

Assessing the Relationship between Organisational Commitment and Knowledge Sharing Behaviour

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ABSTRACT

Knowledge sharing is one important activity in knowledge management. It enables knowledge to be created, as well as acquired and used by others. However, there are reasons to believe that employees are reluctant to share knowledge with their colleagues. Thus, in order to ensure the success of knowledge management effort, knowledge sharing among employees must be encouraged. Though studies had shown that there are many factors that might affect knowledge sharing behaviour, this paper aims at exploring the relationship between organisational commitment and knowledge sharing behaviour. Regression analysis on data gathered from a sample of 114 R&D employees' indicated that affective commitment and normative commitment were significant predictors of tacit knowledge sharing. Additionally, explicit knowledge sharing was significantly and positively predicted by affective commitment. Implications, limitations, and suggestions for future research are highlighted.

Keywords: *Knowledge sharing behaviour; organisational commitment; research and development (R&D) employees; Malaysia.*

ABSTRAK

Perkongsian ilmu merupakan satu aktiviti yang sangat penting dalam pengurusan ilmu. Aktiviti ini membolehkan lebih banyak ilmu dijana, serta diperolehi dan digunakan oleh orang lain. Walau bagaimanapun, terdapat beberapa perkara yang menyarankan bahawa pekerja amat sukar berkongsi ilmu dengan rakan sekerja mereka. Oleh yang demikian, untuk memastikan kejayaan dalam usaha pengurusan ilmu, perkongsian ilmu dalam kalangan pekerja perlu digalakkan. Sungguhpun kajian menunjukkan terdapat banyak faktor yang mungkin mempengaruhi gelagat perkongsian ilmu, kajian ini meneroka hubungan antara komitmen organisasi dan gelagat perkongsian ilmu. Analisis regresi daripada data yang dikumpulkan dari 114 pekerja R&D mendapati hubungan yang signifikan antara komitmen afektif dan normatif dan perkongsian ilmu tasit. Di samping itu, perkongsian ilmu eksplisit hanya mempunyai hubungan yang positif dan signifikan dengan komitmen afektif.

INTRODUCTION

At the turn of the millennium, one of the management issues that has received a lot of attention is the importance of knowledge as a source of competitive advantage for all types of organisations. As a result of that, managing knowledge has become an important agenda for most organisations. The theoretical basis for this phenomenon is known as the knowledge-based view of the firm (Kogut & Zander, 1992), and this theory postulated that knowledge based resources play a very important role in increasing the sustainable competitiveness of the firm due to its strategic characteristics (Spender, 1996).

Based on the work of Davenport and Prusak (1998), knowledge management is described as the process of capturing, storing, sharing, and using knowledge. In addition, Bergeron (2003) maintained that it is a deliberate, systematic business optimisation strategy that selects, distils stores, organises, packages, and communicates information essential to the business of a company in a manner that improves employee performance and corporate competitiveness. Wiig (1995), on the other hand argued that knowledge management is a group of well-defined procedures and methods used to extract key knowledge from various operations to assist in product development and strategies, and to improve human resource management practice. Based on these definitions, it is clear that knowledge management is a must for all organisations. In fact, for most organisations the main goal of knowledge management is to create knowledge so that organisational members can learn from each other in order to enhance the competitiveness of the organisation (Liu & Tsai, 2007). Hence, for this purpose knowledge sharing has received a lot of attention because through knowledge sharing, new knowledge could be created, acquired by other members of the organisation, and stored for future use.

Studies on knowledge sharing have been quite rampant. Some studies focused on the technological aspects of knowledge sharing,

mainly on the tools that facilitate this behaviour. For example studies by Liu and Tsai (2008), and Nor Farzana and Mohd Syazwan (2007). Such studies have shown that certain aspects of the technology need to be present in order for it to be used for knowledge sharing. Most importantly, numerous studies have also argued that the social aspect of knowledge sharing should not be ignored (Cook, 1999; Ipe, 2003). This is because knowledge sharing requires the participation of the people who possesses the knowledge, hence, there is a need to encourage this behaviour among employees.

