate the relationship between formal KGMs and knowledge sharing hostility was not supported.

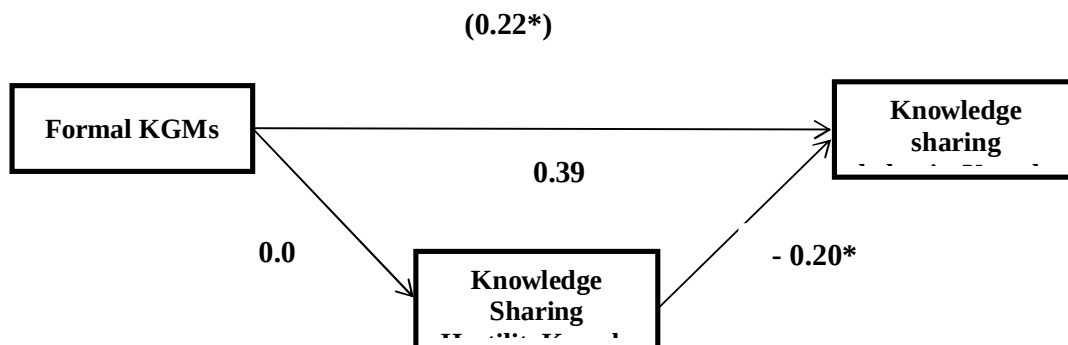
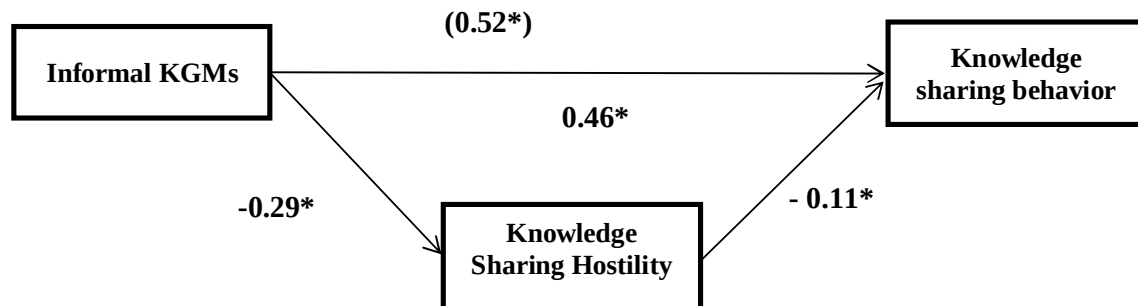


Figure 3

Significant at: *.01 percent

In addition, to examine mediating effect of the knowledge sharing hostility between informal KGMs and knowledge sharing behavior, mediating model was constructed and following results can be seen from Figure 4.



Significant at: *0.1 percent

The goodness-of-fit indices of the model indicated an acceptable fit between the model and data ($\chi^2 = 138$, $df = 50$, $\chi^2/df = 2.760$, $RMSEA = 0.035$, $GFI = 0.975$ and $CFI = 0.953$). The model results showed that informal KGMs have significant effect on knowledge sharing hostility (-0.29 ($p < 0.01$)). The standardized estimates of the path of informal knowledge governance to knowledge sharing is 0.46 ($p < 0.01$), which is lower than the standardized estimates without the knowledge sharing hostility 0.52 ($p < 0.01$). Consequently, hypothesis 4b that knowledge sharing hostility mediates the link between informal KGMs and knowledge sharing is fully supported.

Conclusion

The research findings showed that both formal knowledge governance and informal KGMs do significantly influence knowledge sharing behavior (H1a, H1b). In addition, this research indicates that informal KGMs diminish knowledge-sharing hostility among individuals (H3b). On the contrary, there is no significant effect of formal KGMs on knowledge sharing hostility (H3a). Also, it should be noted that knowledge sharing hostility has negative influence on knowledge sharing behavior (H2). The findings support the mediating effects of knowledge sharing hostility in the relationship between informal KGMs and the knowledge sharing behavior (H4b). While, formal KGMs did not have a significant impact on knowledge sharing behavior (H4a not supported). In summary, the proposed model goes beyond previous work by providing alternative models of KGM's that might affect knowledge-sharing hostility. Consequently, the proposed theoretical model is a useful tool for practitioners to facilitate knowledge sharing behavior among employees.

