

# Organizational Commitment, Knowledge Management Initiative Importance and Success Likelihood as Antecedents Of Knowledge Sharing Intention: An Exploratory Study

*Research-in-Progress*

**Govind Iyer**

Department of Accounting, University of North  
Texas, Denton TX  
govind.iyer@unt.edu

**Sury Ravindran**

Department of Computer Information Systems,  
Northern Arizona University, Flagstaff AZ  
sury.ravindran@nau.edu

## ABSTRACT

Using an experimental design to explore the individual and interactive effects of organizational commitment, likelihood of success of a knowledge management initiative, and importance ascribed to the KM initiative by a firm on a knowledge worker's intention to share her knowledge, we find that importance by itself positively impacts knowledge sharing intent. The effect of importance appears to be enhanced (super-additively) by success likelihood. Organizational commitment is substitutable by the two factors of importance and success likelihood. Implications of these reported 2 and 3-way interactions are that seemingly logical influences may in actuality be conditional on other variables, i.e., their influences are configural. A KM effort that disregards any element of the triad does so at its own risk.

## Keywords

Knowledge sharing, KM initiatives, KM success

## INTRODUCTION

It is widely recognized that the contemporary economy is called a knowledge based economy because the basis of competitive advantage has changed from managing just tangible resources to include managing knowledge as an asset (Davenport and Grover 2001). Knowledge is a set of justified beliefs that boosts the capability of a firm to take actions that raise its performance (Nonaka 1994, Alavi and Leidner 2001). Peter Drucker defines knowledge management (KM) as “the coordination and exploitation of organizations’ knowledge resources, in order to create benefit and competitive advantage” (Call 2005, p 20). Naturally, a prime issue is how to successfully implement a knowledge management (KM) initiative. Indeed, while today’s IT applications make it technologically feasible to share knowledge, the actual sharing will take place only if a suitable organizational climate is created (Bock et al., 2005; Constant et al. 1994; Huber, 2001). Factors including management leadership and support (which affect perceived importance), pro-sharing norms (an aspect of which is organizational commitment) (Davenport et al. 1998), motivational aids (like tangible and intangible rewards and incentives) and training and education (which impact likelihood of success of KM efforts) (Markus 2001) are among the mechanisms required to complement the technology (KM system).

Practitioners of IT maintain a similar view. For example, California Casualty Management, a San Mateo insurance company, found that while IT helped gather, process and manage knowledge, it didn't guarantee effective sharing between groups (Kaplan, 2002). According to Shir Nir of New York based KM consultancy Knowledge Transformation Partners, the key to successful KM is people and process. At Born, a Minneapolis-based technology consultancy, head of manufacturing practice Gene Wright recommends that CIOs not get carried away with technological capability alone but ensure that the KM system does what it is supposed to do (Kaplan, 2002).

Knowledge includes that which is (1) explicit and can be expressed in numbers and words, captured as lessons learned from a completed project, or available in the form of technical documents and white papers (Davenport and Prusak 1998), and (2) tacit referring to expertise gained through experience, e.g., insights, hunches and intuitions (Sabherwal and Sabherwal 2005). Hence, any KM effort must encompass sharing of both types, i.e., tacit and explicit knowledge. Accordingly, the dependent

variable in our empirical model is the intention to share knowledge of different types (routine documentable knowledge, technical reports, best practices, all forms of explicit knowledge, as well as expertise and knowledge about customers and industry contacts, forms of tacit knowledge).

The methodology chosen to address our research issues consists of (1) deriving testable hypotheses based on social exchange theory, and (2) testing the hypotheses using a traditional experiment. As is well known, experiments are an alternative to survey research using survey instruments. Experiments can be used to study the effects of a chosen set of antecedents by manipulating the levels of that set of factors without having to control for other exogenous factors of which there are many in this area of KM initiatives. It should be noted that the focus of the experiment is on *intent* to contribute and *intent* to reuse. We focus on the intent (rather than on actual behavior) because: (i) according to the theory of planned behavior TPB (Ajzen 1991), the dominant theory in this area, intention to perform a particular behavior is the most immediate and important determinant of future behavior; and more importantly (ii) by measuring intent rather than observing behavior based on a specific task, we avoid other confounding effects such as task complexity, system characteristics, ease of use, program interface etc. as potential explanations for observed results. Accordingly, we are better able to explain our findings as a consequence of manipulated variables (thus mitigating omitted variables bias). However, we acknowledge and remind the readers of the standard caveats regarding the correlation between intent and actual behavior.

