

USE OF STRATEGIC HUMAN RESOURCES MANAGEMENT (SHRM) IN THAILAND'S HIGH-TECH FIRMS: ADOPTION AND FIRM NON-FINANCIAL OUTCOMES

Duangta Duangekanong

Assumption University, Thailand

ABSTRACT

Corresponding author:

Duangta Duangekanong
duangtadng@au.edu

Received: 11 September 2019

Revised: 22 July 2020

Accepted: 5 August 2020

Published: 25 January 2021

Citation:

Duangkanong, D. (2021). Use of strategic human resources management (SHRM) in Thailand's high-tech firms: adoption and firm non-financial outcomes. *Humanities, Arts and Social Sciences Studies* 21(1): 1-10.

High-technology firms are a growing segment of Thailand's economy, and are critical to the innovation economy, but show few signs of adopting strategic human resources management (SHRM) practices that could improve their competitiveness. This research investigated the use of SHRM in Thai high technology firms. It used a mixed methods approach to examine the effect of strategic HRM practices including recruitment and selection, training and development, performance appraisal, compensation systems, and flexible work practices on firm outcomes of product quality, corporate reputation and innovation. It was a quantitative-led approach, incorporating HR interviews and a survey. The quantitative findings were used to evaluate the hypotheses, while the quantitative findings were used to evaluate barriers to SHRM implementation in medium and small firms. Analysis of the quantitative survey of high-tech firms (n = 312) showed that SHRM practices had significant effects on product quality (except for flexible work), reputation (except for recruitment and hiring) and innovation (except for recruitment and hiring and training and development). The strongest effect was on company reputation. ANOVA showed that large and medium firms were significantly more likely to use SHRM than small firms. Qualitative interviews with small firms (n = 10) identified several barriers to SHRM implementation, including lack of time, cost, and expertise as well as preference for traditional hiring practices. The implication of this study is that SHRM does have a benefit to technology firms in Thailand, but that small firms may not be recognizing this benefit. The major policy implication is that the Thai government needs to address knowledge and resource barriers for SMEs in the high-tech industry to enable them to use SHRM effectively.

Keywords: Corporate reputation high-tech firms; innovation; product quality; strategic HRM

1. INTRODUCTION

Although global perspectives on Thai business often only address its traditional low-technology industries like agriculture and food production, in fact Thailand has a growing high-tech industrial sector. In 2015, the Thai government changed the Investment Promotion Act to incentivize foreign investment in Thailand's high-tech industries (Oxford Business Group, 2016). This change to the law encouraged foreign

investment in innovative industries. This supported the growth of a high-tech large firm sector, supplementing the existing small and medium industries.

Small domestic firms in Thailand, such as manufacturing firms, are also often highly innovative, even though they face significant challenges including lack of human resources and development capacity, labor shortages, and the cost of innovation (Charoenrat and Harvie, 2014). The high-technology sectors of Thailand are among its most important in terms of economic growth. A recent report from Deloitte (2019) noted that the key mobile services and mobile Internet marketing keeps growing, with an estimated 144% market penetration of mobile subscriptions by 2022. This rate of growth means that growth for consumer applications and services is also rising, but there is still much more room, with fixed-line broadband reaching only 24% by 2022 (Deloitte, 2019). Healthcare services are also growing at about 5.7% CAGR. Furthermore, although still relatively small, Thailand has growing markets in high-tech areas like cloud computing, big data analytics, and app development which will continue to drive the high-tech industries forward, taking the place of lagging industries like the automobile industry. Thus, supporting the high-tech industry of Thailand is critical for long-term economic growth.

