



## **KNOWLEDGE SHARING BEHAVIOR IN IT SECTOR**

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### **ABSTRACT**

The purpose of this paper is to examine the factors that promote or discourage knowledge sharing behaviour of IT employees in the organizational context. Survey based instrument is used to gather the responses from employees working in leading IT companies in Chennai. 300 respondents of leading IT company's employees participated in this survey. The results of PLS path analysis demonstrated that intention towards knowledge sharing and perceived behavioural control are significant predictors of knowledge sharing behaviour. Besides, attitudes towards knowledge sharing, subjective norms, perceived behavioural control were found to be significant predictors of knowledge sharing intention. The employees perceptions of reciprocity is positively associated with favorable attitude towards knowledge sharing. The perceptions of loss of knowledge power, Perceived Reputation Enhancement and Perceived Organizational Incentives exerted a negative effect on the attitude. Organizational climate positively influenced knowledge workers subjective norm. Additionally, facilitating tools and technology was positively associated with high levels of perceived behavioral control towards knowledge sharing. The study is limited to IT companies only. The results may not be applicable to other business organizations.

**Key words:** Knowledge Management, Knowledge sharing, Knowledge based organizations,



## **INTRODUCTION TO THE STUDY**

In the contemporary knowledge-intensive economy, knowledge is recognized as a critical strategic resource for the organizations. (Nonaka and Takeuchi, 1995; Conner and Prahalad, 1996; Grant, 1996; Nahapiet and Ghoshal, 1998; Pettigrew and Whip, 1993) indicated the knowledge-based perspective of the firm regards knowledge to be the source of firm's competitive advantage. (Grant, 1996; Spender, 1996; Liebeskind, 1996) stated that Knowledge, the researchers contend, is the source of competitive advantage because it signifies intangible assets that are unique, inimitable and non-substitutable. However, Alavi and Leidner( 2001) observed that the source for competitive advantage resides not in the mere existence of knowledge at any given point of time, but rather in the organization's capability to effectively use the existing knowledge, to generate new knowledge assets and to act upon them. (Davenport & Prusak, 1998; Alavi and Leidner, 2001; Osterloh et. al., 2000; Zack, 1999) stressed that to leverage and manage organizational knowledge resources, organizations are adopting knowledge management (KM) initiatives and are investing heavily in information and communication technologies in the form of knowledge management systems (KMS). Alavi and Leidner (1999) highlighted that Knowledge management rallies around building the organization's ability to acquire, organize and diffuse the knowledge throughout the organization with the objective of improving its effectiveness, efficiency and competitiveness.

According to (Nonaka and Takeuchi, 1995; Alavi and Leidner, 2001), a key enabler of knowledge management is *knowledge sharing*. (Argote and Ingram, 2000; Gold et al., 2001) indicated that many organizations assert is crucial to exploiting core competencies and to achieve sustained competitive advantage. Prahalad and Hamel (1990) observed that organization's core competencies reside in the collective learning of the organization be it production, marketing or technological capabilities, that are inimitable by the competitors. (Bock & Kim, 2002; Pan & Scarbrough, 1998; O'Dell & Grayson, 1998; Osterloh et al., 2000) mentioned that to allow collective learning and to grow knowledge assets, an organization must develop an effective knowledge sharing process and encourage its employees and partners to share knowledge about customers, competitors, markets, products and so forth.



## **REVIEW OF LITERATURE**

Connelly and Kelloway (2003) investigated a number of factors that impact employee's perceptions of a knowledge sharing culture. The identified factors can be broadly categorized into groups: organizational factors and individual factors. Organizational factors include individuals' perceptions regarding management support for knowledge sharing, their perceptions about a positive social interaction culture, organization's size, and the presence of technology that can facilitate knowledge sharing. Individual factors include age, gender and organizational tenure. The research findings suggest perceptions about management's support for knowledge sharing, and perceptions of a positive social interaction culture to be significant predictors of a positive knowledge sharing culture. Organizational size was negatively related to positive knowledge sharing culture such that smaller organizations were linked more with positive knowledge sharing culture. Lastly, gender was found to be significant moderator such that female participants needed more positive social interaction culture before they would perceive a knowledge sharing culture as positive in contrast to their male counterparts.

Using Nonaka's model and adapting a process oriented perspective, Lee et al., (2003) developed an integrative research model that interconnects knowledge management enablers and processes with organizational performance. The findings of the empirical examination of the model suggest that collaboration, trust, learning and centralization affect knowledge creation and sharing process. Researchers emphasize the significance of trust based culture for effective knowledge creation and note that organizations may have difficulty building a knowledge creating environment due to the lack of adequate culture in spite of their well built IT. The importance of culture for effective KM is also highlighted by Janz et al's., (2003) theoretical model which explains the relationships between knowledge related activities and organizational and individual characteristics that promote the creation and dissemination of knowledge throughout organization. Researchers note that knowledge flow in an organization depends on the trust in the organization as a whole as well as the specific individuals and suggest that organizations provide a climate of trust built on culture that encourages and provides incentives for sharing knowledge in all its manifestations such as learning, mentoring, collaboration, sharing ideas and stories etc.