Theoretical Implications

The results study contribute to the knowledge governance literature by examining KGM's that can be deployed by management to overcome such dysfunctional norms as knowledge sharing hostility. Identification of key antecedents of knowledge sharing will help top management to promote this behavior better. In addition to that lack of the studies in current literature imposes the necessity to make research at micro-level (Minbaeva et al., 2012). The proposed framework in this paper, help us better understand how micro-level factors interact with macro-level (Minbaeva et al., 2012, Michailova and Mustaffa, 2012)

Managerial implications

The results of the study showed that efficient knowledge sharing behavior can be facilitated by KGM's. Particularly, KGM's can be used to deconstruct such dysfunctional organizational phenomena as knowledge sharing hostility. Indeed, suggested knowledge governance model provides a systematic approach for top management to identify and manage knowledge-sharing hostility in different industries of Kazakhstan. At the macro-level it will help Kazakhstan to develop human capital to achieve knowledge-based society (Bhuiyan, 2011). Also the findings indicate that management should realize that knowledge-sharing behavior cannot be forced, but can only be encouraged and facilitated (Gibbert and Krause, 2002, Bock et al., 2005).

References

AMAYAH, A. 2013. Determinants of knowledge sharing in a public sector organization. *Journal of Knowledge Management*, 17, 454-471.

- ANDERSSON, U., BUCKLEY, P. J. & DELLESTRAND, H. 2015. In the Right Place at the Right Time!: The Influence of Knowledge Governance Tools on Knowledge Transfer and Utilization in MNEs. *Global Strategy Journal*, 5, 27-47.
- ARBUCKLE, J. L. 2003. Amos 5.0 [computer software]. *Chicago, IL: SPSS*.
- BARON, R. & KENNY, D. 1986. The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51, 1173.
- BHUIYAN, S. H. 2011. Transition towards a knowledge-based society in post-communist Kazakhstan: Does good governance matter? *Journal of Asian and African Studies*, 46, 404-421.
- BOCK, ZMUD, R., KIM, Y. & LEE, J. 2005. Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS quarterly*, 87-111.
- BOCK, G. & KIM, Y. 2002. Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal (IRMJ)*, 15, 14-21.
- BURCHARTH, A. L. D. A., KNUDSEN, M. P. & SØNDERGAARD, H. A. 2014. Neither invented nor shared here: The impact and management of attitudes for the adoption of open innovation practices. *Technovation*.
- CABRERA, Á., COLLINS, W. C. & SALGADO, J. F. 2006. Determinants of individual engagement in knowledge sharing. *International Journal of Human Resource Management*, 17, 245-264.
- CABRERA, E. & CABRERA, A. 2005. Fostering knowledge sharing through people management practices. *The International Journal of Human Resource Management*, 16, 720-735.
- CAIMO, A. & LOMI, A. 2014. Knowledge Sharing in Organizations A Bayesian Analysis of the Role of Reciprocity and Formal Structure. *Journal of Management*, 0149206314552192.
- CALIGIURI, P. 2014. Many moving parts: Factors influencing the effectiveness of HRM practices designed to improve knowledge transfer within MNCs. *Journal of International Business Studies*, 45, 63-72.
- CAO, Y. & YANG, X. 2012. The impact of knowledge governance on knowledge sharing. *Management Decision*, 50, 591-610.
- CASPI, A. & BLAU, I. 2011. Collaboration and psychological ownership: how does the tension between the two influence perceived learning? *Social Psychology of Education*, 14, 283-298.
- CHEN, L. & FONG, P. S. 2012. Revealing performance heterogeneity through knowledge management maturity evaluation: A capability-based approach. *Expert Systems with Applications*, 39, 13523-13539.
- COUSINS, HANDFIELD, R., LAWSON, B. & PETERSEN, K. 2006. Creating supply chain relational capital: The impact of formal and informal socialization processes. *Journal of Operations Management*, 24, 851-863.
- COUSINS, P. 2002. A conceptual model for managing long-term inter-organisational relationships. *European Journal of Purchasing & Supply Management*, 8, 71-82.
- COUSINS, P. D. & MENGUC, B. 2006. The implications of socialization and integration in supply chain management. *Journal of Operations Management*, 24, 604-620.
- CRUZ, N. M., PÉREZ, V. M. & CANTERO, C. T. 2009. The influence of employee motivation on knowledge transfer. *Journal of Knowledge Management*, 13, 478-490.
- DE ARAÚJO BURCHARTH, A. L. & FOSFURI, A. 2014. Not invented here: how institutionalized socialization practices affect the formation of negative attitudes toward external knowledge. *Industrial and Corporate Change*, dtu018.
- EVANS, J. M., HENDRON, M. G. & OLDROYD, J. B. 2014. Withholding the Ace: The Individual-and Unit-Level Performance Effects of Self-Reported and Perceived Knowledge Hoarding. *Organization Science*.

