STRATEGIC HRM IN CHINA: CONFIGURATIONS AND COMPETITIVE ADVANTAGE

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The strategic HR literature suggests that a firm will perform better through internal appropriate fit among HRM practices (the configuration fit) and through external appropriate fit between a firm's HRM practices and business strategy. The present study adopts a configuration approach to identify unique patterns of HR practices and business strategy that are posited to be maximally effective. The proposed relationships were empirically tested by surveying with a sample of 241 business firms in Guangzhou, South China, to find out the extent that four HR configurations could be successfully adopted in the Chinese context. The results revealed that HR configurations are significantly related to effect in predicting overall outcome performance and turnover, but not significantly related to effect on sales growth and profit growth rates. Research findings showed not only competitive strategies are significantly related to effect on HR configurations. The results also showed significant interaction effects between HR configurations and business strategy in their effect on profit and sales growth. These results further extended support for a contingency perspective in strategic HRM to the Chinese context, with significant practical implications for managing HRM in China. © 2008 Wiley Periodicals, Inc.

Introduction

Over the last two decades, there has been considerable interest in using the configuration approach to study the role human resource management practices play in contributing to an organization's sustained competitive advantage. Organizational configuration refers to "any multidimensional constellation of conceptually distinct characteristics that commonly occur together" (Meyer, Tsui, & Hinings, 1993, p. 1175). Configuration approaches focus on the realized pattern of multiple variables, how these variables interact over time, and how the pattern relates to various organizational outcomes (Delery & Doty, 1996; Ketchen et al., 1997). The configuration literature is grounded in structural contingency theory (Meyer et al., 1993). HRM strategies must be combined with specific business competitive strategies if they are to enhance organizational performance.

Sustainable HRM systems are those that are internally coherent and consistent with

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both the firm's corporate strategy and with the broader context in which the firm is operating. The underlying logic is the assumption that congruence or fit would result in organizational effectiveness (Delery, 1998). The contingency of a strategic approach emphasizes that HR practices need to be contingent upon the firm's business strategy to be effective. To more effectively gain competitive advantage, it is important to integrate HRM with business strategy (Gunnigle & Moore, 1994). This can best be understood by identifying distinct, internally consistent sets of HR practices and their relationships to organization's business strategy and performance outcomes. The present study adopts a configuration approach to identify unique patterns of HR practices and business strategy that are posited to be maximally effective.

Given the different institutional environment of the socialist market and the rapid growth of China's economy, it would be interesting to find out how effective HR management might affect organizational performance in the world's largest transitional economy.

The majority of previous studies on this topic were based in the Western context. Current studies in China focus largely on foreign-invested enterprises (FIEs) or joint ventures (Bjorkman & Fan, 2002; Ding & Akhtar, 2001). To date in China, very little systematic, large-scale surveying has been done on managing the human resource. Yet because one-fifth of the world's population lives in China, understanding how to manage its labor force not only is useful to researchers and practitioners, but also could have an important impact on China's reform programs. Given the different institutional environment of the socialist market and the rapid growth of China's economy, it would be interesting to find out how effective HR management might affect organizational performance in the world's largest transitional economy. Despite the abundant supply of labor in China, HR professionals found that fewer than 10% of Chinese job applicants have the skills required for jobs in foreign companies (Farrell & Grant, 2005). Such findings are particularly alarming since HR practices have been identified as key drivers of employee engagement. In the context of the Chinese economy, what are the key elements of HR practices that may contribute to better performance?

The present study fills the gap by examining the extent of adoption of HRM configurations in South China, particularly while it transitions from a centrally planned economy to a market economy. If organizations want to gain a competitive advantage by continually developing personnel expertise, the adoption of HR systems will become more prevalent in China. China's emergence in the global economy provides a rich context for this study. As more multinational firms enter the China market, results from the present study can offer some insights for researchers and practitioners alike.

China introduced market reforms in the early 1980s. Admission into the World Trade Organization, together with the presence of FIEs, has changed the competitive landscape. Under pressure to compete globally, China accelerated its transition to a more market-oriented economy. HR practices have been moving away from a highly centralized allocation process to a more market-driven and performance-based system. The HRM practices are influenced by environmental, institutional, and organizational conditions. The transitional Chinese economy is not a free market. Most enterprises are still constrained by government regulations and intervention. The conventional "Western model" of HRM may not fully capture the HR challenges facing firms in China. Therefore, HR practices must be modified to fit China's unique cultural and institutional context.

Building on the current research, this article attempts to explore more systematically the relationships between HR practices, business strategies, and firm performance using a configuration approach in the Chinese context. In addition, we examine the interaction effects of HRM and business strategy on both financial and behavioral aspects of firm performance. The findings complement existing literature on the configuration perspective in HRM research. Empirical results offer some evidence of the magnitude of the relationship among HR practices and the effects of the interaction between business strategy and firm performance. The findings offer important insights for multinational business executives who are looking to formulate effective HRM strategies and align their firm's business strategy to attain high-performance results in China.

The following section begins with a brief review of existing research on HR configuration and business strategy. Based on a review of the literature, hypotheses are developed and tested with empirical data collected for this study. The article concludes with a discussion of managerial implications and future research direction.

Theory and Hypotheses

The contingency theory posits that HRM should match the demand of the internal and external conditions (Delery & Doty, 1996; Schuler & Jackson, 1987). External fit links HR systems to business strategy, whereas internal fit focuses on HRM practice configurations (i.e., complementarities across HRM activities positively impact organization [Wright & Snell, 1991]). Therefore, integrating HR configuration with business strategy is conducive to enhancing organizational effectiveness.

HR Configurations and Performance

Current literature on HR practices is configured on the basis of two main approaches: resource-based and control-based (Bamberger & Mesoulan, 2000). In the resource-based view, the value and uniqueness of human capital is geared toward the internal development of employee competencies, as opposed to the market-based acquisition of such competencies (Wernerfelt, 1984). The internal development HR system is characterized by extensive training, promotion from within, developmental performance appraisal, skill-based pay, and job security, whereas the market-based HR system is characterized by little formal training, little security, and market-based compensation. The control-based approach focuses on monitoring employee behaviors and employee compliance with process-based standards (Snell, 1992). It is further divided into two alternatives: process-oriented control or outcome-oriented control. Process-oriented control is characterized as having fixed and explicit job design, formalized evaluation through carefully prescribed job requirements, and an efficiency-based reward. In contrast, outcome-oriented control is characterized by having extensive long-term rewards and employee participation and involvement (Dyer & Reeves, 1995).

Integrating these two approaches, Lepak and Snell (2002) proposed four configurations (i.e., commitment-based, productivity-based, compliance-based, and collaborative-based). Drawing on Lepak and Snell (1999), the distinguishing characteristics of each type of configuration are briefly described as follows.

