

Do Human Resource Best Practices Contribute to Firm Performance in the Transition Economy?

---A Survey in Chinese industries

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Abstract

Based on a sample of 324 firms in China, the relationship between HRM systems and firm performance is examined. The results of this study generally support the hypotheses that HRM systems are positively associated with firm performance (development of 'products, services and programmes', customer satisfaction, productivity and growth of sales) within Chinese context. In addition, it was interesting to find that, two factorized HRM systems exhibited different levels of relationship to firm performance. In particular, 'motivation and support' HRM system appeared to have stronger and significant relationships than 'skill and development' HRM system to firm performance outcomes. Finally, it was found that company age, size of the firm, average salary level and HR-strategy fit generally have significant associations with firm performance.

Keywords:

HRM systems; firm performance; Resource-based view of the firm; China

Introduction

Based on the resource-based view of the firm (Barney, 1991), it is contended that firms will not meet the future competitive challenge unless they can effectively obtain and utilize valuable, scarce, imperfectly inimitable, and hardly substitutable resources. With the gradual loss of advantage of traditional sources (i.e. finance and technology), human resources, as a source of sustained competitive advantages, are widely recognized (Pfeffer, 1994). It argues that, if a firm wants to succeed in the long term business competition, it has to obtain and motivate its high quality people for the work (Pfeffer, 1994; 1998) through properly investing in HR practices. Followed with this assumption, there are a large number of research has been conducted that examining the relationship between HRM and firm performance (e.g. Huselid, 1995;

Youndt et al., 1996; Hoque, 1999; Guest, 2001; Guest et al., 2003; Michie and Sheehan, 2005; Wood et al., 2006; Katou and Budhwar, 2006).

It is not difficult to find that, a majority of past studies that examining the relationship between HRM and firm performance have been given much focus to the Western nations such as US and UK and less attention has been made for Asian countries such as China. In recent year, the rapid growth of Chinese economy and its subsequent important role in World economy attract both of investors' and scholars' interest to explore in this Oriental country. However, compared to the large amount of studies that focused on western countries, the research employed in China are very modest. In addition, each of these studies had a relatively small, sometimes industry specific sample (e.g. Li, 2003; Zheng et al., 2006). There is a need for a more comprehensive study that can determine whether those findings apparently and consistently reported in US and UK can be replicated in China.

In addition, a majority of scholars usually reported the significant results of relationship between HRM systems and firm performance only, and rare study has been found to explicitly investigate the phenomena of whether different HRM systems may have unequal weights of relationship to firm performance outcomes and if yes, what the underlying reasons are. It can be assumed that, the degrees of relationship between specific HRM systems and firm performance outcomes may vary across different contexts. However, such questions still remain unclear and require further discovery.

The reminder of the study is organized as follows. The development of HRM in Chinese context is briefly reviewed and the remaining gap in this field is whist identified. Theoretical background for the linkage between HRM and firm performance is presented and the subsequent hypotheses are proposed. This is followed by research methodology, data results, discussion, conclusions and suggestions for future research.

The development of HRM in Chinese context

Since the launch of the 'open door' policy in 1978, China has been undergoing profound changes in its economic reforms. With the development of economy and the change of public ownership, the business competition is getting much more intense. After the entry of WTO in 2001, in particular, the rapid growth of Chinese private-owned enterprises and Foreign-invested enterprises (*include Foreign owned enterprises and Joint ventures*) accelerate the pace of business competition. An increase in foreign direct investment (FDI) has led Chinese enterprises to adopt not only Western production techniques but also management

ideas (Zheng et al., 2006). In HR feature, particularly, traditional ‘Lifelong’ employment system, ‘Iron rice bowl model’ reward system and ‘crave to grave’ welfare system were removed from almost every Chinese state-owned enterprise (Warner, 1996). Also, an increased number of firms with different modes of ownership announced that they have adopted Western HR best practices (*also called progressive or universal practices*) which are assumed to have significant effects on firm performance.

However, due to the non-synchronous economic development, intervention of Chinese government (Goodwall and Warner, 1999; Zhu et al., 2005), and residues of some old managerial concepts, it remains some doubt on whether the adoption of HR best practices by organizations can persistently generate the better firm performance regardless of ownership modes and other contingent factors (Pfeffer, 1994; Delery and Doty, 1996; Wood and de Menezes, 1998; Guest et al., 2003), or alternatively, the effectiveness of organizational performance is subject to the extent of fit between HR best practices and business or organizational strategy of the firm (Gomez-Mejia, 1992; Wright et al., 1995; Youndt et al., 1996; Bach, 2005) as the latter is assumed to consider the contingencies of environment. Accordingly, a comprehensive study conducted in China is needed.

