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**THE EFFECT OF HUMAN RESOURCE MANAGEMENT PRACTICES ON  
JAPANESE MNC SUBSIDIARY PERFORMANCE –  
A PARTIAL MEDIATING MODEL**

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## **ABSTRACT**

The purpose of this study is to examine the relationship between a bundle or system of human resource (HR) practices and firm performance and the processes through which these HR practices affect organizational outcomes. Using a sample of 52 Japanese multinational corporation subsidiaries operating in the United States and Russia, we examine the impact of HR systems on firm performance mediated by employee skills, attitudes, and motivation in an attempt to shed light on the so-called “black-box” through which HR practices leads to firm performance. The results support the notion that employee skills, attitudes and behaviors play a mediating role between HR systems and firm outcomes in multinational corporations. These findings illustrate the varying impact of synergistic systems of HR practices and their generalizability in different national contexts.

## INTRODUCTION

The realization that human resources can indeed be an organizational source of competitive advantage and firm performance has led to expanded research in the field of strategic human resource management (SHRM). Wright and McMahan define strategic human resource management as “the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals” (1992:298). Because firm performance stands out as a major organizational goal, much of the recent SHRM research has been directed at understanding the relationship between human resource practices and firm performance.

A similar phenomenon is occurring in the area of international human resource management (IHRM), namely, the linkage of international HRM with the strategic needs of the business (Schuler et al., 1992:365). The field of IHRM has begun to focus on macro-level issues, such as the strategic nature of international HRM and the implications for organizational performance. This has led to strategic IHRM (SIHRM) being defined as the “human resource management issues, functions, policies and practices that result from strategic activities of multinational enterprises and that impact the international concerns and goals of those enterprises,” expanding on the Wright and McMahan definition of SHRM (Schuler et al., 1993:422). Researchers have begun to examine the notion of SIHRM empirically (Ngo, Turban, Lau & Lui, 1998; Stroh & Caligiuri, 1998; Pucik & Katz, 1986). For example, Ngo et al. (1998) found significant linkages between HR practices and organizational performance in MNCs operating in Hong Kong. Though some pioneering empirical work has been conducted, relatively little empirical research exists that investigates the relationships between HRM practices and firm performance of multinational corporations. As DeCieri and Dowling (1997:24) note, “[SIHRM] empirical research is embryonic and exploratory.” Most research in

international human resources to date has studied individual HR practices such as expatriate selection, compensation, training, or cross-cultural comparisons of HR practices (Laurent, 1986; Dowling et al., 1994; DeCieri & Dowling, 1998).

Further, although some empirical research exists that provides evidence that HR practices impact firm performance, little empirical attention has been paid to exploring the processes or the so-called “black-box” through which this impact takes place. SHRM research, and by extension SIHRM research, has been criticized by numerous authors for its lack of theoretical and empirical work specifying the mediating processes by which HR policies and practices lead to firm outcomes (McMahan et al., 1998; Dyer & Reeves 1995; Delery, 1998; Becker & Gerhart, 1996). Through which mechanisms do human resource practices affect firm performance? Thus the purpose of this study is to examine not only whether or not but also how HR practices influence firm performance in the context of subsidiaries of Japanese multinational corporations operating in two different countries, the U.S. and Russia.

## **THEORY AND HYPOTHESES**

This section will present the theory behind a model of HR practice contribution to organizational performance that is partially mediated through development of employee skills, and the shaping of employee attitudes and motivation. The proposed bundles or systems of HR practices lead to higher levels of employee skill, attitudes, and motivation leading to higher organizational performance. We present this model by first briefly reviewing current SHRM literature, highlighting the effects of HR practices on performance, and then explore the relational “black-box” by exploring the role of the three hypothesized mediators in this relationship.

### **Firm Performance**

Firms can establish a sustained competitive advantage through the implementation of a value or competitive advantage creating strategy not being carried out by any current or potential competitors, where competitors are unable to duplicate the benefits of this strategy. Under the resource-based view of the firm, successful firms can achieve sustainable competitive advantage by acquiring and maintaining valuable idiosyncratic resources which are rare, imperfectly imitable, and nonsubstitutable and a firm's human resources can be a source of this sustainable competitive advantage (Barney, 1991; Wright, et al., 1994).