Commitment-based HR systems nurture employee involvement and maximize the firm's return on human capital investments. Firms invest substantially to develop unique skills through extensive training initiatives. Jobs are loosely defined to capitalize on employee potential. Employees are encouraged to learn and master firm-specific competencies. Pay is linked to performance. These practices are designed to elicit commitment from employees. The collective culture maintains close connections to each other and encourages mutual commitment toward each other. Empirical results from collective societies such as Singapore and Taiwan, as well as from other Asian countries such as Korea, support high-commitment/-involvement work systems or practices, with a positive effect on organizational performance (Bae & Lawler, 2000; Huang, 2000; Khatri,

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2000). Takeuchi et al. (2003) found support for configuring HRM strategically in China. Hence, we expect a commitment configuration of HR practice will outperform other HR configurations in China.

Market-based HR systems emphasize staffing and deployment of skills for immediate contribution. They rely heavily on the external labor market for securing the right people for jobs (Koch & McGrath, 1996). Organizations are willing to pay market wages to attract human capital with the necessary skills and are less likely to invest heavily in training and development. These skills are easily acquired in the market. The transitional economy is full of rapid changes, as well as uncertainty and volatility. China is far from being a typical free-market economy. Its transition continues to be planned by the state, which has been actively involved in shaping economic and business affairs. Market-based HR configuration is not effective because the labor mechanism has not been efficiently developed and qualified talent is not readily available. Chinese workers get used to long-term, secured employment, rather than a market-type, contractual relationship. Ge and Ding (2005) found that market orientation has an insignificant effect on firm performance.

Collaboration-based HR focuses on group-based and egalitarian practices and is consistent with the collective Chinese cultural value.

Compliance-based HR activities focus on securing compliance with terms and conditions. Firms are more likely to concentrate on enforcing rules and regulations, along with attaining preestablished standards. Training, performance, and compensation are likely to be job-based (Milkovich & Newman, 2005). Formalized rules and procedures, along with centralized power, seem the norm in Chinese firms. In the Chinese context of high power distance and an authoritative corporate culture, supervisors are reluctant to share power with subordinates and unwilling to delegate power during decision-making processes. They tend to restrict and control subordinates' behavior and use harsh rules and regulations to ensure compliance. As a result, Chinese employees are reluctant to accept responsibility and unlikely to take the initiative to get things done. Thus, compliance-based HR is negatively related to firm performance. However, under the high-power-distance cultural environment, employees tend to accept the concentration of power in their supervisors and get used to being controlled and monitored. For these reasons, compliance-based HR has no negative effect on turnover.

Collaborative-based HR systems encourage and reward cooperation, collaboration, and information sharing. Organizations are more likely to focus on process facilitation and team building. Communication, team projects, and job rotations are established to facilitate information sharing and the transfer of knowledge. Group-based rewards and appraisal are used to develop and integrate interdependence trust and collaboration (Quinn, Anderson, & Finkelstein, 1996). Collaboration-based HR focuses on group-based and egalitarian practices and is consistent with the collective Chinese cultural value. The need to develop cooperation, information sharing, and trust only pays off in the long run. The collective culture emphasizing harmony, along with less aggressive attitudes toward others, tends to favor less competition. Thus, we expect collaborative-based HR to be moderately related to firm performance.

The current literature shows that HRM practices, in the form of high-involvement work practices, are associated with positive performance outcomes (Levering & Moskowitz, 1993) and higher financial success (Lawler, Mohrman, & Ledford, 1995). Accumulated research shows that specific configuration or architecture of HRM practices allows a firm to yield better performance (Sheppeck & Militello, 2000). Based on the above discussion, we set up hypotheses for different HR configurations that lead to significant differences in firm performance.

H1a: Commitment configuration is positively associated with firm performance.

H1b: Market-based and collaborative-based HR show no significant relation to firm performance.

H1c: Compliance HR configurations is negatively related to firm performance.

Integrating HR Configuration and Business Strategy

Competitive strategies have been tested in China's business firms, including joint ventures and private enterprises (Brouthers & Xu, 2002; Ding & Akhtar, 2001). Ge and Ding's (2005) study indicates that quality enhancement strategy is dominant among Chinese firms, followed by cost leadership and innovation strategies. Business strategy has been used as a contingent factor on HR configurations and firm performance (Bird & Beechler, 1995; Martell, Gupta, & Carroll, 1996). In their empirical study, Schuler and Jackson (1987) and Sanz-Valle, Sabater-Sanchez, and Aragon-Sanchez (1999) adopted various types of strategies and designated different types of HR activities in organizations.

Innovative strategies focus on offering something new and different. HR practices include selecting highly skilled and creative individuals, granting more discretion to employees while exercising minimal control, and a long-term focus on and greater commitment to development of human capital. Organizations adopting an innovative strategy need to acquire enough highly skilled new employees from external sources to create new knowledge for technological innovation (Schuler, 1989). Therefore, organizations focusing on innovation are most likely to adopt a market HR system. Sanz-Valle et al. (1999) discovered that organizations using innovative strategy most frequently utilize temporary contracting. Furthermore, Delery and Doty (1996) found partial support that matching innovative strategy with the market system resulted in positive organizational performance. In addition, when innovation strategy is used, it also needs to be supplemented with long-term orientation and frequent and intense interaction among employees (Schuler, 1989). Innovation strategy is consistent with HR practices that focus on human capital development. Companies with an innovative strategy invest more money on training for many reasons. They recognize that they need to develop not only the knowledge and skills of their personnel, but also their employees' attitudes if they want to encourage creativity, flexibility, and the propensity to take risk and cooperation that this strategy requires if it is to be implemented successfully. High uncertainty avoidance and less tolerance for risk taking slow down innovation. Further, rules and regulations reduce individual initiative. Thus, innovation strategy is positively associated with market, commitment, and collaboration systems and negatively associated with compliance systems. The impact of innovation strategy will be stronger for commitment and collaboration-HR configurations in the Chinese context.

Quality-enhancing strategy attempts to procure and deliver the highest quality of goods and services possible. This strategy is dominant in Chinese firms (Ding & Akhtar, 2001). The concern for quality is expected to be reflected in an organization's approach to HR—for example, by having active employee participation in continuous improvement processes (i.e., voluntary quality circle; Barad, 1995). A major driving force for this may be solely product quality certification. The appropriate HRM philosophy for quality-enhancing strategy is *accumulation,* which emphasizes high levels of involvement and skilled execution. It represents policies and practices of attracting many strong candidates very carefully and very consistently, often more on the basis of personal, rather than technical, fit. After all, the technical skills that are lacking can be gained through in-house training programs. The organization's commitment to continuous improvement and human capital development, in turn, facilitates the practice of lifetime employment systems. Sanz-Valle et al. (1999) found that organizations that adopted a

The impact of innovation strategy will be stronger for commitment and collaboration-HR configurations in the Chinese context.

quality-enhancing strategy invested significantly more in training and development and rarely used temporary contracting as a mode of employment. Therefore, we expected quality-enhancing strategy to be positively associated with a commitment system, and negatively associated with market systems.