Theoretical background and hypotheses

It is widely accepted by scholars that a positive relationship between the use of HRM practices and firm performance exists as revealed earlier. At present, two competing perspectives are found that represent the main approaches of conducting research in the investigation of the association between HRM and firm performance, namely ‘best practice’ and ‘best fit’ models. The best practice approach suggests a series of universal practices that are appropriate for all firms and argues that firm performance will be increased as long as they adopt such best practices (Pfeffer, 1994). However, an argument was that the best practice mentality makes organizations imitate one another in a type of herd behaviour which leads to the disappearance of firms’ strategies coverage and their creativity (Porter, 1996; Li, 2003). Therefore, in contrast to these best practice models, a contingency approach focused on the ‘fit’ with environment was proposed (Bach, 2005), named best fit models. It argues that HR practices may have greater impact on firm performance only if they are linked to other organizational factors especially business strategy (Michie and Sheehan, 2005) which is best suitable for their own characteristics. The debate of best practice and best fit model is particularly suitable for being addressing in Chinese context as

China is in the transition where is imbued with contingencies as raised in the last section of the paper.

In early studies, a few scholars initially focused on the examination of relationships between individual HR practices and firm performance (Gerhart & Milkovich, 1992; Terpstra and Rozell, 1993; Bartel, 1994). However, later, the dominant trend has shifted to the system view. More specifically, people argued that firm performance will not be largely increased unless progressive HR practices are bound to a HR bundle (i.e. Huselid, 1995). Scholars such as Delaney and Huselid (1996), Youndt et al. (1996), Ngo et al. (1998), Katou and Budhwar (2006), and Zheng et al. (2006) took the HRM systems view since then. For the purpose of consistency with dominant literature, this paper is to focus on the investigation of HRM systems. In the follows, the variables that related to this main study are discussed and the hypotheses are proposed.

Firm performance

It is not disagreed that the ultimate objective of a company is to achieve greater firm performance and that is the main reason the investment of HR best practices has been receiving a huge concern in recent years as the human resources have been already treated as a source of competitive advantage (Pfeffer, 1994; Arthur, 1994; Huselid, 1995; Ichniowski et al., 1997; Guest et al., 2003; Zheng et al., 2006). Probably due to the restriction of specific contexts, however, some researchers gave unclear definition to 'firm performance' in their studies (Li, 2003) by asking respondents questions such as "how is your overall firm performance?" This question easily leads to confusion by people on what indicators the researcher refers to for the assessment of organizational effectiveness. In practice, there are different aspects or indices can be used to measure the firm performance which is totally subject to the researcher's individual purpose and or industry restriction. However, it is acknowledged that the success of firm performance can be measured by not only financial performance indices but also non-financial performance indices. Although the end objective of firms is probably to achieve financial performance or maximizing the wealth of the shareholders (Paul and Anantharaman, 2003), Non-financial performance outcomes (Delaney and Huselid, 1996; Perry-Smith and Blum, 2000) appear to be equally important as it reflects the success of firm's marketing strategy and implementation.

HRM systems

Bailey (1993) argued that organizational efforts to elicit discretionary effort from workers are very

likely to provide returns which may transcend any relevant costs. The reason is that human resources are frequently “underutilized” and their performance is normally below their maximum potential. In line with Bailey’s (1993) argument, scholars (i.e. Huselid, 1995; Ngo et al., 1998; Guest et al., 2001; Paul and Anantharaman, 2003; Katou and Budhwar, 2006) who examined the effect of HRM practices on firm performance suggested a few HRM systems. Although the terms or the number of HRM systems may vary, the general assumption of those scholars is that, in order to enhance the significance of HRM practices on firm performance, first, employees should acquire skill or technique required; second, they should be motivated to commit to the work; finally, the firm should provide a good work structure or sound support to encourage the participation or involvement of employees as well as cooperation (see Huselid, 1995). Based on the resource-based view of the firm (Barney, 1991) and Bailey’s (1993) added contribution, two HRM systems were proposed by this study, namely ‘skill and development’ HRM system and ‘motivation and support’ HRM system.

Skill and development: it may include “Employment test before hiring and Technical training, and performance appraisal and non-entry jobs filled from within firm”. *Comprehensive test during the recruitment* (Huselid, 1995; Guest et al., 2003) can hire good quality employees who have sound skills and qualification to fill the job needed. *Technical training* (Delaney and Huselid, 1996; Fey et al., 2001) can further enhance those employees’ skill for the job required. *Performance appraisal* that decides the level of performance related pay and or pressure of employee withdraw actually can force employees to work hard and continuously develop themselves through learning. *Job filling internally* (Fey et al., 2000; Michie and Sheehan, 2005) provides an opportunity for employees who are willing to stay for getting promoted internally. In order to do so, they may keep them competitive through individual learning and development.

