Explo ring Employee Perceptions of the Relationships Among Knowledge Sharing Capability, Organisational Culture and Knowledge Sharing Success: Their Implications for HRM Practice

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Abstract: The empirical literature suggests that human capital knowledge sharing capability (employees’ abilities, motivations and opportunities), influences knowledge sharing within organisations (Andrawina, Govindaraju, Samadhi and Sudirman 2008; Lin 2007). An organisation’s culture also affects knowledge sharing by moderating employee activity. Knowledge sharing capability and organisational culture are therefore important factors to consider when developing Human Resource Management (HRM) practices that facilitate successful knowledge sharing. 270 knowledge workers in four knowledge-based organisations were surveyed about their perceptions of knowledge sharing capability, organisational culture and knowledge sharing success. Our study confirms that both knowledge sharing capability and organisational culture are important for knowledge sharing success, suggesting they play a significant role in the design of knowledge-driven HRM practices. This has important implications for HRM delivery in Malaysian and global knowledge based organisations, as human capital knowledge sharing capability is affected by desirable employees’ local cultural values. Implications for HRM practices are discussed in the paper.

Keywords: HRM, human capital, knowledge sharing capability, Malaysia

1. Introduction

Knowledge and human capital are two concepts that have received a great deal of attention from scholars of all disciplines in explaining the positive outcomes of organisational achievement (e.g. Cummings and Teng 2003; Minbaeva 2008; Oltra 2005). Human capital is defined as the pool of employee talent, with all its potentialities, that brings economic value to organisations. Knowledge is defined as an individual’s experience and understanding that can be communicated and shared (Allee 1997; Marwick 2001). Therefore, human capital capability to share knowledge has a vital role in facilitating the growth of knowledge to increase its value. Knowledge sharing is an activity or behaviour involving the transfer and dissemination of knowledge from one person to another. This is regarded as an important process because, if successful, it results in shared intellectual capital (Liao, Fei and Chen 2007). Researchers suggest that successful knowledge sharing will, to some extent, depend on the capacity of employees to organise their received knowledge resources through a network of relationships (Andrawina et al. 2008; Kim and Lee 2006). This includes activities like synthesising and utilising their newly acquired knowledge and making decisions on how they will communicate knowledge they consider as relevant to others. Appropriate human resource management (HRM) practices can be an important medium that translate knowledge sharing capability into successful outcomes. However, the lack of any consensus, on which practices are “best” is a matter of concern among organisations. It therefore becomes important to show which practices are contributing to the knowledge sharing improvements that organisations want. Previous research suggests that the importance of organisational culture and a medium of knowledge dissemination (through incorporating individuals’ abilities, motivations and opportunities to share knowledge) be given closer attention in developing HRM practices that aim to facilitate knowledge sharing (Minbaeva 2008; Wang and Noe 2010). Kelloway and Barling (2000) have suggested a framework that links individual's ability, motivation and opportunity to share with knowledge work and the necessary conditions for them to work best. If human attributes (i.e. termed knowledge sharing capability in this study) and organisational culture are important for HRM practices in the achievement of positive knowledge sharing outcomes, then knowledge sharing capability and organisational culture should be related to knowledge sharing success. Our objective in this study is to explore employees’ perceptions on the relationships among knowledge sharing capability, organisational culture and knowledge sharing success, so that HRM practices can become a success “catalyst” within MSC-status IT organisations.
2. Literature review