Recent empirical research in strategic HRM suggests that HRM practices contribute to enhance firm performance and facilitate growth of organizations (Arthur, 1994; Delery & Huselid, 1996; Fey & Björkman, 2001; Fey, Björkman, & Pavlovskaya, 2000; Huselid, 1995; Huselid, et al., 1997). Huselid, Jackson, and Schuler (1997) found that a one-standard-deviation increase in overall HRM effectiveness corresponds to an estimated increase in sales per employee of 5.2%, valued at US\$44,380. The impact of a one-standard-deviation increase in HRM effectiveness on profits yields an estimated increase in cash flow of 16.3%, valued at US\$9,673 per employee. Similarly, Huselid (1995) found that a one-standard-deviation increase in high performance work practices is related to a 7.05% decrease in turnover, and US\$27,044 increase in sales per employee, US\$18,641 in market value, and US\$3,814 in profits. Therefore the appropriate effective deployment of human resources can bring great financial gains for organizations.

Recently research has begun to examine the relationship of high performance HR "bundles" or configurations of practices (Miller, 1996) and sales, profitability and turnover. Empirical evidence has been found for "bundling" practices due to added synergies gained from the conglomeration of practices, which leads to additive or multiplicative higher returns than

individual HR components. MacDuffie (1995:204) notes that “implicit in the notion of a “bundle” is the idea that practices within bundles are interrelated and internally consistent, and that “more is better.” His study of automotive assembly plants found that plants with “high-commitment” HR bundles of practices consisting of measures of employee skills, training, performance-based compensation, the existence of status barriers outperform mass production plants. Arthur (1994) similarly investigated the relationship between HR systems and manufacturing performance in US steel mini mills examining plants with control human resource systems or “bundles” whose goal is to reduce direct labor costs and plants with commitment human resource systems whose goal is to induce desired employee behaviors and attitudes through psychological links between organizational and employee goals. He found that plants with control HR systems have higher turnover than plants with commitment systems.

Youndt, Snell, Dean, and Lepak (1996) determined the extent to which HR systems directly enhance operational performance. The authors propose that different firm strategies will require different attitudes, roles, and behaviors of employees, which can be elicited from employees via different HR practices. Youndt et al. (1996) tested the relationship between a human-capital enhancing HR system and operational performance and found significant results.

Building on the existing literature, we examine the effect of synergistic “bundles” or systems of HR practices on firm performance. Past research has found that performance-oriented and employee skills developing practices have a positive effect on firm performance. Empirical evidence points to the effectiveness of incentive systems that tie individual (Gerhart & Milkovich, 1990; Fey, Björkman, & Pavlovskaya, 2000) and group rewards (Welbourne & Gomez-Mejia, 1995) to organizational performance. Gerhart and Milkovich (1990) found that firms, which evaluated and rewarded top-managers using performance-contingent pay for top

managers had higher financial performance relative to those that did not. According to expectancy theory (Vroom, 1964) when one's pay is tied to some measure of individual or group performance, employees are more likely to work harder to increase the individual's, the group's, or the firm's performance where an increase in performance in any of these areas will lead to an overall improvement in firm performance. Likewise, Huselid (1995) includes incentive plans such as profit-sharing in his measure of high performance work practices and MacDuffie (1995) includes performance contingent pay in his measure of high-commitment HR bundles.

Practices whose aims are to develop the skills or human capital of employees (Wright et al., 1999; Delaney & Huselid, 1996; Huselid, 1995; MacDuffie, 1995) also positively impact firm outcomes. Delery and Doty (1996) found that training programs increased the return on equity of firms. Youndt et al. (1996) found that "human capital enhancing" practices were positively related to employee productivity and customer alignment. Welbourne and Andrews (1996) found in a study of 136 IPO firms that "valuing HR", such as through investment in the skills of employees through training or viewing human resources as a source of competitive advantage, leads to better stock performance and the survival of the organization. MacDuffie (1995) and Huselid (1995) examined the amount of training provided to new and existing employees in their examination of effective HR bundles, and found that building employee skills increases firm performance.