One of the ways that firms can deliver on strategic objectives like product or service quality, innovation and corporate reputation is strategic human resource management (SHRM) (Bailey et al., 2018). SHRM is the organizational practice of using human resource (HR) activities including recruitment and selection, training and development, performance appraisal, compensation systems, and flexible work practices to achieve organizational strategic objectives by attracting, retaining, incentivizing and compensating high-value workers (Bailey et al., 2018). The goal of SHRM is to improve organizational performance by ensuring that the organization has the right people in place and preparing them to perform effectively. In high-technology clusters such as software and services, the use of SHRM is one of the tools that companies use to achieve and maintain competitive advantage (Arunprasad, 2017). For example, companies in Silicon Valley may use SHRM practices to achieve better flexibility and improvisational capability, thereby increasing their ability to identify and respond to strategic challenges (E Cunha et al., 2020). To date, however, there has been little investigation of the use of SHRM in Thai high-tech firms. This is complicated because many of the firms in the industry are small and medium-sized firms, which may have much less formalized HRM practices than large firms even when they do recognize the importance of HRM for talent management and competitive advantage (Krishnan and Scullion, 2017). This research aims to investigate this gap in the research, as it is not clear that Thai high-tech SMEs are either using or achieving the full benefit from SHRM practices.

The objective of this research is two-fold. First, the use of SHRM practices in Thai high-tech firms and subsequent impact on firm performance is investigated. Second, the barriers to implementation of SHRM in small firms are examined. This research focuses on non-financial outcomes only, because small and medium firms are not typically required to follow specific or standardized accounting practices in Thailand and do not release financial data. Thus, financial measures were unavailable.

2. LITERATURE REVIEW

This research investigates five SHRM practices, including: recruitment and selection; training and development; performance appraisal; compensation systems; and flexible work practices (Bailey et al., 2018). Recruitment and selection are the cluster of practices through which potential employees are identified, assessed and ultimately selected for positions within the organization (Taylor, 2017). Recruitment is used within SHRM to ensure that the organization has the talent to meet the current and future strategic demands. Approaches to recruitment can include formal and informal recruitment activities, and can be internal or outsourced to recruiters or headhunters depending on the organization's strategic needs. Training and development are the process used for organizational skill development and improvement of human capital, including both technical skills (for example, advanced programming skills) and so-called soft or people skills (such as management skills) (Bailey et al., 2018). Training and development is used to meet current and future skill needs within the organization's existing human resource pool, and to facilitate career path advancement. Performance appraisal is the organization's process of goal-setting, performance evaluation and appraisal, and reward (Bailey et al., 2018). The performance appraisal system is used strategically for several purposes, including: alignment of individual and team goals and objectives with organizational strategy; motivation and reward for employee performance; and long-term objectives such as selection of candidates for career path advancement. Compensation systems are the systems by which employees are rewarded for their work, including base pay, benefits, and incentive rewards such as bonuses (Bailey et al., 2018). Compensation systems are crucial for employee retention, as higher pay can reduce (though not eliminate) turnover.

Compensation packages are also a crucial part of effective recruitment (Taylor, 2017). Flexible work practices are one of the high-performance work practices (HPWS) which distinguishes SHRM from functional HRM (Bailey et al., 2018). Flexible working practices, including remote working, flexible hours, and flexible vacation time as well as other strategies, help the company recruit and retain employees who might otherwise not be attracted to the firm (Taylor, 2017). These SHRM practices have been routinely found to influence organizational outcomes. The general hypothesis of this research is that the strategic employment of these practices will influence the non-financial outcomes of the firm, including product quality, corporate reputation and innovation. Furthermore, it is believed that large firms will use these strategies more frequently than small and medium firms.

One study in a sample of multinational firms in Kenya tested all five factors against product quality, company image, and interpersonal relations (Dimba, 2010). The authors found that training and development and compensation systems had a particularly strong effect, although all five factors had some effect (Dimba, 2010). This demonstrated a general effect, but given the focus here on innovation the choice was made to investigate the effect of SHRM on innovation.

Product quality. A study in the Taiwanese steel industry also identified connections to firm performance (Lee et al., 2010). These authors studied practices including compensation and incentives, HR planning, performance appraisal, training and development, teamwork, and employment security. They found that HRM practices were closely related to product quality and other organizational outcomes (Lee et al., 2010). A study in Greece, which focused on European Quality Award winners and ISO 9001 certification holders, also showed that there was a strong relationship of SHRM practices and quality practices in the organization (Vouzas, 2009).