Motivation and support: it may include “performance-related pay and grievance and team-working, inter-departmental communication, information sharing, decision making and non-technical training”. *Performance related pay* is usually identified as one of the strongest predictors of firm performance (Delery and Doty, 1996) as it motivates employees to work hard. Grievance solution may reflect how the firm handles the complaints situation and it therefore influences employee’s perceptions (Morrison and Robinson, 1997). The good *grievance* system may lead to a high level of commitment to the firm (Fey et al., 2000). *Team-working* can be treated as a HR practice that results in a better decision-making and an achievement of more creative solution (Pfeffer, 1998) which in turn positively affect firm performance

(Levine, 1995; Delaney and Huselid, 1996). *Interdepartmental communication* plays the similar role as team-working and it fastens the work process. *Decentralized decision making* gives employees greater freedom and authority to perform their job effectively (Huselid, 1995). *Sharing information* of financial performance, strategy and operational measures of the firm may send a symbolic and substantive message to employees that they are trusted and supported. Employees therefore are likely to convert their appreciated attitude into work effort. Not like Fey and Bjorkman's (2001) study, *non-technical training* is not assumed to load in the 'skill and development' HRM system along with technical training. The reason is that, technical training is more task or project-based to fit the present job rather than being focused on employee development (Paul and Anatharaman, 2003), non-technical training however emphasizes comprehensive development which aims not only fit the general job required in workplace but also benefit employees' comprehensive capabilities. It shows that organization fully supports employees' future career development.

Based on the proposed HRM systems and HRM-firm performance discussion above, it is fair to hypothesize that a positive relationship between HRM and firm performance exists.

Hypothesis 1: HRM systems have a positive relationship with firm performance within Chinese industries.

- 1.1 There is a positive relationship between HRM systems and Development of products, services and programs.
- 1.2 There is a positive relationship between HRM systems and Customer satisfaction.
- 1.3 There is a positive relationship between HRM systems and Productivity.
- 1.4 There is a positive relationship between HRM systems and Market share.

HR and strategy fit

Within Chinese context, Goodall and Warner (1999) revealed that the firms (regardless of ownership) operating business in China often develop a 'hybrid' HR system to fit the environment (either internal or external). It implies that purely adopt the common HR best practices may be not appropriate at all times in different contexts. In order to achieve greater firm performance, the idea of match between HR strategy and business or organizational strategy is widely proposed by scholars (e.g. Bird and Beechler, 1995; Delery and Doty, 1996; Youndt et al., 1996; Fey et al., 2001; Michie and Sheehan, 2005) which has been

reviewed when discussing the debate of best practice and best fit models in the early section. In HR literature, a majority of research had attempts to fit specified HRM strategies to classified business strategies. Under this assumption, HR strategy has to integrate with business strategy. However the key is that not every organization has a clear business strategy (Marchington and Wilkinson, 2002). If that is the case, the rationale of HR policies or practices following business strategy in such an organization is no longer valid. Fey et al. (2000: 6) therefore argued that, “instead of examining the statistically relationship between HRM practices and measures of firm generic strategies, it may be more appropriate to analyze the degree to which companies actively pursue the alignment of strategy and HRM practices”.

Research methodology

Sample

A large questionnaire survey was conducted between September and December 2006. Telephone call was made randomly with 1000 HR specialists, HR managers/directors and CEO or senior managers inviting them to participating in the survey. 865 respondents agreed and were sent e-mail questionnaires and by the end of research period 324 useable questionnaires were eventually received with the response rate of 32.4%. The sample comprised different industries, modes of ownership and locations. Due to the restrictions of time and money, the study did not adopt stratified method for company sampling. Instead, the sampled companies were randomly selected from its locally available company directories and each member registered in the directories has an equal chance of being chosen in the sample. However, the length of business operation of the chosen firms has to be at least three years which helps to reduce problems of simultaneity of one period explanatory variable measures (Michie and Sheehan, 2005). Accordingly, they were representative of a large company population within the chosen cities.

It is important to note that, a well-established and reputable Chinese HR company in Beijing was assigned to collect the data. The reason is that the response rates of surveys in China are usually low (Ding et al., 2006) and professional companies often have a better response rate than individual. An agreed requirement on how to conduct data collection was made before the survey began (e.g. the requirements on how to ask questions via phone calls). The whole process was guaranteed that no extra effort was involved by the third party that affected the data results. In addition, the researcher randomly required 10 percent of the respondents' contact detail from the Agent to further confirm with participants and no bias

or fault information detected.