## **RESEARCH HYPOTHESIS**

H<sub>1</sub> - A higher level of intention towards knowledge sharing will lead to greater sharing of knowledge.

H<sub>2</sub> - A higher level of behavioural control towards knowledge sharing will lead to greater sharing of knowledge.

H<sub>3</sub>- A more favourable attitude toward knowledge sharing will lead to greater intention to share knowledge.

H<sub>4</sub> - A higher level of subjective norms towards knowledge sharing will lead to greater intention to share knowledge.

H<sub>5</sub> - A higher level of behavioural control towards knowledge sharing will lead to greater intention to share knowledge.

H<sub>6</sub> – Perceived organizational incentives have a positive effect on the knowledge worker's attitude towards knowledge sharing

H<sub>7</sub> – Perceived Reciprocal benefits have a positive effect on the knowledge worker's attitude towards knowledge sharing

H<sub>8</sub> - Perceived reputation enhancement has a positive effect on the knowledge worker's attitude towards knowledge sharing

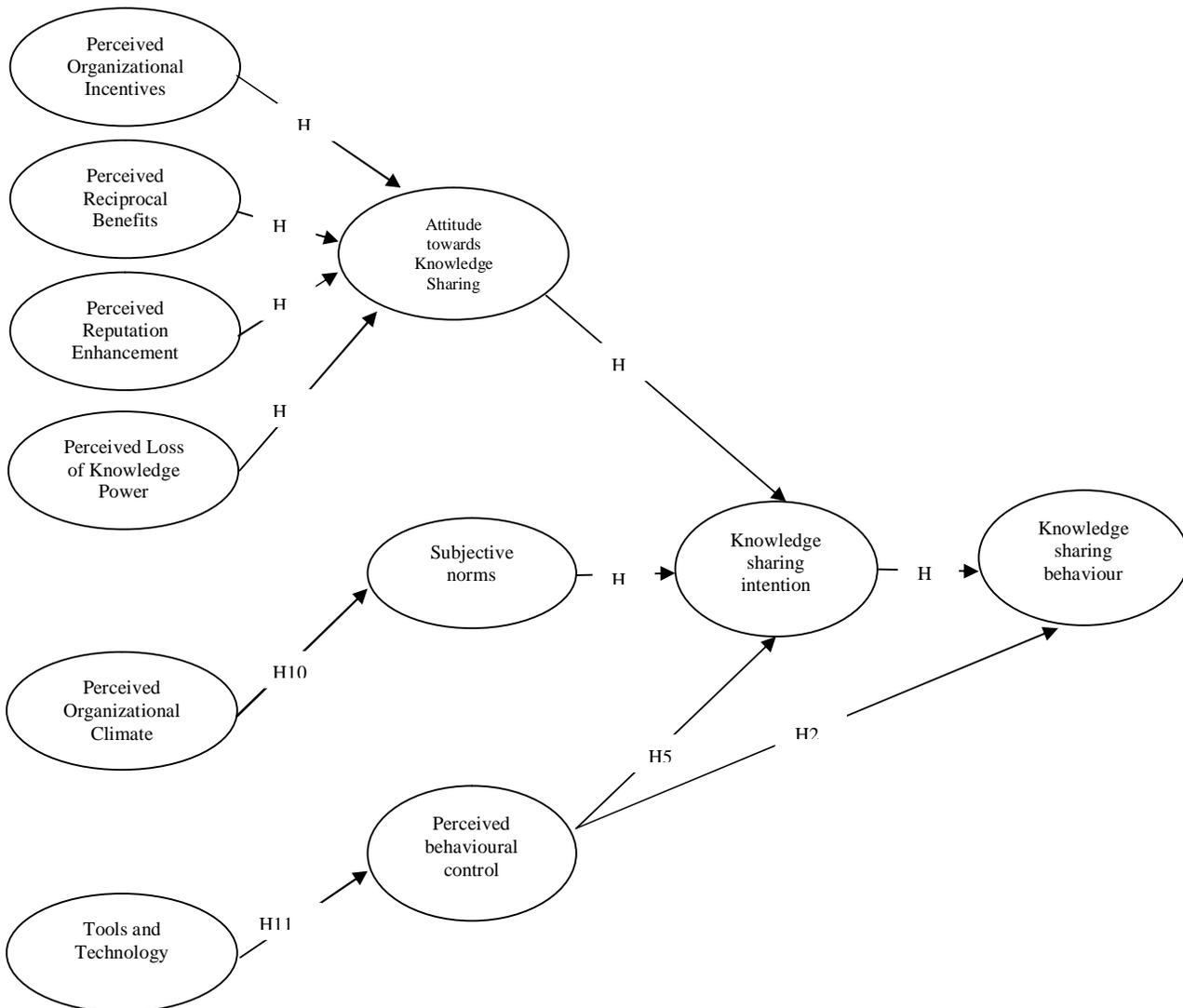
H<sub>9</sub> – Perceived loss of knowledge power has a negative effect on the knowledge worker's attitude towards knowledge sharing.

