EFFECTIVENESS IN KNOWLEDGE SHARING PRACTICES IN GOVERNMENTAL SERVICE FIRMS: The Effect of Organizational Characteristics on Interdepartmental Knowledge Sharing

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Abstract

Purpose: Government sector organizations are mainly knowledge-intensive organizations, and to exploit their knowledge, effective knowledge sharing among the different departments is required. We focus on specific characteristics of government sector organizations that increase or limit interdepartmental knowledge sharing. Three types of organization-specific coordination mechanisms directly influence knowledge sharing between departments. Organizations are also characterized by members' social identification and trust, which in the absence of power games are assumed to create a knowledge-sharing context.

Methodology: Data are collected by a questionnaire survey in the government sector. The sample consists of 358 cooperative episodes between departments in more than 90 different government sector organizations. Structural equation modeling reveals the importance of lateral coordination and trust.

Results: The combination of power games and informal coordination seems to be remarkably beneficial for knowledge sharing. Furthermore, compared with other government sector organizations, government institutions have organizational characteristics that are less beneficial for knowledge sharing.

Keywords: Knowledge, Knowledge sharing, Knowledge Management, Governmental Services Firms.

1.0 INTRODUCTION

Knowledge is generally seen as one of the most, if not the most, important asset in organizations that should be carefully managed (Argote, McEvily, and Reagans 2003; Teece 1998). However, knowledge management as new managerial practice and as an academic research topic has not yet entered the government sector literature, with exceptions of studies in certain government services such as health care (Bate and Robert 2002). This is surprising, knowing that government sector organizations often have as their main activity developing and providing knowledge (Luen and Al-Hawamdeh 2001) and hence can be classified as knowledge-intensive o Government sector organizations are mainly knowledge-intensive organizations, and to exploit their knowledge, effective knowledge sharing among the different

departments is required. We focus on specific characteristics of government sector organizations that increase or limit interdepartmental knowledge sharing. Three types of organization-specific coordination mechanisms directly influence knowledge sharing between departments. Organizations are also characterized by members' social identification and trust, which in the absence of power games are assumed to create a knowledge-sharing context. Data are collected by a questionnaire survey in the government sector. The sample consists of 358 cooperative episodes between departments in more than 90 different government sector organizations. Structural equation modeling reveals the importance of lateral coordination and trust. The combination of power games and informal coordination seems to be remarkably beneficial for knowledge sharing. Furthermore, compared with other government sector organizations, government institutions have organizational characteristics that are less beneficial for knowledge sharing organizations. All organizations are to some extent knowledge-intensive (Alvesson 1993). However, some organizations have knowledge as their core product, provide knowledge to the government as their main activity, or have mainly knowledge workers, that is, experts developing and providing knowledge (Starbuck 1992). This is characteristic of most government sector organizations. Within the growing body of knowledge management literature, increasing attention is being paid to the role of organization structure in knowledge sharing (Grover and Davenport 2001). In this article, we focus on knowledge sharing during cooperative episodes between departments. A cooperative episode here refers to any kind of cooperation between one or more people from two departments. Knowledge sharing is defined as ''the process through which one unit is affected by the experience of another'' (Argote et al. 2000, 3). This view on knowledge sharing involves more than simply acquiring or transmitting knowledge from one party to another but is a process of exchanging and processing knowledge in a way that knowledge of one unit can be integrated and used in another unit.