Corporate reputation. SHRM practices can have an effect on the firm's corporate reputation either positively or negatively. For example, hiring and training and development practices can be used to facilitate the ethical and sustainability goals of corporate social responsibility (Garavan and McGuire, 2011). SHRM practices can also support so-called employer branding, or the perception of the company as a place to work (Cascio and Graham, 2016). Employer branding is a particularly important dimension of corporate reputation now, as employees can easily share their impressions of the company via sites like Glassdoor. Thus, SHRM practices that give employees positive impressions of the workplace are essential to manage corporate reputation (Cascio and Graham, 2016).

Innovation. SHRM is one of a class of broad strategic activities that can contribute to innovation in the organization (Jackson et al., 2014). By hiring, appropriately compensating, training, and retaining high-value workers, SHRM can be particularly effective in the high-technology workplace by providing the organization with the knowledge required for effective innovation (Jackson et al., 2014; Marler and Fisher, 2013). A study in Indonesia showed that SHRM was especially important for retraining, attaining, and training and rewarding workers in the high-tech industry to facilitate innovation (Aryanto et al., 2015). These authors found that SHRM was critical to maintaining appropriate knowledge and skill levels in the company's base of resources, facilitating organizational performance.

Given this body of evidence, the first three hypotheses state:

Hypothesis 1: SHRM practices will have a positive effect on product quality.

Hypothesis 2: SHRM practices will have a positive effect on company reputation.

Hypothesis 3: SHRM practices will have a positive effect on innovation.

One of the most frequently identified factors in SHRM implementation is firm size. Large firms routinely use SHRM practices to achieve their strategic objectives, but smaller firms are much less likely to do so (Marler and Fisher, 2013). One reason for this gap in SHRM use is that it is resource-intensive, requiring more time and money than traditional or informal HRM practices (Greenidge et al., 2012). Thus, smaller firms are less able to implement SHRM than larger firms because they have fewer resources. Furthermore, smaller firms are more likely to use informal HR practices in general due to limited human resources (for example, lack of HR professionals) and beliefs and attitudes toward HR practice (Sheehan, 2014). Furthermore, small firms may find informal and cooperative practices more effective for firm performance (Verreynne et al., 2011). Thus, the final aspect of this study tests the following:

Hypothesis 4: Use of SHRM practices will be more common in larger firms.