H<sub>10</sub> - A higher level of perceived organizational climate characterized by fairness, innovativeness and affiliation will lead to greater subjective norm to share knowledge.

H<sub>11</sub> - Tools and Technology have a positive effect on knowledge worker's perceived behavioral control towards knowledge sharing.

The theoretical relationships presented in Hypotheses 1 to 11 are depicted in Figure 1.

**Figure 1: Proposed Research Model**





## **NEED FOR THE STUDY**

(Bock et al., 2005; Connelly and Kelloway, 2003; Ruggles, 1998) indicated Knowledge sharing has been recognized as a positive force for the survival of an organization. Yet, the factors that promote or discourage knowledge sharing behaviour in the organizational context are poorly understood. (Hall, 2001; Smith and Farquhar, 2000; Prusak, 1999; Boisot and Griffiths, 1999) expressed that Identification of factors that motivate employees to share knowledge for the benefit of other employees and the firm is regarded as a high priority issue for organizations. While the factors that influence knowledge sharing behaviour of employees can be speculated, it is crucial that we carefully examine the underlying antecedents of knowledge sharing, if we really want to add value to the practitioners of knowledge sharing. To date, little empirical research exists on what environments and mechanisms are conducive to knowledge sharing. (Andrews & Delahaye 2000; Hinds & Pfeffer 2003) stated that even much less empirical research exists on the deeper individual issues that shape individuals beliefs, attitudes, intentions, and behaviour in knowledge sharing. The studies of Bock et al., 2005 and Ryu et al., 2003 showed some encouraging developments. However, even these studies did not measure explicitly employee's actual knowledge sharing behaviour. Citing the growing significance of knowledge sharing to the success of knowledge management and to organizational survival, several researchers have called for further investigation of the factors that shape knowledge sharing behaviour in the organizational context. Besides, there is a lack of understanding of the factors that shape knowledge sharing behavior in organizational context.

## **RESEARCH OBJECTIVES**

- a) To examine influence of attitude, subjective norms, perceived behavioural control on behavioural intention to share knowledge.
- b) To examine the impact of knowledge sharing intention and perceived behavioural control on knowledge sharing behaviour of IT Employees.
- c) To test and validate the proposed research model.



## **RESEARCH METHODOLOGY**

### **Universe**

The study was conducted in four leading IT companies in Chennai. The population for this study consisted of all the employees in four leading IT companies in Chennai.

### **Determination of Sample size**

A pilot study was conducted among 50 respondents and the standard deviation of the items was found to be 0.452. Hence the sample size was determined to be 300 \*. Since the estimated sample size is 300, a sample of 75 employees were drawn from each company using simple random sampling method.

$$* \text{ The sample size } n = (Z * SD / e)^2$$

### **Data Collection**

Data were collected from both the primary and secondary sources. The questionnaire consists of two parts namely Part I and Part II. The part I contained 9 questions on Demographic factors of users such as age, gender, Marital Status, educational qualifications, experience, department, designation, Company and Annual Income. Second part consists of the conceptual factors such as Perceived Organizational Incentives with 5 questions, Perceived Reciprocal Benefits with 3 questions, Perceived Reputation Enhancement with 6 questions, Perceived Loss of Knowledge Power with 4 questions, Perceived Organizational Climate with 10 questions, Tools and Technology with 9 questions, attitudes with 5 questions, subjective norms with 5 questions, perceived behavioural control with 6 questions, intention with 7 questions and knowledge sharing behaviour with 7 questions. The scaling values are 1- Strongly Agree; 2- Agree; 3- Neutral; 4- Disagree; 5- Strongly Disagree. Secondary data were obtained from Journals and Web portals.

## **DATA ANALYSIS**

### **Reliability**

Gaur and Gaur (2006) defined that reliability refers to the consistency of the measurement. That is the degree to which an instrument gives the same numeric value when the



measurement is repeated under same conditions with same subjects. The study has used ‘Cronbach alpha coefficient’ for assessing the reliability of the scale. Generally, according Nunnally (1978) Cronbach alpha level of 0.60 or above is considered to be acceptable for construct.

Table 1. Reliability and Validity

Dimensions	No. of items	Cronbach's Alpha value	AVE value	Composite Reliability
Perceived Organizational Incentives towards attitudes	5	0.75	0.42	0.78
Perceived Reciprocal Benefits towards attitudes	3	0.65	0.53	0.77
Perceived Reputation Enhancement towards attitudes	6	0.77	0.45	0.82
Perceived Loss of Knowledge towards attitudes	4	0.86	0.77	0.90
Perceived Organizational Climate towards Subjective Norms	10	0.88	0.49	0.90
Tools and Technology towards Perceived behavioural control	9	0.79	0.36	0.82
Attitudes towards knowledge sharing	5	0.64	0.38	0.67
Subjective norms towards knowledge sharing	5	0.84	0.62	0.89
Perceived behavioral control towards knowledge sharing	6	0.69	0.49	0.81
Intention towards knowledge sharing	7	0.77	0.44	0.84
Knowledge sharing behaviour	7	0.76	0.43	0.83
<b>Total Items</b>	<b>67</b>			