Objectives of the Study

The main aim of the study was to assess the effectiveness in knowledge sharing practices in governmental service firms: the effect of organizational characteristics on interdepartmental knowledge sharing

LITERATURE REVIEW

Theoretical Review
The Resource-Based Theory

Penrose (1959) is regarded as the originator and the main contributor of the RBV theory. The theory rests on the idea that a firm is a wider resource base and that the organizational growth requires exploring the resources already in existence and developing new ones as well. Penrose (1959) also states that the workforce is not solely specialized and it is possible to redeploy it so as to enable the firm to diversify into making new products as well as services. RBV depicts out that the success of a firm is as a result of common assets, resources as well as capabilities owned by the firm, and these together differentiate the organization from the others in the same

industry. The organization's resources, as well as its capabilities, allow the organization to achieve high performance. Through this subsection of resources, the firm acquires ability to attain high performance, another subsection leading to greater long-tern performances. The resources as well as the capabilities valuable to a company should not be easily imitable, and should not be easy to acquire or replace especially by their competitors. Valuable and distinguishable resources enable the organization to generate profits and sustain them for longer periods (Burvill, Jones-Evans & Rowlands, 2018). In a similar study, FNB & Nedbank's resources comprise of investment, equipment, capacities, knowledge, skills as well as expertise. In economies based on knowledge, knowledge is the key resources especially in Oxfam. Knowledge is used to determine how an industrial enterprise is performing (Kull, Mena & Korschun, 2016). Nevertheless, the Resource-Based Theory does not stipulate the process of knowledge acquisition and how to retain it in the firm. These shortcomings leave Kellermanns, Walter, Crook, Kemmerer and Narayanan (2016) theory on the creation of knowledge in the organization incomparable the most ideal basis of its management.

Empirical Review

Knowledge Creation and Service Delivery

This involves the mobilization of internal and external resources to ensure that there is the generation of new knowledge that facilitate the organization to achieve its goals (Nicholas & Steyn 2017). To ensure that the correct strategies are laid in place, the company may barnstorm and conduct research on the possible strategy to manage knowledge assets of project management and how to create an organizational knowledge bank (Tran, 2016). The company may also identify explicit knowledge and knowledge creation by ensure there is enough information on the policies and objectives of carrying out a particular project. According to Groop, Ketokivi, Gupta and Holmström (2017) knowledge creation includes identifying tacit from explicit one and vice versa. Voorberg, Bekkers, Timeus, Tonurist and Tummers (2017) studied how KM helps in change management of an organization; they also sought to find influences business strategies to the firms' performance among other value adding activities that increases organizational performance. The study focused on knowledge creation and application. To effectively explain the of knowledge creation on application, the study focused on the study concentrated on the skills that the management acquire and how they use it to manage employees. The study used descriptive statistics and inferential statistics to provide the effectively give the effect of skills on organizational performance. The findings indicated that adequate management of skills and employee's perception impacts institutional performance positively. The study concluded the employees and management are important for maintaining and controlling staff perception which has a positive impact to the productivity of the firm. Sawe (2017) conducted a study on the effect that KM have on the service delivery. The study concentrated on ways that companies have initiated to support knowledge creation, knowledge storage, and it can be transferred from one section to the other to increase organization performance. The study was conducted in South African insurance firms. Sawe (2017) used both quantitative and inferential statistics to determine the effect of independent variables (knowledge creation, knowledge storage and transfer). The study highlighted five ways. The

first method that can be used by organization is employees training. The second one is construction of knowledge repositories. Next is conducting information informal knowledge fairs of employees and spur of communities of practices.

The study explained the KM strategy to support business strategy is one of the ways to enhance knowledge creation in organizations. Strategies can be adopted through innovation. Tseng (2016) also studied the effect that KM model have on the organization capabilities. The study used open and closed ended questionnaire to collect data on the effect of KM models on the organization capabilities. The study used content analysis to find out the type of models that are available for use in Germany. The concentrated on how knowledge infrastructure affects performance of institution. The findings indicated that main focus of knowledge creation is sharing tacit knowledge via the process of socialization. For example the organization may adopt conventional face-to-face interactions such as meetings and electronic communication channels such as forums or videoconferences. Leadership behaviors are considered essential to enhance knowledge creation in organizations. Leaders with vision provide the organization with clear direction in terms of guidelines and what types of knowledge to create. The study also revealed that organizations can enhance knowledge creation by cultivating organizational learning culture.