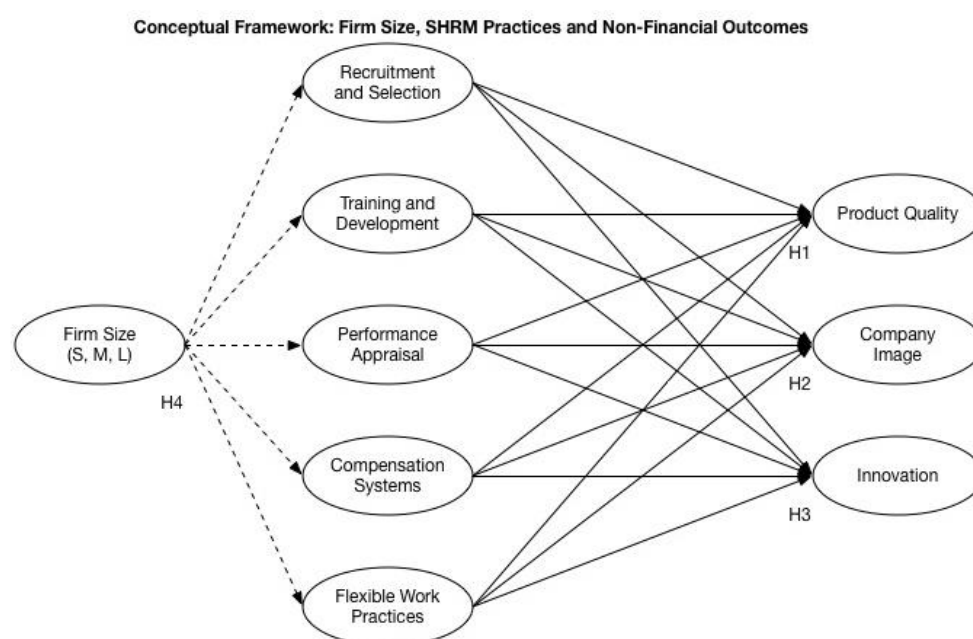


Figure 1: Conceptual Framework of the Study

3. RESEARCH METHODOLOGY

This research used a quantitative-led mixed methods approach, incorporating a firm survey and interviews with managers at small firms. The quantitative findings were used to evaluate the hypotheses, while the quantitative findings were used to evaluate barriers to SHRM implementation in SMEs.

3.1 Participants

The analysis was conducted at the firm level. Participants included HR staff at firms in Thailand. The quantitative sample included $n = 312$ HR staff members, consisting of 28 (9%) from large firms, 127 (40.7%) from medium firms, and 157 (50.3%) from small firms. (See Table 1 for more details)

The qualitative sample ($n = 10$) was recruited from quantitative participants, with a recruitment question included in each of the questionnaires distributed. The sample included five small firms and five medium firms, consisting of those in the computer software ($n = 6$), computer services ($n = 3$) and biotechnology ($n = 1$) sectors.

Table 1: Summary of Firm Characteristics (Qualitative Research)

	Count	Percentage
Firm Size		
Small (under 20 employees)	157	50.3%
Medium (20-99 employees)	127	40.7%
Large (100+ employees)	28	9%
Technology Sector		
Computer software	76	24.4%
Computer hardware	22	7.1%
Computer services/cloud	92	29.5%
Biotechnology and pharmaceuticals	28	9.0%
Electronics	30	9.6%
Engineering	57	18.3%

Table 1: Summary of Firm Characteristics (Qualitative Research) (continued)

	Count	Percentage
Main Customers		
Business-to-consumer	94	30.1%
Business-to-business	216	69.2%
Firm Revenues (p.a.)		
Up to 10 million baht	90	28.8%
10-100 million baht	191	61.2%
100 million-1 billion baht	28	9.0%
More than 1 billion baht	3	1.0%

3.2 Data collection

The quantitative data was collected from mailed questionnaires distributed to firms in Thailand. A total of 1000 questionnaires were distributed and 312 were returned, giving a return rate of 31.2%. Questionnaires collected firm data and data on attitudes toward the SHRM practices and firm outcomes. A summary of the questionnaire is provided in Table 2.

Qualitative data collection was collected using semi-structured interviews with firm representatives who had responded to the quantitative survey. Interviews were recorded and then transcribed for later analysis. A summary of the interview guide is provided in Table 3.

Table 2: Questionnaire Items for Quantitative Research

Scale	Item
Recruitment and Hiring	1. Our company uses recruitment and hiring to meet our strategic objectives.
Training and Development	2. Our company uses training and development to meet our strategic goals.
Performance Appraisal	3. Our company employs a performance appraisal strategy that is designed to meet specific strategic objectives.
Compensation Systems	4. Our compensation system is aligned to our strategic objectives.
Flexible Work Practices	5. We use flexible work practices to achieve organizational strategies.
Product Quality	6. We meet our product quality objectives.
Company Image	7. Our company image is where we want it to be.
Innovation	8. Our company is meeting its innovation goals.

Table 3: Interview Guide for Qualitative Research

What are the company's overall strategic goals for this period?
What are the company's specific goals for product quality? Company image? Innovation?
How is HR managed at the company? What kind of systems are in place?
Are HR practices like recruitment and hiring used to meet strategic objectives?
If so, how is it used?
What kind of barriers are found for the company in this area?
How effective is it overall?
What could make it more effective?
[Question set repeated for training and development, performance appraisal, compensation systems, and flexible work practices]
Overall, does HR contribute to achieving strategic goals at the company? Why (or why not?)