Measures

HRM practices

Respondents were asked to indicate “To what extent is each of the following HRM practices used for all employees in your firm?” Eleven items were applied to measure HRM systems include ‘Information sharing, Technical training, Non-technical training, An employment test prior to hiring (test before hiring), Team working, An interdepartmental communication, a formal grievance procedure, formal performance appraisals, performance related pay, non-entry-level jobs filled within firm (job filling internally) and decentralized decision making’.

This study adopted a single item for each practice. Similar reason was made by Fey et al. (2000), who explained that, in order to get a large number of respondents to willingly participate in this survey, it is essential to keep the length of questionnaire as short as possible. Guest (2001) also argued that the items that used to describe every single practice is not necessary the more the better. Fey and Bjorkman (2001) actually shared Guest’s (2001) view and adopted single item for measuring constructs. Perry-Smith and Blum (2000), who examined the relationship between work family friendly benefits and perceived firm performance, adopted only two single items for the measure of each HR practice.

It is important to note that, different from a majority of previous scholars’ measures, this study asked neither for the exact proportion of employees that actually use a particular practice (e.g. Huselid, 1995), nor for the selection of 5-point Likert scale with representing ‘little extent to a large extent’ (e.g. Fey and Bjorkman, 2001; Katou and Budhwar, 2006). The reason is that the former measure may force respondents to create a kind of spurious precision (Guest, 2001) and the latter measure is too simple and thus not visual. This study combined the two methods and the response bands were given to the respondents to make a selection (where 1= ‘not available’, 2= ‘1-25% of employees’, 3= ‘26-50% of employees’, 4= ‘51-75% of employees’, 5= ‘76-100% of employees’) which visualized 5-point Likert scale’s actual meaning. Such response bands allow respondents to feel more comfortable to give the appropriate answer (Guest, 2001).

For the purpose of creating uncorrelated constructs (HRM systems), principle component factor analysis was applied. Table 1 (below) presents the results of factorized HRM practices. Due to the sample size (200-350), 0.35 was chosen as the cutting point of loading value (Hair et al., 2006). Based on the

display of scree plot, coupled with a minimum eigenvalue criteria of '1.00', two components appear to be the most appropriate dimensions and the items loaded in the two categories which is consistent with what has been proposed in the paper. This study therefore labels the factor 1 as 'motivation and support' HRM system and factor 2 as 'skill and development' HRM system. The Cronbach alphas of the two factors are high, (0.865 and 0.757 respectively) which are above the suggested reliability level of 0.70 (see Nunnally, 1978). The percentages of variance explained are 34.021% and 23.309% respectively.

Table 1: Results of factory analysis for HR best practices (Rotated component matrix)

HR best practices	factor 1 (M&S)	factor 2 (S&D)	Alpha
Motivation and Support (M&S)			8.65
Interdepartmental communication	.814	.107	
Team-working	.723	.277	
Grievance	.708	.347	
Information sharing scheme	.674	.254	
Decision making	.670	.346	
Performance related pay	.670	.254	
Non-technical training	.627	.258	
Skill and Development (S&D)			.757
Performance appraisal	.127	.768	
Job filling internally	.349	.746	
Technical training	.315	.687	
Employment test before hiring	.271	.650	
Eigenvalue	5.255	1.051	
Percentage variance explained	34.021	23.309	

N=324

Firm performance

As mentioned earlier, firm performance includes not only financial performance but also non-financial performance. This study used development of products, services and programmes (Delaney and Huselid, 1996), customer satisfaction (Delaney and Huselid, 1996), productivity (Huselid, 1995; Guest et al., 2003) and growth of sales (Paul and Anantharaman, 2003; Zheng et al., 2006) to indicate firm performance outcomes. Respondents were asked the following 'How would you compare the firm's performance over the past 3 years to that of other firms that do the same kind of work? (*includes Foreign invested enterprises and Chinese owned enterprises in China*)'. 5-point Likert scale was adopted (1= 'much worse' and 5= 'much better') and it is suggested that such kind of comparative method may be much more effective in eliciting responses than directly asking respondents to give exact figure of performance outcomes (Tomaskovic-Devey et al., 1994). Although it may be bias in self-reported measures of performance indices, they are commonly used in the HRM research (e.g. Delaney and

Huselid, 1996; Youndt et al., 1996; Fey and Bjorkman, 2001; Paul and Anantharaman, 2003; Zheng et al., 2006). And research has found that there is a positively correlated between measures of perceived firm performance and objective measures of firm performance (Geringer and Hebert, 1991; Powell, 1992; Thang and Quang, 2005; Wall et al., 2004). The clear indication of referent in these questions (*which refers to FIE and Chinese owned enterprises that operating business in China only*) eliminated the risk of choosing different comparators by respondents as Guest (2001) raised his worry.

