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Jao-Hong Cheng  
National Yunlin University of Science and Technology, jhcheng@yuntech.edu.tw

Dong-Her Shih  
National Yunlin University of Science and Technology, shihdh@yuntech.edu.tw

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THE INFLUENCE OF MORAL ORIENTATION AND RELATIONAL RISK ON KNOWLEDGE SHARING IN SUPPLY CHAINS

Jao-Hong Cheng, Department of Information Management, National Yunlin University of Science and Technology, Douliou, Taiwan, R.O.C., jhcheng@yuntech.edu.tw

Dong-Her Shih, Department of Information Management, National Yunlin University of Science and Technology, Douliou, Taiwan, R.O.C., shihdh@yuntech.edu.tw

Abstract
Sharing knowledge through inter-organizational relationships is one means of enhancing strategic competitiveness. It is generally agreed that the development of close relationships facilitates such sharing among partners. This paper presents a research model comprises five research hypotheses with four constructs, including moral orientation, opportunistic behavior, loss of competences risk and knowledge sharing. This study develops a conceptual model that relational risk as a mediating construct to examine the inter-relationship effects that affect knowledge sharing and these relationships. We analyze data collected from 281 major manufacturing firms in Taiwan, using structural equation modeling. The results of the empirical study suggest that the role played by moral orientation is critical in ensuring the knowledge sharing as it mitigates the opportunistic behavior and loss of competences risk in the process. The findings of the study provide useful insights into how supply chain members should reinforce their collaborative behaviors and activities so as to improve their moral orientation and in turn enhance knowledge sharing for the supply chain as a whole.

Keywords: Moral Orientation, Opportunistic Behavior, Loss of Competences Risk, Knowledge Sharing

1. INTRODUCTION
To improve coordination and quality, firms often request that their partners share knowledge (Cheng et al., 2008). A primary objective of knowledge management is to facilitate effective knowledge sharing among inter-organizational members (Desouza, 2003), which is important for the maintenance of good relationships. It is generally believed that the willingness to share knowledge is greater when parties have a close relationship (Panteli, & Sockalingam, 2005;
Wang & Wei, 2007). However, this willingness is determined by trade-offs related to many factors, such as dependence, uncertainty, exchange efficiency, and social satisfaction (Dwyer et al., 1987).

To achieve the advantages of knowledge sharing, it is strategic important to understand those factors that affect the partners’ behavior of knowledge sharing. Research on inter-organizational knowledge sharing, have examined resource commitment (Wagner & Bukó, 2005), justice (Liu et al., 2012), and ambidextrous management and ontological commitment (Im & Rai, 2008), among other factors to respond to market changes (e.g., Myers & Cheung, 2008). Little has examined the inter-relationship between relational governance and risk management that affect knowledge sharing and these relationships, despite being an important issue in inter-organizational research (Lee & Johnson, 2010; Szczepański & Światowice-Szczepańska, 2012). With collaborations between manufacturing firms and their partners, a base of jointly held knowledge can be created and maintained through knowledge sharing, thus enhancing mutual understanding and expectations (Larsson et al., 1998).

To verify this new research model, we first examine how the moral orientation of a company affects its attitude toward inter-organizational knowledge sharing. Then, we look into how factors of moral view affect the connection between moral orientation and inter-organizational knowledge sharing. Specifically, we examine how opportunistic behavior and loss of competences risk mediated the relationship between moral orientation and knowledge sharing.

In the following sections, Section 2 presents theoretical framework and hypothesis development. The data collection method and research design are described in Section 3, and the study findings are presented in Section 4. Finally, Section 5 provides a discussion of the results, and Section 6 concludes the paper and offers directions for future research.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

In an supply chain, a strong moral orientation means that the willingness of a firm to build and to maintain positive relationships with its partners is enhanced (Taylor and Winquist, 2001; Small, 2002). When supply chain members have the same perceptions about how to interact with one another in line with proper standards of behavior, they can avoid potential opportunistic behavior by partners with different sets of goals. With collaborations between partners will boost the share of knowledge (Wang et al., 2011). Thus, it is reasonable to propose that the higher the moral orientation between partners improve inter-organizational knowledge sharing. It is thus hypothesized that:

Hypothesis 1: Moral orientation is positively related to knowledge sharing
According to the moral theory, moral orientation is a science in practice, that it is concerned with rules determining right action, and identifying actions that are wrong (Taylor and Winquist, 2001; Small, 2002). In line with organizational behavior literature, the firm will choose to conform to the “rules of the game” to avoid being locked out of cooperative relationships and to ensure access to relational resources (North, 1990; Liang et al., 2007; Cheng, 2011). Moral orientation is related to cognitive dimension of social capital. According to (Villena et al., 2011), parties with similar moralized rules and cultures govern appropriate behaviors and constrain undesirable behavior (such as opportunistic behavior) in favor of the collective interests. With collaborations between partners will mitigate the probability of opportunistic behavior and loss of competences risk. Accordingly, it is hypothesized that:

**Hypothesis 2:** Moral orientation is negatively related to opportunistic behavior.

**Hypothesis 3:** Moral orientation is negatively related to loss of competences risk.

One firm will choose to cooperate with another, on the basis that the other can provide it with greater benefits. In general, when relationships become closer, collaborative tasks, including product design and process improvement, become more knowledge intensive, and thus corporate knowledge needs to be shared. Despite the benefits gained from sharing knowledge with external partners, firms must protect themselves against knowledge appropriation by partners’ relational risk behaviors (Jordan & Lowe, 2004). Thus, some partners may use methods to protect key knowledge as a result of relational risk behaviors, thus impeding knowledge sharing between organizations (Cheng et al., 2008). It’s thus hypothesized that:

**Hypothesis 4:** Opportunistic Behavior is negatively related to knowledge sharing.

**Hypothesis 5:** Loss of competences risk is negatively related to knowledge sharing.

### 3. RESEARCH METHOD

To develop the survey instrument, pools of items are identified from this literature in order to measure the constructs of this research model. All measures of this survey instrument were developed from the literature. The expressions of these items are adjusted, where appropriate, to the context of marine transportation logistics. The items measured on a seven-point Likert scale, ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (7).

In order to improve content and appearance of the 11-item questionnaire, a pre-test of it was performed on a sample comprising three academic researchers and five Ph.D. Students. The empirical study aims at top 1000 manufactory enterprises selected from directories of 2012 Business Weekly top 1000 firms in Taiwan. This resulted in 281 effective responses and a total response rate of 28.1%. A Chi-square analysis of the industry distribution of the respondents
showed no difference from the industry distribution of all the firms used in the survey. This suggested no non-response bias in the returned questionnaires.

4. RESEARCH RESULTS

Structural equation modeling (SEM) with AMOS 17.02 was used to test and analyze the hypothesized relationships of the research model. SEM aims to simultaneously examine the inter-related relationships among a set of posited constructs, with each construct being measured by one or more observed item(s) (measures). SEM involves the analysis of two models: a measurement (or confirmatory factor analysis) model and a structural model (Anderson and Gerbing 1988). The measurement model specifies the relationships between the observed measures and their underlying constructs, which allowed to inter-correlate, and the structural model specifies the posited causal relationships among the constructs. This paper followed the procedure suggested by (Baron and Kenny, 1986) and tested the mediating effects of the model. The results show that opportunistic behavior and loss of competences risk partial mediated the relationship between moral orientation and knowledge sharing.

Moral orientation is positively associated with knowledge sharing. Opportunistic behavior and loss of competences risk positively mediated the relationship between moral orientation and knowledge sharing. The overall fit of the structural model is acceptable, since all measures of fit reach an acceptable level ($\chi^2 = 109.221$, df = 102, $p < 0.01$; GFI = 0.921; AGFI = 0.902; CFI = 0.922; NFI =0.910; RMSEA=0.045). The result shows that moral orientation ($H1: \gamma = 0.212, t = 2.902, p < 0.01$) is significantly associated with knowledge sharing. Moral orientation ($H2: \gamma =-0.443, t = -4.383, p< 0.001; H3: \gamma = -0.171, t = -2.591, p< 0.01$) are significantly associated with opportunistic behavior and loss of competences risk. Opportunistic behavior and loss of competences risk have negative impact on knowledge sharing ($H4: \gamma =-0.264, t = -2.101, p < 0.05; H5: \gamma =-0.193, t = -2.009, p < 0.05$).

5. DISCUSSION

Conforming to the hypothesis, moral orientation has the strongest positive influence on inter-organizational knowledge sharing. This finding is consistent with Wang et al., (2011). In Taiwan's electronic supply chains, this factor plays the most significant role in undermining inter-organizational knowledge sharing. Moral orientation means there are formally or informally through proper standards or expectations of behaviors between electronic supply chain members. Violating these standards may bring a firm's legitimacy into question and jeopardize its access to scarce resources and social support. Thus, moral orientation can impact partners’ ability to process rationalize, and exercise discretion in inter-organizational knowledge sharing.