3.3 Data analysis

Quantitative data analysis was conducted using a combination of descriptive statistics and inferential statistics. Multiple regression was used to test hypotheses 1 through 3 (SHRM practices and their contribution to firm non-financial outcomes). The regression equation used for these tests followed the form:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Following this form, the regression tests were as follows:

$$Y_{\text{Product Quality}} = \beta_0 + \beta_1 X_{\text{Recruitment and Hiring}} + \beta_2 X_{\text{Training and Development}} + \beta_3 X_{\text{Performance Appraisal}} + \beta_4 X_{\text{Compensation Systems}} + \beta_5 X_{\text{Flexible Work}}$$

$$Y_{\text{Reputation}} = \beta_0 + \beta_1 X_{\text{Recruitment and Hiring}} + \beta_2 X_{\text{Training and Development}} + \beta_3 X_{\text{Performance Appraisal}} + \beta_4 X_{\text{Compensation Systems}} + \beta_5 X_{\text{Flexible Work}}$$

$$Y_{\text{Innovation}} = \beta_0 + \beta_1 X_{\text{Recruitment and Hiring}} + \beta_2 X_{\text{Training and Development}} + \beta_3 X_{\text{Performance Appraisal}} + \beta_4 X_{\text{Compensation Systems}} + \beta_5 X_{\text{Flexible Work}}$$

One-way ANOVA was used to test hypothesis 4 (differences in SHRM practice between firm sizes). Qualitative data analysis was conducted using thematic analysis. Thematic analysis was selected because it allows the researcher to draw conclusions about hidden constructs shared between multiple participants (Saldana, 2016). Thematic analysis was conducted using a paper-based approach, using a two-stage coding process followed by categorization.

4. RESULTS

4.1 Quantitative findings

Descriptive statistics were examined to identify general trends and quality issues in the data prior to regression (Tables 4). The skewness and kurtosis for all variables was within +/-2, indicating data was normally distributed. The correlations (Tables 5) showed that while there were relationships within the data, none was above the level where dependence might be questioned ($r < .5$ in all cases).

Table 4: Descriptive Statistics

	Mean	SD	Kurtosis	Skewness
Recruitment and Hiring	3.22	1.275	-0.885	-0.299
Training and Development	3.41	1.215	-0.54	-0.561
Performance Appraisal	3.38	1.263	-0.729	-0.485
Compensation Systems	3.34	1.273	-0.741	-0.483
Flexible Work Practices	3.29	1.224	-0.686	-0.428
Product Quality	3.28	1.195	-0.719	-0.307
Company Image	3.21	1.286	-0.909	-0.307
Innovation	3.18	1.276	-0.915	-0.281

Table 5: Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Recruitment and Hiring	1.000							
(2) Training and Development	0.365	1.000						
(3) Performance Appraisal	0.410	0.396	1.000					
(4) Compensation Systems	0.388	0.346	0.349	1.000				
(5) Flexible Work	0.396	0.284	0.288	0.441	1.000			
(6) Product Quality	0.409	0.376	0.443	0.402	0.326	1.000		
(7) Company Image	0.388	0.435	0.470	0.461	0.406	0.415	1.000	
(8) Innovation	0.341	0.317	0.387	0.417	0.355	0.342	0.423	1.000

Hypotheses 1 through 3 were tested using multiple linear regression (Table 6). All three relationships tested were significant and moderately predictive, with Reputation (adj. $R^2 = .379$) the most strongly predicted, followed by Product Quality (adj. $R^2 = .308$) and Innovation (adj. $R^2 = .265$).

Table 6: Regression

	Model 1: Product Quality Beta	Model 2: Reputation Beta	Model 3: Innovation Beta
Intercept	0.762**	0.179	0.682**
Recruitment and Hiring	0.153**	0.074	0.084
Training and Development	0.139**	0.206***	0.095
Performance Appraisal	0.225***	0.248***	0.201**
Compensation Systems	0.163**	0.212***	0.222***
Flexible Work	0.075	0.167**	0.147*
F	28.731***	38.894***	23.442***
R ²	0.319	0.389	0.277
Adj. R ²	0.308	0.379	0.265
S.E.	0.994	1.014	1.094

* $p < .05$, ** $p < .01$, *** $p < .001$

For Product Quality (Model 1), Performance Appraisal had the strongest effect, followed by Compensation Systems, Recruitment and Hiring, and Training and Development. Flexible Work Practices was not significant.