2.1 Human resource knowledge sharing capability

In this research, we define knowledge sharing capability as the extent to which employees possess abilities, motivation and opportunities to share knowledge (Siemsen, Roth and Balasubramanian 2007). Minbaeva, Makela and Rabbiosi, (2010:5) describe this combination as “conditions of individual actions”. This tripartite schema (the combination of ability, motivation and opportunity) is a key mechanism for achieving knowledge flows within an organisation (Adler and Kwon 2002; Nahapiet and Ghoshal 1998). Developing the ability to share knowledge, which is the extent to which both senders and receivers have similarities in workplace bases (Cummings and Teng 2003), signifies the need for employees to be able to understand and organise the knowledge that they receive through both formal and informal workplace relationships. This requires the development of a shared jargon and language because it facilitates the identification, combination, and interpretation of information. These obligations and expectations among employees enhance their motivation to voluntarily share their knowledge and expertise (Nahapiet and Ghoshal 1998). To understand the central features of this contention, Widen-Wulff and Ginman (2004) suggest the importance of considering the ways people form groups in a workplace and develop cooperative behaviour among themselves. Tyler and Blader’s (2001) have identified cooperative group behaviours as: rule following, a willingness to help the groups, and a desire to continue in their group memberships. Their research confirms that group status (pride) significantly affects employees’ motivation to engage in groups through their desire to continue group involvement. It is reasonable to suggest that, in this context, employees’ motivation to share knowledge relates to their intention to remain with the organisation. In the present research, employees’ motivation to share knowledge is linked to the degree to which employees intend to remain in the organisation (Hislop 2003). According to Nahapiet and Ghoshal (1998), both formal and informal relationships create the medium of dissemination for information and resources. Previous research suggests that the opportunity to share knowledge depends on HRM practices that allow frequent and intense social exchange, and that support the development of new formal and informal workplace relationships (Currie and Kerrin 2003). Thus, the extent to which employees have been provided with sufficient training and job rotation during their professional life defines the opportunity to share knowledge (Currie and Kerrin 2003; Yahya and Goh, 2002).

While the importance of employees’ capabilities to successfully share knowledge has been emphasised (Andrawina et al. 2008; Kim and Lee 2006), their sharing behaviours can also be affected by an organisational culture that reinforces such knowledge sharing (Kim and Lee 2006; Nayir and Uzuncarsili 2008). The literature provides evidence that organisational culture is one of the most difficult challenges in success stories of organisational knowledge management initiatives (Al-Alawi, Al-Marzoqi and Mohammed 2007; Alavi, Kayworth and Leidner 2005; Nayir and Uzuncarsili 2008; O’Dell and Grayson 1998).

2.2 Organisational culture and knowledge sharing

We define organisational culture as a shared values set that guides employees to communicate and act explicitly in the day-to-day workplace context (Alavi et al. 2005; Keyton 2005). Culture shapes people’s assumptions about what knowledge is important and distinguishes between which is organisational and which is individual (De Long and Fahey 2000). Therefore, culture shapes the creation and adoption of new knowledge. When people in an organisation see sharing knowledge as a natural activity and they do not feel they are being forced to do so; this is nurturing a knowledge sharing culture (Nayir and Uzuncarsili 2008). Organisations that value knowledge as being important to their long term performance should have a deep understanding of the impact of culture towards knowledge sharing. Because individuals bring their personal values, attitudes and beliefs to the workplace, their level of sharing capabilities as well as knowledge sharing success may differ. Although knowledge management systems are acknowledged as significant contributors to the success of knowledge leveraging processes, the important role that human capital plays in knowledge sharing should not to be neglected. (Yahya and Goh 2002). Thus, it is an important challenge for organisations to establish a culture that may develop and enhance their employees’ capability to share knowledge (Kim and Lee 2006).

A review of the literature of studies investigating organisational culture, in relation to knowledge management, identifies several attempts to model the organisational culture of knowledge management processes, as well as a number of identifiable organisational variables believed to
Influence the performance of knowledge management processes (Al-Alawi et al. 2007; Alavi et al. 2005; Lee and Choi 2003). However, little research has been done that systematically focuses on identifying the prominent cultural values for knowledge-based organisations, particularly within the Malaysian context. Adopting Alavi et al.’s (2005) cultural model with the additional value of trust in relation to knowledge sharing, our previous study indicated the emergence of four cultural values that mirror common indigenous Malaysian culture, where collectivism, hierarchy, relationship orientation, face (maintaining a person’s dignity by not humiliating him/her in front of others), and religious belief are all important (Abdullah 1996). These values are involvement, formal recognition, trustworthiness and independence (Abdul Jalal, Toulson and Tweed 2010). Involvement describes the ability of organisations to improve successful knowledge sharing by encouraging employees to actively participate in organisational activities, and to develop a sense of “collaboration” amongst them through responsive management strategies (relates to collectivism). Trustworthiness is defined as “faith in the trustworthy intentions of others and confidence in the ability of others” (Cook and Wall 1980:40) (relates to relationship orientation and religious belief). Formal recognition explains the importance of well developed procedures as a means of receiving fair treatment from management and recognition as supportive employees for successful knowledge sharing (relates to hierarchy and relationship orientation). Independence describes employees’ concerns with openness, nonconformity and risk taking (if decisions fail) (relates to hierarchy and face).