HR practices that are aligned with the strategic needs of the organization are also examined in the SHRM literature. Alignment or "fit" is defined as the "degree to which the needs, demands, goals, objectives and/or structure of one component are consistent with the needs, demands, goals, objectives and/or structure of another component (Wright & Snell, 1998: 756)." Alignment or fit amongst these components leads to an increase in organizational

effectiveness and efficiency. In light of this need for fit, contingency theorists argue that, in order to be effective, an organization's HR policies must be consistent or congruent with other aspects of the organization such as the organization's strategy. Several studies have found that strategic "fit" of HR practices with the overall business strategy positively affects firm performance (e.g. Welbourne & Andrews, 1996; Fey & Björkman, 2001). Huselid et al. (1997), in a study of 293 line and HR managers, found that strategic HRM practices positively affect employee sales and firm performance as measured by Tobin's Q and return on assets.

Therefore we hypothesize the following relationship between synergistic HR "bundle" or system consisting of performance-oriented, skills developing and strategically aligned HR practices and firm performance:

H1: There will be a positive relationship between a synergistic system of HR practices and firm performance.

### **Employee Skills**

Human capital theory focuses on the effects of the variance in employee skills on performance (Becker, 1964). Human resource is defined as the pool of human capital under the firm's control in a direct employment relationship (Wright & McMahan, 1992). Applications of human capital theory focus directly on the skills or competencies of human beings in organizations (Flamholtz and Lacey, 1981; McKelvey, 1983). Wright, et al. (1994) recognize that the characteristics of individuals do not provide value to the firm unless they are channeled through employee behaviors but employees must have the competencies necessary to exhibit these desired behaviors.

Wright et al. (1994:315-6) propose that higher levels of human capital (or employee skills) leads to greater capabilities to develop more efficient means of accomplishing task

requirements, and greater capability to respond to environmental changes leading to a sustained competitive advantage. HR practices are the levers or mechanisms through which employee skills can be developed. Firms may do this by implementing practices which place an emphasis on investment in human resources to build the skills of employees. For instance, performance-oriented practices, such as performance-based compensation practices, encourage employees to gain skills that will enhance their job performance. Strategically aligned practices, which emphasize the alignment of human resource practices with the business strategy, determine which skills are necessary for the successful implementation of organizational strategies.

We propose that employee skills are a key antecedent to firm performance. Thus, we propose that one of the primary mediating processes by which the effects of human resource practices are converted to firm performance is through changes in the skill levels of employees.

H2: Increases in the skills of employees will mediate the relationship between a synergistic system of HR practices and firm performance.

### **Employee Attitudes**

As stated above, Wright, et al. (1994) point out that the characteristics such as the skills of individuals do not provide value to the firm unless they are channeled through the proper employee behaviors and attitudes. An employee's behavior or attitude will determine if and to what extent employees will use their capabilities within the organization (Jackson, et al., 1989; Schuler and Jackson, 1987). If an employee has good attitudes and behaviors such as high job satisfaction and high job commitment they are more likely to work for the benefit of the organization, thereby positively affecting firm performance.

There are two main theories that explain the antecedents of job satisfaction. They include individual disposition/personality (Staw & Ross, 1985) and job characteristics (Hackman & Oldham, 1980). The dispositional theory of job satisfaction holds that such attitudes are a function of a person's long-term disposition or personality rather than a fluctuating mood-state influenced by work circumstances (Wright & Staw, 1999). Thus a HRM system with systematic procedures to identify the best talent may select employees with positive dispositions and thus higher job satisfaction. The job characteristics model of job satisfaction holds that the skill variety, task identity, task significance, autonomy, and feedback of the work process affect job satisfaction.

Organizational commitment represents identification with and affective attachment to the organization (Porter, Steers, Mowday, & Boulin, 1974). Organizational commitment is defined in terms of the strength of an individual's identification with and involvement in a particular organization (Porter et al., 1974). When commitment is high, it means that an employee's values are aligned with the organization and that he or she wants to do what is best for the organization (Mowday, Porter, & Steers, 1982).

A large body of literature supports the notion that the work practices of an organization influence perceptions of commitment and other attitudes about the organization (Vroom, 1964; Arthur, 1994). In a study of multiple business units, Gardner, et al. (2000, 2001) found positive results for an employee attitudes mediated model of HR practices leading to decreased turnover and absenteeism.