Table 1 presents that all the constructs namely Perceived Organizational Incentives towards attitudes, Perceived Reciprocal Benefits towards attitudes, Perceived Reputation Enhancement towards attitudes, Perceived Loss of Knowledge towards attitudes, Perceived



Organizational Climate towards Subjective Norms, Tools and Technology towards Perceived behavioural control, Attitudes towards knowledge sharing, Subjective norms towards knowledge sharing, Perceived behavioural control towards knowledge sharing, Intention towards knowledge sharing and Knowledge sharing exhibit adequate reliability with internal consistency values of 0.75, 0.65, 0.77, 0.86, 0.88, 0.79, 0.64, 0.84, 0.69, 0.77 and 0.76 respectively which is greater than recommended alpha value of 0.60.

### **Validity**

John Adam et al (2007) stated that validity refers to the accuracy of the research instrument. That is, the measuring instrument used in this study actually measures the property it is supposed to measure. It is believed that validity is more important than reliability, because if an instrument does not accurately measure the property, it is supposed to measure, there is no reason to use it even if it measures consistently.

### **Convergent Validity**

Convergent validity of all the constructs was examined using the measure of Average Variance Extracted (AVE) that is the average variance shared between a construct and its items (Fornell & Larcker, 1981). (Chin 1995 and 1998, Chin et al 1999 & 2003) indicated that a construct with an AVE of over 0.5 is expected to have adequate convergent validity. In some cases, values up to 0.40 of AVE and 0.60 of composite reliability are also considered to be acceptable if they are central to the model.

The Average Variance Extracted (AVE) of each of the study constructs is presented in Table 1. The AVE of each construct was over 0.40 and composite reliability of each contract was over 0.60. Therefore, convergent validity of the study constructs was verified.

### **Validation of Models through Partial Least Square –Path Modeling (PLS-PM)**

In order to test the proposed Hypothesis, this study employed a construct level Correlation analysis as an initial verification. Visual PLS is used to compute the constructs scores. Using these constructs scores as a base, the study explored the relationship between the variables using SPSS package 16.0. The construct correlation has been presented in the table 2.



**Table 2. Construct Level Correlation of Model**

Hypothesis	Independent variables	Dependent Variable	Pearson's Correlation	Significance level at 1 %
H1	Intention towards knowledge sharing	Knowledge sharing behaviour	0.673	0.000
H2	Perceive behaviour control towards knowledge sharing		0.656	0.000
H3	Attitude towards knowledge sharing	Intention towards knowledge sharing	0.707	0.000
H4	Subjective Norms towards knowledge sharing		0.702	0.000
H5	Perceive behaviour control towards knowledge sharing		0.668	0.000
H6	Perceived Organizational Incentives	Attitude towards knowledge sharing	0.404	0.000
H7	Perceived Reciprocal Benefits		0.49	0.000
H8	Perceived Reputation Enhancement		0.495	0.000
H9	Perceived Loss of Knowledge Power		0.187	0.000
H10	Perceived Organizational Climate	Subjective norms	0.343	0.000
H11	Tools and Technology	Perceived behavioural control	0.549	0.000

