

HOW HIGH PERFORMANCE HUMAN RESOURCE PRACTICES AFFECT KNOWLEDGE CAPACITY AND INNOVATION PERFORMANCE : AN EXAMPLE OF TAIWANESE MNCS

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ABSTRACT

To mitigate the research gap around high performance human resource practices in an international environment, we examined processes (mediation and moderation) linking these practices to innovation performance. The researchers conducted a survey of Taiwanese business units in a foreign environment and used LISREL and hierarchical regression models to test the research hypotheses. The empirical result evidences the influence of high performance human resource practices on a foreign unit's knowledge capacity, knowledge management process, and innovation performance. Moreover, it confirms the mediating role of knowledge capacity and the moderating roles of resource dependence and institutional pressure in an overseas environment.

INTRODUCTION

Considerable evidence exists that high performance human resource (HR) practices are associated with organizational performance [1] [2] [3]. But the literature has a number of limitations. We obtained data from an emerging economy to test a model of the processes (mediation and moderation) linking high performance human resource practices, knowledge management, and innovation performance. The objectives of this study are: (1) to explore how high performance human resource practices concerning expatriates in a foreign unit affect innovation performance; (2) to examine the potential mediating effect of knowledge capacity (including absorptive and disseminative capacity) in the relationship between high performance human resource practices and knowledge management, and between high performance human resource practices and innovation performance in an overseas unit; and (3) to examine two context variables, resource dependence and institutional pressure, as moderators of the relationship between high performance human resource practices and knowledge capacity in a foreign unit.

THEORETICAL BACKGROUND AND HYPOTHESES

Huselid [1] factor-analyzed a number of high performance work practices into two categories: those influencing employees' abilities and those affecting employees' motivation. Specifically, training and performance appraisal are positively related to employees' abilities while performance-based compensation, merit-based promotion and internal communication are positively related to employees'

motivation [4]. In this study, we hypothesize that high performance human resource practices, including selective staffing and extensive expatriate training, will positively associate with foreign units' ability to learn and disseminate knowledge. Further, high performance human resource practices, including promotion from within, incentive rewards, team-building, and employment security will enhance a foreign unit's motivation to learn and share knowledge. The human resource practices will have a positive association with a foreign unit's knowledge capacity. Therefore, we propose:

Hypothesis 1 A foreign unit's high performance human resource practices are positively related to its knowledge capacity.

Previous studies show the mediation effects of knowledge capacity (including absorptive capacity and disseminative capacity) between human resource practices and knowledge related variables [4] [5]. Bowen and Ostroff [6] argue that the strength of the HRM system can help explain how individual employee attributes affect organizational effectiveness. Evans and Davis [7] provide a theoretical framework illustrating how social structure, including shared mental models, of the organization can mediate the relationship between high performance work systems and organization performance. According to a meta-analysis by Combs, Liu, Hall, and Ketchen [8], mediators, including knowledge, skills, ability and motivation, drive the relationship between high performance human resource practices and organizational performance. This explication suggests the mediating effect of knowledge capacity. Based on the arguments of Combs et al. [8], Evans and Davis [7], and Bowen and Ostroff [6], we contend that knowledge capacity can mediate between high performance human resource practices and knowledge management. High performance human resource practices can thus enhance knowledge capacity of a foreign unit and in turn help it acquire, transfer, and apply knowledge. Therefore, we propose:

Hypothesis 2a A foreign unit's knowledge capacity mediates the relationship between its high performance human resource practices and knowledge management.

Previous research supports the relationship between capacity and innovation performance. Chow and Gong [9] find that innovation capability is positively associated with innovation performance. Almeida and Phene [10] argue that subsidiaries with a large number of linkages (with the MNC and the host country) have more knowledge available, as well as more varied knowledge, and should therefore be more innovative. Knowledge capacity indicates the ability and motivation of a foreign subsidiary to learn and transfer knowledge. This knowledge capacity provides a foreign unit with different kinds of knowledge sources which will be positively associated with the foreign unit's innovation performance. Adding to the mediation nature of knowledge capacity between human resource practices and performance indicators [6] [7] [8], we predict that knowledge capacity will play a mediating role between high performance human resource practices and innovation performance in a foreign environment. Thus, we propose:

Hypothesis 2b A foreign unit's knowledge capacity mediates the relationship between its high performance human resource practices and innovation performance.

