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## High Commitment HRM, Perceived Organizational Support, Trust, and Knowledge Sharing: A Multiple-Level Analysis

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#### Introduction

The analysis of knowledge sharing that contributes to organizational competitive advantage has become one of the most prominent topics in organizational research. Prior research demonstrated the antecedents of knowledge sharing were mostly focused on personality (Matzler et al. 2008), trust (Mooradian, Renzl and Matzler 2006), and organizational justice (Ibragimova 2006). Organizational-level analyses focused on human resource management practices, organizational structure, culture, and learning, all of which could enhance the capability of knowledge management (Collins, Smith and Stevens 2001). Team-level research discussed innovativeness of knowledge created, speed of knowledge creation, and speed of knowledge transferring between teams, all of which influenced on knowledge management efforts (Gibson et al. 2007). Individual-level studies focused on the effects of organizational justice and trust on knowledge sharing (Lin 2007). According to the above research, fewer studies investigated the antecedents of knowledge sharing via multiple-level analyses, which revealed an important research gap needed to be fulfilled.

department, unit, and employees who transform value and experience into a kind of human capital (Petrash 1996). If an organization may make employees constantly learn and accumulate knowledge through knowledge sharing systems, human capital and customer capital may be enhanced as a result of creating organizational core value. Quinn, Anderson and Finkelstein (1996) proposed that knowledge and experience acquired by both organizations and employees fostered via systems of sharing and feedback. Nowadays, an organization which confronts the global trend may realize the importance of communication and knowledge sharing, this is, individuals, groups and organizations all

Important knowledge of an organization exists in

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need to learn new knowledge and then accumulate knowledge. The key of keeping organizational competitiveness is to utilize individual knowledge which is regarded as implicit knowledge of employees. As for internal operation, the most difficult stage of knowledge implementation is knowledge sharing (Hendriks 1999). Prior research demonstrated that human resource management was an effective tool fostering organizational competitiveness (Arthur 1994; Youndt et al. 1996; Bowen and Ostroff 2004). However, the mediating process between human resource and organizational performance was regarded as a black box needed to be further explored. As demonstrated by Srivastava, Bartol and Locke (2006), knowledge sharing contributes to team performance, that is, organizational performance may be fostered by knowledge sharing. Based on prior research, fewer scholars discussed the relationship between human resource management and knowledge sharing and its mediators, revealing another important

Extended from the theory of Whitener (2001), we propose that knowledge sharing may be fostered by high commitment human resource management through perceived organizational support and trust. When employees are approved and supported by an organization, a positive relationship may exist between human resource practices and POS revealing subjective cognition of employees (Allen, Shore and Griffeth 2003). Results of POS influence organizational commitment, job satisfaction, loyalty, turnover, and organizational citizenship behavior (Randall et al. 1999). Furthermore, trust is also an important factor that arouses employees' altruistic spirit which contributes to knowledge sharing, that is, organizations have to create an organizational environment making employees trust in their organization and supervisors as the result of sharing knowledge with colleagues (Nonaka, Toyama and Konno 2000). Based on social exchange theory, employees who perceive organizational support may transform short-term psychological contract into long-term psychological contract via organizational practices (e.g., high commitment human resource management). That is, employees who perceive organizational support may produce positive attitude (e.g., trust in the organization and supervisors) and behavior (e.g., knowledge sharing) which enhance organizational competitive advantage. Therefore, to investigate the relationships among high commitment human resource management, perceived organizational support, trust, and knowledge sharing is important.

From the empirical evidence, employee's discretionary behaviors (e.g., organizational citizenship behavior, knowledge sharing etc.) and perceived supportive organizational environment may be fostered through human resource practices which contribute to organizational performance (Sun, Aryee and Law 2007). A multiple-level approach was utilized by Whitener (2001) and Sun, Aryee and Law (2007) to solve the problem of common method bias. Based on Whitener (2001), multiple-level analyses were adopted to investigate the relationships among high commitment human resource management, perceived organizational support, trust, and organizational commitment; however, Whitener (2001) didn't further investigate employee behaviors (e.g., knowledge sharing), which revealed the other important research gap need to be fulfilled.

Organizational-level and individual-level questionnaires were utilized to collect data from financial institutions of Taiwan in order to understand cross-level relationships. In individual-level analyses, we examined the relationships among perceived organizational support, trust, and knowledge sharing. In cross-level analyses, we adopted hierarchical linear modeling to investigate the effects that high-commitment human resource management influenced perceived organizational support, trust, and knowledge sharing.