The present study then extends our previous research by integrating the four values with knowledge sharing capability variables to further explore their relationships with knowledge sharing success. In this study, we define knowledge sharing success as the extent to which recipients obtain ownership of, commitment to, and satisfaction with shared knowledge (Cummings and Teng 2003). Based on our previous findings and the literature review, our previous conceptual framework was modified. The new framework is presented in Figure 1.

![Figure 1: Knowledge sharing capability, organisational culture and knowledge sharing success](image)

### 3. Methodology

#### 3.1 Sample and research process

As this is a continuation of our previous study (Abdul Jalal et al. 2010), where employees identified as “knowledge workers” of four Malaysian-owned MSC-status Information technology (IT) companies are also the population of interest for the present research. MSC-status is awarded to both local and foreign companies that develop or intensively use multimedia technologies in enhancing their products and services (MDeC 2009). The criteria for the sample of the study are: i) the respondents for our current research must be Malaysian nationality; ii) have worked with the company for at least a year; and iii) be involved in creating new knowledge or developing innovations. This sample is the same as was used for determining organisational cultural values for successful knowledge sharing (Abdul Jalal et al. 2010). Out of the 500 respondents who were selected using random number tables,
270 completed surveys that were considered usable (a 54% response rate). Pairwise deletion was used to deal with missing cases, that is, whilst missing cases were omitted, cases with valid values for other variables were included in the statistical analyses.

3.2 Data analysis

In our previous study, each section of instrument was subjected to factor analysis to determine the underlying theme for organisational culture and knowledge sharing success variables. This was due to the resulting varimax rotated component that was not consistent with previous studies that utilised similar items for measuring the constructs proposed for the study. While four new cultural value labels were reported, the varimax rotated component matrix for knowledge sharing success failed to converge in 25 iterations because only one component was extracted (Abdul Jalal et al. 2010). Therefore, only one component of knowledge sharing success was used for further investigation.

The same technique was employed for knowledge sharing capability variables in the present study. Knowledge sharing capability variables were operationalised using a combination set of measures from Cummings and Teng (2003), Siemsen et al. (2007) and Jehn (1995). (Details of the questionnaire can be obtained from the principal author).

4. Results

The 9 items of knowledge sharing capability were analysed using principle components approach and varimax rotation used to increase the interpretability of the factor solution (Hair, Black, Babin and Anderson 2006). The suitability of the data for factor analysis was also assessed following the guidelines recommended by Pett, Lackey and Sullivan (2003). Bartlett’s Test of Sphericity reached statistical significance (698.931, \( p = 0.000 \)) and confirmed the multivariate normality of the data. The KMO measure of sampling adequacy was 0.827, which was acceptable and accounted for 55.75% of total variance. All MSA values for individual items exceeded the recommended value of 0.70 supporting the factorability of the correlation matrix. Therefore, it was decided to retain only two components for further investigation. Component 1 (Table 1), considered ‘Competency’, describes those who are concerned with performing well in executing certain tasks, and are committed and determined to do so, indicating their ability and motivation characteristics. When reviewing items comprising Factor 2, it was clear that this factor incorporated all questions regarding ‘Opportunity’ to share knowledge (see Table 1). The value of the alphas indicates that each of the scales possessed a moderate to high level of internal consistency. The overall alpha for the knowledge sharing capability measures was found to be 0.782.