Previous research proposes that the knowledge management process, including knowledge acquisition, transfer, and application, will have a positive impact on innovation performance [11]. Similarly, a foreign unit's knowledge acquisition may occur through learning from other organizations, grafting knowledge-processing components, or intentional search and monitoring. These activities are required for the innovation process. The acquired knowledge has to be converted into a transferable form and distributed internally to institutionalize innovation in the unit. Knowledge application means that the unit can exploit acquired knowledge in the form of new and improved products and will be positively related to innovation performance for a foreign unit. Thus, we propose that knowledge management, including knowledge acquisition, transfer and application, has a positive association with the innovation performance of a foreign unit.

Hypothesis 3 A foreign unit's knowledge management is positively related to its innovation performance.

From the previous inference, a foreign unit's high performance human resource practices will have a positive influence on knowledge capacity. But if the foreign unit depends on its parent for substantial resources, it will use headquarters' people-related resources to manage its daily operations. For instance, a newly established subsidiary will rely on the parent company's specialists to develop information systems or new factories and the effect of the foreign unit's high performance human resource practices on knowledge capacity may be attenuated. The resource dependence will dampen the impact of high performance human resource practices on knowledge capacity. Therefore, we propose:

Hypothesis 4a Resource dependence moderates a foreign unit's high performance human resource practices-knowledge capacity relationship in such a way that the relationship is stronger when resource dependence is low than when it is high.

In a multinational environment, MNCs face local institutional pressures to adapt their HR practices to the different local environments where their subsidiaries operate [12]. Since institutional pressures arise from an international environment that is different for each country, we predict that institutional pressures will play a moderating role. If the institutional pressures in a foreign environment are strong, a subsidiary has to follow the local rules and its high performance human resource practices may need revision to conform to local needs. The effect of high performance human resource practices on knowledge capacity may be attenuated under this circumstance. But if the institutional pressures in a foreign subsidiary are weak, the subsidiary can implement high performance human resource practices as desired, and the effect of HR practices on knowledge capacity can achieve its expected goals. Therefore, we propose:

Hypothesis 4b Institutional pressure moderates a foreign unit's high performance human resource practices-knowledge capacity relationship in such a way that the relationship is stronger when institutional pressure is low than when it is high.

RESEARCH METHOD AND RESULTS

The researchers conducted a survey of Taiwanese business units in a foreign environment and used LISREL and hierarchical regression models to test the research hypotheses. The results support H1, H2a, H2b, but not H3. First, high performance human resource practices have a positive and significant relationship with knowledge capacity. Moreover, our study shows that knowledge capacity plays an intermediary role between high performance human resource practices and knowledge management and between high performance human resource practices and innovation performance. It is unfortunate to see that the relationship between knowledge management and innovation performance is not supported (Figure 1).

The moderating effects of resource dependence and institutional pressure on the relationship between high performance human resource practices and knowledge capacity were tested by hierarchical regression models as shown in Table 1. Hypothesis 4a predicts that the positive relationship between high performance human resource practices and knowledge capacity will be stronger when resource dependence is low than when it is high. Empirical support for this prediction can be seen in Table 1 Model 3. Hypothesis 4b predicts that the positive relationship between high performance human resource practices and knowledge capacity will be stronger when institutional pressure is low than when it is high. Empirical support for this prediction can be seen in Table 1 Model 5.