Objective of the Study

Throughout their careers, employees usually accumulate a wealth of information and knowledge about their jobs, and with that they develop efficiencies that make them more productive. However, the fact that employees are reluctant to share their job-related knowledge with their colleagues had been highlighted by several researchers (Michailova & Husted, 2003; Riege, 2005). Nonetheless, previous literature had also emphasised the importance of organisational commitment in motivating employees to share knowledge (Hislop, 2003; Jarvenpaa & Staples, 2001). Therefore, it is imperative to understand the role of organisational commitment, one of the most researched job-related attitudes, in encouraging knowledge sharing behaviour among the employees of organisations.

In fact, the focus of the current study was to determine whether organisational commitment is an important variable in explaining knowledge sharing behaviour. Unfortunately, to date studies that link organisational commitment, especially each of its dimensions, to knowledge sharing is still scanty. Henceforth, the objective of this study was to explore the influence of organisational commitment, mainly affective, normative, and continuance commitment (Allen & Meyer, 1990), on two types of knowledge sharing behaviour, which are tacit and explicit knowledge sharing behaviour.

LITERATURE REVIEW

Knowledge and Job-related Knowledge

First and foremost, it is important to distinguish between data, information, and knowledge. Data is commonly described as a set of discrete, objective facts about events; while information is a collection of data and associated explanations, interpretations and other textual material concerning a particular object, event or process. Knowledge on the other hand, is a more complex concept to define. Karlsen and Gottschalk (2004) defined knowledge as information combined with experience, context, interpretation, reflection, intuition, and creativity, while Davenport and Prusak (1998) saw it as:

a fluid mixed of framed experience, values, contextual information, and expert insight that provides framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organisations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms. (p. 5)

In short, knowledge by far is more comprehensive and more valuable compared to information and data, but most importantly the literature had identified two general types of knowledge: tacit and explicit (Nonaka & Takeuchi, 1995). Explicit knowledge basically is the type that can be easily explained and codified, and are available in books, manuals, and other types of publications. Tacit knowledge, on the other hand, is the type that is difficult to verbalise and codify because it is ingrained at a subconscious level. These two types of knowledge complement each other. As Selamat and Choudrie (2004) pointed out in their literature review, the presence of explicit knowledge is meaningless without tacit knowledge to augment it. This is because only with tacit knowledge that we can put the explicit knowledge into practice.

Knowledge Sharing Behaviour

Knowledge sharing has been identified as one of the elements of knowledge management. In general, knowledge sharing occurs when people who share a common purpose and experience similar problems come together to exchange ideas and information (McNeil, 2003). The process of knowledge sharing between individuals involve the conversion of the knowledge held by an individual into a form that can be understood, absorbed and used by other individuals (Ipe, 2003). Hence Ipe (2003) defined knowledge sharing behaviour as the action of individuals in making knowledge available to others within the organisation. Along the same line, Bartol and Srivastava (2002) indicated that it is the sharing of organisationally relevant information, ideas, suggestions, and expertise with one another, and Ryu, Ho, and Han (2003) defined knowledge sharing as the behaviour of disseminating one's acquired knowledge with other members within one's organisation. Lee (2001) on the other hand, gave a broader definition of knowledge sharing indicating that it involves activities of transferring or disseminating knowledge from one person, group, or organisation to another. In short, all these definitions agree that knowledge sharing is a mechanism to disseminate information and knowledge from one individual, group, or organisation to another.

Since the literature had identified the two types of knowledge, there are two types of knowledge sharing behaviours that are of concern here, which are tacit and explicit knowledge sharing behaviours. It is commonly agreed that disseminating and communicating explicit knowledge is easier than sharing of tacit knowledge (Ipe, 2003). Sharing of explicit knowledge can be done by means of books, manuals, video clips, databases, and expert systems, as well as through formal training. On the other hand, sharing of tacit knowledge is more difficult because it cannot be directly expressed using words. Instead the only ways of presenting it are usually through metaphors, drawings, and different methods of expression not requiring a formal use of language (Koskinen, Pihlanto, & Vanharanta, 2003). Hence, the sharing of tacit

knowledge requires face-to-face interactions (Ferne, Green, Weller, & Newcombe, 2003; Koskinen et al., 2003) and a dialectic debate among employees (Ferne et al., 2003).