<table>
<thead>
<tr>
<th>Table 1: Rotated factor structure matrix for knowledge sharing capability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cronbach’s alpha, ( \alpha = )</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Q42 If employees have their own way, they will continue working</td>
</tr>
<tr>
<td>Q40 Employees thought seriously about leaving</td>
</tr>
<tr>
<td>Q35 Employees have knowledge base necessary to understand</td>
</tr>
<tr>
<td>Q41 Sender has knowledge base necessary to understand</td>
</tr>
<tr>
<td>Q36 Differences in basic work knowledge make discussion difficult</td>
</tr>
<tr>
<td>Q38 Employees do not expect to stay longer</td>
</tr>
<tr>
<td>Q39 Employees have little training &amp; job rotation opportunity</td>
</tr>
<tr>
<td>Q37 Additional training &amp; job rotation are limited</td>
</tr>
<tr>
<td>Q34 Employees have sufficient training &amp; job rotation opportunity</td>
</tr>
</tbody>
</table>

4.1 Relationship testing

Regression analysis, without implying causality, was conducted for exploratory purposes in describing the association between variables (Meyers, Gamst and Guarino 2006). A significance level of 0.05 was used in all regression analyses.

Knowledge sharing capability (Table 2) was positively and significantly associated with knowledge sharing success, indicating that when employees have the capability to share knowledge, the greater knowledge sharing success will be.
Table 2: Results of regression analyses of knowledge sharing success on knowledge sharing capability

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>Std error</th>
<th>Std β</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency</td>
<td>0.565</td>
<td>0.052</td>
<td>0.556</td>
<td>10.870</td>
<td>0.000</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0.166</td>
<td>0.052</td>
<td>0.163</td>
<td>3.188</td>
<td>0.002</td>
</tr>
</tbody>
</table>

\( R^2 = 0.336; \quad F = 64.163 \)

Employees’ competency was positively and significantly associated with involvement and formal recognition. Opportunity, that describes the extent to which employees use interaction opportunities provided by the organisation in order to develop a network of ties is significantly associated with the cultural values of involvement, trustworthiness and independence (see Table 3).

Table 3: Regression of knowledge sharing capability on organisational culture variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Competency</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>Std error</td>
</tr>
<tr>
<td>Involvement</td>
<td>0.518</td>
<td>0.050</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.044</td>
<td>0.050</td>
</tr>
<tr>
<td>Formal recognition</td>
<td>0.279</td>
<td>0.050</td>
</tr>
<tr>
<td>Independence</td>
<td>-0.012</td>
<td>0.050</td>
</tr>
</tbody>
</table>

\( R^2 = 0.351; \quad F = 35.445 \)

The results (Table 4) showed that all organisational culture values except independence are significantly associated with knowledge sharing success. These results suggest that the more acceptable and desirable the organisational culture is, the more successful knowledge sharing will be.

Table 4: Regression of knowledge sharing success on organisational culture variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>Std error</th>
<th>Std β</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>0.479</td>
<td>0.048</td>
<td>0.473</td>
<td>9.972</td>
<td>0.000</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.187</td>
<td>0.048</td>
<td>0.183</td>
<td>3.866</td>
<td>0.000</td>
</tr>
<tr>
<td>Formal recognition</td>
<td>0.432</td>
<td>0.048</td>
<td>0.425</td>
<td>8.971</td>
<td>0.000</td>
</tr>
<tr>
<td>Independence</td>
<td>-0.015</td>
<td>0.048</td>
<td>-0.015</td>
<td>-0.320</td>
<td>ns</td>
</tr>
</tbody>
</table>

\( R^2 = 0.440; \quad F = 48.991 \)

5. Discussion and conclusions

The results of this survey of Malaysian knowledge workers led to modifications of the proposed conceptual framework. Figure 2 shows the resultant framework.