While there is a variety of ways to promote knowledge sharing, we focus on a set of factors falling under the purview of management leadership and support. The factors we identify are (1) organizational commitment of an employee, (2) the importance given to KM efforts and demonstrated by senior management, and (3) the likelihood of success of the aforementioned KM initiatives expected by an employee based on past projects of other kinds. We acknowledge that there are other determinants either mentioned or used in prior research in KM systems and knowledge sharing such as reciprocity, trust, pro-sharing norms, ease of use, availability of resources including time, effort and opportunities to participate in KM efforts. Obviously, in a controlled experiment, it is not feasible to vary everything. We control for the other factors by (a) randomization, and (b) measuring intent and keeping other confounding factors out of the experiment.

According to Porter et al. (1974), organizational commitment is the strength of an employee's identification with and involvement in her/his organization. Such commitment also fosters a positive outlook towards one's co-workers (Becker 1992). Organizational commitment, indeed, applies to all facets of an employee's work performance, logically including participation in KM efforts by the act of knowledge sharing (Lin 2007). The rationale behind choosing likelihood of success of KM and importance given to KM as the two other independent variables is as follows. Employees attitudes towards projects and schemes (suggestion schemes, quality initiatives etc.) promoted by their business unit or firm may often be colored by whether they perceive it as the latest fad which will be forgotten as soon as the next one comes along or whether they truly believe that their firm considers it as crucial and important to organizational performance.

## THEORETICAL BACKGROUND

To assess the effect of (1) organizational commitment, (2) likelihood of success of KM efforts, and (3) importance ascribed to KM initiatives, on knowledge exchange, we turn to social exchange theory. The initial work of Blau (1964), enriched with additional insights by Roloff (1981) is of primary relevance in the present context of intra-organizational information or knowledge sharing. The original theory proposed that individuals choose *associates* and *actions* by evaluating and ranking alternatives in each category and selecting the best alternative (Blau, 1964). The objective is to obtain a variety of desired outcomes including financial, physical or social rewards net of cost of actions (Roloff, 1981) in the long run. The rewards and costs are dependent on the twin factors of *social context* and nature of the *relationship* in which the information exchange transaction takes place. Social exchange theory further suggests that when a series of exchange transactions takes place there is a perception of equitable exchange (or otherwise) developed by the parties involved. If the history of interactions is perceived to have fair value, sharing of knowledge in the foreseeable future will be high.

In general, workplace social exchange takes place in a business environment involving two or more "agents" who produce some output that is "better" than something they could produce in isolation. Applying this theory to knowledge exchanges among employees in a firm, the expectation of knowledge workers is that by doing so they will obtain rewards such as enhancement of status, reputation, approval and respect, promotion or other financial rewards (e.g., department performance bonuses). In the context of knowledge workers in an organization who interact with each other, albeit through the use of a KMS, contributing what they know may be helpful in carrying out their or others present or future assigned tasks. Exchange theorists identify four social exchange contexts – negotiated, reciprocal, generalized and productive (Molm 1994, Molm and Cook 1995). Reciprocal exchange involves two players mutually exchanging items of interest with each other during one or more interactions over a period of time. This form of exchange involves bilateral relationships. Generalized exchange takes place among groups of more than two agents; in such relationships, the giver and the receiver may not be matched pairs as agent 1 may provide an input to agent 2 who provides another input to agent 3 who gives to agent 1. The knowledge sharing

scenarios that typically occur in business organizations are the reciprocal and generalized exchange varieties, which may take place by the direct transfer of tacit knowledge (expertise) or by contributing documented knowledge objects to a repository.