Indeed, the literature had discussed many different factors that may influence knowledge sharing behaviour of employees at work. These factors can be grouped into three categories, which are individual, group, and organisational factors. Some of the organisational factors that affect employees knowledge sharing behaviour include organisational culture (Bock, Zmud, & Kim, 2005), human resource management practices (Currie & Kerrin, 2003), leader support (McNeil, 2003), and communication climate (Van den Hooff & de Ridder, 2004), while group factors that were argued to affect knowledge sharing are group membership (Hutchings & Michailova, 2004), group identification (Galetta, McCoy, Marks, & Polak, 2002), interpersonal trust (Ardichvili, Maurer, Li, Wentling, & Stuedeman, 2006). Finally, some of the individual factors that have been associated with knowledge sharing behaviour include individual motivation (Kalling, 2003; Käser & Miles, 2001; Kwok & Gao, 2004), perceptions of information ownership (Jarvenpaa & Staples, 2001; Kwok & Gao, 2004), complementary knowledge or individual absorptive capacity (Sakakibara, 2003), evaluation apprehension (Ardichvili et al., 2006; Irmer, Bordia, & Abusah, 2002), perceived benefits (Bock & Kim, 2002; Kankanhalli, Tan, & Wei, 2005; Van den Hooff & de Ridder, 2004), self efficacy (Bock & Kim, 2002; Kankanhalli et al., 2005), trust (Renzl, 2008), and ethics and self interest (Wang, 2004). Despite the numerous factors, the variable that is of interest here is organisational commitment.

Organisational Commitment

In the last few decades, organisational commitment has become one area of research that has gained the interest of many organisational behaviourists mainly because studies in this area have suggested that committed workers contribute to the organisation in more positive ways than less committed workers (Aven, Parker, & McEvoy, 1993). In fact, previous studies had shown that high organisational commitment is related to high

organisational citizenship behaviour (Williams & Anderson, 1991), high job satisfaction (Mathieu & Zajac, 1990), low intention to leave the organisation (Martin & Hafer, 1995), and low absenteeism (Mathieu & Zajac, 1990).

Profuse interest in this job-related attitude has brought about many conceptualisations of this construct. There were a number of studies that conceptualised organisational commitment as uni-dimensional and defined it as an emotional attachment to the organisation (Brown, 1996; Mowday, Steers, & Porter, 1979). Yet, it is increasingly apparent that commitment is a complex and multifaceted construct, and hence several alternative models were developed (Allen & Meyer, 1990; O'Reilly & Chatman, 1986; Penley & Gould, 1988). Of all these multidimensional conceptualisations, the most popular is the conceptualisation by Allen and Meyer (1990).

According to Allen and Meyer (1990), organisational commitment is composed of three components; affective, continuance, and normative. Affective commitment is defined as an individual's emotional attachment to the organisation such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organisation, while continuance commitment refers to an individual's perceived costs associated with leaving the organisation. Lastly, normative commitment reflects a perceived obligation to remain with and be loyal to the organisation. According to Meyer, Stanley, Herscovitch, and Topolnytsky (2002), each dimension affects work-related behaviours differently. Specifically, Meyer et al. (2002) indicated that affective commitment has the strongest positive relationship with behaviours, followed by normative commitment. Alternatively, continuance commitment was said to be unrelated, or negatively related to desirable work behaviours.

Organisational Commitment and Knowledge Sharing Behaviour

The role of organisational commitment in encouraging people to share their knowledge in an organisational setting is still unclear (Van den Hooff, & de Ridder, 2004; Van den Hooff, & van Weenen, 2004). A study conducted by Van den Hooff and de Ridder (2004) indicated that

affective commitment is one of the key variables in explaining employees' knowledge sharing behaviour. However, in a different study by Van den Hoof and Van Weenen (2004), it was reported that commitment to one's department positively influences knowledge sharing, but commitment to one's organisation is not a significant predictor of knowledge sharing. Nonetheless, a recent study by Cabrera, Collins, and Saldago (2006) demonstrated that the internalisation component of organisational commitment, defined as the congruence between the values of the employee and the values of the organisation, is a significant predictor of knowledge sharing. Similarly, Lee and Kim (2006) also showed that employee commitment has a significant impact on the level of knowledge sharing. Wasko and Faraj (2005), on the other hand, studied individuals participating in knowledge sharing through an electronic network. It seemed that commitment to the network did not have anything to do with the propensity of the individual to contribute knowledge to the network. In short, the relationship between organisational commitment and knowledge sharing behaviour is still inconclusive.