This paper addresses the relationships between knowledge sharing capability, organisational culture and knowledge sharing success. We found overall support for the argument that an employee’s capability to share and a “knowledge-friendly” culture facilitates knowledge sharing success. This indicates a significant role for both factors in the design of HRM practices, affirming Minbaeva’s (2008) and Wang and Noe’s (2010) suggestions that these should be integrated into HRM practices that aim to facilitate employees’ knowledge sharing. This finding is important in helping HRM practices become robust facilitation tools for knowledge sharing success. This research highlights the importance of how knowledge management practice must consider the critical role that HRM plays in nourishing the culture of sharing and developing employee capability. Moreover, and perhaps the most important finding of this study, is that both aspects of knowledge sharing capability (competency and opportunity) need to be present in order to optimally facilitate employees’ knowledge sharing success. The mixed relationships between organisational culture and knowledge sharing capability indicate that fostering the right cultural values (depending on the specific situation) may increase the level of employees’ knowledge sharing success. Overall, the results of our study empirically suggest that investment in employees’ capabilities through culturally translated HRM practices contribute to successful knowledge sharing within organisation. Specifically, this research highlights a significant role for HRM in the development and enhancement of employees’ capabilities through the creation of...
conditions for successful knowledge sharing within organisations. These findings then, provide support for the “employee” case for perceived favourable organisational culture in knowledge-based organisations, which is an integral part of the “business” case for successful knowledge sharing. Thus, the findings could be used to assist stakeholders and management in the design of HRM practices that not only advance employees’ know-how, but create successful knowledge sharing, a valued workforce and increase the return of investment from such knowledge management initiatives.

Figure 2: The resultant framework

The implication of our results is that managers can improve the level of knowledge sharing success by ensuring that the designs of HRM practices are customised to support the increase of employees’ capabilities and to nourish a “knowledge-friendly” culture within organisation. Differentiating organisational investment in governance mechanisms, depending on which type of employees’ knowledge sharing capability is important for specific situations is also recommended. For example, the value of involvement is beneficial in situations in which both employees’ competency and opportunity are crucial, but often a combination of values may be necessary. The combination of involvement and formal recognition seems particularly beneficial in situations in which significant employee competence is evident. Involvement, independence and trustworthiness, on the other hand, may be beneficial for promoting the formation new workplace relationships. While identifying “new” HRM practices is not suggested, this research indicates that organisations should revamp their existing practices by matching organisational knowledge sharing goals and employee preferred values within their context. This can be achieved by emphasising the “must have” values that support knowledge sharing capability, thus assisting organisations to increase their knowledge sharing success.

One possible approach in this direction is to systematically re-orient/re-design the approach of potential knowledge-driven HRM systems. Emphasis should be given to integrating the local workforces’ acceptable cultural values into the HRM practices design. It is important to acknowledge that employees’ involvement in organisational activities, whereby their contributions are recognised within a trustworthy environment, will increase organisational knowledge sharing success. For instance, knowledge sharing behaviours have implications for advertising and predictive evaluation criteria in recruitment and selection practices that are part of these HRM processes. Also, the implication of these findings can directly be seen in training and development. In developing the training programme, the approach should be more trainee-centred to allow more employees’ participation in promoting the cross-pollination of ideas among them. Encouraging them to engage in open discussion or debate during the training sessions will further develop their communication skills and competency. Furthermore, involvement can facilitate the development of new workplace relationships and help to minimise individuals’ differences, leading to the promotion of trust throughout the organisation. Rewarding employees’ attendance and active participation in the training sessions with credits or points leading to job promotion or upgrading through yearly performance appraisal, indicates an improvement of individuals’ competence level and links training, competence and collaboration in a meaningful way. Reward and appraisal systems have also been noted by other researchers in knowledge-based organisations as significant predictors of employees’ knowledge sharing behaviours (Currie and Kerrin 2003; Robertson and Hammersley 2000). Additionally, nourishing employees’ acceptable cultural values may improve and maintain organisational retention rates as suggested by Roberston and Hammersley (2000). They further suggest that organisations
that are capable of creating a unique working environment may increase employees’ willingness and ability to share knowledge and skills.

Future research should collect data from a larger sample size in other business sectors and from both private and public employees of other cultural settings. A comparative study should also be undertaken to see if differences of perceptions of knowledge sharing capability, organisational culture and knowledge sharing success exist between private and public employees in both Malaysia and international contexts. Finally, examining other factors of knowledge sharing such as the relationship between the parties involved and the characteristics of senders as well as the nature of knowledge shared can further strengthen the present findings. While this study makes important contributions to our understanding of the relationships between employees’ perceptions on knowledge sharing capability, organisational culture and knowledge sharing success in MSC-status IT organisations, clearly, additional research is needed to further develop the field of both human resource management and knowledge management.

References