Firms may influence employee attitudes by implementing practices which place an emphasis on training human resources which shows employees that firms care about building their skills and view employee capabilities as being important to the company. Performance-

oriented practices show that the organization will evaluate employees objectively and fairly on performance criteria, indicating that employees who perform well can succeed in the organization. For example, Price (1977) presented a model of the determinants and intervening variables of turnover where he defined the primary determinants of turnover as job satisfaction which is determined by pay levels, integration, instrumental communication, and centralization of power. Strategically aligned practices indicate that human resource practices are aligned with the business strategies so that employees will feel the organization is well managed and has a great potential for success leading to positive attitudes about the organization.

Therefore we propose the following hypothesis:

H3: Increases in employees' attitudes will mediate the relationship between a synergistic system of HR practices and firm performance.

### **Employee Motivation**

Pinder (1998) describes work motivation as the set of internal and external forces that initiate work-related behavior and determine its form, direction, intensity, and duration (Ambrose & Kulik, 1999). This definition recognizes the impact of environmental factors such as organizational incentives and the nature of the work as influencing the motivation of employees.

HR practices are the means through which firms seek to motivate employees to engage in the discretionary behaviors that contribute to the achievement of firm goals. Firms may influence employee motivation by implementing practices which place an emphasis on investment in human resources such as through training programs which allow firms to communicate proper behaviors with employees and to socialize employees into the cultures and norms of the organization (Wright et al., 1999:533). Huselid (1995) found that motivational high performance work systems decreased turnover and increased productivity and sales. One of the

key outcomes of work that motivates employees is wages (Vroom, 1964). The fact that the firm places an emphasis on building up employee skills may motivate employees to work harder in order to participate in the training opportunities. Performance-oriented practices tie rewards to performance so that employees are encouraged to engage in behaviors that align with the interests of the organization. As indicated above in the employee attitudes section, strategically aligned practices, which indicate to employees that human resource practices are aligned with the business strategies of the organization, may motivate employees to work harder and more efficiently since they know that the organization that they are working for is being strategically managed. Therefore we hypothesize the following:

H4: Increases in employee motivation will mediate the relationship between a synergistic system of HR practices and firm performance.

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FIGURE 1 ABOUT HERE  
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## **RESEARCH METHODS**

The survey was conducted during the Fall of 1999 and Spring 2000. A member of the human resource department of sixty-four subsidiaries of Japanese multinational companies listed in the Japanese-American Chamber of Commerce operating in the United States and eighty subsidiaries of Japanese multinational companies operating in Russia were contacted by telephone to invite their companies to participate in the study. The subsidiaries were randomly selected from the list and the HRM manager or General Manager of the subsidiaries was asked to complete the survey. Each company that agreed to participate in the study was faxed or mailed a copy of the survey and asked to mail or fax the completed surveys directly to the researchers either in the United States or in Russia. Reminder calls were made to companies that had not

returned the surveys approximately one month after the initial surveys were distributed. In Russia, however, little tradition of completing questionnaires exists and there is much worry about giving information to unknown people. As a result, based on past experience, interviews were set up with the managers where the managers were asked to complete the questionnaire during the interview. In a few cases, at the manager's request, the questionnaire was left with the manager and collected a few days later.

Of these we received completed surveys from 21 Japanese MNCs operating in the US and 33 MNCs operating in Russia resulting in a 28 percent return rate in the US and a 41 percent return rate in Russia. Of the Japanese surveys only 19 could be used in the analysis due to missing data leading to a total of 52 responses for use in the analysis. Of the respondents, 37 percent were in upper-level management (42 percent in the US sample and 34 percent in the Russian sample), and 92 percent were in the human resource or general administration functions (90 percent in the US sample and 96 percent in the Russian sample). The distribution of ages of the respondents in the US sample was 4 respondents between the ages of 21 through 29, 7 respondents between 30 through 39, 4 respondents between 40 through 49, and 4 respondents over 50 years old. In the Russia sample, 3 respondents between the ages of 21 through 29, 14 respondents between 30 through 39, and 16 respondents between 40 through 49 years old. All of the Japanese subsidiaries operating in the US were wholly foreign owned. Ninety-five percent of those operating in Russia were wholly foreign owned with the remaining five percent formed as a joint venture with the Russian parent company owning sixty to eighty percent of the company. The average number of employees in the Japanese parent firms of the subsidiaries worldwide was 98,440 and the average number of employees in the subsidiaries was 169.7 (372.1 employees in the US sample and 45.8 employees in the Russian sample). The average number of

years of operation of the subsidiaries was 15.1 years (26.6 years in the US sample and 7.7 years in the Russian sample). Fifty-seven percent of the subsidiaries were in service-related industries (76 percent in the US sample and 43 percent in the Russian sample).