The cost-reduction strategy strives to produce goods and services less expensively than do a firm's competitors. Cost-reduction strategy was found to be unrelated to the strategic role of HR functions (Ding & Akhtar, 2001). The HR practices for cost-reduction strategy maximize efficiency by using narrowly designed jobs, close monitoring, and minimal levels of training and development (Sanz-Valle et al., 1999; Schuler, 1989). Cost-minimization firms are less eager to invest in their human capital. Emphasis is placed on efficiently managing their workforce using practices such as little employee involvement and reducing their discretionary decision making. Communication is mostly top-down. Performance appraisals focus on error reduction, and training tends to be used as a remedial activity aimed at correcting skill deficiencies. Rewards are based on fixed guidelines, with little flexibility. HR practices are simply administrative and reactive. Preference for centralized, hierarchical, and formalized structure appears to favor cost-reduction strategy in Chinese organizations. Thus, we predict cost-reduction strategy will be positively associated with compliance-based HR.

The HR practices for cost-reduction strategy maximize efficiency by using narrowly designed jobs, close monitoring, and minimal levels of training and development.

The hypotheses set up to examine the impact the three competitive strategies have on HR configurations are:

H2a: Cost-reduction strategy is positively associated with compliance.

H2b: Quality-enhancing strategy is positively associated with commitment and negatively associated with market.

H2c: Innovation strategy is positively associated with commitment, market, and collaboration, with a lower magnitude in market.

Interaction Effects of HR Configuration and Business Strategy on Performance

Based on the literature, an organization's strategy moderates the effect of HR practices on firm performance (Hitt, Bierman, Shimizu, & Kochhar, 2001). Previous studies suggested that a bundle or set of HRM practices with appropriate business strategies were related to reduced employee turnover (Arthur, 1994) and higher productivity (MacDuffie, 1995) and greater financial performance (Huselid, 1995). Delery and Doty (1996), as well as Youndt, Snell, Dean, and Lepak (1996) found that the interaction of business strategy and HRM practices was an important factor in organization effectiveness. Bjorkman and Fan's (2002) study revealed that HR system and strategy integration had a positive impact on the performance of Chinese firms. Based on the view of external fit of HRM systems, aligning HR configuration with business strategy will enhance firm performance. Therefore, we assert, as discussed in the previous section, that HR configurations paired with appropriate business strategies will have a positive effect on organization performance. To the contrary, the interaction of HR configurations with inappropriate strategies will have a negative impact. There is a total of 12 possible interactions altogether. Due to space limitations, three of the most critical hypotheses are set as follows:

H3a: The interaction of cost-reduction strategy with compliance configuration will further enhance organizational performance.

H3b: The interaction of quality-enhancing strategy and commitment configuration will further enhance organizational performance, and the interaction with market configuration will reduce organizational performance.

H3c: The interaction of innovation strategy with commitment, market, and collaboration *configuration will further enhance organizational performance.*

Methods

Sample and Procedures

In this study, the triangulation method (interviews, survey, and documentation) was used to ensure accuracy of the data. Interviews were conducted with HR experts and managers from 48 firms in the Pearl River Delta area of China to identify a broad range of HR practices in the Chinese context. Based on the opinion of HR professionals and experts from the interviews, together with an extensive review from the current literature, a list of HR practices was generated and thoroughly discussed by a team of HR researchers. For the present study, a total of 54 HR practices were included, covering the domains of staffing, training and development, performance appraisal, reward and compensation, information sharing and participation in decision making, and job security. Respondents were asked to mark the number that best indicated the degree to which each statement described HRM practices employed by their organization on a five-point scale (1 = not at all to 5 = very great extent). The questionnaire was written in Chinese. These items were pretested with practicing managers to verify the usefulness.

Questionnaires were e-mailed to the company's HR department, and follow-up telephone calls were made. A total of 300 questionnaires were distributed, and 241 responses were received. The response rate was about 80%. Respondents included middle managers (65.4%), top management (13.5%), and frontline managers (21.1%). Results from one-way analysis of variance (ANOVA) revealed no significant differences in most of the HR, strategy, and performance measures except for compliance configuration and innovation strategy. The results demonstrated that responses from the diverse groups were relatively homogeneous. The sample consisted of 241 firms from Guangdong, China. The average length that responding firms have been in operation was 12.3 years, although the length of operation ranged from 1 to 145 years. In terms of ownership, 32.9% were Chinese firms (including state-owned and collectively owned), 49.6% were Hong Kong and Taiwan firms doing business in China, and the remainder were foreign-invested and joint ventures. Industries represented included manufacturing (43.3%), technology and electronic (38.2%), and a variety of other service industries, like financial/insurance and wholesaling/retailing. The average number of employees per firm was 2,395 but ranged from 13 to 91,200. Using a t-test, there were no significant differences in HR configurations and business strategies between firms with fewer than 100 employees and larger firms with more than 100 employees. The ratio of managerial to operating staff was 9.5%. On average, the HR department had 9.2 persons and an average annual turnover rate of 11.86%.

The survey included a broad range of HR practices, such as staffing, training and development, performance appraisal, compensation, job design, international promotion, security, information sharing, and participation.

Measures

HR Configurations

The survey included a broad range of HR practices, such as staffing, training and development, performance appraisal, compensation, job design, international promotion, security, information sharing, and participation. Items were identified to form four configurations. The results of the factor structure based on a theory-driven configuration of HR practices can be found in Table I. The resulting HR configuration is very similar to Lepak and Snell's commitment, market, collaboration, and compliance. In 2002, Lepak and Snell proposed a productivity configuration instead of market configuration. Given that China is the world's factory, productivity configuration seems to be crucial. However, because the overall guiding principle for economic reform is market orientation, it will be appropriate to use market-based configuration. Lepak and Snell