To summarize, sharing knowledge will occur when the employees concerned believe that this will result in creating value for the others in the firm, and when they can expect to retain some of the value for themselves (Nahapiet and Ghoshal 1998). Repeated successful exchanges taking place in this environment should result in on-going relationships and enhanced trust and mutual cooperation based on reciprocity and concern for reputation because of the collaborative nature of most work situations (Kollock 1994). Next, based on these aspects of social exchange theory, we will derive hypotheses for each of the three manipulated variables that we expect to impact knowledge sharing.

## **HYPOTHESES DEVELOPMENT**

Employees who have a sense of loyalty and commitment to the organization for which they work, when presented with information that their business unit or firm is implementing a KM initiative, will react favorably since they feel that the long term performance of their organization will be positively impacted by such an initiative if successful. Their commitment leads to a belief that knowledge sharing will be appreciated by their firm, their colleagues will use and benefit from their shared knowledge, and ultimately it will benefit their organization as a whole (and contributing individuals given they expect to remain with the organization). Thus, they will want to do their part by exchanging their experience and expertise with colleagues, either in the form of documented knowledge objects or by listing themselves in an index of contact persons in specific areas of expertise (an expertise index). In return, based on their past history with the firm, they expect to realize some of the benefit that accrues to the organization.

Belief that there is a high likelihood of success of the KM efforts will have a similar impact on knowledge sharing. Employees will assess the returns they expect from participation in KM as follows. A successful implementation implies that each one will be able to perform their decision tasks more effectively by taking advantage of their colleagues' accumulated knowledge and expertise. With everyone's participation, the expected return will be seen to be positive, equitable and fair.

Lastly, if the importance attributed by their organization to KM efforts is high, knowledge workers will come to believe that their organization is concerned with long term performance sustainability and improvement. The return they expect to get from their participation in KM is its continuing existence and growth. Based on this line of reasoning we propose that:

*H1: Higher organizational commitment leads to higher levels of intent to share knowledge.*

*H2: Higher likelihood of KM success leads to higher knowledge sharing intent.*

*H3: Higher importance of KM leads to higher levels of intent to share knowledge.*

There is a lack of prior research upon which to hypothesize interaction effects. Logically one would not expect sufficient positive outcomes (warranting an investment of effort) unless an initiative was at least deemed important to the organization (main effect), and most likely both important and likely to succeed (interaction effect: why invest scarce resources in an initiative that is unimportant (whimsical) or doomed to failure?) One exception to this logic might occur among employees with unusually high organizational commitment. They might be expected to support any and all organizational initiatives. Thus, while we generally anticipate the likelihood of interactions, the specific nature of potential higher order interactions is arguably complex. That being the case, in this exploratory study, we will not explicitly hypothesize specific interactions.

## **RESEARCH METHOD AND DATA COLLECTION**

A laboratory experimental method was used to test and validate our hypotheses. Participants in the experiment consisted of masters students enrolled in a large highly-ranked business school. All participants were presented with a scenario in which organizational commitment (low and high), likelihood of success of KM efforts (low and high), and importance given to KM by the firm (low and high) were manipulated. In the different scenarios, each participant was placed in the role of a consultant for a nationally known consulting firm. The scenario provided an explanation of a knowledge management initiative/system and the reasons for which individuals participate in KM initiatives. From that followed questions about whether the participants would participate in the KM efforts. The assignment of the different treatments was random. The participants were required to read the case carefully and then indicate on a seven point scale their intent to contribute different types of knowledge to a knowledge repository, namely (1) routine knowledge, (2) technical reports, (3) best practices, (4) expertise, by listing their name in an expertise index, and (5) knowledge about customers and industry contacts. A check was conducted to ensure that the participants correctly understood the manipulations they were presented with. After elimination of incorrect responses, we were left with a total of 119 observations. The 2X2X2 factorial design is summarized in Table 1.