# Literature Review and Hypotheses

In individual-level analyses, this study investigated the relationships among perceived organizational support, trust, and knowledge sharing. In cross-level analyses, this study examined the effects that high-commitment HRM influenced perceived organizational support, trust, and knowledge sharing. Literature review and hypotheses were discussed as follows.

# Perceived Organizational Support and Knowledge Sharing

As argued by Eisenberger et al. (1986), "perceived organizational support may be influenced by various aspects of an employee's treatment by the organization and would, in turn, influence the employee's interpretation of organizational motives underlying that treatment." That is, perceived organizational support is regarded as organizational treatments that influence organizational support and organizational care perceived by employees. Approaches adopted by organizations are to treat employees positively, which include praise, financial support, promotion, job enrichment, which hope to get positive expectation from employees. Furthermore, perceived organizational support emphasizes that employees believe the organization treat them positively, and then produce different attitudes and behaviors, such as trust (Whitener 2001), organizational commitment (Allen, Shore and Griffeth 2003), and organizational citizenship behaviors (Organ and Ryan 1995).

As mentioned before, individual's status and power in an organization may be affected by knowledge sharing; therefore, it is difficult for employees to share valuable knowledge with colleagues automatically unless they have trust in the organization and colleagues. Allen, Shore and Griffeth (2003) argued that employees who perceived organizational support and organizational care would have a better rate of attendance, job performance, organizational citizenship behavior, job satisfaction, and affective commitment to an organization. Hislop (2003) demonstrated that organizational commitment could predict employee knowledge-sharing attitudes and behaviors, that is, employees with high altruistic spirit might perform organizational citizenship behaviors and share knowledge automatically. Therefore, hypothesis 1 was proposed.

Hypothesis1: Perceived organizational support and knowledge sharing will be positively correlated.

## Perceived Organizational Support and Trust

As argued by Aryee, Budhwar and Chen (2002), two types of trust contribute to employees' cognition and affection. However, trust is regarded as a conception that is hard to be defined (Rousseau et al. 1998), because the objective and degree of trust are different from situations, such as trust between organizations and trust between people. Even so, Kim and Mauborgne (1993) argued elements of trust included risk, uncertainty, interdependent, and employees' trust reflected loyalty toward their leaders and then brought benefit to them. Furthermore, Mayer and Davis (1999) found three components (i.e., ability, benevolence, and integrity) were related with trust and mediated the relationship between a system of performance appraisal and trust.

When employees perceive organizational support and organizational care, employees will produce affective commitment toward an organization (Allen, Shore and Griffeth 2003). According to social exchange theory, POS can create organizational trust and make an organization fulfill its exchange obligations by informing and rewarding employees (Eisenberger, Fasolo and Davis-LaMastro 1990). Moreover, POS can also cause employees to have long-term trust toward an organization to reciprocate additional performance created by employees (Eisenberger, Fasolo and Davis-LaMastro 1990). Whitener (2001) demonstrated that perceived organizational support was significantly associated with employees' trust. Therefore, Hypothesis 2 was proposed.

Hypothesis2: Perceived organizational support and trust will be positively correlated.

#### Trust and Knowledge Sharing

Collins, Smith and Stevens (2001) argued that an organization could enhance employees' willingness of sharing knowledge via organizational culture, motivation system, and team design. In other words, an organization may hope to enhance the degree that employees trust in the organization (Chowdhury 2005),

and foster the degree that employees commit to the organization in order to make employees produce organizational citizenship behaviors via several procedures. From perspectives of social exchange, those employees trust organizational procedures and policies may enhance affective commitment toward the organization and express organizational citizenship behaviors to response organizational trust. From empirical evitrust is positively correlated knowledge-sharing behaviors (Chowdhury 2005), that is, when employees trust in an organization and leaders, they will response through actions (Whitener 2001). Prior research demonstrated that organizational trust predicted employee knowledge-sharing behaviors and attitudes (Andrews and Delahaye 2000). Therefore, Hypothesis 3 was proposed.

Hypothesis3: Trust and knowledge sharing will be positively correlated.