TABLE I Factor Structure of HR Configuration

	Factor 1	Factor 2	Factor 3	Factor 4
Commitment				
The company has a formal employee training program	.20	–.07	.06	**.81**
The company implements a systematic training program to enhance new employees' job skills	.25	.16	.03	**.75**
The company provide extensive training for managerial staff besides job-related skills	.27	.35	.23	**.63**
Training items mainly focus on long-term objectives but not short-term objectives	.13	.33	.35	**.64**
The company offers various channels of promotion rather than a single one for employees	.38	.11	.37	**.44**
The majority of the technicians and managers have a formal career development plan	.31	.34	.37	**.44**
The performance evaluation emphasizes guiding employee behaviors toward the company's strategic direction	.39	.28	.27	**.47**
Market				
The managerial salary is set at around the 75th percentile of the industrial level (The market rate is considered to be the 50th percentile)	–.07	.23	**.48**	.35
Incentive pay is linked to job performance for all employees	.39	–.10	**.60**	.30
The company provides managerial staff a flexible compensation structure but not a standardized one	.26	.31	**.61**	.03
The incentive pay of middle- to high-level managerial staff to a large extent is linked to the company's profitability or other financial indicators	.11	.24	**.78**	.09
There is a great discrepancy in incentive pay between the high and low performers for the same job	.32	.06	**.59**	.05
Compliance				
The main focus of performance evaluation is development as opposed to punishment [R]	**–.64**	–.05	–.18	–.27
Performance evaluation uses a long-term measurement standard [R]	**–.53**	–.29	–.24	–.32
The company has a formal employee participation program [R]	**–.44**	–.36	–.28	–.21
There is a high degree of empowerment in managerial decisions [R]	**–.65**	–.32	–.16	–.03
The company accepts and provides feedback on employee opinion effectively [R]	**–.75**	–.15	–.14	–.11
The company conducts employee satisfaction survey regularly, and makes improvement based on results [R]	**–.54**	–.24	–.06	–.31
The company frequently sponsors social activities to promote exchange among employees [R]	**–.55**	–.10	–.24	–.31
Collaboration				
Managers frequently participate in cross-functional training and job rotation	.24	**.50**	.26	.35
The company provides team-based incentives including employee stock ownership and a profit-sharing scheme to most of the employees	.18	**.50**	.29	.13
Most employees involved in self-management team, cross-department team, and project team in their job	.34	**.67**	.15	.14
Employees have complete autonomy to arrange their job	–.07	**.73**	–.06	–.06
The company share with their employees information about its strategy, market, and customer feedback	.29	**.65**	.05	.19
The company shares information with employees through bulletins and Web site	.12	**.55**	.18	.22
Eigenvalue	4.31	3.99	3.60	3.59
% Variance explained	14.86	13.76	12.43	12.39

Note: [R] reverse coded.

(1999, 2002) did not include items on employee development, participation, and communication in their study. But if employees are required to follow strict rules and procedures, in some sense it will likely restrict employee development, participation, and communication. Thus, the reverse-coded items can be interpreted as compliance. Following the recommendation by MacDuffie (1995) and others (Koch & McGrath, 1996; Youndt et al, 1996), each configuration was operationalized as an additive index of HR practices (Lepak & Snell, 2002). Four HR indices were calculated by taking the mean value of the items in each configuration. The alpha reliability of the measurement scales ranged from 0.76 to 0.86.

Business Strategies

The types of strategies included cost reduction, innovation, and quality enhancement. Following Schuler and Jackson (1987) and Huang (2001), we adopted ten items in the present study. Previous studies have validated the use of business strategies in a transitional economy (Brouthers & Xu, 2002; Ge & Ding, 2005). Respondents were asked to rate each item as it relates to their company's strategies on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). These items were factor analyzed using a principal factor with varimax rotation method. The factor structure of business strategy is given in Table II. All three factors accounted for 59.35% of the total variance explained. The alpha coefficients for cost, quality, and innovation were .68, .78, and .71, respectively.

Performance Measures

The present study uses multiple firm performance measures (i.e., employee turnover, financial profit, and sales growth). Because not all of the organizations we surveyed are publicly listed, objective financial data were not available for all. Furthermore, even avail-

TABLE II Factor Structure of Business Strategy

	Factor 1	Factor 2	Factor 3
Cost Reduction			
The company emphasizes cutting general expenses to maintain competitive.	.20	**.78**	.12
The company sets product prices below those of competitors	.03	**.54**	.24
The company surpasses competitors via enhancing operation efficiency or lowering production costs	.09	**.73**	.32
The company enforces strict labor cost control	.17	**.72**	–.32
Quality Enhancement			
The company has quality control teams	**.83**	.08	.01
The company sets up minimum standard for production and service quality	**.69**	.09	.08
The company has very strict quality management procedures	**.88**	.06	.14
Innovation			
The company frequently develops new products and technology	.20	.01	**.83**
The company invests a huge amount of capital to carry out innovative production process and service process innovation	.36	.21	**.47**
The company is usually the first to introduce new products or services in the market	.12	.30	**.80**
Eigenvalue	2.83	2.17	2.12
% Variance explained	23.59	18.12	17.65

able and objective financial figures turned out to not be directly comparable in a study like this, which covers a wide variety of types of organizations. Managers are likely to provide the best estimate of firm performance. The dependent variables in the present study include four performance indicators: overall performance, turnover rate, sales growth rate, and profit growth rate. Sales growth and profit growth reflect the conventional measure of profitability and market share. Sales growth rate and profit growth rate were measured by the percentage change in sales and profit over the prior two years. Overall performance is a composite measure of productivity, the quality of products and services, research and development capability, and market shares. These items were measured on a five-point Likert scale ranging from 1 (very low) to 5 (very high). Factor analysis resulted in one single factor accounted for 54.68% of the variance explained.

State-owned firms tend to be more embedded in institutional constraints and therefore tend to be less flexible in adopting innovative HR practices.

Control Variables

Because firms with superior resources would be more likely to be able to formulate and implement unique and innovative strategies, firm size and ownership types are controlled for when predicting organizational performance. Firm size was measured by the number of full-time employees. We used natural logarithmic transformation to normalize the distributions and made the measure more consistent with existing literature. A firm's ownership structure also can influence HRM and performance. State-owned firms tend to be more embedded in institutional constraints and therefore tend to be less flexible in adopting innovative HR practices. In terms of ownership structure, we used firms in Hong Kong and Taiwan firms as a base for comparison. Three dummy variables were created to represent state-owned, collective, and foreign-invested/joint ventures. Results from $\chi^2 = 36.57$, $df = 3$, $p < .01$, indicate a significant difference in ownership distribution in comparison with Guangdong province. Hong Kong and Taiwan firms are slightly overrepresented in the sample. Hong Kong and Taiwan firms play a leading role in transforming enterprise management in South China. The industry is another variable to be controlled. The service industry was used as a basis for comparison. Two dummy variables were created to represent the manufacturing and technology industry (microcomputers, telecommunication and other electronic facilities). Since ownership and industry are control variables, statistical procedure rules out serious bias of the results.

Regression analysis was used to assess the relative impact of all the variables and the extent to which the four HR configurations affect performance through the interaction of three business strategies. A potential problem of common method variance can result from collecting all variables from the same respondent, in the same survey. Following Podsakoff, MacKenzie, and Lee (2003), we checked for presence of common method bias by conducting Harman's one-factor test in our data. A principal components factor analysis with an unrotated solution yielded ten factors with eigenvalues greater than 1, accounting for 63.87% of the total variance. The largest variance explained by factor 1 is 34.60%, which suggests that no single factor accounted for a majority of the covariance in the variables. The result shows that common method variance is unlikely to be a serious problem.