Knowledge Sharing and Service Delivery

This basically means how organizational information is exchanged with each individual in a company. Therefore it refers to how information is conveyed from one individual to the other or from a group to individual and vice versa (Lohikoski, Kujala, Haapasalo, Aaltonen & Ala-Mursula 2016). Information passed in an organization environment will not be successful unless the person who is to receive the information can be able to absorb and apply the knowledge given as the basis for action. The level and the degree at which the knowledge is received depend on how the information source is respected by the receiver. The information must be from a trustworthy environment and relevant to the receiver to perform better (Bloice & Burnett, 2016). The degree at which the degree at which the organizational technology interacts with each and every individual in the have an impact in project performance (Destler & Page, 2018). The organization must make the knowledge accessible to many who can use it and ensure the format, flexibility; selection and integration are understood by all the interested party (Yuan, Lin & Zhuo, 2016). Hussain, Konar and Ali, (2016) conducted a study on the effect culture and knowledge sharing on the performance of hotel service. This study was conducted in Malaysia hotel industry. The study used purposive sampling technique in the quest of determining the effect of the two variables. Questionnaire was used to acquire data that is relevant to the study. The study also targeted 327 staff of luxury hotels within Klang Valley, Malaysia. The analysis of this data was performed using partial least squares. The findings indicated that culture and knowledge sharing behavior have a significant effect on the service innovation performance. The study therefore recommended that firms needs to implement strong cultural team and knowledge sharing behavior to kick start performance growth. Hurnonen, Ritala and Ellonen (2016) conducted a study on effect of knowledge-

integration practices on the innovation of project services. The study concentrated on the impact that knowledge-integration practices (KIBS) have on the performance of the firm.

The study variable consisted of directives, sequencing, decision-making, and group problem-solving and routine and how they influence service delivery the findings indicated that the practices are used at different states to increase productivity. The study also identified that and interaction, teamwork, sharing as well as coaching, handling faults, direction of the knowledge in existence as the cultural features, aligning social relations based on knowledge management. Teamwork is the level of actual support as well as help in the organization normally determined by the behavior of individuals involving the allocation and completion of activities regard to mutual sharing of goals that takes place in a given social or work environment.

METHODOLOGICAL REVIEW

Data were collected through a questionnaire survey among Kenyan government sector workers. Our unit of analysis was a cooperative episode between two departments in a government sector organization. The population thus consisted of all interdepartmental cooperative episodes within Kenyan government sector organizations. The unit of measurement is individuals answering the questionnaire. Hence, we selected individuals who could answer the questionnaire for a specific cooperative episode. We started with a sample of more than 90 different government sector organizations with 358 respondents, answering the questionnaire for as many different interdepartmental cooperative episodes, selected based on a non random snowball selection method. Students of Master of Government Administration courses selected respondents in their own organization or an organization with which they had frequent contact. Although random samples are more preferable, there was no sample selection bias toward certain types of cooperative episodes. On the contrary, the selection method resulted in a diverse sample of organizations, respondents, and cooperative episodes.

We asked the respondents to identify a cooperative episode between their department and one other department of the same organization and to briefly describe this cooperative episode. These cooperative episodes varied and included internal client-supplier relationships, cooperative episodes to accomplish common tasks and projects, interactions to provide advice and explanations, and interactions to plan and coordinate tasks. Some specific examples given were as follows: ''there is daily intensive cooperation necessary between several individuals of the two departments because we take care of the people in the prison and the other department administrates the files of those people,'' ''my department, the hospital's pharmacy, cooperates with the hospital's accounting department to monitor our performance,'' ''developing together an educational plan for each student that follows a part-time education at our department and a part-time education at the other department,'' ''exchanging information on psychiatric patients that come to our department for occupational therapy,'' and ''working out answers on policy questions from the ministers in workgroups or workshops.''

