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1R. The Impact of Rewards on Knowledge Sharing

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Abstract

Knowledge is a valuable resource that can lead to improved organizational performance and competitive advantage. Knowledge resides in individuals and knowledge sharing is a process that creates organizational knowledge resources by disseminating the knowledge of individuals. However, knowledge sharing is dependent on the willingness of individuals in the organization to share. Many organizations have created reward structures to encourage employees to contribute to knowledge repositories or share their knowledge through online forums. Many reward schemes depend on monetary rewards such as payments or promotions. However, prior research demonstrates that these tangible rewards may not always encourage sharing with some reporting negative effects for tangible rewards. The literature on incentives and motivation identifies other types of rewards - verbal rewards, reputation and reciprocity. This study investigates the impact of different types of rewards on attitude towards knowledge sharing through a survey of knowledge workers. The results confirm the importance of verbal rewards and extrinsic rewards based on social capital. However, monetary rewards did not have a significant effect. The paper concludes with a discussion of the implications for practice and future research.

Keywords

Extrinsic rewards, Feedback, Verbal rewards, Knowledge Sharing

1. Introduction

Knowledge management utilises systems which allow employees to share their experience and knowledge. These systems support the transition of the knowledge held by individual employees to the group and organisational level. The process of sharing creates an organisational knowledge asset which improves performance and creates competitive advantage (Bock et al. 2005). As knowledge initially lies within people, the process of creating organisational knowledge is highly dependent on people's willingness to share their knowledge (Cabrera & Cabrera, 2005). One of the key obstacles to knowledge management is hoarding of knowledge by individuals (Gagné, 2009).

Prior research has identified monetary rewards as a common incentive used by organisations to motivate employees to share their knowledge and address the problem of knowledge hoarding (Bock et al. 2005, Hung et al. 2011). However, empirical research shows no significant effect for monetary rewards on knowledge sharing behaviour (Hung et al. 2001) or on attitude towards knowledge sharing (Bartol & Srivastava, 2002; Bock et al. 2005). Studies on motivation to share knowledge identify other types of extrinsic rewards that are not based on financial incentives such as reciprocity and enhanced reputation (Kankanhalli 2005, Welschen et al. 2013). The education literature emphasizes the importance of verbal rewards in the form of feedback and praise (Deci et al. 2001). The impacts of these rewards have not been tested in the context of knowledge sharing. Therefore, the purpose of this study is to

investigate the relative importance of different types of extrinsic rewards and to extend our understanding of their role in motivating individuals to share knowledge.

2. Prior Research and Model Development

Prior research which examines the impact of rewards on knowledge sharing attitude has primarily focused on monetary rewards. This reflects common practice with most organisations investing in financial incentive schemes (Bartol & Srivastava, 2002; Bock et al. 2005). However, there are other types of extrinsic rewards which build relational and social capital for individuals, and may encourage knowledge sharing. For example, studies based on Self Determination Theory have highlighted the importance of verbal rewards or positive feedback. This section briefly outlines prior research on the links between rewards and attitude, and behaviour (focusing on behavioural intention) to support a more comprehensive model that includes different types of extrinsic rewards. Twelve hypotheses are proposed and tested, and the results presented.

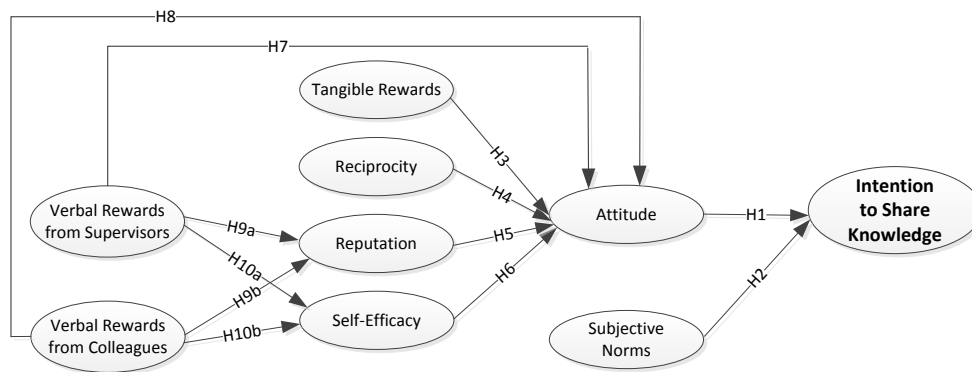


Figure 1: The Research Model

To develop an integrated assessment of the influence of extrinsic rewards on individuals' willingness to share knowledge, this research proposes a model (Figure 1) that brings together insights from motivational research, self-determination theory (Ryan & Deci, 2000) and the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980). The aim is to improve our understanding of the influence of key extrinsic rewards (i.e. monetary rewards, reciprocity, reputation and verbal rewards). As the literature indicates the possibility of an indirect effect for verbal rewards through self-efficacy (Daniels & Larson, 2001; Mouratidis et al. 2008), this intrinsic motivator is also included.