Results

The descriptive statistics and correlations among variables are given in Table III. It is observed that significant positive correlation exists among the three business strategies. The four HR configurations are also significantly correlated with each other. The overall outcome is positively correlated with innovation, commitment, market, and collaboration, but negatively correlated with compliance. These correlation results confirmed the findings reported in previous research (Bird & Beechler, 1995; Huang, 2001; Takeuchi, Wakebayashi, & Chen, 2003). Surprisingly, sales growth rate

TABLE III Means, Standard Deviations, Reliability, and Correlations

	Mean	SD	Alpha	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Size (log)	2.74	.68	na																
2. State-owned	.08	.27	na	.08															
3. Collective	.23	.42	na	–.31**	–.16*														
4. Foreign and JV	.16	.36	na	.19**	–.13$^+$	–.23**													
5. Manufacturing	.44	.50	na	.04	–.18**	–.10	.00												
6. Technology	.35	.48	na	.06	–.07	.03	–.04	–.63**											
7. Cost	3.30	.63	.68	.09	.04	.09	–.08	–.09	.21$^+$										
8. Quality	3.78	.74	.78	.29*	–.12	–.27*	–.06	–.13	.12	.28*									
9. Innovation	3.54	.71	.71	.07	.02	–.09	–.27*	–.23*	.17	.34**	.39**								
10. Commitment	3.39	.69	.86	.02	–.23**	–.04	.03	.00	.14*	.28*	.46**	.59**							
11. Market	3.27	.66	.76	–.10	–.21**	.05	–.02	.07	.08	.25*	.23*	.35**	.60**						
12. Compliance	2.73	.63	.82	–.01	.29**	.11	–.02	–.02	–.15*	–.41**	–.39**	–.63**	–.71**	–.60**					
13. Collaboration	2.74	.66	.76	–.06	–.12$^+$	.09	.02	–.05	.09	.45**	.20$^+$	.63**	.60**	.49**	–.61**				
14. Overall outcome	3.67	.57	.79	–.01	–.29**	–.02	.06	.04	.12$^+$	.07	.04	.33**	.52**	.43**	–.52**	.43**			
15. Sales growth	38.39	76.08	na	–.11	–.08	.15$^+$	–.04	.01	–.09	–.20	–.45**	–.35*	.01	.04	–.04	.09	.28**		
16. Profit growth	21.21	36.53	na	–.06	–.09	.08	–.08	.03	–.01	.08	–.30$^+$	.01	.01	.14	–.14	–.03	.10	.55**	
17. Turnover rate	11.86	12.47	na	.11	–.14*	.00	.08	.14*	–.10	.01	–.29*	–.17	–.18*	–.14$^+$	.19**	–.15*	–.17*	–.06	–.01

Correlation is significant at $^+$ $p < .10$, * $p < .05$, ** $p < .01$.

is negatively correlated with quality and innovation. Profit growth rate shows no significant correlation with any of the variables. State-owned firms show lower performance and staff turnover rate as reflected by significant negative correlation with overall outcome and turnover. As predicted, both overall outcome and turnover had a significant effect on all four HR configurations. In contrast, sales and profit showed no significant effect on all four HR configurations.

For business strategy, cost reduction has no significant effect on all four performance measures. Quality enhancement strategy shows a significant negative effect on sales, profit, and turnover rate. Innovation strategy is positively correlated with overall outcome but negatively correlated with sales growth.

Table IV displaces the results of regression analysis testing the effects of HR configuration on performance. Firm size, ownership, and industry were entered as control. State-owned firms have a significant negative impact on overall performance and the rate of staff turnover. Obviously, state-owned enterprises (SOEs) are less efficient. Workers in SOEs enjoy high job security and tend to have lower turnover. Technology firms are more efficient. The check for Variance Inflation Factor (VIF) shows no problem of multicollinearity. HR configurations have a significant effect in predicting overall outcome and turnover, as shown in the significant ΔR^2 and F values, but no significant effect on sales and profit growth rates. Perhaps financial measures may be affected by many other factors in a transitional economy. In predicting the overall outcome, compliance has a marginally significant negative effect ($\beta = -.18$, $p < .10$), while commitment has a significant positive effect ($\beta = .21$,

TABLE IV **Results of Hierarchical Regression Analyses Testing Effects of HR Configurations on Performance**

	Overall Outcome		Sales Growth		Profit Growth		Turnover Rate	
Variables	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Control		.11**		.04		.02		.06+
Firm size (log)	.00		–.03		–.01		.13+	
State-owned	–.27**		–.09		–.08		–.13+	
Collective	–.04		.11		.05		.04	
Foreign and JV	.03		–.03		–.08		.05	
Manufacturing	.12		–.08		.03		.10	
Technology	.19*		–.15		.00		–.06	
HRM configuration		.24**		.01		.06		.06*
Commitment	.21*		–.09		–.19		–.11	
Market	.09		.01		.17		–.02	
Compliance	–.18+		–.06		–.26+		.19+	
Collaboration	.13		.09		–.18		.03	
R^2		.35**		.05		.08		.12
F		10.70**		.66		.93		2.52**

+ $p < .10$, * $p < .05$, ** $p < .01$.

$p < .05$). Such results are consistent with current literature stating that a commitment HR system invests in human capital in a move that, in turn, improves firm performance.

A compliance HR system has a significant negative effect on profit growth and a significant positive effect on the turnover rate. The compliance-based HR system does not lead to better performance even in a traditional high-power-distance and hierarchical Chinese society. A market-based HR system shows no significant effect on all performance measures. The results are consistent with our predictions in Hypotheses 1a–c. Market-oriented and collaboration-based HR produced no significant effect, particularly for SOEs. Inherited from the historical burden of the planned socialist economy, SOEs are less market-oriented.

The impact of the three business strategies on HR configurations can be found in Table V. When the control variables were first entered into the regression, collectively owned firms showed a significant negative effect on commitment but a significant positive impact on compliance. Collectively owned firms with fewer resources tend to rely on control rather than investing in high-commitment HR practices. In testing the main effect, the three business strategies have a significant effect on the four HR configurations, as indicated by the significant ΔR^2 and F values. Again, a VIF test for multicollinearity shows no problem. As for different business strategies, we observed a highly significant effect on four HR configurations. Cost reduction had a significant negative effect on compliance ($\beta = -.24$, $p < .05$) but a significant positive effect on collaboration ($\beta = .30$, $p < .01$). Contrary to our expectation, Hypothesis 2a is not supported. Quality-enhancing strategy significantly affected commitment only ($\beta = .23$, $p < .05$). Though quality-enhancing strategy is negatively associated with market configuration but not significant ($\beta = -.09$). Hypothesis 2b is partially supported. Innovation strategy has a significant positive impact

TABLE V Results of Hierarchical Regression Analyses Testing Effects of Strategy on HR Configurations

Variables	Commitment		Market		Compliance		Collaboration	
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Control		.10		.10		.08		.04
Firm size (log)	.05		–.17		.04		–.00	
State-owned	.04		–.16		.02		–.06	
Collective	–.27*		–.15		.26*		–.03	
Foreign and JV	–.18		–.16		.17		–.20	
Manufacturing	–.22		.28		.04		–.09	
Technology	–.11		.26		–.07		–.03	
Business Strategy		.32**		.15**		.40**		.44**
Cost reduction	.09		.13		–.24*		.30**	
Quality	.23*		.10		–.09		–.10	
Innovation	.44**		.30*		–.50**		.57**	
R^2		.42		.26		.48		.48
F		5.12**		2.41*		6.40**		6.36**

+ $p<.10$, * $p < .05$, ** $p < .01$.

on commitment (β = .44, $p < .01$), market (β = .30, $p < .05$), and collaboration (β = .57, $p < .01$) but a significant negative impact on compliance (β = –.50, $p < .01$). Hypothesis 2c is confirmed. Compliance HR practice is not conducive to innovation strategy.