For Reputation (Model 2), the strongest effect was for Performance Appraisal, followed by Compensation Systems, Training and Development, and Flexible Work Practices. Recruitment and Hiring was not significant.

For Innovation (Model 3), the strongest effect was for Compensation Systems, followed by Performance Appraisal and Flexible Work Practices. Recruitment and Hiring and Training and Development were not significant.

Therefore, evidence meant that Hypotheses 1, 2, and 3 failed to be rejected.

Hypothesis 4 was tested using one-way ANOVA (Tables 7). The ANOVA tests showed significant mean differences in all five SHRM practices ($p(F) < .05$). Post-hoc analysis (Tables 8) using Tukey t-tests showed that Large and Medium firms both used SHRM practices more than Small firms. Large firms used Recruitment and Hiring, Training and Development, and Flexible Work Practices more often than medium firms, but not Performance Appraisal and Compensation Systems. This offered supporting evidence for Hypothesis 4.

Table 7: ANOVA

Practice	Cases	Sum of Squares	df	Mean Square	F
Recruitment and Hiring	Firm Size	221.386	2	110.693	120.287***
	Residual	284.354	309	0.92	
Training and Development	Firm Size	163.536	2	81.768	85.426***
	Residual	295.768	309	0.957	
Performance Appraisal	Firm Size	194.909	2	97.455	100.066***
	Residual	300.937	309	0.974	
Compensation Systems	Firm Size	208.819	2	104.41	109.422***
	Residual	294.844	309	0.954	
Flexible Work Practices	Firm Size	163.179	2	81.59	83.244***
	Residual	302.859	309	0.98	

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 8: Post-Hoc Tests

Practice			Mean Difference	p _{tukey}
Recruitment and Hiring	Large	Medium	0.496	0.035
		Small	2.069	< .001
	Medium	Small	1.574	< .001
Training and Development	Large	Medium	0.504	0.035
		Small	1.835	< .001
	Medium	Small	1.331	< .001
Performance Appraisal	Large	Medium	0.354	0.192
		Small	1.859	< .001
	Medium	Small	1.505	< .001
Compensation Systems	Large	Medium	0.334	0.223
		Small	1.9	< .001
	Medium	Small	1.566	< .001
Flexible Work Practices	Large	Medium	0.662	0.004
		Small	1.943	< .001
	Medium	Small	1.282	< .001

4.2 Qualitative findings

The qualitative interviews focused on small and medium firms to identify the barriers that these firms faced in implementing SHRM practices. Although organizations identified a range of barriers that affected their ability, there were three that stood out, with at least 8 of 10 interviewees addressing them. These included knowledge and human resource barriers, cost, and management support.

Knowledge and human resource barriers - Knowledge and human resource barriers were identified by nine interviewees as one of the reasons they did not implement SHRM. One of the common problems was that the firms did not have formally trained HR staff members, and instead most of the HR work was done either by business owners or by managers who had basic HR knowledge. As a result, there was a lack of knowledge in the organization that meant they could not design or implement SHRM strategies very well. Another problem that was expressed by some of the medium companies is that while they had HR people, they were overworked due to the relatively high ratio of employees. This meant they could not devote enough time or other resources to long-term SHRM.

Cost - Cost was another factor, identified by all ten participants. It was frequently expressed that high turnover and low financial resources for overheads meant that the firms were typically recruiting using the cheapest available strategies. Firms only used a high level of resources, for example highly competitive compensation practices, for higher level recruiting, and they noted that this was decidedly expensive. Although some firms like S4 noted that their compensation could improve in future, for example if the company is listed publicly and their stock options vested, none of this was guaranteed. As a result, small firms struggled to compete with larger firms to provide competitive recruitment packages. Overall, the impression was that the firms could not afford SHRM practices.