FINDINGS

The correlations between the variables and mean scores are listed in Appendix 2. These descriptive values indicated the low use of incentives in public sector organizations and the existence and use of informal coordination. Power games were present but not dominant, and both knowledge-sharing intensity and knowledge-sharing effectiveness were moderately present. The intercorrelations indicated the negative relationship between power games and most of the other variables, except with informal coordination and formal systems. Lateral coordination positively correlated with all variables, except with power games where the relationship was negative. The intercorrelation between lateral coordination and incentives was high (.54) as expected because incentive was partly measured in terms of stimulating teamwork. Hence, high incentives will most likely go together with more intense use of lateral coordination. Furthermore, the high correlation between trust and the knowledge-sharing variables was noticed. The correlations between the three dummies for the three categories of public sector organizations revealed that especially government institutions correlated with several of the independent variables. Only the dummy variable government institutions was included in the multivariate analyses because analysis of variance indicated that only government institutions were significantly differing from the other two categories of public sector organizations for the variables lateral coordination, incentives, and identification (F 5 3.236, F 5 4.342, and F 5 4.755, respectively).

The proposed relationships between the variables were analyzed through structural equation modeling and linear multiple regression. Structural equation modeling allows us to analyze direct and indirect relationships between the dependent and independent variables and among the dependent variables at the same time. Hence, it allows the testing and exploration of complex and new relationships, which is especially appropriate when indications in the literature on the relationships between the variables are still rather weak. In short, structural equation modeling can add additional insights to the more traditional regression analysis (Kline and Klammer 2001). However, interaction effects are still best analyzed with linear regression analysis, thus used here to test the interaction effect in two propositions (1d and 3b).

We built our structural equation model using Amos (Byrne 2001). The overall model fit was tested using several fit indices, all indicating a good fit. Hence, conclusions about the relationships in the model may be drawn. There was a nonsignificant p value (.21) for the chi-square test indicating a good fit. The root mean square residual was low, .027; adjusted goodness of fit was .961; comparative fit index was .993; and the normed fit index was .969, all well above the threshold (.9) generally considered necessary for a satisfactory model fit (Kline 1998). The x^2 (df) value referred to a good fit as well, with 1.250. Structural equation modeling is based on the same conditions of normality, such as linearity, homoscedasticity, heteroscedasticity, and independence of error terms, required in many multivariate analyses. Although multiple responses per organization can jeopardize these conditions, none of the conditions were violated in our sample. Table 1 lists the structural parameter estimates of our path model. Structural equation parameter estimates are similar to standardized beta

coefficients in regression analysis, and the critical ratio indicates the significance of the relationship.

The model provided evidence for our propositions and also revealed new relationships. The variable incentives, included here as a control variable, had a significant effect on knowledge sharing and explained part of the variance in the knowledge-sharing variables. However, our coordination variables were very relevant as well and clearly influenced the knowledge-sharing variables. The effect of formal systems on the intensity of knowledge sharing was negative, confirming proposition 1a; however, there was no significant negative effect on knowledge-sharing effectiveness. The data also provided support for our second proposition (1b). Lateral coordination resulted in higher knowledge-sharing intensity and higher effectiveness of knowledge sharing. However, although the use of informal coordination did not result in higher knowledge-sharing intensity, the knowledge shared through informal interunit coordination was effective, partly confirming proposition 1c. Hence, more use of horizontal, networklike, coordination had a positive qualitative and quantitative effect on knowledge sharing. There was a dominant positive effect of trust, strongly confirming proposition 2a. However, proposition 2b on the effect of identification could not be fully supported. Although identification did not result in higher knowledge sharing intensity, high levels of identification gave more effective knowledge sharing. The effect of power games was not significant, providing no support for proposition.