Results of regression analyses testing the interaction effect are depicted in Table VI. As recommended by Aiken and West (1996), the mean-centered variables were used for the main and interaction terms in the regression analysis. We conducted separate regression analyses on all four dependent variables and tested all the possible interaction terms in our analysis. We observed significant interaction effects on overall outcome, and sales and profit growth rates, but no significant interaction effect on turnover rate. Therefore, the results of the turnover rate are not included in Table VI.

For the main effect, HR configurations show no significant impact on the three performance measures, except the marginal significant effect collaborative HR systems have on overall outcome. Both quality-enhancing and innovation strategy are negatively related to sales growth and profit growth. Cost-reduction strategy does not have any significance on three performance measures.

TABLE VI Results of Regression Analysis Testing the Interaction Effects on Performance

Variables	Overall Outcome β	Overall Outcome ΔR^2	Sales Growth β	Sales Growth ΔR^2	Profit Growth β	Profit Growth ΔR^2
Main effect		.31*		.57**		.51+
Firm size (log)	–.13		.13		.09	
Collective	–.04		.10		.27	
Foreign and JV	–.13		–.32*		–.04	
Manufacturing	–.14		–.75**		–.49	
Technology	–.05		–.59*		.01	
Commitment	.21		–.22		–.18	
Market	.03		–.01		.37	
Compliance	–.07		–.33		–.26	
Collaborative	.36+		.26		.27	
Cost reduction	–.18		–.07		–.14	
Quality	–.10		–.34*		–.41*	
Innovation	–.05		–.63**		–.32	
Interaction		.21		.21		.34+
Cost x commitment	–.52*		–.87		–1.97**	
Cost x market	–.07		–.18		–.38	
Cost x compliance	.17		–.29		–1.23	
Cost x collaboration	.22		.63		.42	
Quality x commitment	.35+		.70*		.88*	
Quality x market	–.53*		–.63		–1.09*	
Quality x compliance	–.40		–.25		–.04	
Quality x collaboration	–.25		–.61		–.06	
Innovation x commitment	–.20		1.12*		1.47*	
Innovation x market	.24		–.03		–.02	
Innovation x compliance	–.04		–.12		.23	
Innovation x collaboration	–.49		–1.16+		–.14	
R^2		.52		.78		.85
F		1.88*		2.41*		2.86*

+ $p < .10$, * $p < .05$, ** $p < .01$.

The interaction of cost X commitment shows a significant negative effect on overall outcome and profit growth. Hypothesis 3a, therefore, is not supported. Even though not hypothesizing in our interaction terms, the interaction of cost X commitment showed significant negative effect on both overall outcome ($\beta = -.52$, $p < .10$) and profit growth ($\beta = -1.97$, $p < .01$). There was no significant effect for the interaction of cost and other HR configurations. The interaction effects of quality X commitment had a marginally significant positive effect on overall outcome ($\beta = .35$, $p < .10$), sales ($\beta = .70$, $p < .05$), and profit growth ($\beta = .88$, $p < .05$). Quality X market were negatively associated with overall outcome ($\beta = -.53$, $p < .05$) and profit growth ($\beta = -1.09$, $p < .05$). These results support Hypothesis 3b. Innovation X commitment has a significant positive effect on both sales ($\beta = 1.12$, $p < .05$) and profit growth ($\beta = 1.47$, $p < .05$). Contrary to our prediction, innovation has no significant interaction effect with other HR configurations. These results only provide partial support to Hypothesis 3c. It should be noted that HR configurations have no significant effect on sales growth and profit growth, but the interaction of HR configurations and business strategy shows a significant effect on profit and sales growth, as indicated by highly significant F values.

Figures 1 to 4 display the pattern of significant interaction terms (due to space limitation, not all significant interaction charts are shown here). When a commitment HR configuration was matched with low-cost strategy, it had a positive impact on overall outcome, as shown in Figure 1. High-cost strategy is not likely to benefit with overall outcome as indicated by the steep negative slope with overall outcome. In contrast, a commitment HR configuration matching with a high-quality strategy will lead to a slight increase in profit growth, while using a low-quality strategy leads to substantial negative profit growth for high-commitment HR, as shown in Figure 2. Figure 3 indicates that high-quality strategy is detrimental to profit growth for organizations pursuing high market-based HR. Graphically, Figure 4 shows that for organizations with the commitment HR configuration, pursuing a high-innovation strategy does not make much difference, while adopting low-innovation strategy will result in dramatically lower sales growth.

Discussion and Conclusions

The present study seeks to identify the pattern of HRM configurations that would improve the performance of China's business firms. Results from the present study partially support the configuration hypothesis as a way to predict firm performance. Based on a theoretically driven measure, we assess the relative efficiency of various HR practice configurations. Commitment HR showed a positive significant effect on overall outcome. Compliance showed a negative significant effect on overall outcome, a marginal

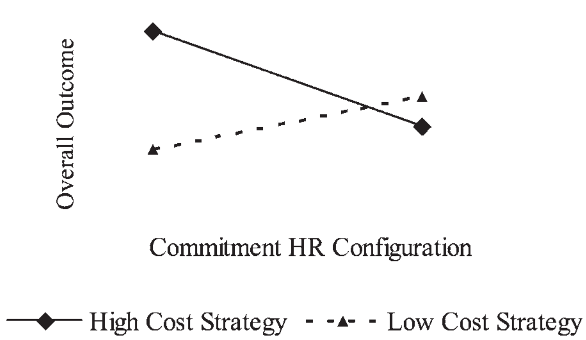

FIGURE 1. The Interaction Between Cost Strategy and Commitment HR Configuration on Overall Outcome