Management support - All ten interviewees identified management support as a critical barrier. In some cases, despite the high-tech industry, firms were managed as family firms and managers tended to resist hiring people they did not know. As a result, some managers felt that they did not need SHRM practices or other strategic practices. Another problem was that autocratic managerial styles meant that even where there were HRM professionals, they may be overridden by managers who expect the staff to do as they say rather than follow policies and procedures. Overall, it appeared that many small firms had little support for formal SHRM practice.

5. DISCUSSION

These findings were generally consistent with the expected findings as based on previous studies, which have found connections between SHRM and non-financial outcomes such as product quality and quality procedures (Dimba, 2010; Lee et al., 2010; Vouzas, 2009); corporate reputation and company image (Cascio and Graham, 2016; Dimba, 2010; Garavan and McGuire, 2011); and innovation (Aryanto et al., 2015; Dimba, 2010; Jackson et al., 2014; Marler and Fisher, 2013). Thus, while each individual dimension of SHRM was not significant in all cases, it can be stated that there was a significant, though moderate, influence on all three of these outcomes identified by the literature. This finding demonstrates that conditions in Thailand's high-tech industries are consistent with the conditions that have been observed elsewhere. It also demonstrates that SHRM does contribute to the firm's non-financial performance dimensions. The strongest effect was for reputation, which is interesting. This may be because the scale was weighted toward employer reputation, which is one of the crucial areas where hiring and employment practices can make a big difference (Cascio and Graham, 2016). Thus, firms considering SHRM practices should consider what effect this will have on their reputation as an employer.

Also as expected, there were significant differences in SHRM by firm size, with large firms using SHRM more frequently than small firms and to an extent more than medium firms as predicted in the literature (Greenidge et al., 2012; Marler and Fisher, 2013; Sheehan, 2014; Verreyne et al., 2011). The interviews identified three key reasons why small and medium firms do not use SHRM practices, including lack of knowledge and HR resources, the cost of implementation, and managerial support (or more precisely lack of managerial support). These findings add depth to the literature by explaining why small firms may not choose to implement SHRM even if it is known to be useful.

6. CONCLUSION

This research showed that high-tech firms in Thailand can positively affect their non-financial performance in areas like product quality ratings, corporate reputation, and internal innovation practices by implementing SHRM practices in recruitment and hiring, training and development, performance appraisal, compensation systems and flexible work practices. Unfortunately, the study also showed that some firms - especially small firms - have significant barriers to implementation of these SHRM practices. As the interviews showed, small firms may not have the required organizational resources like HR knowledge, managerial support, or financial resources that a SHRM approach as routinely used by larger firms calls for. This could leave small firms at a significant disadvantage in high-tech industries, especially since these industries rely on human resources and worker skills to compete. Thus, this study implies that small firms in Thailand's high-tech industries may need additional support to implement SHRM practices that could help them attract and retain key workers.

There are some policy implications that need to be considered here. Right now, Thailand's government bodies do not seem to have addressed the need for SHRM policies (or even widespread application of HRM policies) in SMEs. That means that SMEs in Thailand's high-tech sector are at a severe disadvantage compared to their larger and international competitor firms, who may have effective SHRM policies in place. This gap means that Thailand's high-tech SMEs may not be achieving the competitive benefits that SHRM could bring, due to lack of organizational resources (including HRM personnel, given the size of the firm) and resources to compete with larger firms. Thus, the Thai government and agencies that deal with SMEs in the high-tech sector, such as OSMEP, should consider implementing policies on SHRM education to improve uptake and effectiveness in high-tech SMEs.

The research does have some significant limitations. The research did not investigate differences in high-tech industries (e.g. differences between computer software, hardware, or services providers), which could be important since these industries may have different employment condition. Another factor that could influence the organizational outcomes, but which was not investigated, is the transfer of organizational knowledge and practices regarding SHRM from larger organizational partners. The lack of management support is another area that is interesting for future research. These areas of research could yield more information about the value of SHRM in high-technology industries, especially in developing countries. Another area of potentially useful research is investigating how SHRM practices could be adapted to fit into the resource availability of small firms, for example using a case study. This type of action research could help organizations overcome resource barriers and implement similar strategic processes to improve their organizational performance.