The TRA suggests that intention towards a behaviour is determined by attitude and subjective norms, and that intention is the immediate antecedent of behaviour (Ajzen & Fishbein, 1980). Attitude, in turn is determined by a set of salient beliefs about the outcome of the behaviour and the individual's subjective evaluation of these outcomes. In this study the focus is on behavioural intention and its determinants.

The relationship between attitude and intention to share knowledge is supported by the TRA (Ajzen & Fishbein, 1980) and other studies. For example, Bock et al. (2005) found positive relationships between favourable attitudes toward knowledge sharing and intentions to share knowledge. Lin (2007) also found that employees with the strongest knowledge sharing intentions also had more positive attitudes toward knowledge sharing. Hence:

H1: Attitude towards knowledge sharing is positively related to intention to share knowledge.

Subjective norm reflects a perception of social pressure to perform or not perform a particular behaviour (Ajzen & Fishbein 1980). There has been significant support for the influence of subjective norm on behavioural intention (Bock et al. 2005; Lin & Lee, 2004). Bock et al. (2005) found that the greater the influence of subjective norm the more likely it was for individuals to share their knowledge. Hence, it is expected that:

H2: Subjective norm in relation to knowledge sharing is positively related to intention to share knowledge.

Monetary or tangible rewards constitute financial rewards such as salary increases, bonuses or promotion that employees expect to receive as a result of a behaviour. There have been mixed results for the effect of monetary rewards. Here, some studies report that monetary rewards did not improve knowledge sharing or attitude towards it (Bock et al. 2005, Hung et al. 2011), while others suggest that monetary rewards can have a positive effect on knowledge sharing (Kankanhalli et al. 2005). This suggests that:

H3: Anticipated monetary rewards in relation to knowledge sharing are positively related to attitude toward knowledge sharing.

Reciprocity constitutes the belief of individuals that knowledge sharing will give them the benefit of future help from others. The findings have been mixed with Hung et al. (2011) reporting an insignificant effect for expected reciprocity on quantity and quality of knowledge contributions. Conversely, Bock et al. (2005) found that reciprocal benefits positively influence attitude toward knowledge sharing. Wasko and Faraj (2005) also reported a positive effect for reciprocity on knowledge sharing behaviour. Hence:

H4: Expected reciprocity in relation to knowledge sharing is positively related to attitude toward sharing knowledge.

Reputation constitutes the belief that knowledge sharing will lead to enhanced reputation in the workplace. Wasko and Faraj (2005) reported a positive effect for reputation on the volume of contribution to an electronic repository. Hung et al. (2011) also reported positive effects for reputation on knowledge contribution. Therefore, it is expected that:

H5: Anticipated reputation in relation to knowledge sharing is positively related to attitude toward knowledge sharing.

Self-efficacy represents the individual's perception of their competence to perform a behaviour. Cabrera and Cabrera (2005) and Gagné (2009) suggest that self-efficacy will encourage positive attitudes toward knowledge sharing. If individuals have positive feelings about their ability to provide valuable knowledge, they will be more likely to have positive feelings toward knowledge sharing (Lin, 2007). It is therefore expected that:

H6: Self-efficacy in relation to knowledge sharing is positively related to attitude toward knowledge sharing.

Verbal rewards refer to the positive feedback employees expect to receive as a result of knowledge sharing. Verbal rewards have not been examined in the context of knowledge sharing. However, there is research which emphasizes the importance of praise and feedback to motivate people. Deci et al. (2001) found that verbal rewards had a positive effect on free-choice behaviour. McNeely and Meglino (1994) found that perceptions of recognition were significantly correlated with pro-social organisational behaviour. Some studies further distinguished the source of feedback, such as colleagues versus superiors (Deci et al. 2001; Dominick et al. 1997). For example, Dominick et al. (1997) reported that peer feedback led to improvements in effectiveness of behaviour in individual team

members. This suggests that a distinction between positive feedback from peers and from superiors may be useful. Therefore the following hypotheses are proposed:

H7: Anticipated verbal rewards from superiors in relation to knowledge sharing are positively related to attitude toward knowledge sharing.

H8: Anticipated verbal rewards from colleagues in relation to knowledge sharing are positively related to attitude toward knowledge sharing.

Roberts et al. (2006) examined the role of performance ranking (as a type of feedback) in the context of open source software development. They found that performance ranking is positively related to the expectation of developers for increasing of their reputation in the community. Hence:

H9a: Anticipated verbal rewards from superiors are positively related to reputation.

H9b: Anticipated verbal rewards from colleagues are positively related to reputation.

Prior research has also provided evidence of a positive effect for positive feedback on perceived competence to perform a behaviour (self-efficacy). Daniels and Larson (2001) found that positive performance feedback had a positive effect on self-evaluations of self-efficacy in counsellors. Harackiewicz and Larson Jr. (1986) provided evidence that positive supervisor feedback improved interest towards performing a task through improvement in self-efficacy. Mouratidis et al. (2008) found a positive effect of positive feedback on self-efficacy regarding physical education (PE) and sports. Therefore:

H10a: Anticipated verbal rewards from superiors are positively related to self-efficacy.