Despite these findings, it is believed that organisational commitment could have a significant impact on knowledge sharing behaviour. The underlying assumption is that positive attitude will produce a corresponding positive behaviour. This assumption is based on Fazio, Powell, and William (1989) model of attitude-to-behaviour process. This model proposed that behaviour in any given situation is a function of the individual's immediate perception of the attitude object in the context of the situation in which the object is encountered. In this case, the behaviour of interest in knowledge sharing, and the attitude that is proposed to influence the behaviour is individual's commitment toward his/her organisation. However, the findings by Meyer et al. (2002) indicated that affective commitment has the strongest positive relationship with behaviours, followed by normative commitment. On the other hand, continuance commitment was said to be unrelated, or negatively related to desirable work behaviours. Hence, using this theory and the discovery made by Meyer et al. (2002), it is proposed that:

H1: Organisational commitment (affective commitment, normative commitment, and continuance commitment) will have an influence on knowledge sharing behaviour (tacit and explicit).

H1.1a: Affective commitment will have a positive influence on tacit knowledge sharing behaviours.

H1.2a: Normative commitment will have a positive influence on tacit knowledge sharing behaviours.

H1.3a: Continuance commitment will have an insignificant relationship with tacit knowledge sharing behaviours.

H1.1b: Affective commitment will have a positive influence on explicit knowledge sharing behaviours.

H1.2b: Normative commitment will have a positive influence on explicit knowledge sharing behaviours.

H1.3b: Continuance commitment will have an insignificant relationship with explicit knowledge sharing behaviours.

METHODOLOGY

Sampling

The target population for this study encompassed employees of research and development (R & D) companies who are involved in R&D projects. This study purposely chose this group of employees because R&D is knowledge intensive work (Swart & Kinnie, 2003), and therefore, for these people knowledge sharing is crucial to ensure the success of their projects. Unfortunately, it is not possible to determine the actual number of companies that has R&D, and hence it is also impossible to determine the actual population involved. This is because there is no listing of the population readily

available, and therefore, only non-probability sampling can be done. In order to reach these people, companies that conduct R&D or have a R&D department were contacted. A total of 426 companies were contacted, but only 93 agreed to participate in the study. Since most of these companies were not willing to disclose the exact number of their R&D employees, the number of questionnaires sent to these organisations reflects the number that the human resource managers were willing to distribute. Subsequently, a total of 533 questionnaires were distributed to these employees with the assistance of the firms' human resource managers. Respondents were required to mail the completed questionnaires directly to the researcher using the self-addressed envelopes that were provided. Respondents were given three weeks to complete the questionnaires. However, two weeks after the due date, only 140 (26.27%) were returned to the researcher. Of this, only 114 questionnaires (21.39%) were used for data analysis, because 26 of them were either completed by the human resource managers themselves or they were incomplete.

Data Collection Instruments

The dependent variable for this study is knowledge sharing behaviour and the independent variable is organisational commitment. Knowledge sharing behaviour was conceptualised as the extent to which one communicates and disseminates one's acquired job-related knowledge, either explicit or tacit, with other members within one's organisation. This construct was measured using eight items that were adapted from the studies by Jaw and Liu (2003) and Bock et al. (2005), which had a composite reliability of .93. The items from Bock et al. (2005) were originally used to measure individuals' intention to share explicit and tacit knowledge. Therefore, some modifications were made to the items in the scale so that they reflect individuals' actual behaviour of sharing knowledge. For this purpose, the words "I will" or "I intend" in the original items were replaced with "I often". Responses to the items were made on a five-point scale (1= strongly disagree to 5=

strongly agree). Organisational commitment was measured using a 24-item scale developed by Allen and Meyer (1990). This scale conceptualised organisational commitment as a three dimensional construct with eight items for measuring each dimension, where measures for each dimension had shown a reliability coefficient higher than .60 in previous studies (Lee, Allen, & Meyer, 2001), which was considered as acceptable by Sekaran (2003). A five-point Likert scale ranging from (1= strongly disagree to 5= strongly agree) was used. This scale was chosen because of its high reliability and it is applicable to countries outside North America (Meyer et al., 2002).

Data Analysis

The hypothesised model was analysed using hierarchical multiple regression. Three demographic variables (gender, organisational tenure, and work experience) were controlled in the statistical analyses. These variables were selected based on studies by prior scholars (Ojha, 2005; Thomas-Hunt, Ogden, & Neale, 2003; Watson & Hewett, 2006).