HR-strategy fit

HR-strategy fit was measured by the following three items: “To what extent do you agree with the following statements: 1. Our department involved in firm’s strategic planning process; 2. we have a clear strategic mission that is well communicated and understood at every level of through out of the firm; 3. we conduct formal analyses to determine how best to adjust HRM practices to fit business strategy”. Five-point Likert scale was adopted (1= strongly disagree and 5= strongly agree).

Control variables

In order to capture additional effects on performance outcomes that might be caused by other factors, a series of control variables were used which are presented as follows.

Industry: Industry was treated as a dummy variable where 1 represents ‘manufacturing’ and 0 represents ‘service’.

Company age: The calculation of the company age is to figure out the difference of 2006 (the year of survey) minus the founding year of the firm (see Delaney and Huselid, 1996; Katou and Budhwar, 2006) and then converted the age to a log base because of the distribution.

Firm size: firm size was measured by the total amount of employees in last year. Five-point Likert scale was adopted (1=100 or below, 2=101-150, 3=251-500, 4=501-1000, and 5=1001 or above).

Trade union: There is much evidence that union affects firm performance (see Arthur, 1994; Huselid, 1995; Guest et al., 2003; Paul and Anantharaman, 2003). In this study, respondents were asked to indicate ‘What is the percentage of TU membership out of total employees?’ A dummy variable was used. In particular, if membership density is more than 25% they code as ‘1’ and else as ‘0’ (see Guest et al., 2003).

Average salary level: Salary was measured by the following item: ‘To what extent do you think your provision of salary in average compare with other rivals?’ 5-point Likert scale was applied (1= much less

than and 5= much more than).

Results

Table 2 (below) presents the means, standard deviations and correlations for variables that used to examine the HRM systems and firm performance. The correlation between two HRM systems (IVs) is .646, less than suggested value .70 (Tabachnick and Fidell, 2001) and no any multicollinearity problem has been detected in each equation model with tolerance value above .80.

Table 2: Means, Standard Deviations and Correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Industry	.3426	.47531													
2. Company size	2.7284	1.43820	.191**												
3. Log of company age	2.0252	.74088	.016	.393**											
4. CPO	.4568	.49890	-.153**	.258**	-.171**										
5. SOE	.1914	.39398	-.087	.278**	.318**	-.446**									
6. CCO	.0988	.29881	.066	-.103	-.053	-.304**	-.161**								
7. FOE	.2531	.43545	.208	.115*	-.056	-.534**	-.283**	-.193**							
8. Beijing	.2623	.44059	-.090	.079	.048	.031	.174**	-.103	-.255*						
9. Shanghai	.1543	.36181	.034	.081	.101	-.220**	.075	-.027	.203**	-.225**					
10. Guangzhou	.2006	.40108	-.086	-.227**	.009	.113*	-.048	.144**	-.185**	-.299**	-.214**				
11. Shenzhen	.2253	.41843	.140*	.066	-.109	.010	-.131*	-.030	.128*	-.322**	-.230**	.270**			
12. Other city	.1574	.36475	.009	-.001	-.044	.046	-.081	.027	.002	-.258**	-.185**	-.217**	-.233**		
13. Trade union	.3735	.48447	-.060	.248**	.300**	-.132*	.322**	.044	-.171*	.076	.006	.043	-.080	-.053	
14. Average salary level	3.0617	72711	.010	-.049	-.120*	-.189**	.067	-.014	.166**	-.031	.105	-.053	.005	-.013	.005
15. HR-strategy fit	3.2469	1.03901	-.036	.000	-.066	.027	-.015	.008	-.022	.054	-.091	-.104	.064	.066	-.016
16. M&S HRM system ¹	3.5335	0.90850	-.070	.066	-.093	-.072	-.020	.007	.096	.015	.031	-.074	.025	.003	-.057
17. S&D HRM system ²	3.1011	1.00810	-.018	.099	-.045	-.084	-.084	.072	.123*	-.110*	-.039	.082	.056	.018	-.049
18. Development of PSP ³	3.3457	.90967	.012	.003	.016	-.022	.031	-.012	.005	.043	.016	-.012	-.075	.031	.043
19. Customer satisfaction	3.5833	.91216	-.112*	-.044	.028	-.050	.042	.015	.009	-.028	.027	.018	.011	-.026	.017
20. Productivity	3.1852	.94244	.086	.087	.064	-.115*	-.021	-.043	.180**	.002	.031	-.090	.090	-.040	-.071
21. Growth of sales	3.4506	.98943	.085	.149**	.077	-.111*	.048	-.036	.108	-.023	.056	-.127*	.105	-.008	.093