#### Mediating Role of Trust

Based on hypotheses 1-3, this study proposes that there may be a mediating relationship among perceived organizational support, trust, and knowledge sharing. From empirical findings, Whitener (2001) found that high commitment HRM moderated the relationships among perceived organizational support, employee commitment, and trust-in-management. Trust-in- management played a partial mediator in the relationship between perceived organizational support and organizational commitment; however, they didn't further discuss the consequences, such as job satisfaction, turnover, organizational performance, and knowledge sharing. Aryee, Budhwar and Chen (2002) found that trust played partial mediators and full mediators among relationships of distributive justice, procedural justice, working attitudes of job satisfaction, turnover intentions, and organizational commitment. According to above mentions, the mediating effect may exist in the relationship between employee perception and knowledge sharing except for the direct effect. Thus, we proposed that trust mediated the relationship between perceived organizational support and knowledge sharing. Therefore, hypothesis 4 was proposed:

Hypothesis4: Trust mediates the relationship between perceived organizational support and knowledge sharing.

#### High Commitment Human Resource Management and Perceived Organizational Support

Human resource practices which include the selectiveness of staffing, comprehensiveness of training, developmental use of performance appraisal, externally competitive rewards, and internally equitable rewards are implemented by supervisors of the human resource department may be treated as organizational support and care by organizational members (Snell and Dean 1992). Employees tend to establish the relationship between themselves and an organization via social exchange relations. That is, when employees expect

organizational procedures may benefit them, this perception of employees may produce good exchange relationship (Whitener 2001) and make employees adjust their behaviors to reciprocate their organization.

When an organization approves employees' contributions and supports them, positive relationships will exist among promotion, developing experience, and perceived organizational support (Allen, Shore and Griffeth 2003). In fact, employees do not always sense organizational intentions, so it is important for the organization to make employees sense HR practices (Whitener 2001; Allen, Shore and Griffeth 2003). Whitener (2001) argued that the organization could adopt a high-commitment strategy including employpractices, appraisal, competitiveness, compensation, and comprehensive training and development in order to make employees have high commitment and motivation. Based on social exchange theory, Flynn (2005) argued that employees with personal identity orientation preferred negotiated exchange to derive self-worth feelings from the evaluation of their characteristics by making comparisons with others. That is, employees may think they are more important and perceive organizational support high-commitment HRM practices adopted by an organization. Therefore, high-commitment HRM is a good strategy for an organization to make employees perceive organizational support and commit to their organization. Consequently, high-commitment human resource practices in the organizational level may affect employees' perceived organizational support in individual level. Thus, hypothesis 5 was proposed.

Hypothesis5: High-commitment human resource management will be positively related to perceived organizational support.

#### High Commitment Human Resource Management and Trust

Kim and Mauborgne (1993) proposed that employee's trust could be reflected by facts that they trusted in their organization and leaders, and agreed that organizational actions could make them benefited. According to Aryee, Budhwar and Chen (2002), two types of trust which include cognition-based trust and affect-based trust were proposed. Cognition-based trust reflects individuals' beliefs of reliability, dependability and competency in order to evaluate their ability of carrving out obligations. Affect-based trust reflects individuals' emotional attachments which are from mutual care among organizational members, that is, those employees perceive organizational support and organizational care may exhibit emotional attachments and affective commitment toward an organization (Allen, Shore and Griffeth 2003). Therefore, an organization may utilize high-commitment human resource practices to enhance the degree that employees trust in their supervisors in order to foster knowledge-sharing behaviors. For example, employees who are treated fairly will reciprocate with high job performance and positive attitudes, including organizational trust (Whitener et al. 1998). Furthermore, Whitener (2001) demonstrated that high-commitment human resource management practices affected employees' trust of supervisors directly. This study argued that high-commitment human resource management was positively related to trust. Thus, hypothesis 6 was proposed.

Hypothesis6: High-commitment human resource management will be positively related to trust.

#### High Commitment Human Resource Management and Knowledge Sharing

High-commitment human resource practices are profoundly related to employees' daily life, that is, an organization may select employees with altruistic spirit that contributes to knowledge sharing, and adopt comprehensive training courses that make employees share their professions with departments and colleagues. Furthermore, an organization may regard knowledge sharing as an evaluative index and arouse employees' altruistic spirit that contributes to knowledge sharing behaviors through spontaneous rewards, representing that human resource practices may affect individuals' cognition and behaviors (Snell and Dean 1992). Actually, human resource practices are important to the relationship between employees and an organization because of the exchange relationship (Allen, Shore and Griffeth 2003). High-commitment human practices are regarded as a long-term investment of human capital that cares about employees' contributions and developments. Based on reciprocal relationships (Flynn 2005), employees may repay an organization to solve problems of knowledge sharing through long-term and broad works. Therefore, this study argued that high- commitment human resource management practices were positively related to knowledge sharing. Thus, hypothesis 7 was proposed.