DISCUSSION

Public sector organizations are often presented as strongly dominated by procedures and high formalization. Behn (1995), for instance, mentioned that avoiding an overload of procedural rules is one of the concerns of public managers and researchers in public. Furthermore, according to some authors, motivation and commitment are lower in public sector organizations, another major concern for public sector managers (Behn 1995; Moon 2000). This is not the ideal environment for knowledge sharing (Van den Bosch, Volberda, and de Boer 1999).

However, evidence on the dominance of formal systems, with its many disadvantages (cf. the red tape arguments), in public sector organizations is weak (Boyne 2002). Formal systems (mean 5 3.16) were, according to our respondents, somewhat less important than the use of lateral and informal coordination (mean 5 3.27 and 3.59, respectively). Hence, a dominance of systems in the cooperative episode was not observed. However, when the coordination of the cooperative episode was mainly based on formal systems, it resulted in lower knowledge-sharing intensity, although the impact was not very large (parameter estimate 5 0.127) We can therefore conclude that formal systems were not the main obstacle to knowledge sharing and that they were not even dominant in our broad sample of cooperative episodes in public sector organizations. In short, our sample did not reveal negative bureaucratic effects on knowledge sharing, even when we limited our sample to cooperative episodes in government institutions— the pure public organizations according to Fottler (1981). Lateral coordination was very

important for the intensity and effectiveness of knowledge sharing (parameter estimate 5 0.157 and 0.182, respectively).

Lateral coordination not only had a significant positive impact on intensity and effectiveness of knowledge sharing but also influenced many other variables, resulting in a strong indirect effect of lateral coordination on the knowledge-sharing variables. Although lateral coordination was necessary for knowledge sharing, it also had a negative effect via formal systems, decreasing knowledge sharing. Apparently, formal systems were necessary to support the working of lateral coordination. Informal coordination did not lead to higher knowledge-sharing intensity, although it did lead to more effective knowledge sharing. Literature on informal coordination has drawn our attention to the inflexibility of informal coordination and, hence, its limitations on the kind of knowledge that is shared and the parties involved in the knowledge sharing (Hansen 1999, 2002).

We expected to find a positive effect on the knowledge-sharing variables, especially on the ''intensity'' of knowledge sharing. A less positive, smaller or even negative effect on the variable effectiveness of knowledge sharing was to be expected. On the contrary, the effectiveness of knowledge sharing was clearly positively influenced by the use of informal coordination. One explanation suggested by the literature is that informal coordination develops trust and openness toward accepting and thus applying the knowledge of others (Adler 2001; Hansen 2002). However, this was not the case for our data because informal coordination scored low on trust (correlation 5 .12) and high on power games (correlation 5 .30).

Kostava and Kendall (2003) referred to people in informal networks as a kind of boundary spanners connecting units. They said that although social networks are primarily established to achieve personal benefits, social networks can become public when a group of people or a unit in an organization can tap into the resources made available through the network. In fact, people able to share knowledge, able to see opportunities, and believing in the benefits of networking engage in networks (Burt 1992). Hence, although people are creating informal coordination with other departments to obtain knowledge for their own benefit, they help their department through this networking. Those people might be better able to find, share, and successfully apply the knowledge they need for their tasks. This could be an explanation for the positive relationship between informal coordination and the effectiveness of knowledge sharing in our data. It is interesting that in the cooperative episodes in the governmental institutions more informal coordination and less lateral coordination were used than was the case in the cooperative episodes in the other public sector organizations. The higher use of informal coordination could not compensate for the shortcomings in lateral coordination because of the lower impact of informal coordination on knowledge-sharing intensity. Furthermore, the correlation between lateral and informal coordination suggests that lateral coordination was a source for informal coordination because it created opportunities for people to meet each other and develop personal relationships that could result in more informal networks as well in the cooperative episodes. Our study confirmed the dominant positive impact of trust on the knowledge-sharing variables, which has been recognized in several other studies. It was trust

that was important, not as part of informal or lateral coordination or developed through identification. Not only would people share more knowledge in an environment of trust but also knowledge sharing would be more effective. Power games and trust correlated strongly negatively, as expected. Although power games had unexpectedly no direct effect on the knowledge-sharing variables, it had a strong indirect effect through trust.