	Low Success		High Success	
	Low Importance	High Importance	Low Importance	High Importance
Low Commitment	15	14	16	15
High Commitment	15	15	14	15

Table 1: Factorial Design

A factor analysis of the above 5 dimensions of knowledge (principal component analysis with varimax rotation) resulted in a single factor consisting of both types of knowledge, namely tacit and explicit, as shown in table 2 (note that Cronbach's Alpha goes down if any item is deleted).

Knowledge Type	Loading
Routine Knowledge	0.772
Technical Reports	0.814
Best Practices	0.806
Expertise Profile	0.712
Customer and Industry Contacts	0.701
Variance explained	68.1%
Cronbach's Alpha	0.814

Table 2: Factor Analysis

A single factor representing intent to share knowledge was constructed using the weights indicated in table 1 and used in the subsequent analysis of variance described in the next section.

## RESULTS AND DISCUSSION

We first ran an Analysis of Variance (ANOVA) with the dependent measure being the weighted factor score, discussed above. The results are provided in table 3. Results indicate that the **importance** placed upon knowledge management initiatives undertaken by the firm impacted the dependent variable.

The other two factors independently (i.e., commitment to the organization and likelihood of success of knowledge management initiatives) do not significantly affect the dependent measure: i.e., the knowledge sharing intent level. However, the interactive effect of importance and success manipulation is significant. Lastly, the interactive effect of all three manipulations (commitment, success and importance) has a significant effect on knowledge sharing.

Null Hypothesis	Wilks Lambda	F-Value (p-value)
No overall organizational commitment effect	0.999	0.01 (0.9135)
No overall success effect	0.980	2.20 (0.1409)
No overall importance effect	0.969	4.61 (0.0340)
No overall commitment*success effect	0.999	0.06 (0.8815)
No overall commitment*importance effect	0.999	0.07 (0.7885)
No overall importance*success effect	0.953	6.04 (0.0161)
No overall commitment*success*importance effect	0.966	5.12 (0.0252)
Overall Model	----	2.549 (0.0180)

Table 3: MANOVA results

The mean levels of sharing for each of the significant effects are shown in table 4. Where applicable, the results of the test of differences in means are indicated. These results can be interpreted as follows. First we have confirmation of the theoretically

and intuitively expected outcome that the importance given by a firm to its knowledge management efforts is a factor that determines whether their employees will show intent to share what they know with their colleagues as the occasion arises. Somewhat less intuitive, (1) the likelihood that the KM efforts will be successful and (2) the level of commitment to the organization do not by themselves impact knowledge sharing. Interestingly, the likelihood of success of KM initiatives when taken in conjunction with the importance given to KM leads to higher levels of sharing than otherwise. Thus, we draw the conclusion that these two measures are synergistic. Formally stated, likelihood of success when jointly considered along with high KM importance increases the impact of importance in a supermodular fashion.

Organizational Commitment	Success	Importance	Mean
Low	High	Low	60.2 *
		High	66.4 *
High	Low	Low	61.9 @
		High	61.0 @
	High	Low	58.4 @
		High	71.8 @@
Low	Low	Low	64.9 **
		High	57.6 **
	High	Low	54.6 **
		High	74.6 ***
High	Low	Low	58.9 **
		High	64.4 **
	High	Low	62.4 **
		High	68.9 ***

**Table 4: Test of Means**

\* mean different at 1% significance      @ and @@ means different at 1% significance

\*\* and \*\*\* mean different (1% level)      \*\*\* and \*\*\* mean not significantly different

The three way interaction is a little more complex. It appears from a comparison of mean knowledge sharing levels that when an individual's organizational commitment is low, knowledge sharing can be induced by a combination of KM success likelihood and emphasis on KM importance. Thus, these two measures can be thought of as counteracting the potentially adverse impact of less than desirable commitment on the part of individuals to their firm and the firm's continuing performance.

## CONCLUSION

To summarize, one of the contributions of this study is the impact of organizational commitment on a firm's KM efforts; this is a factor which has received little attention in the KM research literature thus far. We also have some evidence that likelihood of success of KM along with importance given to KM jointly have a greater effect than the sum of both in isolation. Implications for future research of these reported 2 and 3-way interactions rests with evidence that seemingly logical influences may in actuality register significance only conditional on other variables, i.e., their influences are configural. A research effort that disregards any element of the triad does so at its own risk.