Both of the dependent and independent variables were constructed from Likert-scale survey responses. As shown in Appendix 1, we followed Gardner et al. (2000, 2001), Huselid (1995), Wright et al. (1998) and Björkman and Xuicheng (2000), and developed several items to measure each of the constructs used in our hypotheses. Our examination of interrelatedness among the items with Cronbach's alpha suggests that the items for each of the constructs are highly related, so we aggregated them to create a scale by taking their means. In creating a variable, HR System, that indicates a synergistic system of HR practices, we presume that this system consists of three aspects: (1) performance-oriented practices, (2) strategic alignment of practices, and (3) employee skills enhancing practices. These three facets are crucial components of HR practices found in previous studies noted above.

Along with the independent variable of interest, control variables for organizational age and size were included in the analysis. Older firms may have an advantage over younger firms by having more information, resources, citations, and experience which may affect organizational performance. Age is measured as the number of years the subsidiary has operated in the local country. Larger organizations may benefit from economies of scale, experience, market power, and access to resources (Aldrich & Pfeffer, 1976; Pfeffer & Salancik, 1978; McBain & Krause, 1989) which can affect organizational performance. Size is measured as the number of employees in the subsidiary.

The country in which the subsidiary is located is included to control for any differences that may occur as a result of location or national culture. The study controls for headquarter

national culture as all of the companies are Japanese MNCs but the subsidiaries in the sample are located in two very different economies: capitalist developed economy (US) and post-communist developing economy (Russia).

## RESULTS

Table 1 displays the means, standard deviations and correlations of the variables used. It was found that the variables used as mediators in our model are highly correlated with each other (ex.  $r(\text{Employee Skill, Attitudes}) = .57$ ). In order to alleviate the possible problem of multicollinearity, we conducted separate regression analyses for each of the predicted mediators.

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TABLE 1 ABOUT HERE  
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Table 2 presents the results of the regression analyses for testing the effects of a synergistic system of HR practices on organizational performance and also the role of the mediators in these processes. The mediation effect is tested through the following procedure: (1) we ran separate regressions to test whether or not there exists statistically significant associations between the HR system of practices and organizational performance (Models I); and then (2) we added each mediator to these regression models (Models II, III, and IV). The following conditions must be simultaneously met for a mediation effect to be present: (1) the coefficients of the HR system variable must be significant in the models without the mediators (i.e., the nested model) and non-significant in the models including the mediators (i.e., the full model), and (2) the coefficients of the mediators must be significant when the mediators are included in the regression models of HR system leading to firm performance. In principle, mediation effects exist when the significance of the main variables (i.e. synergistic HR system) disappears due to the addition of

the mediators (i.e. employee skills, attitudes, and motivation) to the nested models (Baron & Kenny, 1986; James & Brett, 1984).

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TABLE 2 ABOUT HERE  
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Regression results shown in Table 2 lend full support to our hypotheses. H1, stating the positive effects of a synergistic system of HR practices on organizational performance, was supported (Model I), consistent with previous studies (e.g. Huselid, 1995). The consistency of our findings with past research results lends some credence to the quality of our data. While the number of observations in the sample is relatively limited, the subjects were not biased in any particular direction.

Although *HR System* positively and significantly accounts for variation in the dependent variable, *Firm Performance*, in Model I in which no mediation variable is included, this variable loses its significant explanatory power as each mediator variable (i.e., *Employee Skill*, *Attitude*, or *Motivation*) is included in the regression models (Models II, III, IV). Moreover, all of the three mediator variables are significant at the  $\alpha = .05$  level or lower. These results not only suggest a direct positive effect of *HR systems* on firm performance but also the partial mediating effect of employee skills, attitudes, and motivation on firm performance lending support to H2, H3, and H4. HR practices contribute to an increase in firm performance by helping employees develop their skills for performing jobs, shaping their attitudes in the workplace, and motivating them to achieve organizational goals.