RESULTS

Respondents Profile

In general, as shown in Table 1, the majority of respondents were males (63.2%). The respondents in this sample were from various ethnicities. The percentages for the Malay and Chinese respondents were almost equal, 48.2% and 43.0% respectively, while the rest of respondents were Indian and others (8.7%). The majority (79.8%) of the respondents has at least a bachelor's degree. A total of 41.2% were managers, followed by the engineers (25.4%), software engineers (15.8%), with the remaining being non-engineers (17.5%). The mean age of the respondents is 31.93 years (SD=7.75 years). On the average, the respondents have 8.01 years of work experience (SD= 6.91 years). The mean organisational tenure is 5.48 years (SD= 5.68 years) whilst the mean for job tenure was 3.53 years (SD=3.73 years).

Table 1: Respondents' Profile

| | | Frequency | Percentage |
|-------------------------------|-------------------------------|-------------|-------------|
| Gender | Male | 72 | 63.2 |
| | Female | 42 | 36.8 |
| Race | Malay | 55 | 48.2 |
| | Chinese | 49 | 43.0 |
| | Indian | 7 | 6.1 |
| | Others | 3 | 2.6 |
| Highest education | Certificate | 4 | 3.5 |
| | Diploma | 18 | 15.8 |
| | Bachelor's degree | 65 | 57.0 |
| | Master's degree | 25 | 21.9 |
| | Doctorate | 1 | 0.9 |
| | Others | 1 | 0.9 |
| Job category | Technical (software engineer) | 18 | 15.8 |
| | Technical (engineer) | 29 | 25.4 |
| | Technical (non-engineer) | 20 | 17.5 |
| | Managerial | 47 | 41.2 |
| | | Mean | S.D. |
| Age (years) | | 31.93 | 7.75 |
| Work Experience (years) | | 8.01 | 6.91 |
| Organisational Tenure (years) | | 5.48 | 5.68 |
| Job Tenure (years) | | 3.53 | 3.73 |

Factor Analysis

A principal component analysis with varimax rotation was conducted on the measurements for knowledge sharing behaviours and organisational commitment. As shown in Table 2, two factors emerged as a result from the factor analysis of the knowledge sharing behaviour scale, with an eigenvalue of above 1. Two items were dropped due to high cross-loadings.

Both component 1 and 2 were renamed 'tacit knowledge sharing' (TKS) and 'explicit knowledge sharing' (EKS) respectively.

Principal component analysis was also performed on the organisational commitment scale. The number of factors extracted was fixed at three since this construct has been proven to comprise three dimensions (Allen & Meyer, 1990). The result of the component analysis is presented in Table 3.

Table 2: Rotated Factor Structure of Knowledge Sharing Scale

| | Component | |
|--|-----------|-------|
| | 1 | 2 |
| I often share my experience or know-how from work with other organisational members. | 0.87 | 0.13 |
| I often share my expertise from my education or training with other organisational members. | 0.85 | 0.07 |
| In my organisation, I would express my opinion actively. | 0.62 | 0.40 |
| I often exchange ideas with organisation members from daily social life and informal meetings | 0.60 | 0.28 |
| I often share my work reports and official documents with members (<i>e.g. co-workers who have to produce similar reports or documents</i>) of my organisation. | 0.11 | 0.89 |
| I often provide my manuals (<i>e.g. technical books or notes regarding work</i>), methodologies (methods for completing a certain job) and models (<i>examples from previously completed projects</i>) for members on my organisation. | 0.22 | 0.75 |
| Eigenvalue | 3.70 | 1.04 |
| % Variance explained | 34.61 | 24.64 |
| Cronbach | 0.80 | 0.70 |
| Kaiser-Meyer-Olkin (KMO) | 0.77 | |
| Bartlett sphericity test: χ^2 | 328.77** | |
| df | | |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation. Rotation converged in 3 iterations.