# Hypothesis7: High-commitment human resource management will be positively related to knowledge sharing.

According to Whitener (2001), this study proposed a framework to investigate the relationship between high-commitment human resource management and employees' behaviors (i.e., knowledge sharing) except for investigating the relationship between high-commitment human resource management and employees' cognition and attitudes, such as perceived organizational support and trust. In the individual-level analyses, this study examined the relationships among perceived organizational support, trust, and knowledge sharing. In the cross-level analyses, this study examined the relationships among high-commitment human resource management, perceived organizational support, trust, and knowledge sharing.

#### **Method**

#### Sample and Procedures

The data of this study collected from questionnaires of supervisors and employees. The supervisor questionnaire was designed to measure high-commitment HRM from the perspective of supervisors, and the employee questionnaire was designed to measure employees' attitudes and behaviors including perceived organizational support, trust, and knowledge sharing. In total, 1251 questionnaires were mailed to these respondents in 2008, and 1103 completed questionnaires were returned, representing a valid response rate of 88.18%. Among the respondents, 177 were supervisors and 796 were employees.

Individual level

Perceived Organizational Support

H2

H3

Knowledge sharing

H1

Figure 1 Research Framework

Table 1 Individual-level Analyses

Independent variable $\rightarrow$ Dependent variable	POS→KS	<b>POS</b> → <b>Trust</b>	Trust→KS
Intercept γ00	3.623***	3.630***	3.619***
POS γ10	0.351***	0.753***	
Trustγ10			0.211***
Gendery20	-0.02	0.022	-0.039
Αgeγ30	0.081***	-0.004	0.092***
Educationγ40	0.099*	0.068	0.074
τ 00	0.022***	0.032***	0.022***
$\sigma^2$	0.31	0.431	0.31
$R^2$	0.127	0.778	0.091

\*\*\*P< 0.01, \*\* P<0.05, \* P<0.1

#### Measure

**High-commitment HRM** (H-C HRM) A 32-item HRM scale was adapted from Snell and Dean (1992) and utilized to measure employee perceptions of the extent of high-commitment. The Cronbach's alpha was from 0.878.

Perceived organizational support (POS) According to Eisenberger et al. (1986) and Eisenberger, Fasolo and Davis-LaMastro (1990), POS helps employees commit to an organization. A five-item scale adapted from perspectives of Eisenberger et al. (1986) and Eisenberger, Fasolo and Davis-LaMastro (1990) was applied to capture employee POS. The Cronbach's alpha was 0.838.

**Trust** Employees' trust refers to reflect in their trust toward an organization and leaders; and employees typically believe organizational practices will benefit them. A five-item scale was adapted from Robinson and Rousseau (1994) to capture employee organizational trust. The Cronbach's alpha was 0.904.

Knowledge-sharing (KS) Knowledge-sharing refers to the frequency employees disseminate and share job-related know-how with their co-workers. Based on existing KM research and scales (i.e., Bartol and Srivastava 2002; Kohli, Jaworski and Kumar 1993), this study developed a four-item scale to measure employee knowledge-sharing behaviors. The Cronbach's alpha was 0.713.

Control variables. Several variables that may influence dependent variables were controlled. The individual-level controlled variables were gender, age, education, and tenure. The organizational-level controlled variables were ever publicly-operated and ever foreign-owned

### **Empirical Results**

This study utilized hierarchical linear modeling analyses to examine hypotheses except for statistical and correlation analyses in order to attenuate the problems caused by common method bias.

#### Individual-level Analyses

Hypotheses 1-3 investigated the relationships among perceived organizational support, trust, and

knowledge sharing. This study estimated an individual-level model including these variables, with no predictors specified for the organizational-level variables. According to results presented in table 1, perceived organizational support was positively and significantly related to knowledge sharing  $(\gamma 10=0.351***, p<0.01)$ , thus, hypothesis 1 was supported. Based on the significant result of residual variance (τ00=0.022\*\*\*, p<0.01), knowledge sharing may be affected by organizational-level variables. Furthermore, age and education were positively and significantly correlated with perceived organizational support, that is, aged employees with higher degree of education have higher perceived organizational support. Perceived organizational support was positively and significantly correlated with trust (γ10=0.753\*\*\*, p=0.01), thus, hypothesis 2 was supported. According to the significant result of residual variance ( $\tau 00=0.032***$ , p<0.01), trust may be affected by organizational-level variables. It shows that employees may have more trust in the organization and supervisors when they perceive more support from the organization of supervisors. Trust was positively correlated with knowledge sharing  $(\gamma 10=0.211***, p<0.01)$ , thus, hypothesis 3 was supported. Based on the significant result of residual variance (τ00=0.022, p<0.01), knowledge sharing may be affected by organizational-level variables. It shows that employees are more willing to share knowledge when they trust in their supervisors and organization.