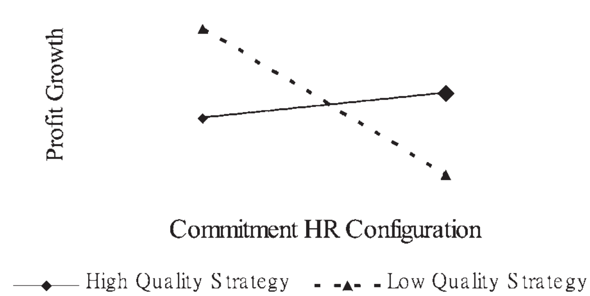

FIGURE 2. The Interaction Between Quality Strategy and Commitment HR Configuration on Profit Growth

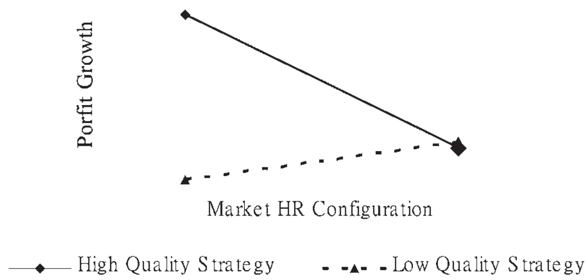

FIGURE 3. The Interaction Between Quality Strategy and Market HR Configuration on Profit Growth

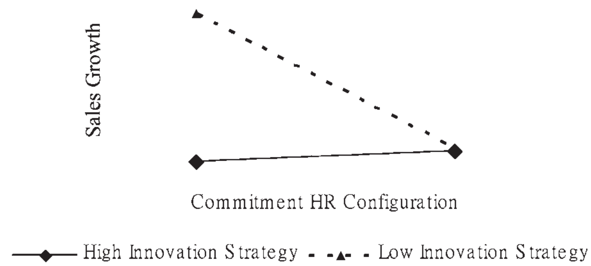

FIGURE 4. The Interaction Between Innovation Strategy and Commitment HR Configuration on Sales Growth

positive effect on turnover, and a marginal negative effect on profit growth. For these reasons, it appears obvious that organizations should move away from controlling employees and seek instead to gain commitment from their workers. Compliance in the high-power-distance culture is not well received, at least not at the current stage of the diffusion process. Economic reforms have actually undermined participative management. For this reason, we believe further research in this area is needed.

The findings in this study of Chinese business firms indicate that a commitment HR configuration, compared with other HR configurations, has a significantly positive effect. Results from the present study are consistent with those from the Western countries (Arthur, 1994; Delaney & Huselid, 1996), Asian countries (Bae & Lawler, 2000; Guthrie, 2001), and even the Chinese culture societies (Huang, 2000; Khatri, 2000). The results also confirm that a commitment HR system is an effective way to create a competitive advantage and enhance organizational performance in emerging economies such as China (Bjorkman & Fan, 2002). This finding offers research-guided practical implications for Chinese firms as it relates to upgrading their HRM system. In terms of business strategy, low cost is the dominant strategy used in Chinese firms. Results from the present study confirm findings from previous studies, which showed that low cost is not a very good strategy for Chinese firms (Brouthers & Xu, 2002). A narrow emphasis on cost control may prevent firms from spending on new product development, technological improvement, and quality control, which in turn may affect firm performance. While organizations often seek cost advantages, they should also emphasize quality. Innovation is a risky strategy for organizations that are not emphasizing commitment HR practices.

While there is little support showing that HR configurations are significantly associated with the growth of sales and profits, HR configurations combined with business strategy create significant interaction effects on sales and profit growth. The interaction of particular HR configurations with business strategy has synergistic effects on performance. Results show significant gains if HR configuration is aligned with business strategy. Thus, if you want to yield maximum results, it is important to align HR configuration to a firm's business strategy.

In the present study, the performance measures include overall outcome (a composite measure), turnover (behavioral consequence), financial outcome (profit growth rate), and market outcome (sales growth rate). HR configurations are most likely to have a significant impact on HR outcomes, followed by organizational, financial, and market outcomes (Dyer & Reeves, 1995). This is because HR strategies are primarily designed to impact HR outcomes. Turnover is affected in part by labor market conditions. Financial and market outcomes are influenced by other factors, such as economic condition (Rogers & Wright, 1998). The impact on financial performance is minimal in the present study. Apparently, the current HR practices seem to have less effect on a firm's financial performance, at least in the present study in Guangdong, China. One reason may be because financial performance is influenced by other economic factors, such as macroeconomic conditions and the government's intervening policy. Another possible explanation is that because HR is regarded as an asset and source of sustainable competitive advantage, the outcomes generated by HRM may not necessarily be assessed using short-term performance measures (Pfeffer, 1994).

Limitations and Future Research Directions

Caution is needed when interpreting results in the configuration of HR practices. Organizations use a wide range of HRM practices, and the lack of consensus in the configuration of HR practices has led to inconsistencies in research linking HR practices to firm performance. Attention should be paid to the adequacy of variables selected to identify configurations. Another possible explanation for the inconsistencies lies in the way these HR configurations were implemented in the chosen sample. It is very likely that senior management recognizes the importance of human resource policies and ignores the implementation of these HR practices. Future research is needed to fill this gap by assessing the level of implementation of HRM in organizations.

There is a lack of statistical evidence of HR configuration in relation to financial performance. One possible explanation for this may be related to the use of self-reported, subjective measurements. Profit rate is commonly accepted as a reliable proxy for assessing financial performance (Kimbara, 1991). Chinese respondents are often very sensitive about publicizing financial performance figures. Therefore, rating of the profit rate and a subjective evaluation of corporate performance were employed as indicators of corporate financial performance. Subjective measures of firm performance were widely used in the literature (Bae & Lawler, 2000; Delaney & Huselid, 1996; Harel & Tzafrir, 1999). In the absence of objective data, self-reported measures are an acceptable substitute and are equally reliable. Prior research by Dollinger and Golden (1992) showed that organizational performance rated by self-reported measures was positively correlated with objective performance indicators.

Another limitation is the cross-sectional nature of the study. Causality is difficult to establish. The advantage of having a broad range of organizations is that it maximizes variation in the independent variables and increases the generalizability of the findings. Given the dynamic HR configurations and the sustainability of competitive advantage changes over time, it requires a longitudinal analysis.

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To conclude, the results from the present study offer some support that integrating HR configuration with business strategy enhances organizational performance, particularly for high-commitment-based HR. The adoption of HR practices characterized by internal fit and external fit will promote performance. It provides a foundation to study the important HR strategies and organizational outcomes in a Chinese context. China's status as one of the most attractive business markets for foreign investors and the second largest foreign direct investment recipient in the world means that its emergence in the global economy offers great opportunities. For multinational corporations operating in China, one of the biggest challenges is the management of human resources. The findings from this present study offer important insights for executives in formulating effective HRM strategies. Managers should take a more proactive role in effectively implementing innovative HR practices that will help them to achieve higher levels of financial performance and ultimately affect the bottom line.

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References

Aiken, L., & West, S. (1996). Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.

Arthur, J. B. (1994). Effects of human resource management systems on manufacturing performance and turnover. Academy of Management Journal, 37, 670–687.