** $p < 0.01$

Table 3: Rotated Factor Structure of Organisational Commitment Construct

| | Component | | |
|--|-----------|------|------|
| | 1 | 2 | 3 |
| A7 I do not feel "part of the family" at my organisation. | .85 | .12 | -.11 |
| A6 I do not feel "emotionally attached" to this organisation. | .81 | .11 | -.03 |
| A5 I do not feel a strong sense of "belonging" to my organisation. | .76 | .28 | -.20 |
| N2 I do not believe that a person must always be loyal to his or her organisation. | .63 | .00 | .00 |
| C1 I am not afraid of what might happen if I quit my job without having another one lined up. | .55 | -.34 | .29 |
| N8 I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore. | .42 | .14 | -.36 |
| A1 I would be very happy to spend the rest of my career with this organisation. | .06 | .80 | .09 |
| N6 I was taught to believe in the value of remaining loyal to one organisation | -.02 | .61 | .19 |
| N4 One of the major reasons I continue to work for this organisation is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain. | .25 | .56 | .02 |
| N5 If I got another offer for a better job elsewhere I would not feel it was right to leave my organisation. | -.15 | .56 | .09 |
| A8 This organisation has a great deal of personal meaning for me. | .36 | .53 | .12 |
| A3 I really feel as if this organisation's problems are my own. | .20 | .37 | -.16 |
| C7 One of the few serious consequences of leaving this organisation would be the scarcity of available alternatives | .06 | -.02 | .74 |

Table 3 (continued)

| | | Component | | |
|----|--|-----------|----------|-------|
| | | 1 | 2 | 3 |
| C4 | Right now, staying with my organisation is a matter of necessity (e.g. <i>it may be difficult to get another job elsewhere or the location of this company is convenient</i>) as much as desire. | -.24 | .02 | .67 |
| C5 | I feel that I have too few options to consider leaving this organisation. | -.14 | -.04 | .63 |
| C3 | Too much in my life would be disrupted if I decided I wanted to leave my organisation now. | .16 | .17 | .63 |
| C8 | One of the major reasons I continue to work for this organisation is that leaving would require considerable personal sacrifice – another organisation may not match the overall benefits I have here. | .01 | .37 | .53 |
| C2 | It would be very hard for me to leave my organisation right now, even if I wanted to. | -.01 | .20 | .47 |
| A2 | I enjoy discussing my organisation with people outside it. | .02 | .26 | .35 |
| | Eigenvalue | 3.94 | 3.47 | 2.00 |
| | % Variance explained | 13.66 | 13.12 | 12.38 |
| | Cronbach | 0.78 | 0.69 | 0.71 |
| | Kaiser-Meyer-Olkin (KMO) | | .67 | |
| | Bartlett sphericity test: χ^2 | | 874.39** | |
| | df | | 276 | |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in 7 iterations.** $p < 0.01$

As can be seen, the measurement for continuance commitment is quite stable, all except two items which loaded into a third component. On the other hand, items for affective and normative commitment seemed a little mixed-up. This was not surprising since Allen and Meyer (1990) highlighted the fact that normative commitment is highly correlated with affective commitment, such that it is possible that they may not be truly two different forms of commitment. Nevertheless, as pointed out by Meyer and Allen (1990), the influence of normative commitment on work-related behaviour may be different from affective commitment. Therefore, whether these two forms of commitment are actually the same or not is still unresolved. A closer inspection of the items on factor 1 indicated the existence of more affective

commitment items. Hence, the term “affective commitment” was retained. Similarly, factor 2 was labelled as “normative commitment” due to the same reason. Additionally, three items were excluded from the analysis due to either low loadings or high cross-loadings in accordance to the suggestion made by Hair, Anderson, Tatham, and Black (1998). Two items were also excluded due to negative covariations with the rest of the items identified in factor 2. The reliabilities for each commitment component exceeded 0.60 and thus considered acceptable (Sekaran, 2003).

Descriptive Statistics

Table 4 displays the mean, standard deviations, and intercorrelations of all variables.

Table 4: Mean, Standard Deviations and Intercorrelations of Variables

| | M | S.D. | Affective | Normative | Continuance | Tacit KS | Explicit KS |
|----------------------------|------|------|-----------|-----------|-------------|----------|-------------|
| Affective | 3.37 | .64 | 1.00 | | | | |
| Normative | 3.34 | .58 | .35** | 1.00 | | | |
| Continuance | 3.24 | .59 | .01 | .21* | 1.00 | | |
| Tacit Knowledge Sharing | 3.88 | .57 | .28** | .27** | -.12 | 1.00 | |
| Explicit Knowledge Sharing | 3.94 | .64 | .23* | .04 | -.10 | .36** | 1.00 |

* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

As can be seen from Table 4, the mean values for the commitment dimensions ranged from 3.24 to 3.37 (SD ranging from .58 to .64). This means that, on average, the organisational commitment level for this sample was moderate. The mean scores for tacit knowledge sharing was 3.88 (SD=.57) and explicit knowledge sharing was 3.94 (SD=.64). These mean scores indicated that the respondents in the study engage in a moderate level of tacit and explicit knowledge sharing. From Table, there were statistically significant correlations between affective and normative commitment ($r=.35, p<.01$), and between normative and continuance commitment ($r=.21, p<.05$). However, affective commitment was not correlated with continuance commitment. Besides, both affective and normative commitment were significantly correlated with tacit knowledge

sharing behaviour ($r=.28, p<.01$ and $r=.27, p<.01$, respectively). Only affective commitment was significantly correlated with explicit knowledge sharing behaviour ($r=.23, p<.05$).

Regression Result

Two separate hierarchical regression analyses were performed to test for H1 and its sub-hypotheses. In the first analysis, tacit knowledge sharing behaviour was entered as the dependent variable. In the second analysis, explicit knowledge sharing behaviour was entered as the dependent variable. In both analyses, the three control variables (gender, organisational tenure, and work experience) were entered in Step 1, followed by the model variables (affective, normative and continuance commitment) in Step 2. The results of both analyses are summarised in Table 5.

Table 5: Summary of Regression Analysis Results

| | Tacit Knowledge Sharing | | Explicit Knowledge Sharing | |
|--------------------------|-------------------------|--------|----------------------------|------|
| | M1 | M2 | M3 | M4 |
| Control Variables | | | | |
| Gender ^a | -.16 | -.14 | -.02 | -.01 |
| Organisational tenure | -.23 | -.23 | -.01 | -.00 |
| Work experience | .29 | .25 | .03 | -.03 |
| Study Variables | | | | |
| Affective | | .20* | | .24* |
| Normative | | .21* | | .02 |
| Continuance | | -.17 | | -.09 |
| R ² | .07 | .19 | .00 | .06 |
| Δ R ² | .07 | .12 | .00 | .06 |
| F-value | 2.62 | 4.04** | .02 | 1.17 |

* $p<.05$; M denotes model; Dummy Coded, ^amale = 0, female = 1.

As shown in model 1 of Table 5, the three control variables (gender, organisational tenure, and work experience) produced R^2 value of .07, which means that only 7% of the variance in tacit knowledge sharing behaviour was explained by these variables. However, none of these variables had any significant impact on tacit knowledge sharing behaviour. On adding the three dimensions of commitment as indicated in model 2, the R^2 value increased to .19 (R^2 change=.12), implying that the organisational commitment variables was able to explain an additional 12% of the variance in tacit knowledge sharing behaviour. Specifically, it was found that only affective and normative commitment were positively and significantly related to tacit knowledge sharing behaviour ($\beta=.20, p<0.05$ and $\beta=.21, p<0.05$), providing support for H1.1a and H1.2a. Additionally, continuance commitment did not have any significant influence on tacit knowledge sharing behaviour, thereby, supporting H1.3a.

With regard to explicit knowledge sharing behaviour, as shown by Model 3, the three demographic variables did not have any influence on this behaviour. In fact, these three variables were not able to explain the variance in explicit knowledge sharing behaviour. On adding the three dimensions of commitment as reflected in model 4, the R^2 value increased to .06 (R^2 change=.06) implying that the organisational commitment variables was able to explain an additional 6% of the variance in explicit knowledge sharing behaviour. Specifically, it was found that only affective commitment was positively and significantly related to explicit knowledge sharing behaviour ($\beta=.24, p<0.05$). Hence, only H1.1b was supported. Additionally, continuance commitment did not have any significant influence on explicit knowledge sharing behaviour, thereby, supporting H1.3b.