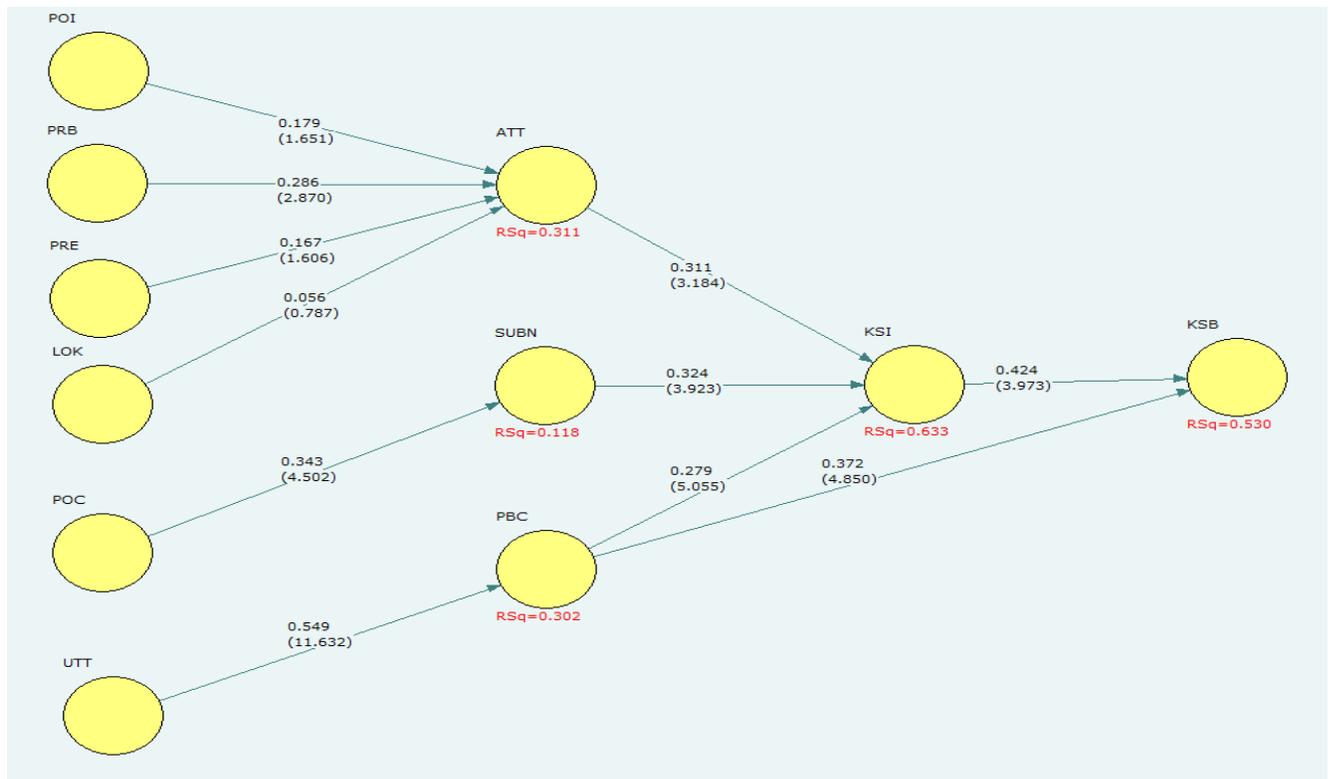
The correlation table indicates that there exists a positive relationship between knowledge sharing intention and knowledge sharing behaviour, perceived behavioural control and knowledge sharing behaviour, attitudes towards knowledge sharing and knowledge sharing intention, subjective norms towards knowledge sharing and knowledge sharing intention, perceived behavioural control towards knowledge sharing and knowledge sharing intention, Perceived Organizational Incentives and Attitude towards knowledge sharing, Perceived



Reciprocal Benefits and Attitude towards knowledge sharing, Perceived Reputation Enhancement and Attitude towards knowledge sharing, Perceived Loss of Knowledge Power and Attitude towards knowledge sharing, Perceived Organizational Climate and Subjective norms and Finally Tools and Technology and Perceived behavioural control with the R value of 0.673, 0.656, 0.707, 0.702, 0.668, 0.404, 0.49, 0.495, 0.187, 0.343, 0.549 respectively. The correlation coefficient for the above relationship is significant at 0.001% level.

Staples et al (1998) indicated that through the bivariate correlation are significant between the construct, it is still needed to assess the path coefficient in the structural model as a causal effect. (Efron 1979, Efron and Gond, 1983) expressed that in order to ensure that path coefficients are statistically significant, this study used a bootstrap and jack knife re-sampling procedures to estimate standard errors for calculating values using visual PLS. The results are examined and the t-statistic value at the 0.05 level is 1.96. If the t-statistic value is greater than 1.96, the path is significant.

**Figure 2. Structural Equation Results of Model**





**Table 3 : Bootstrap Summary of Model and Hypothesis Result**

<b>Hypothesis</b>	<b>Entire sample estimate</b>	<b>Mean of sub sample</b>	<b>Standard error</b>	<b>t-Statistic</b>	<b>R square value</b>	<b>Result</b>
H1	0.424	0.4148	0.1067	3.9735	<b>0.530</b>	<b>Significant</b>
H2	0.372	0.3833	0.0767	4.8504		<b>Significant</b>
H3	0.311	0.3054	0.0977	3.1836	<b>0.633</b>	<b>Significant</b>
H4	0.324	0.3252	0.0826	3.9225		<b>Significant</b>
H5	0.279	0.2856	0.0552	5.0548		<b>Significant</b>
H6	0.179	0.2084	0.1084	1.6514	<b>0.311</b>	Insignificant
H7	0.286	0.2826	0.0996	2.8702		<b>Significant</b>
H8	0.167	0.1934	0.104	1.6061		Insignificant
H9	0.056	0.1181	0.0712	0.787		Insignificant
H10	0.343	0.3699	0.0762	4.5021	<b>0.118</b>	<b>Significant</b>
H11	0.549	0.5873	0.0472	11.6317	<b>0.302</b>	<b>Significant</b>

As presented in figure 2 and table 3 ,the path linking knowledge sharing intention to knowledge sharing behaviour was found to be significant at 0.05 level (beta=0.424 t= 3.9735), indicating intention has a significant effect on knowledge sharing behaviour. It explained a variation of 53 percent in knowledge sharing behaviour. This supported for H1.

The path linking perceived behavioural control to knowledge sharing behaviour was significant at 0.05 level (beta=0.372, t= 4.8504), indicating perceived behavioural control has a significant effect on knowledge sharing behaviour. This provided support for H2.



The path linking attitudes towards knowledge sharing to knowledge sharing intention was found to be significant at 0.05 level ( $\beta=0.311$ ,  $t= 3.1836$ ), indicating attitudes has a significant effect on knowledge sharing intention. This provided support for H3.