Bae, J., & Lawler, J. J. (2000). Organizational and HRM strategies in Korea: Impact on firm performance in an emerging economy. Academy of Management Journal, 43, 502–517.

Bamberger, P., & Mesoulan, I. (2000). Human resource strategy. Newbury Park, CA: Sage.

Barad, M. (1995). Some cultural/geographical styles in quality strategies and quality costs (P.R. China versus Australia). International Journal of Production Economics, 41(1–3), 81–92.

Bird, A., & Beechler, S. (1995). Links between business strategy and human resource management. Journal of International Business Studies, 26, 23–46.

Bjorkman, I., & Fan, X. (2002). Human resource management and the performance of western firms in China. International Journal of Human Resource Management, 13, 853–864.

Brouthers, L. E., & Xu, K. (2002). Product stereotypes, strategy and performance satisfaction: The case of Chinese exporters. Journal of International Business Studies, 33, 657–677.

Delaney, J. M., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. Academy of Management Journal, 39, 949–969.

Delery, J. E. (1998). Issues of fit in strategic human resource management: Implications for research. Human Resource Management Review, 8, 289–309.

Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictors. Academy of Management Journal, 39, 802–835.

Ding, D. Z., & Akhtar, S. (2001). The organizational choice of human resource management practices: A study of Chinese enterprises in three cities in the PRC. International Journal of Human Resource Management, 12, 946–964.

Dollinger, M. A., & Golden, P. A. (1992). Interorganizational and collective strategies in small firms: Environmental effects and performance. Journal of Management, 18, 695–715.

Dyer, L., & Reeves, T. (1995). Human resource strategies and firm performance: What do we know and where do we need to go? International Journal of Human Resource Management, 6, 656–670.

Farrell, D., & Grant, A. J. (2005, November). China's looming talent shortage. McKinsey Quarterly, pp. 70–79.

Ge, G. L., & Ding, D. Z. (2005). Market orientation, competitive strategy and firm performance: An empirical study of Chinese firms. Journal of Global Marketing, 18(3–4), 115–142.

Gunnigle, P., & Moore, S. (1994). Linking business strategy and human resource management: Issues and implications. Personnel Review, 23(2), 63–84.

Guthrie, J. P. (2001). High involvement work practices, turnover and productivity: Evidence from New Zealand. Academy of Management Journal, 44, 180–190.

Harel, G. H., & Tzafrir, S. S. (1999). The effect of human resource management practices on the perceptions of organizational and market performance of the firm. Human Resource Management, 38, 185–200.

Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. Academy of Management Journal, 44, 13–28.

Huang, T. C. (2000). Are the human resource practices of effective firms distinctively different from those of poorly performing ones? Evidence from Taiwanese enterprises. International Journal of Human Resource Management, 11, 436–451.

Huang, T. C. (2001). The effects of linkage between business and human resource management strategies. Personnel Review, 30(2), 132–151.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. Academy of Management Journal, 38, 635–672.

Ketchen, D. J., Jr., Combs, J. G., Russell, C. J., Shook, C., Dean, M. A., Runge, J., et al. (1997). Organizational configurations and performance: A meta–analysis. Academy of Management Journal, 40, 223–240.

Khatri, N. (2000). Managing human resource for competitive advantage: A study of companies in Singapore. International Journal of Human Resource Management, 11, 336–365.

Kimbara, T. (1991). Localization and performance of Japanese operations in Malaysia and Singapore. In S. Yamashita (Ed.), Transfer of Japanese technology and management to the ASEAN countries (pp. 153–168). Tokyo: University of Tokyo Press.

Koch, M. J., & McGrath, R. G. (1996). Improving labor productivity: Human resource management policies do matter. Strategic Management Journal, 17, 335–354.

Lawler, E. E., Mohrman, S. A., & Ledford G. E., Jr. (1995). Creating high performance organizations: Practices and results of employee involvement and total quality management in Fortune 1000 companies. San Francisco, CA: Jossey-Bass.

Lepak, D. P., & Snell, S. C. (1999). The human resource architecture: Toward a theory of human capital allocation and development. Academy of Management Review, 24, 31–48.

Lepak, D. P., & Snell, S. C. (2002). Examining the human resource architecture: The relationships among human capital, employment, and human resource configurations. Journal of Management, 28, 517–543.

Levering, R., & Moskowitz, M. (1993). The 100 best companies to work for in America. New York: Doubleday.

MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. Industrial and Labor Relations Reviews, 48(2), 197–221.

Martell, K., Gupta, A., & Carroll, S. J., (1996). Human resource management practices, business strategies, and firm performance: A test of strategy implementation theory. Irish Business and Administrative Research, 17(1), 18–35.

Meyer, A. D., Tsui, A. S., & Hinings, C. R. (1993). Configurational approach to organizational analysis. Academy of Management Journal, 36, 1175–1195.

Milkovich, G. T., & Newman, J. M. (2005). Compensation (8th ed.). New York: McGraw-Hill/Irwin.

Pfeffer, J. (1994). Competitive advantage through people. Boston: Harvard Business School Press.

Podsakoff, P. M., MacKenzie, S. B., & Lee, J. Y. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 85, 879–903.

Quinn, J. B., Anderson, P., & Finkelstein, S. (1996). Managing professional intellect: Making the most of the best. Harvard Business Review, 74(2), 71–80.

Rogers, E. W., & Wright, P. M. (1998). Measuring organizational performance in strategic human resource management: Problems and prospects. Human Resource Management Review, 8, 311–331.

Sanz-Valle, R., Sabater-Sanchez, R., & Aragon-Sanchez, A. (1999). Human resource management and business strategy links: An empirical study. International Journal of Human Resource Management, 10, 655–671.

Schuler, R. S. (1989). Strategic human resource management and industrial relations. Human Relations, 42(2), 157–184.

Schuler, R. S., & Jackson, S. E. (1987). Linking competitive strategies with human resource management. Academy of Management Executive, 1(3), 207–219.

Sheppeck, M. A., & Militello, J. (2000). Strategic HR configurations and organizational performance. Human Resource Management, 39, 5–16.

Snell, S. A. (1992). Control theory in strategic human resource management: The mediating effect of administrative information. Academy of Management Journal, 35, 292–327.

Takeuchi, N., Wakebayashi, M., & Chen, Z. (2003). The strategic HRM configuration for competitive advantage: Evidence from Japanese firms in China and Taiwan. Asia Pacific Journal of Management, 20, 447–480.

Wernerfelt, B. (1984). A resource-based view of the firm. Strategic Management Journal, 5(2), 171–180.

Wright, P. M., & Snell, S. A. (1991). Toward an integrative view of strategic human resource management. Human Resource Management Review, 1, 203–225.

Youndt, M. A., Snell, S. A., Dean. J. W., Jr., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. Academy of Management Journal, 39, 836–866.