Table to continue

14	15	16	17	18	19	20	21
.364**							
.281**	.427**						
.254**	.339**	.646**					
.323**	.306**	.431**	.364**				
.338**	.326**	.384**	.298**	.506**			
.358**	.315**	.340**	.278**	.369**	.537**		
.331**	.201**	.329**	.279**	.439**	.517**	.607**	

Notes

N=324

- a. Standard coefficients (Beta) are shown instead of unstandardized coefficients (B).
- b. *p < .05, **p < .01
1. M&S HRM system= 'Motivation and Support' HRM system
2. S&D HRM system= 'Skill and Development' HRM system
3. PSP=Products, services and programs

In the following, the regression results for the relationships between the two HRM systems and four firm performance indicators are presented respectively (see table 3 and 4).

Table 3 (below) presents the results of regression analysis for testing relationships between the HRM systems and non-financial firm performance outcomes, namely development of products, services and programmes (PSP) and customer satisfaction. Both of 'motivation and support' and 'skill and development' HRM systems are found to be positively related to development of PSP (Beta=.280, P < .01 and Beta=.140, P < .05 respectively) that supported hypothesis 1.1. In addition, 'motivation and support' HRM system is also found to have a positive association with customer satisfaction (Beta=.250, P < .01), however, 'skill and development' HRM system does not show any significant relationship with customer satisfaction (Beta=.046, n.s.). The results partially support hypothesis 1.2. As for control variables, average salary level appears to be positively related to development of PSP (Beta=.201, P < .01). In addition, company age, average salary level, strategy fit show positive associations with customer satisfaction (Beta=.115, P < .05, Beta=.218, P < .01 and Beta=.133, P < .05 respectively).

Table 3: HRM systems and non-financial firm performance

	Development of PSP ^a		Customer satisfaction	
Control variables				
Industry	.037	.077	-.105 ⁺	-.076
Company size	-.004	-.069	-.042	-.085
Company age ^b	.051	.079	.092	.115 [*]
SOEs	-.030	-.022	.016	.018
CCOs	-.025	-.047	.023	.009
FOEs	-.032	-.069	.008	-.017
Shanghai	-.013	-.025	.040	.031
Guangzhou	-.008	-.038	.057	.047
Shenzhen	-.094	-.102 ⁺	.048	.047
Other city	-.004	-.005	-.002	.001
Trade union	.032	.055	-.008	.009
Average salary level	.257 ^{**}	.201 ^{**}	.257 ^{**}	.218 ^{**}
Strategy_fit	.221 ^{**}	.074	.241 ^{**}	.133 [*]
HRM systems				
Motivation and Support		.280 ^{**}		.250 ^{**}
Skill and Development		.140 [*]		.046
R²	.159	.270	.185	.245
Adjusted R²	.124	.235	.151	.209
F	4.516 ^{**}	7.611 ^{**}	5.415 ^{**}	6.680 ^{**}

N=324

1. Standard coefficients (Beta) are shown instead of unstandardized coefficients (B).
2. ⁺p < .10, *p < .05, **p < .01
- a. Development of PSP=Development of products, services and programmes
- b. Log of company age was taken

Table 4 (below) presents the results of regression analysis for testing associations between HRM systems and financial firm performance outcomes, namely productivity and growth of sales. ‘Motivation and support’ HRM system appears to have a positive association with productivity (Beta=.191, P < .05) while ‘skill and development’ HRM system does not show any significant relationship with productivity (Beta=.035, n.s.) that partially support hypothesis 1.3. Again, ‘motivation and support’ HRM system appears to be positively associated with growth of sales (Beta=.217, P < .05) while ‘skill and development’ HRM system has no significant relationship (Beta=.084, n.s.). The results partially support hypothesis 1.4. As for control variables, Company age, average salary level and HR-strategy fit appear to be positively related to productivity (Beta=.156, P < .05, Beta=.254, P < .05, and Beta=.137, P < .05 respectively). In addition, company age and average salary level show positive relationships with growth of sales (Beta=.100, P < .10 and Beta=.266, P < .01 respectively).