Alavi, M., and Leidner, D. (2001) Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues, *MIS Quarterly*, (25:1) March, p 117-136.

## REFERENCES

1. Ajzen, I. (1991) The Theory Of Planned Behavior, *Organizational Behavior and Human Decision Processes*, (50) p 179-211.

2. Becker, T.E. (1992) Foci and Bases of Commitment: Are they Distinctions worth Making? *Academy of Management Journal*, (35), p 232-244.
3. Blau, P. M. (1964) *Exchange and Power in Social Life*, Wiley, New York, NY.
4. Bock, G., Zmud, R. W., and Kim, Y. (2005) Behavioral Intention Formation in Knowledge Sharing: Examining the role of extrinsic motivators, social-psychological forces, and organizational climate, *MIS Quarterly*, (29:1), p 87-111.
5. Call, D. (2005) Knowledge Management – not Rocket Science, *Journal of Knowledge Management*, (9:2), p 19–30.
6. Constant, D., Kiesler, S., and Sproull, L. (1994) What's Mine is Ours, or Is it? A Study of Attitudes about Information Sharing, *Information Systems Research*, (5:4), p 400-421.
7. Davenport, T.H., and Prusak, L. (1998) *Working Knowledge: How Organizations Manage what they know*, Boston, Harvard Business School Press.
8. Davenport, T.H, De Long, D.W., and Beers, M.C. (1998) Successful Knowledge Management Projects, *Sloan Management Review*, (Winter) p 43-57.
9. Grover, V., and Davenport, T. (2001) General Perspectives on Knowledge Management: Fostering a Research Agenda, *Journal of Management Information Systems*, (18:1), p5 – 21.
10. Huber, G. P. (2001) Transfer of Knowledge in Knowledge Management Systems: Unexplored Issues and Suggested Studies, *European Journal of Information Systems*, (10), p 72-79.
11. Kaplan, S. (2002) Three Steps to a Successful KM Implementation, *CIO Magazine*, [http://www.cio.com/article/31214/Three\\_Steps\\_to\\_a\\_Successful\\_KM\\_Implementation](http://www.cio.com/article/31214/Three_Steps_to_a_Successful_KM_Implementation) (accessed June 1, 2007) July 15.
12. Kollock, P. (1994) The Emergence of Exchange Structures: An Experimental Study Of Uncertainty, Commitment and Trust, *American Journal of Sociology*, (100), p 315-345.
13. Lin, C-P. (2007) To Share or Not To Share: Modeling Tacit Knowledge Sharing, Its Mediators and Antecedents, *Journal of Business Ethics*, (70), p 411-428.
14. Markus, M., L. (2001) Toward a Theory of Knowledge Reuse: Types of Knowledge Reuse Situations and Factors in Reuse Success, *Journal of Management Information Systems*, (18:1), p 57-93.
15. Molm, L. (1994) Dependence and Risk: Transforming the Structure of Social Exchange, *Social Psychology Quarterly*, (57), p 163-189.
16. Molm, L., and Cook, K. (1995) Social Exchange and Exchange Networks, in eds (Cook, K., Fine, G., and House, J. ), *Sociological Perspectives on Social Psychology*, Allyn and Bascon, Boston, p 209-235,.
17. Nonaka, I. (1994) A Dynamic Theory of Organizational Knowledge Creation, *Organization Science*, (5:1) February, p 14-37.
18. Porter, L.W., Steers, R.M., Mowday, R.T., and Boulian, P. (1974) Organizational Commitment, Job Satisfaction and Turnover among Psychiatric Technicians, *Journal of Applied Psychology*, (59), p 603-609.
19. Roloff, M. E., (1981) *Interpersonal Communication: The Social Exchange Approach*, Sage, Beverly Hills CA.
20. Sabherwal, R., and Sabherwal, S. (2005) Knowledge Management using Information Technology: Determinants of Short-term Value, *Decision Sciences*, p 531-567.