#### **Mediating Effect of Trust**

This study investigated the mediating effect of trust between perceived organizational support and knowledge sharing through three analytical steps of Baron and Kenny (1986). From the results of Table 2, perceived organizational support was significantly correlated with knowledge sharing ( $\beta$ =0.311\*\*\*, p<0.01). Its  $\triangle$   $R^2$  (0.106) showed that perceived organizational support may explain 10.6% variance of knowledge sharing, that is, the first step was to confirm the effect that an independent variable affects a dependent variable. The second step was to examine the relationship between the independent variable and mediated variable. The result showed that perceived organizational support was significantly related to trust

**Table 2 Mediating Effect of Trust** 

Dependent Variable		Knowledge Sharing				Trust
Control Variable	Gender Age Education	-0.049 0.100*** 0.093*	-0.020 0.081*** 0.099*	-0.039 0.092*** 0.074	-0.021 0.081*** 0.089*	0.022 -0.004 0.068
Independent Variable	POS (β) Trust(β)		0.311***	0.211***	0.243*** 0.089**	0.753***
	$\sigma_{\scriptscriptstyle R}^{^{\ 2}}$	0.304	0.275	0.284	0.274	0.243
	$R^2$	0.021	0.127	0.091	0.132	0.778
	$\triangle R^2$		0.106	0.070	0.110	0.739

<sup>\*\*\*</sup>P< 0.01, \*\* P<0.05, \* P<0.1

Table 3 Multiple-level effects of High-commitment HRM

Dependent Independent	POS	ОТ	KS
Individual level Intercept γ00	3.313***	3.636***	3.630***
POS γ10 OT γ20 Gender γ30 Age γ40	-0.017 0.076**	0.781*** 0.026 -0.012	0.224*** 0.094** -0.027 0.082***
Education y50	-0.0005	0.076	0.093*
Organizational level			
High-commitment HRM γ01	0.341***	-0.079	0.085
Ever foreign-owned γ02	0.066	-0.056	0.085
Ever publicly-operated γ03	-0.082	0.217	0.068
$\sigma^2$	0.303	0.242	0.275
$R^2$	0.508	0.525	0.096

<sup>\*\*\*</sup>P< 0.01, \*\* P<0.05, \* P<0.1

( $\beta$ =0.753\*\*\*, p<0.01). Its $\triangle$   $R^2$  (0.739) showed perceived organizational support explained 73.9% variance of trust, that is, the independent variable truly affected the mediated variable. The third step was to examine whether the degree that the independent variable affected the dependent variable was affected by the mediated variable. From the variation of β, the β of perceived organizational support decreased from 0.311 to 0.243 when trust was added into the relationship between perceived organizational support and knowledge sharing. Additionally, perceived organizational support and trust explained 11% variance of knowledge sharing. Perceived organizational support (β=0.243\*\*\*\*, P<0.001) and trust (β=0.089\*\*, P<0.05) were still significantly related to knowledge sharing.

Based on the results mentioned above, trust mediated the relationship between perceived organizational support and knowledge sharing, therefore, hypothesis 4 was supported.

#### Cross-level effects of high-commitment HRM

This study investigated the relationship between high-commitment HRM at the organizational level and perceived organizational support, trust, and knowledge sharing at the individual level in order to examine hypotheses 5-7. As reported in Table 3, the high-commitment HRM was significantly and positively correlated with perceived organizational support ( $\gamma$ 01=0.341\*\*\*, p<0.01) after several variables were controlled; therefore, hypothesis 5 was supported. The high-commitment HRM was not significantly correlated with trust ( $\gamma$ 01=0.085, p>0.1), thus, hypothesis 6 was not supported. The high-commitment HRM was not significantly associated with knowledge sharing ( $\gamma$ 01=0.085, p>0.1); therefore, hypothesis 7 was not supported.