The path linking subjective norms to knowledge sharing intention was significant at 0.05 level ( $\beta=0.324$ ,  $t= 3.9225$ ), indicating subjective norms has significant effect on knowledge sharing intention. This provided support for H4.

The path linking perceived behaviour control to knowledge sharing intention was found to be significant at 0.05 level ( $\beta=0.279$ ,  $t= 5.0548$ ), indicating perceived behaviour control has a significant effect on knowledge sharing intention. This provided support for H5.

The attitude towards knowledge sharing, subjective norm and perceived behavioural control collectively explained about 63 percent of the variance in the knowledge sharing intention to share knowledge.

The path linking Perceived Organizational Incentives to Attitude towards knowledge sharing was not significant at 0.05 level ( $\beta=0.179$ ,  $t= 1.6514$ ), indicating subjective norms has no significant effect on Attitude towards knowledge sharing but the correlation between these two dimension was significant. This did not provide support for H6.

The path linking Perceived Reciprocal Benefits to Attitude towards knowledge sharing was significant at 0.05 level ( $\beta=0.286$ ,  $t= 2.8702$ ), indicating subjective norms has significant effect on Attitude towards knowledge sharing. This provided support for H7.

The path linking Perceived Reputation Enhancement to Attitude towards knowledge sharing was not significant at 0.05 level ( $\beta=0.167$ ,  $t= 1.6061$ ), indicating subjective norms has no significant effect on Attitude towards knowledge sharing but the correlation between these two dimension was significant. This did not provide support for H8.

The path linking Perceived Loss of Knowledge Power to Attitude towards knowledge sharing was not significant at 0.05 level ( $\beta=0.056$ ,  $t= 0.787$ ), indicating subjective norms has no significant effect on Attitude towards knowledge sharing but the correlation between these two dimension was significant. This did not provide support for H9. The Perceived Organizational Incentives, Perceived Reciprocal Benefits, Perceived Reputation Enhancement



and Perceived Loss of Knowledge Power collectively explained about 31 percent of the variance in the Attitude towards knowledge sharing to share knowledge.

The path linking Perceived Organizational Climate to Subjective norms was found to be significant at 0.05 level ( $\beta=0.343$   $t= 4.5021$ ), indicating intention has a significant effect on Subjective norms. It explained a variation of 11 percent in Subjective norms. This supported for H10.

The path linking Tools and Technology to Perceived behavioural control was significant at 0.05 level ( $\beta=0.549$ ,  $t= 11.6317$ ), indicating perceived behavioural control has a significant effect on Perceived behavioural control. It explained a variation of 30 percent in Perceived behavioural control. This provided support for H11.

## **DISCUSSIONS**

### **Profile of respondents**

87 percent of the respondents were between the age group of 21-30 years. 65 percent of the respondents were male. 93 percent of the respondents had an experience for less than 5 years. 36 of respondents were working in the department of testing/quality. About 63 percent of respondent were in cadre of Software engineer. About 60 percents of respondent were drawing salary between 2 to 4 lakhs Per annum.

### **PLS Analysis discussion**

The objective of this research study was to enhance our collective understanding of the factors affecting knowledge sharing behaviour of knowledge workers. The results from the field survey of 300 IT professionals provide empirical support for the overall structure theorized in the research model. Of the 11 hypothesis, 8 were supported. The results indicate that the significant predictors of knowledge sharing behaviour are: intention towards knowledge sharing, attitude towards knowledge sharing, subjective norm towards knowledge sharing, perceived behavioural control towards knowledge sharing, Reciprocal Benefits towards knowledge sharing, Organizational Climate towards knowledge sharing and Tools and Technology towards knowledge sharing. These predictors explained about 31 percent of the variance in the Attitude to share knowledge, 11 percent of the variance in the Subjective Norms to share knowledge, 30



percent of the variance in the perceived behavioural control to share knowledge, 63 percent of the variance in the behavioural intention to share knowledge and 53 percent variance in the actual knowledge sharing behaviour. The findings are a great improvement over previous studies on knowledge sharing behaviour (Bock and Kim, 2002; Bock et al., 2005; Ryu et al., 2003; Lin et al., 2004).

### **Knowledge Sharing Behaviour**

The study theorized that knowledge sharing behaviour of knowledge workers are to be collectively determined by intention towards knowledge sharing and perceived behavioural control. As theorized, intention towards knowledge sharing and perceived behavioural control emerged as significant predictors of actual knowledge sharing behaviours. Intention towards knowledge sharing had a significant effect on knowledge sharing behaviour with a path coefficient of 0.42. Perceived behavioural control also had a substantial effect on knowledge sharing behaviour with a path coefficient of 0.37. Collectively, intentions towards knowledge sharing and perceived behavioural control explained about 53 percent of the variance in knowledge sharing behaviour.

The finding that intention towards knowledge sharing was positively and significantly related to knowledge sharing behaviour coincides with the findings of prior research on knowledge sharing using self-reported survey measures (Bock and Kim, 2002). However, while Bock and Kim's study explained only 1.6 percent of the variance in the knowledge sharing behaviour, this study explained about 53 percent of the variance in knowledge sharing behaviour.