DISCUSSION AND IMPLICATIONS

The purpose of this study was to explore the relationship between organisational commitment and knowledge sharing behaviour. Consistent with the finding of Van den Hooff and de Ridder (2004), the results of the current study showed

that affective commitment was positively and significantly related to both tacit and explicit knowledge sharing behaviours of R&D employees. This is not surprising as affective commitment has consistently been shown to be most beneficial in enhancing positive organisational behaviours such as less intention to leave, less absenteeism, and more accepting of change (Iverson & Buttigieg, 1999). When an individual is affectively committed, it basically means that this individual feels a strong emotional attachment toward the organisation (Allen & Meyer, 1990), and therefore, is willing to do more for the benefit of the organisation. Hence, based on the finding of the current study, it can be said that R&D employees who feel strong emotional attachment toward their organisations, also have a higher tendency to share tacit and explicit knowledge with other members of their organisation.

On the other hand, normative commitment was positively and significantly related to tacit knowledge sharing behaviour, but not to explicit knowledge sharing. These results are consistent with that of Meyer et al. (2002), whereby the effect of normative commitment on desirable behaviours was weaker compared to the effect of affective commitment. Normatively committed towards one's organisation means that there is a sense of obligation to remain loyal to the organisation (Allen & Meyer, 1990). The finding of the current study suggested that a sense of loyalty is important in order for tacit knowledge sharing to occur. This means that if one does not have a sense of loyalty toward his or her organisation, there is a possibility that he or she might not share their tacit knowledge. On the other hand, a sense of loyalty is not necessary for explicit knowledge sharing to occur. This means it does not matter whether one is loyal or not to his or her organisation, he or she might still share explicit knowledge. This is probably because sharing of explicit knowledge is so easy and it can happen at any time, without too much effort.

The non-relationship between continuance commitment and the dependent variables (both tacit and explicit knowledge sharing behaviours) confirmed the earlier findings (Meyer et al., 2002). According to Meyer et al.

(2002), continuance commitment is unrelated or negatively related to desirable behaviours. According to Allen and Meyer (1990), continuance commitment people stay with their organisations because they have to stay, and not necessarily mean they want to stay. Hence with such an attitude, it is no wonder why continuance commitment might not affect behaviour, or might even be detrimental to employee performance. With regard to the current study, continuance commitment does not have a significant relationship to knowledge sharing behaviour. Having to stay with one's organisation because it is too costly to leave does not affect one's knowledge sharing tendency. Therefore, knowledge sharing, may it be tacit or explicit knowledge, could still occur with or without employees' continuance commitment.

These findings highlighted the importance of affective commitment, to a lesser extent normative commitment, in encouraging knowledge sharing behaviours among employees. Managers must be mindful of the fact that these attitudes are being governed by numerous antecedents including personal characteristics, role perceptions, job characteristics, group/leader relations, and organisational characteristics, as noted by Mathieu and Zajac (1990). Generally, personal factors may not be within the control of the managers. Hence, managers may want to focus their attention on ensuring favourable contextual factors that would be able to encourage their subordinates to become more committed toward their organisation, which in turn, will lead them to share knowledge. For example, managers can enrich the job of their subordinates by providing more autonomy and skill variety. Similarly, a participative type of leadership would be able to enhance commitment.

LIMITATIONS, FUTURE DIRECTIONS, AND CONCLUSION

However, these findings should be interpreted cautiously, given the limitations inherent to this study. Firstly, the sample was not randomly selected. Hence, the results may not be generalised to the population. Furthermore, the study was

conducted among R&D employees only. It is possible that the results of the study may be tempered by the professional culture of this group of people, in which knowledge sharing is considered a part of their day-to-day activities. Therefore, to determine whether the findings of the present investigation can be applied to other situations, a better sampling procedure and different group of respondents, which can provide some variability in knowledge sharing behaviour, should be adopted. Next, this study uses self-reported data which are susceptible to biases associated with common method variance. This bias is most problematic in examining relationships among psychological or attitudinal data collected from a single respondent at one time (Avolio, Yammarino, & Bass, 1991). Therefore, future researchers should employ methods that could reduce common method variance. For example, another party could be used to rate an individual's knowledge sharing behaviour. Finally, the use of cross-sectional data in this study makes it hard to determine causality. Therefore, a longitudinal research is warranted.

In summary, this examination of R&D employees' knowledge sharing behaviour highlighted the critical role played by organisational commitment. Therefore, in order to promote knowledge sharing behaviour among employees, efforts that can enhance organisational commitment, especially affective commitment, should also be emphasised. Some of these factors include leadership (Erben & Guneser, 2008), ethical climate (Erben & Guneser, 2008; Tsai & Huang, 2008), and psychological empowerment (Chen & Chen, 2008).

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