REFERENCES

- Arunprasad, P. (2017). Inevitable knowledge strategy: A paradigm shift in strategic HRM practices to augment firm's performance. *Employee Relations* 39(5): 753-774.
- Aryanto, R., Fontana, A. and Afiff, Z. (2015). Strategic human resource management, innovation capability and performance: An empirical study in Indonesia software industry. *Procedia - Social and Behavioral Sciences* 211: 874-879.
- Bailey, C., Mankin, D., Kelliher, C. and Garavan, T. (2018). *Strategic Human Resource Management*. 2nd ed. New York: Oxford University Press.
- Cascio, W. F. and Graham, B. Z. (2016). New strategic role for HR: leading the employer-branding process. *Organization Management Journal* 13(4): 182-192.
- Charoenrat, T. and Harvie, C. (2014). The contribution of entrepreneurship and innovation to Thai SME manufacturing performance. Paper presented at the 2nd International Conference on Innovation and Entrepreneurship (United Kingdom), Reading (pp.343-345). Academic Conferences and Publishing International Ltd.
- Deloitte. (2019). *Economic Outlook Report 2019*. [Online URL: <https://www2.deloitte.com/content/dam/Deloitte/th/Documents/about-deloitte/th-about-economic-outlook-1h-2019.pdf>] accessed on September 25, 2019.
- Dimba, B. A. (2010). Strategic human resource management practices: effect on performance. *African Journal of Economic and Management Studies* 1(2): 128-137.
- E Cunha, M. P., Gomes, E., Mellahi, K., Miner, A. S. and Rego, A. (2020). Strategic agility through improvisational capabilities: implications for a paradox-sensitive HRM. *Human Resource Management Review* 30(1): 100695.
- Garavan, T. N. and McGuire, D. (2011). Human resource development and society: human resource development's role in embedding corporate social responsibility, sustainability, and ethics in organizations. *Advances in Developing Human Resources* 12(5): 487-507.
- Greenidge, D., Alleyne, P., Parris, B. and Grant, S. (2012). A comparative study of recruitment and training practices between small and large businesses in an emerging market economy: The case of Barbados. *Journal of Small Business and Enterprise Development* 19(1): 164-182.
- Jackson, S. E., Schuler, R. S. and Jiang, K. (2014). An aspirational framework for strategic human resource management. *The Academy of Management Annals* 8(1): 1-56.
- Krishnan, T. N. and Scullion, H. (2017). Talent management and dynamic view of talent in small and medium enterprises. *Human Resource Management Review* 27(3): 431-441.
- Lee, F., Lee, T. and Wu, W. (2010). The relationship between human resource management practices, business strategy and firm performance: evidence from steel industry in Taiwan. *The International Journal of Human Resource Management* 21(9): 1351-1372.
- Marler, J. H. and Fisher, S. L. (2013). An evidence-based review of e-HRM and strategic human resource management. *Human Resource Management Review* 23(1): 18-36.
- Oxford Business Group. (2016). Thailand's government incentivises investment in high-tech industries. [Online URL: <https://oxfordbusinessgroup.com/analysis/moving-forward-government-reforms-incentivise-high-tech-industry-investment>] accessed on June 15, 2018.
- Saldana, J. (2016). *The Coding Manual for Qualitative Researchers*. 3rd ed. London: Sage.
- Sheehan, M. (2014). Human resource management and performance: Evidence from small and medium-sized firms. *International Small Business Journal* 32(5): 545-570.
- Taylor, S. (2017). Recruitment and selection. In *Strategic Human Resource Management: An International Perspectives*, edited by Rees, G. and Smith, P. E., pp. 147-192. Thousand Oaks, London: Sage.
- Verreynne, M., Parker, P. and Wilson, M. (2011). Employment systems in small firms: A multilevel analysis. *International Small Business Journal: Researching Entrepreneurship* 31(4): 403-431.
- Vouzas, F. K. (2009). Business excellence and human resources: investigating best practices in European Quality Awarded Hellenic organisations. *International Journal of Business Innovation and Research* 3(3): 281-297.