Another remarkable finding was that a combination of informal coordination and power games was leveraging intensity and effectiveness of knowledge sharing, strongly contradicting our assumption. This was even more surprising when taking into account the arguments of O'Toole and Meier (2004), who warned us of the greater risk of power games in informal coordination in public sector organizations. Their arguments were not supported at all. Power games and informal coordination were highly correlated (.3). People involved in informal coordination were more knowledgeable than other people in the organization (Krackhardt 1990). They knew who to contact and who had what knowledge, and they understood the informal structure of the organization. This information gave these people many opportunities to share knowledge and, unfortunately, also for power games (Adler and Kwon 2002; Krackhardt 1990; Leana and Van Buren 1999). However, this was not yet a full explanation for the interaction effect found. Another explanation could be that in the presence of power games, people were only willing to share their knowledge if they felt protected against opportunistic behavior. Informal networks can provide a sense of protection and thus induce people to share their knowledge.

 Hence, the presence of power games could have resulted in the development of informal coordination in the cooperative episode. It might be that people engaged in or built informal coordination especially to cope with power games (Gresov and Stephans 1993). Although further study is necessary to unpack this unexpected role of power games, there was evidence pointing to the use of informal coordination to cope with power games. However, this was not especially the case in government institutions. There was evidence on the impact of low organizational commitment in government institutions. The level of identification was lower in pure public organizations, the government institutions, and lower identification impacted on the effectiveness of knowledge sharing—see evidence for proposition 2b and 2c in table 1. Hence, government institutions might risk facing knowledge-sharing problems due to lower levels of identity. Although the impact of government institutions versus other public sector organizations on incentives was not very strong (parameter estimate 5 0.097) (see table 1), the combination of low identity and low incentives could result in a serious lower level of knowledge-sharing effectiveness. Incentives based on intrinsic and extrinsic rewards have been indicated in the literature as very important for the level of organizational commitment (including identity) among public sector employees (Khojasteh 1993; Young, Worchel, and Woehr 1998). This was confirmed in our study. Respondents reported lower identification, together with few incentives, for cooperative behavior and less lateral coordination. Values of the three correlated variables were all lower in the cooperative episodes in government institutions. Cooperative behavior and knowledge sharing were not yet recognized as important, or at least, they were not much formally encouraged in the organizations in our

sample. The incentives had a positive impact on identity and also on trust. Hence, through the direct and indirect effects, knowledge-sharing effectiveness could be greatly influenced by more incentives.

CONTRIBUTIONS AND LIMITATIONS

We have contributed to the government sector literature by indicating which organizational characteristics are important and might need to be altered to make knowledge management enter the (knowledge-intensive) government sector. We have also contributed to government management literature by revisiting the organization design fundamentals, namely, coordination choices, and assessing their relevance in the knowledge-sharing discussion in the government sector. Our study was focused on the sharing of know-how between departments during cooperative episodes. We learned that the most appropriate organization design consists of coordination that is not solely based on formal systems but also more on lateral coordination, combined with high levels of trust and identification, clear incentives, and the absence of power games. This confirmed most of our propositions except for some on power games and informal coordination. Data collection occurred through a cross-sectional survey. This meant an inability to look for longitudinal effects or to study processes. The concept of knowledge and knowledge sharing is hard to operationalize and to measure quantitatively in larger samplesThe sample of our study consisted of cooperative episodes in Kenyan government sector organizations. Hence, the findings are only representative of the Kenyan population of government sector organizations. Our study is also limited in scope in the number of variables included. An interesting extension of our research, for instance, would be to include the complexity of the cooperative episodes in interaction with the coordination mechanisms.

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