Conforming to the hypothesis, the results show that moral orientation is the major factor
influencing to opportunistic behavior. In supply chains, moral orientation plays the most significant role in controlling inter-organizational opportunistic behavior. This finding is in line with previous research on the subject. This may reflect that moral orientation of the supply chain parties are so considerable and will diminish the probability of opportunistic behaviors. Therefore, this finding suggests that a good practice in forming an inter-organizational relationship in supply chains is to reinforce their moral orientation and thus mitigate probable opportunistic behaviors.

We also find that moral orientation is the major factor contributing to loss of competences. Moral orientation was mentioned a person has good behavior from mind inside. Taiwan's supply chains will manage well in the possession of morality between partners if they are out of control. This may reflect that moral orientation of the supply chain is so considerable that loss of competences among them is tolerated and conceived. This finding suggests that a good relational risk management in forming an inter-organizational relationship in supply chains is to control inter-organizational loss of competences and mitigate probable relational risks.

As hypothesized, opportunistic behavior and loss of competences risk have negative impact on inter-organizational knowledge sharing. This is in accordance with the findings of previous studies (Jordan & Lowe, 2004; Panteli & Sockalingam, 2005). This indicates that when significant gap (cognitive differences) or distrust between parties, the degree of knowledge sharing would be restricted. Opportunistic behavior and loss of competences risk can harm relationship formation and as a result, knowledge sharing. This is mainly because sharing key knowledge may increase the competitive advantage of their partners, which may be in conflict with their own interests in a highly competitive market. Thus, supply chain partners should reinforce their collaborative relationships so that opportunistic behavior and loss of competences risk do not damage the relationships or the future sharing of knowledge.

5.1 Theoretical implications

With the development of the new research model, the theoretical contributions of this paper to the literature are described as follows. The results from our study contribute to the inter-organizational knowledge sharing literature. Specifically, although risk is a central notion in the literature, notable gaps remain in understanding its impact on inter-organizational knowledge sharing (Wagner & Bukó, 2005; Im & Rai, 2008; Myers & Cheung, 2008; Liu et al., 2012). We attempted to fill the gaps by identifying relational risk behaviors and investigating their influences in inter-organizational knowledge sharing. For instance, this study makes a theoretical contribution in linking moral orientation with relational risk and inter-organizational knowledge sharing for exploring the inter-organizational relationships between supply chain members. The theoretical framework of the model can be applied to other forms of inter-organizational relationships involving knowledge sharing.
5.2 Managerial and practical implications

This study provides insights for managers and practices seeking to improve inter-organizational knowledge in supply chains. Inter-organizational knowledge sharing are increasingly popular to managers because business relationships are enhanced to achieve corporate goals and facilitate sustain competitive advantages (Im & Rai, 2008; Myers & Cheung, 2008; Liu et al., 2012). Our findings on the effects of moral orientation and relational risk, not only are consistent with prior studies, but also examine how knowledge sharing is significantly affected by moral orientation through other mediating variables such as opportunistic behavior and loss of competences risk. The most important managerial implication and practical insights are that developing positive and strong collaborative relationships is the key to enhancing inter-organizational knowledge sharing in supply chains. Therein, relevant parties can develop collaborative relationships by focusing on activities that would enhance moral orientation, and avoid activities that would reinforce the probability of relational risk behaviors (such as opportunistic behavior and loss of competences risk). The improvement of knowledge sharing via enhancing the relational and institutional views of relational governance and managing the relational risk behaviors can then be achieved, efficiently and effectively, leading to the sustainability of supply chain relationships.

6. CONCLUSION AND FUTURE RESEARCH

It is of strategic importance for an organization to understand the factors influencing the sharing of knowledge developed and implemented with its partners in an inter-organizational relationship such as supply chains. To the best of our knowledge, this empirical research is among the earliest studies attempting to address the issues of relational governance and risk management to improve knowledge sharing in the context of supply chains. The findings of the study provide practical insights in understanding how supply chain members should reinforce their moral orientation activities that would improve their collaborative behaviors and manage relational risk, in order to enhance inter-organizational knowledge sharing for the supply chain as a whole.

Despite these contributions, this study suffers from methodological limitations typical of most empirical surveys. The resultant findings of the study cannot be generalized for all forms of supply chains, as these findings reflect the setting of Taiwan’s supply chains only. Collecting data from both partners would advance our understanding of the working of relational governance and its effect on relational risk and inter-organizational knowledge sharing. To address these inherent limitations, future research on cross-industrial studies on various forms of supply chains would be worth conducting in order to investigate whether differences between supply chains exist in relation to the inter-relationship effects that affect inter-organizational knowledge sharing and these relationships. Given that the current study
focuses on the effects of moral orientation and relational risk, further research may consider exploring some possible antecedents of the institutional or relational view of relational governance such as mimetic, coercive and normative institutional pressures, organizational culture or trust in supply chains.

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