#### **Discussion**

#### Individual-level Analyses

The subjective perception of employees toward the organization directly affected employees' behaviors (i.e., knowledge sharing), and indirectly affected employees' behaviors through trust; therefore, the results were

consistent with the arguments of Whitener (2001) and-social exchange theory. In the work environment of financial institutions in Taiwan, policies and procedures made by the management may be regarded as the treatment to employees. When organizational care and support are perceived by employees, they may be more altruistic and be more willing to share knowledge with colleagues and supervisors. In the interactive process of mutual interdependent between supervisors and employees, employees implicitly establish their trust in the organization gradually and explicitly share knowledge with colleagues in behaviors. That is, employees who more perceive organizational support and more trust in the organization may be more willing to share knowledge.

#### Cross-level Analyses

Based on cross-level analyses, this study found that high commitment human resource management could enhance employees' perceived organizational support; however, high commitment human management could neither enhance employees' trust nor make employees share knowledge directly. According to social exchange theory, this study argues that human resource management can not affect employee's behaviors directly, but via the reciprocal relationships of employee's mental processes. That is, high commitment human resource management may improve employee's perception of an organization, when employees perceive more organizational support, and enhance their trust in supervisors gradually as the result altruistic behaviors. From results of financial institutions in Taiwan, this study found that it was difficult for financial institutions to make employees trust in them, because the interdependent relationship needed long-term interactions to bear uncertain risks. Even so, based on the reciprocal relationship, the organization may still enhance the degree that employees trust in supervisors and produce extra-job behaviors through perceived organizational support.

#### **Implications**

Three important implications were discussed as follow. First, perceived organizational support was not only affected knowledge sharing directly, but also affected knowledge sharing through trust. After controlling gender, age, and education, the variances of trust and knowledge sharing explained by perceived organizational support were 73.9% and 10.5%, that is, the explained variance of trust was higher than knowledge sharing. It shows that perceived organizational support plays an important role in the process of establishing employee trust. Therefore, the managers and leaders have to think how to enhance employees' trust and knowledge sharing through the subjective cognition (i.e., support and care) perceived by employees. Second, high commitment human resource management affected perceived organizational support significantly; therefore, the organization could enhance knowledge sharing behaviors through human resource practices that contributed to perceived organizational support. From

the results, high commitment human resource management can not directly affect employees' behaviors, they have to improve employees' cognitions first, and then affect their trust and knowledge sharing behaviors. As for employees, they may interpret and judge these organizational practices and procedures by their individual cognitions, and then adjust their behaviors (i.e., knowledge sharing) in accordance with their judgments. Third, to enhance employees' perceived organizational support is an important approach of strategic human resource management in the future. From the results, high commitment human resource manageaffected perceived organizational support significantly and employees' trust and knowledge sharing were facilitated via perceived organizational support. That is, the key point of strategic human resource management in financial institutions is to meet expectations and needs of employees in the future.

#### **Contributions**

According to research results, three important contributions were discussed. First, the data utilized in the study was collected from multiple channels. This study designed two types of questionnaires including supervisor and employee in order to solve the problem of common method variance. Additionally, organizational control variables were referred from annual reports and open information of financial institutions in Taiwan; therefore, the research results could be presented objectively and reasonably. Second, multiple-level analyses were utilized to investigate the relationship between high commitment human resource management and individual-level variables in order to solve the bias of common method variance. It showed that this study was the first one to investigate the factors that affected knowledge sharing via multiple-level approaches (i.e., HLM); therefore, antecedents of knowledge sharing were investigated reasonably. Third, employees' knowledge sharing behavior was influenced by their mental processes, such as perceived organizational support and trust, revealing that the problem of black-box relationship between human resource management and knowledge sharing was solved.

#### Limitations and Future Study

This study has to be considered in light of its limitations. First, the data in this research was collected from 27 financial institutions in Taiwan; therefore, the generalizability of the research results, inference and application, might be limited. Future study may collect data from different industries so as to be generalized. Second, based on the argument of Schwab (2005), researchers should use the longitudinal data to examine casual relationships. However, the cross-sectional data utilized by this study could only explain a phenomenon at a period of time. Longitudinal data, experiment designs or quasi-experiment may be utilized in the future study. Third, this study only utilized two-level of hierarchical linear modeling to analyze, thus, future study might utilize three-level factors (e.g., administrative strategy, organizational culture etc.) to investigate the relationship between high commitment human resource management and knowledge sharing comprehensively.

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