The significant impact of perceived behavioural control on knowledge sharing behaviour in this study suggests that knowledge sharing is not largely under volitional control. Knowledge workers are inclined to engage in knowledge sharing behaviour to the extent they have the time, resources and opportunities to do so.

### **Knowledge Sharing Intention**

The study hypothesized the predictors of knowledge sharing intention are to be: attitude towards knowledge sharing, subjective norm and perceived behavioural control. As



hypothesized, attitude, subjective norm and perceived behavioural control emerged as significant predictors of intention towards knowledge sharing. These findings are consistent with the findings of prior TPB related research (Taylor and Todd, 1995; Mathieson, 1991; Bock and Kim, 2002, Bock et al., 2005; Ryu et al., 2003; Lin et al., 2004).

Attitudes towards knowledge sharing had a strong effect on the behavioural intention to share knowledge with a path coefficient of 0.31. The high contribution of attitude towards knowledge sharing suggests that knowledge workers with favorable attitudinal disposition are more likely to engage in knowledge sharing.

The subjective norms towards knowledge sharing have much impact on knowledge sharing intention with a path coefficient of 0.32. So, the significance of subjective norm implies that knowledge workers are consider management and peer group expectations of knowledge sharing to be important. Knowledge workers are likely to engage in knowledge sharing when they perceive that their management and peer group value knowledge sharing.

The perceived behavioural control towards knowledge sharing had a strong effect on the behavioural intention to share knowledge with a path coefficient of 0.27. The impact of perceived behavioural control on the intention towards knowledge sharing indicates that knowledge workers are motivated to engage in knowledge sharing to the extent they believe they have the time, resources and opportunities to do so. Collectively, the attitudes towards knowledge sharing, subjective norms and perceived behavioural control explained about 63 percent of the variance in the behavioural intention to share knowledge.

### **Attitude towards knowledge sharing**

The study applied a variety of extrinsic and intrinsic motivational drivers such as perceived organizational incentives, perceived reciprocal benefits, perceived reputation enhancement and perceived loss of knowledge power as antecedents to attitude. Of these antecedents, only one of them emerged as significant predictors of knowledge workers attitude towards knowledge sharing. That is perceived reciprocal benefits. Perceived organizational incentives, perceived reputation enhancement and perceived loss of knowledge power were found not to have a substantial impact in the analysis.



As hypothesized, perceived organizational incentives had not significant attitude towards knowledge sharing with a path coefficient of 0.179. From the findings the social and organizational context influences individual's actions by compelling them to rise above their initial impulses to act from self-interest to consider the impacts of their actions in the long run. Specifically, the social and organizational context affects information exchange through the social concerns individuals have for such things as maintaining future relationships with coworkers, the balance of power, reputation, and the consequences of their actions on other desirable goals.

However, perceived reciprocal benefits had a significant but moderate effect on attitude towards knowledge sharing with a path coefficient of 0.286. The significance of perceived reciprocal benefits provides some indication that knowledge workers are likely to engage in knowledge sharing with the expectation of receiving future help from others in return for sharing knowledge.

The perceived reputation enhancement had not significant towards knowledge sharing attitude with a path coefficient of 0.167. This finding suggests that knowledge workers are not like to engage in knowledge sharing with a desire to build their professional reputation. The perceived loss of knowledge power is also not significant attitude towards knowledge sharing with a path coefficient of 0.056. This finding suggests that the more the knowledge workers hold beliefs that sharing knowledge reduces their power within the organization the less likely they are to engage in knowledge sharing. Collectively, attitude towards knowledge sharing control explained about 31 percent of the variance in knowledge sharing behaviour.

### **Subjective norms**

The study hypothesized the Organizational climate characterized by three dimensions: affiliation, innovation and fairness were applied as an antecedent to subjective norm. Similar to Bock et al., (2005) study, organizational climate was found to have substantial impact on subjective norm with a path coefficient of 0.343. The higher the perceptions of organizational climate to be conducive of knowledge sharing, the higher was the formation of subjective norm



towards knowledge sharing. Organizational climate explained about 11 percent of variance in subjective norm towards knowledge sharing.

### **Perceived behavioral control**

Tools and technology that facilitate knowledge sharing demonstrated a strong positive relationship with perceived behavioral control towards knowledge sharing at 0.549. This finding suggests that the knowledge workers are inclined to use tools and technology to share knowledge to the extent they have high perceptions regarding their availability and the ease of use. Tools and technology explained about 30 percent of the variance in the perceived behavioral control. This is a significant finding since organizations are investing heavily in the development and acquisition of information and communication technologies in the form of knowledge management systems.

### **IMPLICATIONS FOR PRACTICE**

From a pragmatic perspective, the results of the study have many implications for organizations initiating or striving to promote knowledge sharing behaviors of their employees. First, prior to launching knowledge sharing initiatives, organizations should create an environment that is conducive to knowledge sharing. Organizations should develop and nurture cultural norms, practices and processes that build trust, collective cooperation and positive social interactions among the employees. Work context exemplified by high levels of trust, collective cooperation, formal and informal networks facilitate knowledge exchanges among employees.