- FELIN, T., ZENGER, T. R. & TOMSIK, J. 2009. The knowledge economy: emerging organizational forms, missing microfoundations, and key considerations for managing human capital. *Human Resource Management*, 48, 555-570.
- FORD, D. P. & STAPLES, S. 2010. Are full and partial knowledge sharing the same? *Journal of Knowledge Management*, 14, 394-409.
- FORNELL, C. & LARCKER, D. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50.
- FOSS 2007. The Emerging Knowledge Governance Approach: Challenges and Characteristics. *Organization*, 14, 29-52.
- FOSS 2013. 4. Knowledge governance: meaning, origins and implications. *Handbook of Economic Organization: Integrating Economic and Organization Theory*, 62.
- FOSS, HUSTED, K. & MICHAILOVA, S. 2010a. Governing knowledge sharing in organizations: Levels of analysis, governance mechanisms, and research directions. *Journal of Management Studies*, 47, 455-482.
- FOSS & MINBAEVA, D. 2009. Governing knowledge: the strategic human resource management dimension.
- FOSS, N., KENNETH, H. & SNEJINA, M. 2010b. Governing Knowledge Sharing in Organizations: Levels of Analysis, Governance Mechanisms, and Research Directions. *Journal of Management Studies*, 47, 455-482.
- GIBBERT, M. & KRAUSE, H. 2002. Practice exchange in a best practice marketplace. *Knowledge management case book: Siemens best practices*, 89-105.
- GRANDORI, A. 2013. *Handbook of economic organization: integrating economic and organization theory*, Edward Elgar Publishing.
- GUPTA & GOVINDARAJAN, V. 2000. Knowledge flows within multinational corporations. *Strategic Management Journal*, 21, 473-473.
- HAIR, J., TATHAM, R., ANDERSON, R. & BLACK, W. 2006. *Multivariate data analysis*, Pearson Prentice Hall Upper Saddle River, New Jersey.
- HE, H., BARUCH, Y. & LIN, C.-P. 2014. Modeling team knowledge sharing and team flexibility: The role of within-team competition. *Human Relations*, 0018726713508797.
- HE, P. 2013. Why and when do people hide knowledge? *Journal of Knowledge Management*, 17, 398-415.
- HUANG, M.-C., CHIU, Y.-P. & LU, T.-C. 2013. Knowledge governance mechanisms and repatriate's knowledge sharing: the mediating roles of motivation and opportunity. *Journal of Knowledge Management*, 17, 677-694.
- HUSTED, K. & MICHAILOVA, S. 2002. Diagnosing and Fighting Knowledge-Sharing Hostility. *Organizational Dynamics*, 31, 60-73.
- HUSTED, K., MICHAILOVA, S., MINBAEVA, D. B. & PEDERSEN, T. 2012. Knowledge-sharing hostility and governance mechanisms: an empirical test. *Journal of Knowledge Management*, 16, 754-773.
- JÖRESKOG, K. G. & SÖRBOM, D. 1996. *LISREL 8: User's reference guide*, Scientific Software International.
- KING, W. R. & MARKS JR, P. V. 2008. Motivating knowledge sharing through a knowledge management system. *Omega*, 36, 131-146.
- KOGUT, B. & ZANDER, U. 1993. Knowledge of the firm and the evolutionary theory of the multinational corporation. *Journal of international business studies*, 625-645.
- KUBO, I., SAKA, A. & PAN, S. L. 2001. Behind the scenes of knowledge sharing in a Japanese bank. *Human Resource Development International*, 4, 465-485.