It is interesting to note that none of the coefficients of the variables that indicate the location of the subsidiaries (i.e. Russia or US) was significant across the different models. This surprising finding suggests the following two possibilities. The first possibility is that our

findings are robust even after controlling for the effects of location. In other words, this is evidence that even after removing the effects of subsidiary location, some of the models were significantly supported as we discussed above. The second possibility is that although location does not have any significant and direct effect, it may have interaction effects. That is, it may be possible that both the significance and strength of the marginal effects of *HR System* on firm performance is contingent on the location, *Country*. In order to speculate on these possibilities, we conducted an exploratory 2-way ANOVA analysis and tested the interaction effect of location.

The results of the 2-way ANOVA analysis are presented in Table 3. In this analysis, we used *Firm Performance* as the dependent variable and took the interaction of location, *Country*, with *HR System*. Table 3 demonstrates not only that the location variable is not a direct significant predictor of firm performance but also that there exists no interaction effect, so that the marginal effect size of *HR system* examined above is not contingent upon whether a firm is in the U.S. or Russia.

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TABLE 3 ABOUT HERE  
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## **DISCUSSION**

The recent growth in the strategic human resource management literature and the focus on human resources as a source of competitive advantage points to the fact that a great deal of variance in rents can be attained by focusing on the different sets of internal resources that the firm possesses. While past research has demonstrated a relationship between HR practices and firm performance (e.g. Huselid, 1995; MacDuffie, 1995), research has not often been conducted

in the context of international MNCs. The existing research has also neglected to examine the intervening mechanisms or the “black-box” through which practices are hypothesized to impact firm performance. The results of this study indicate that synergistic “bundles” or systems of HR practices positively affect the performance of Japanese subsidiaries located in the US and Russia. In particular, these relationships are mediated through employee skills, attitudes, and motivation to various degrees shedding some light on the processes through which HR practices affect firm performance. Therefore, this research not only demonstrates that HR practices have a positive influence on firm performance but also articulates the mechanisms through which HR practices improve performance.

A particularly interesting result of this research is that no country effects of being located in the US or Russia were found. There are two ways of interpreting this finding. First, regardless of firm location, HR practices consistently influence firm performance via employee skills, attitudes, or motivation. This finding may imply that this pattern of influence is universal; neither national boundaries nor differences in national culture change the causal mechanism. In addition, this result may validate the generalizability of the proposed framework to various settings as differences were found between companies located in vastly different economies: one being a highly developed economy and the other being a developing economy. In other words, our findings can be applied to both types of economies.

A second method of interpreting our findings is that the effectiveness of HR practices on firm performance is significant in subsidiaries of Japanese MNCs regardless of location. This may imply that Japanese MNCs have similar HR practices wherever they are located and these practices always positively affect firm performance, lending support for the idea of HR “best practices.” Japanese MNCs may be working with a loose framework of the types of HR