H10b: Anticipated verbal rewards from colleagues are positively related to self-efficacy.

3. Methodology and Results

Survey data for this study was collected from knowledge workers across 8 organisations (incl. Manufacturing & Production, Information Technology & Communications, Financial Services). A contact person in each organisation with responsibility for knowledge management assisted with identifying participants and distributing the survey. 133 persons completed the survey. Of the participants, 41.4% were female and 58.6% were male; 40.6% were from organisations with over 100 staff and the remainder from firms with 50-99 staff.

Multi-item scales (3-5 items each) adapted from existing sources were used to measure the model constructs (Ajzen & Fishbein 1980; Bock, et al. 2005; Deci et al. 2001; Kankanhalli et al. 2005a; Lin 2007; McNeely & Meglino 1994; Spreitzer, 1995; Wasko & Faraj 2005). Responses were captured on 7-point Likert scales (1=Strongly Disagree; 7=Strongly Agree).

3.1 Data Analysis and Results

Both the measurement model and the structural model were assessed using PLS-Graph 3.0, and bootstrapping (500 resamples) used to evaluate significance.

For the measurement model the results showed all the item loadings exceeded the suggested threshold of 0.707 (Chin, 2010), ranging from 0.818 to 0.969, except for one item measuring tangible rewards with a factor loading of 0.636. Although loadings of 0.60 are acceptable (Chin 2010), this suggests further work is needed on the measures for tangible rewards. Composite reliabilities ranged from 0.876 to 0.977 and average variance extracted (AVE)

from 0.707 to 0.934 suggesting adequate convergence of the measures (Chin 2010). The results also showed the construct AVEs were greater than the squared correlations among the constructs, suggesting adequate discriminant validity for the measures (Chin 2010).

For the structural model the results explained 0.568 of the variance observed for intention to share knowledge. Both attitude ($\beta=0.676$; $p \leq 0.001$) and subjective norms ($\beta=0.137$; $p \leq 0.05$), were positively associated with intention to share knowledge; H1 and H2 were supported.

The model also explained 0.547 of the variance for attitude. The results showed that reciprocity ($\beta=0.299$; $p \leq 0.05$), reputation ($\beta=0.254$; $p \leq 0.10$) and self-efficacy ($\beta=0.316$; $p \leq 0.001$) were significant for attitude, but tangible rewards ($\beta=0.034$) was not. Hypotheses H4, H5 and H6 were supported, but not H3. Verbal rewards from superiors ($\beta=-0.123$) and colleagues ($\beta=0.086$) were also not significant for attitude; H7 and H8 were not supported.

Turning to the impacts of verbal rewards on reputation and self-efficacy, the results showed positive links between verbal rewards from colleagues, and reputation ($\beta= 0.256$; $p \leq 0.05$) and self-efficacy ($\beta=0.249$; $p \leq 0.10$), supporting H9b and H10b. Verbal rewards from superiors was also positively associated with reputation ($\beta= 0.359$; $p \leq 0.001$) supporting H9a, but was not significant for self-efficacy ($\beta=0.173$ $p \leq 0.20$); H10a was not supported. Further analysis (post-hoc) using bootstrapping, suggested though, that with a larger sample size ($n=200$) the links between verbal rewards from superiors and, self-efficacy and attitude would likely be significant (at $p \leq 0.10$) though negative for attitude and contrary to H7. Thus, for a larger sample, the results suggest that while verbal rewards may not directly impact attitude towards knowledge sharing, attitude is influenced through their effects on self-efficacy and reputation.

4. Discussion and Conclusion

This study contributes to research by extending our understanding of the role of rewards to motivate knowledge sharing. It confirms the findings of some prior studies that monetary rewards do not have a significant effect on attitude to share knowledge. However reputation and reciprocity which are extrinsic rewards based on social capital are important motivators to share knowledge.

Perhaps the most interesting findings of this study relate to the role of feedback as a verbal reward. The study demonstrates that positive feedback from colleagues and supervisors motivates individuals to share knowledge. However, this influence is not necessarily direct and if a test is performed solely on the direct link, their role may be missed. Verbal rewards from colleagues do not have significant direct effect on the attitude to sharing knowledge. However, they have an important indirect effect through self-efficacy and reputation. Similarly, there is no positive direct effect of supervisors' feedback on attitude but there is significant influence through reputation. Contrary to expectations, supervisors' feedback did not have a significant effect on self-efficacy. However, the post-hoc analysis suggests that the link would be significant with a larger sample.

The findings of this study have important implications for practice. They demonstrate that organisations need to design their rewards schemes to include more rewards based on social capital. The importance of positive feedback as a reward also suggests that managers need to provide regular feedback and employees encouraged to comment on others' contributions.

Finally, future research can examine the role of rewards further in other contexts, giving consideration to the rewards that are in place in the organisations. Future research can also distinguish different types of feedback. Researchers have distinguished supervisory feedback according to its valence (positive or negative) (Jaworski & Kohli 1991) and its locus (output vs. behaviour). These types can be investigated in relation to knowledge sharing.

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