- LAM, A. & LAMBERMONT-FORD, J.-P. 2010. Knowledge sharing in organisational contexts: a motivation-based perspective. *Journal of Knowledge Management*, 14, 51-66.
- LAWSON, B., PETERSEN, K. J., COUSINS, P. D. & HANDFIELD, R. B. 2009. Knowledge Sharing in Interorganizational Product Development Teams: The Effect of Formal and Informal Socialization Mechanisms. *Journal of Product Innovation Management*, 26, 156-172.
- LEE, S., YOO, Y. & YUN, S. 2015. Sharing my knowledge? An interactional perspective. *Journal of Managerial Psychology*, 30, 986-1002.
- MANLIO, D. G., VINCENZO, M., RATHI, D., GIVEN, L. & FORCIER, E. 2014. Interorganisational partnerships and knowledge sharing: the perspective of non-profit organisations (NPOs). *Journal of Knowledge Management*, 18, 867-885.
- MICHAILOVA, S. & HUSTED, K. 2003. Knowledge-Sharing Hostility in Russian Firms. *California Management Review*, 45, 59.
- MICHAILOVA, S. & MUSTAFFA, Z. 2012. Subsidiary knowledge flows in multinational corporations: Research accomplishments, gaps, and opportunities. *Journal of World Business*, 47, 383-396.
- MINBAEVA, D., MÄKELÄ, K. & RABBIOSI, L. 2012. Linking HRM and knowledge transfer via individual-level mechanisms. *Human Resource Management*, 51, 387-405.
- MOLINA-AZORÍN, J. F. 2014. Microfoundations of strategic management: Toward micro–macro research in the resource-based theory. *BRQ Business Research Quarterly*, 17, 102-114.
- MÜLLER, R., PEMSEL, S. & SHAO, J. 2014a. Organizational enablers for governance and governmentality of projects: A literature review. *International Journal of Project Management*.
- MÜLLER, R., PEMSEL, S. & SHAO, J. 2014b. Organizational enablers for project governance and governmentality in project-based organizations. *International Journal of Project Management*.
- NIELSEN, A. P. 2006. Understanding dynamic capabilities through knowledge management. *Journal of knowledge management*, 10, 59-71.
- NONAKA, I. & TAKEUCHI, H. 1996. The knowledge-creating company: How Japanese companies create the dynamics of innovation. *Long Range Planning*, 29, 592.
- PEMSEL, S., WIEWIORA, A., MÜLLER, R., AUBRY, M. & BROWN, K. 2014. A conceptualization of knowledge governance in project-based organizations. *International Journal of Project Management*.
- SZULANSKI, G. 1996. Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic management journal*, 17, 27-43.
- TSAY, H., LIN, T., YOON, J. & HUANG, C. 2014. Knowledge withholding intentions in teams: the roles of normative conformity, affective bonding, rational choice and social cognition. *Decision Support Systems*.
- WILLIAMS, C. & LEE, S. H. 2014. Knowledge flows in the emerging market MNC: The role of subsidiary HRM practices in Korean MNCs. *International Business Review*.