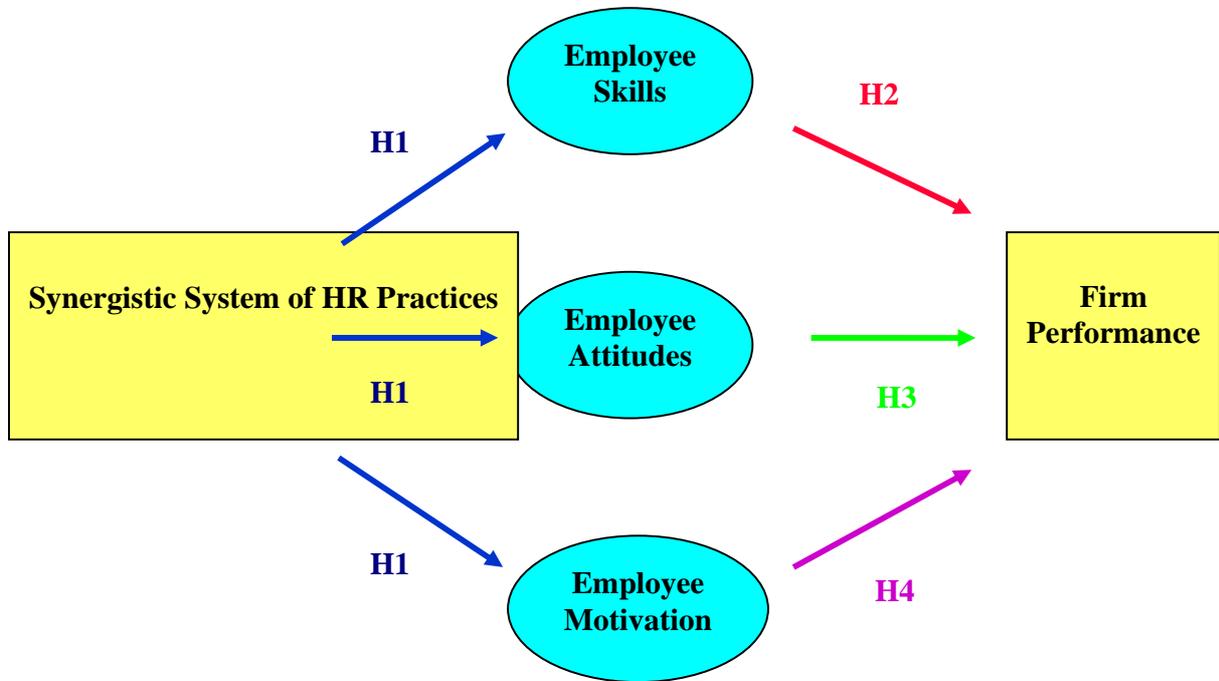
practices that work well (i.e. investing in employee skills, performance-based practices) in any context, and adapting them for the various countries in which the businesses are located. Some adaptation must occur as national culture and labor laws dictate that some differences in practices must exist between countries. This also indicates that the coordination of HR practices between the parent headquarters and subsidiaries may exist so that these “best practices” are implemented in all units or subsidiaries of the MNC. It is impossible and beyond the purpose of this research to make decisive arguments about which of the interpretations is appropriate because our data consists only of subsidiaries and subunits of Japanese MNCs. Future research using data collected from non-Japanese MNCs will be best able to test the generalizability of these findings.

A managerial implication of this research is not only the demonstration of the positive contributions of HR practices on firm performance in the international context, but also that employee skills, attitudes, and motivation are three major components of the “black-box” that generates firm competitiveness from HR practices. This research implies that changes in employee skills, attitudes, and motivation that are caused by HR practices precede increases in firm performance. Managers are able to check whether or not their firm’s system of HR practices are influencing firm performance by observing changes in employee competencies and behaviors. When managers implement new HR practices without consequent changes in employee skills, attitudes, or motivation, no positive outcomes on firm performance can be expected. If this is the case, managers are encouraged to check the organizational design of the implemented HR practices and their interrelatedness with business strategies and the HR system as a whole.

Finally, this study contains some limitations that must be highlighted. This research design presumes the simultaneous effects of HR practices on employee capabilities and attitudes. It is more reasonable, however, to presume that there is a time lag in this causal mechanism. For example, there should be a time lag between an implementation of HR practices and the resulting change in employee skill and competence. Future research will be more accurate if it employs an alternative research design that adequately addresses the timing of the effects.

Another limitation of this study is that perceptual measures of organizational performance were used rather than objective measures and only one managerial response from the HR function were obtained per organization due to information access limitations. Future research should attempt to gain responses from multiple raters from within and outside of the HR function per organization in order to test the interrater reliability of the data. Finally, future research should increase not only sample size but also the variety of firms included in the sample. This study should be extended to MNCs headquartered in and subsidiaries located in a range of developed and developing economies. Conducting such comparative research will extend the generalizability of the results and further inform the field of strategic international human resource management.