Table 4: HRM systems and financial firm performance

	Productivity		Growth of sales	
Control variables				
Industry	.045	.067	.048	.077
Company size	.053	.020	.093	.047
Company age ^a	.138*	.156*	.078	.100 ⁺
SOEs	-.035	-.033	-.029	-.025
CCOs	-.008	-.019	-.017	-.032
FOEs	.099 ⁺	.080	.019	-.007
Shanghai	-.021	-.028	.026	.017
Guangzhou	-.024	-.032	-.044	-.062
Shenzhen	.031	.031	.090	.086
Other city	-.054	-.052	.011	.011
Trade union	-.091	-.078	.073	.090
Average salary level	.283**	.254**	.305**	.266**
Strategy_fit	.220**	.137*	.089	-.018
HRM systems				
Motivation and Support		.191*		.217*
Skill and Development		.035		.084
R²	.220	.255	.167	.226
Adjusted R²	.187	.218	.133	.188
F	6.716**	7.018*	4.796**	5.991**

N=324

1. Standard coefficients (Beta) are shown instead of unstandardized coefficients (B).
2. ⁺p < .10, *p < .05, **p < .01
- a. Log of company age was taken

Discussion and conclusions

Based on a sample of 324 firms in China, this study set to explore the relationship between HRM and firm performance within Chinese context. Two HRM systems ('motivation and support' and 'skill and development') were proposed which were found to be positively and significantly associated with firm performance outcomes (*development of PSP, customer satisfaction, productivity and growth of sales*) thus generally support the hypotheses of the study (hypotheses 1.1 to 1.4). Compared to 'skill and development' HRM system, 'motivation and support' HRM system appeared to have much stronger relationships with firm performance outcomes which may be mainly due to the different degrees of use and the effectiveness of use of these two HRM systems. As for control variables, company age, size of the firm, average salary level and HR-strategy fit to some extent show significant relationships to firm performance indicators. Among these variables, average salary level appeared to be the strongest factor

that positively related to the four performance outcomes. It can be understood that, at present, salary is still a very essential factor that attracts and motivates Chinese employees to work to achieve desired performance outcomes.

In the current fierce business environment, in order to achieve or sustain competitive advantage, organizations have to focus on the *Development of PSP*. Both of ‘motivation and support’ and ‘skill and development’ HRM systems were found to be positively related to development of PSP. Based on Bailey’s (1993) argument, it is widely agreed that HRM practices can affect employees’ discretionary effort (*which helps contributing to firm performance*) through influencing employees’ skill, motivation and organizational structure. The two HRM systems met this requirement with providing HR practices that characterized with skill, development, motivation and support. In this study, ‘motivation and support’ HRM system show a slightly stronger relationship than ‘skill and development’ HRM system to development of PSP. The reason may be that, ‘skill and development’ HRM system just provides employees’ sound skill needed for the development of PSP. However, ‘motivation and support’ HRM system may generate employee’s discretionary effort to develop PSP which can be more significant.

‘Motivation and support’ HRM system was found to have a positive association with *customer satisfaction* while ‘skill and development’ HRM system did not show any significant relationship to customer satisfaction. There is not much surprise as ‘motivation and support’ HRM system combines HR practices of ‘team working, information sharing scheme, grievance and decision making’ gives employees a signal that their work are fully supported and valued by organization. Such derived attitudes therefore will lead employees to devote best service to their customers. Studies (e.g. Tornow and Wiley, 1991; Kuo, 2007) have already proved the existence of the close relationship between employees’ attitude and customer satisfaction. On the other hand, ‘skill and development’ HRM system that combines HR practices of ‘technical training, performance appraisal, job filling internally and employment before hiring’ does not pay much attention to employees’ attitude or cohesion. Instead, they place an emphasis on how to obtain high skilled workers and how to train them for qualifying for the challenge which is assumed to be less related to customer satisfaction especially within service industry (*65% of participating firms in this study are from service industry*).

‘Motivation and support’ HRM system appeared to have a positive association with *productivity* while ‘skill and development’ HRM system did not show any significant relationship with productivity. The underlying reason may be that ‘motivation and support’ HRM system that combines HR practices of

‘inter-departmental communication, team working, information sharing scheme’, which to a large extent helps facilitating cooperation and fastening job process among employees and between departments. In addition, ‘performance related pay and decentralized decision making’ motivate employees to work harder than ever. Therefore, it is not difficult to imagine such a HRM system is more likely to lead to increased productivity. However, on the other hand, ‘skill and development’ HRM system that combines HR practices of technical training, performance appraisal and employment test before hiring are less frequently adopted by Chinese firms especially Small-medium size firms (Zheng et al., 2006), therefore, they are assumed to be less competitive although they are needed. These findings actually are consistent with research that conducted by Huselid (1995) in USA although he did not indicate the reason.