Second, management should demonstrate its support for employees. Supportive organizational climate and intensified management commitment towards knowledge sharing promotes knowledge sharing behaviors. The study findings indicate that employees are likely to be influenced by the expectations of management and peer group in deciding to engage in knowledge sharing. So it may even be appropriate to exert some pressure on employees to share knowledge through the social influence of top management and peer group.



Third, the results of the study suggest that attitude towards knowledge sharing behaviour affects intention. The organizations should promote knowledge sharing behaviours by managing factors that influence employee's attitude towards knowledge sharing.

Fourth, organizations should reconsider knowledge sharing incentives based on economic incentives. As Kohn (1993) observes economic incentives succeed only at creating temporary compliance. They do not produce lasting commitments. They even undermine the intrinsic motivation of employees by promoting self-interested behavior (Wasko and Faraj, 2000). As such, organizations should reevaluate the usage of economic incentives to motivate employees to share knowledge.

Fifth, organizations should employ knowledge management systems to facilitate collaborative work and support knowledge sharing. The results of the study indicate that employee's perception of facilitating tools and technology is an important factor in deciding to engage in knowledge sharing. Organizations should enhance the level of the employee's perception of facilitating tools and technology by employing appropriate systems that are easy to use.

## **LIMITATIONS AND FURTHER RESEARCH**

There are few limitations to this research study. First, the research setting for the current study was IT companies in a particular city. The results of this study can be regarded as being representative of the perceptions of the general knowledge work force. To further increase the generalizability however, future research should replicate the study's findings with larger samples and in different contexts.

Second, the research setting used in this study made it difficult to obtain objective measures of knowledge sharing behaviors. As such, the current study used perceptual measures. The survey instrument relied on self-reported measures, in which the findings are dependent upon employees responses regarding his/her knowledge sharing behavior rather than on direct observation of such behavior. Self reports of behavior are often criticized as being tainted with response bias, inaccuracy and so forth and as such are regarded as poor indicators of actual behavior. Also, in the current study, the measures for knowledge sharing behavior, although



perceptual are recorded using a five point frequency scale which is believed to mitigate the bias associated with self reports. Never the less, future research should investigate the research model using objective measures for knowledge sharing behaviors to make the findings of this study more robust.

Third, the study focuses on some of the motivating factors that influence knowledge sharing behaviours of knowledge workers. As such, the antecedents explain only a portion of the variance in the dependent variable (actual knowledge sharing behaviour). There may be other factors which are not part of this study but may have significant influence on knowledge sharing behaviours. Future research should add other constructs such as self-efficacy, personality traits, leadership styles, trust, organizational commitment, perceived ownership of knowledge, task inter dependence etc to the research model to determine their influence on knowledge sharing behaviours.

Finally, the study's findings are based on the modest sample size of 300 respondents. Although PLS Graph handles small sample sizes and generates valid results, a larger sample with more statistical power would have permitted me to use other covariance based structural equation modelling tools such as LISREL. Future research should verify the findings of this research study using covariance based tools.

## **CONCLUSIONS**

Knowledge sharing has been identified as the key enabler of knowledge management. To leverage knowledge resources and to support knowledge sharing, organizations are employing knowledge management systems. While knowledge management systems are important, practical implementations have shown that the mere availability of technology does not guarantee that knowledge will be shared. Citing the growing significance of knowledge sharing to the success of knowledge management and to the survival of organization, both academicians and practitioners have called for the identification of factors that promote or discourage knowledge sharing behaviours in the organizational context. Using a field survey of 300 employees, the theoretical model was validated within the context of a single empirical study. The findings provided significant statistical support for the research model accounting for about



31 percent of the variance in the attitude towards share knowledge, 11 percent of the variance in the subjective norm to knowledge sharing, 30 percent of behavioural control to share knowledge, 63 percent of the variance in the behavioural intention to share knowledge and 53 percent variance in the actual knowledge sharing behaviour. 8 of the 11 hypothesized relationships were supported. Knowledge sharing behaviour was predicted by intention towards knowledge sharing and perceived behavioural control. Knowledge sharing intention in turn was predicted by attitude towards knowledge sharing, subjective norm and perceived behavioural control. Attitude towards knowledge sharing was predicted by Perceived Organizational Incentives, Perceived Reciprocal Benefits, Perceived Reputation Enhancement, and Perceived Loss of Knowledge Power. Subjective norm was predicted by Perceived Organizational Climate. Perceived behavioural control was predicted by Tools and Technology. Based on the findings, the study discussed theoretical and practical implications for sharing knowledge in the work context. Overall, the results of the study advance prior research in the area of knowledge sharing by shedding light on the determinants of knowledge sharing behaviour of IT employees. The research model deepens our collective understanding of the underlying psychological processes that induce knowledge sharing behaviours. In addition to contributing to theory, the findings of the study also yield insights for practice. The insights could be used by IT organisations in developing realistic environments that are conducive to knowledge sharing.

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