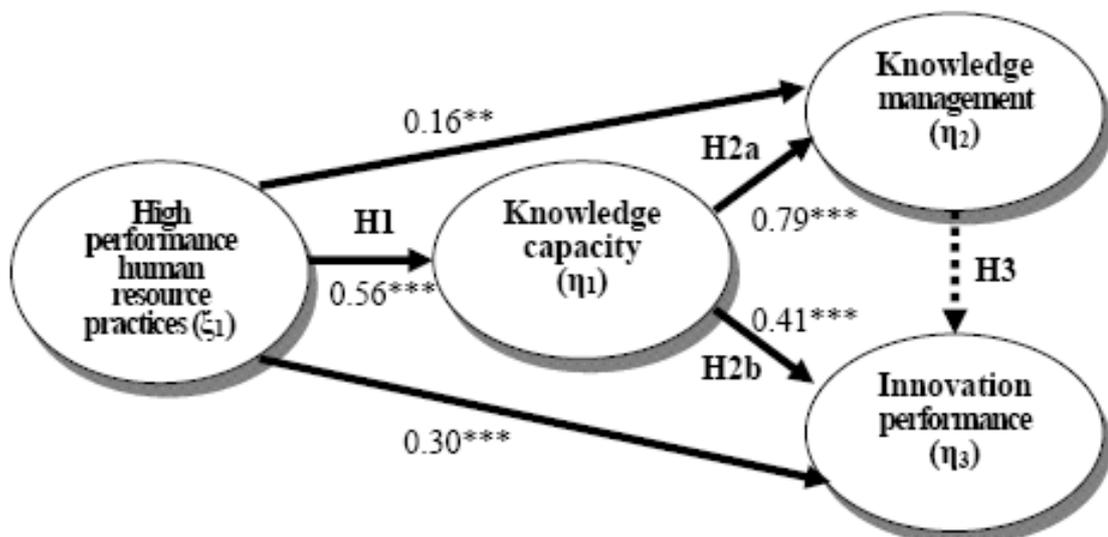


Figure 1. Research model.

Note: $\chi^2 = 418.88$, d.f. = 99, NFI = 0.92, NNFI = 0.92, CFI = 0.94, RMR = 0.086.

Table 1. Results of the hierarchical regression analysis.

<i>Dependent and Independent variables</i>		<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	
Knowledge capacity	Unit function	-.109	-.083	-.074	-.086	-.101	-.083	-.092	
	Unit age	.066	.095	.092	.095	.073	.099	.078	
	Unit size	-.132+	-.127+	-.120+	-.128+	-.099	-.126+	-.098	
	Unit location	.038	.023	.038	.022	.040	.026	.048	
	Unit industry	-.018	.025	.034	.016	.038	.021	.044	
	High performance human resource practices		.470***	.500***	.487***	.495***	.461***	.483***	
	Resource dependence		.153*	.133*			.140*	.120+	
	Institutional pressure				.089	.091	.057	.059	
	High performance human resource practices * Resource dependence			-.127*					-.205**
	High performance human resource practices * Institutional pressure						-.230***		-.053
	R ²		.028	.303	.318	.288	.339	.306	.356
	ΔR ²			.275***	.015*	.260***	.051***	.278***	.050**
	F		1.090	11.730***	10.937***	10.943***	12.070***	10.351***	10.270***

+: p<0.10, *: p<0.05, **: p<0.01, ***: p<0.001.

CONCLUSION AND IMPLICATIONS

The major contribution of this study is to empirically test the influence of high performance human resource practices on a foreign unit's knowledge management-related variables and to raise new questions in the international knowledge management field. This research has academic and practical implications. On the academic side, the study consolidates theories from international human resource management and knowledge management to examine the relationship among high performance human resource practices, knowledge capacity, knowledge management process, and innovation performance. We highlight the importance of contextual factors, such as resource dependence and institutional pressure, in an emerging market study. On the practical side, we show that high performance human resource practices can influence international knowledge management and related issues. The study proposes a series of useful human resource practices for knowledge management in a foreign environment. For instance, selective staffing, extensive training, promotion from within, incentive rewards, team building, and employment security can all be implemented by MNCs for effective knowledge management in a foreign unit.

The study has several limitations. First, the definition of high performance human resource practices can be improved in the future [3]. Second, the research subjects were Taiwanese business units located mainly in Asian countries. Third, this study was conducted on a cross-section basis. Fourth, this study surveys expatriate managers as informants to represent the opinions of a foreign unit. Fifth, this study focuses on three major knowledge management constructs (knowledge capacity, knowledge management, and innovation performance).

We recommend the following areas for future study: First, other high performance human resource practices elements could be included in the study of international knowledge management. Second, we suggest including more extensive samples in the testing process to improve the justification of this research framework. Third, we suggest a longitudinal study in the future to investigate the long-term relationship between HR practices and knowledge management. Fourth, future research could use different sources to collect survey data. Fifth, other related variables can be considered in a future study, such as business strategy [4].

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