Figure 1: Proposed Model



**Table 1: Descriptive Statistics and Correlations**

	N	Mean	S.D.	Min.	Max.
1 <i>Firm Performance</i>	52	6.13	1.23	3.25	9
2 <i>HR System</i>	52	.01	.63	-1.75	1.12
3 <i>Employee Skill</i>	52	4.74	.71	3	6.33
4 <i>Attitudes</i>	52	4.53	.69	2.75	6.25
5 <i>Motivation</i>	52	3.58	.60	2.25	5
6 <i>Country</i>	52	.61	.49	0	1
7 <i>Organization Age</i>	52	2.40	.77	1.13	3.91
8 <i>Organization Size</i>	52	3.73	1.48	1.63	8.16

	1	2	3	4	5	6	7	8
1	1							
2	0.15	1						
3	0.00	0.16	1					
4	0.00	0.36 **	0.57 ***	1				
5	0.11	0.58 ***	0.43 ***	0.28 *	1			
6	0.25	0.61 ***	0.05	0.21	0.46 ***	1		
7	-0.32 *	-0.47 ***	-0.19	-0.31 *	-0.42 **	-0.63 ***	1	
8	-0.16	-0.12	-0.29 *	-0.29 *	-0.39 **	-0.38 **	0.49 ***	1

**Table 2: Results of Regression Analysis**

	I	II	III	IV
<b>HR System</b>	0.795 *	0.475 +	0.424	0.356
	(0.338)	(0.260)	(0.321)	(0.373)
<i>Employee Skill</i>		1.133 ***		
		(0.186)		
<i>Attitude</i>			0.847 ***	
			(0.241)	
<i>Motivation</i>				0.834 *
				(0.356)
<i>Country</i>	-0.173	0.265	0.066	-0.176
	(0.488)	(0.374)	(0.443)	(0.466)
<i>Organization Age</i>	0.487	0.578 **	0.598 *	0.479
	(0.307)	(0.232)	(0.278)	(0.294)
<i>Organization Size</i>	0.015	0.196 +	0.118	0.131
	(0.131)	(0.103)	(0.121)	(0.135)
Constant	5.019 ***	-1.509	0.402	1.627
	(0.908)	(1.272)	(1.546)	(1.688)
F	1.98	10.2 ***	4.44 **	2.83 *
R <sup>2</sup>	0.14	0.53	0.33	0.24
Adjusted R <sup>2</sup>	0.07	0.47	0.25	0.15

Note 1: +  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Note 2: Standard deviations are in parentheses.

**Table 3: Results of ANOVA**

	Partial SS	F	P-values
Model	4.161	2.85	0.10
HR System	4.161	2.85	0.10
Model	6.751	2.35	0.11
HR System	6.744	4.70	0.04
Country	2.589	1.80	0.19
Model	7.127	1.63	0.19
HR System	5.261	3.61	0.06
Country	2.769	1.90	0.17
Interaction	0.377	0.26	0.61

### Appendix 1: Items and Variables

Variable	# Items	Cronbach Alpha	Items
<i>Firm Performance</i>	4	.774	Relative to your competitors in your industry, how would you rate your subsidiary's performance on each of the following dimensions? (1) Operating efficiency, (2) Quality, (3) Service, and (4) Profitability (1-9 Scale)
<i>Employee Skill</i>	3	.766	Relative to the employees of your competitors in your industry, how would you rate the quality of your subsidiary's employees on each of the following dimensions? (1) Overall ability, (2) Job related skills, and (3) Educational level (1-7 Scale)
<i>Attitudes</i>	4	.834	Relative to the employees of your competitors in your industry, how would you rate the quality of your subsidiary's employees on each of the following dimensions? (1) Motivation, (2) Organizational commitment, (3) Job satisfaction, and (4) Work effort (1-7 Scale)
<i>Motivation</i>	4	.759	(1) Our employees are always behaving in ways that help our company's performance, (2) Our employees are always contributing in positive ways to the company's performance, (3) Compared to our parent company, our subsidiary has a highly motivated group of employees, and (4) Compared to our competitors, our parent company has a highly motivated group of employees (1-5 Scale)
<i>HR Systems</i>	10	.832	(1) Our compensation system is closely connected with the financial results of the company, (2) Our company uses performance-based compensation to a large extent, (3) Our company places a great deal of importance on merit when making promotion decisions, (4) To what extent is communication between the HR department and the top management team effective?, (5) To what extent does your subsidiary make an explicit effort to align business and HR/personnel strategies?, (6) To what extent does your firm have a clear strategic mission that is well communicated and understood at every level throughout the firm?, (7) Our company places a great deal of importance on training, (8) Our employees' capabilities are viewed as our main source of competitive advantage, (9) Employee input and suggestion are highly encouraged, and (10) Employees input and suggestions are highly implemented (1-5 Scale)

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