‘Motivation and support’ HRM system shows positively related to *growth of sales* while ‘skill and development’ HRM system appeared insignificant. This result is consistent with previous research that carried out in China. For instance, with studying 485 manufacturing firms in Shanghai, Ng and Siu (2004) found that training and development and performance appraisal did not have a significant relationship with sales growth but management training (*non-technical training*) did. Zheng et al. (2006) investigated in 74 Chinese Small-medium size firms and found that ‘staff development’ factor (*contain performance appraisal and training and development*) was not found to have a significant effect on HRM outcomes (*e.g. staff competency and staff commitment*). The findings in China are different from studies in other developed and semi-developed countries (*or regions*) in which technical training and performance appraisal were found to have positive relationships with firm performance (See Bartel, 1994; Harel and Tzafrir, 1999; Chang and Chen, 2002). The evidence indicates that HR practices such as performance appraisal and technical training are less introduced or not effectively implemented in Chinese industries especially in small medium size enterprises (Goodwall and Warner, 1999; Zhu and Dowling, 2000; Zheng et al., 2006).

In conclusion, since the launch of the ‘open door’ policy in 1978, China has been undergoing profound changes in economic reforms. And its subsequent introduction of western HR practices by firms in China plays an increased important role on organizational effectiveness. The results of this study support the hypotheses that HRM systems have positive relationships with firm performance outcomes. Accordingly, in order to increase firm performance within the transition economy, the investments of progressive HR practices are strongly recommended. However, this study has no attempts to suggest purely imitating western HR practices. In order to allow HR practices to have greater impact on firm

performance, HR-strategy fit has to be taken into account. As the result of this study indicated, the fit between HR practices and overall firm strategy did have a positive relationship with firm performance.

In this study, ‘motivation and support’ HRM system that combines HR practices of *‘Inter-departmental communication, team-working, grievance, information sharing, decentralized decision making and performance related pay and non-technical training’* was found to have a stronger relationship to firm performance versus ‘skill and development’ HRM system which combines HR practices of *‘performance appraisal, job filling internally, technical training, and employment test before hiring’*. In other words, ‘motivation and support’ HRM system works more effectively than ‘skill and development’ HRM system on achieving better firm performance outcomes within Chinese context. As a result, firms in China should place greater emphasis on those HR practices of ‘motivation and support’ system.

However, it does not mean that, ‘skill and development’ HRM system are not important. The reasons the latter HRM system does not work effectively are due to some contingencies within the China’s transition economy. As revealed, just limited forms of performance evaluation have been applied to large firms (Zhu and Dowling, 2000) let alone SMEs. In addition, technical training is also less adopted in Chinese firms especially SMEs (Zheng et al., 2006) and even it is in use, the focus is somewhat distracted and thus less effective. Due to the constraints of time and money, the growing number of SMEs is unable to pay much attention to technical training and performance appraisal and related, other less money invested HR practices such as inter-departmental communication, team working, decentralized decision making can work a lot better. Since more than half percent of the participating firms in this study are recognized as SMEs (less than 500 employees) and which may be part of the reason why ‘skill and development’ HRM system showed less strong relationship than ‘motivation and support’ HRM system to firm performance. Nevertheless, in the future, more investment should be distributed to HR practices of ‘skill and development’ system by employers if there is a need to generate greater firm performance. A growing body of evidence for the important role of ‘skill and development’ HRM system has been proved in further economy-developmental contexts (see Bartel, 1994; Harel and Tzafrir, 1999; Chang and Chen, 2002).

Suggestions for future research

It is acknowledged that some limitations exist in this study. *First of all*, like many other scholars, cross sectional data is used in this study. A longitudinal study is suggested for measuring the effectiveness of HRM practices over time. *Secondly*, this study adopted one-way line of causation which is unsatisfactory (Edwards and Wright, 2001), it lacks of theory to explain how such HRM practices operate (Guest, 1997). The future research can include intermediate variables (i.e. HRM outcomes) which are assumed to explain the path of the relationship between HRM and firm performance. *Thirdly*, all data of this study derive from the same questionnaire (management level). Future research can collect data from employees' points of view concerning the use of HRM practices. Finally, single items were used to measure all the HR practices in this study and which may somewhat affect the reliability. Although this method was used by some scholars (i.e. Fey et al., 2000) and the reason why this study adopted this method has been explained earlier in this paper, nevertheless, multiple items can be tried in the future research to check the consistency.

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