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# HIGH PERFORMANCE WORK PRACTICES AND HUMAN RESOURCE MANAGEMENT EFFECTIVENESS: SUBSTITUTES OR COMPLEMENTS?

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## Abstract

*The human resource management literature has implicitly treated high performance work practices (HPWPs) and human resources management (HRM) effectiveness as substitutes for one another with respect to their relationship with firm performance. We contend that HPWPs and HRM effectiveness act both as substitutes and as complements. Main effects reveal that only human resource management effectiveness affects market performance and that HPWPs affect innovation. However, interacting HPWPs with HRM effectiveness positively relates to both market performance and innovation in support of our hypothesis. The results suggest that effective HRM can offset HPWP's expense and that HPWPs can enhance the flexibility of effective HRM systems.*

High performance work practices (HPWPs), through significant investment in employees, have been touted as a way to make organizations more flexible and effective. Often HPWPs are viewed as an alternative to traditional production systems that are firmly rooted in Fredrick Taylor's scientific management and subsequent Fordist principles. However, we contend that having effective human resource structures (HRM effectiveness) can enhance the return on HPWPs because HPWPs require a heavy investment in human capital, that is lost if the firm cannot attract and retain quality employees. Conversely, effective HRM systems can benefit from the innovative capabilities of HPWP that enhance the organization's ability to adapt and change. Hence, we address the question, "Are HPWPs and effective HRM systems complements or substitutes?" We empirically test this question using data from the banking industry. First, we review the literature that supports these predictions.

## Literature Review and Hypotheses

### High Performance Work Practices

No one has consistently defined, or even uniformly named HPWPs (Baker, 1999; Becker & Gerhart, 1996; Delaney & Goddard, 1997; Wood, 1999). They have been called “high performance work systems,” “alternate work practices,” and “flexible work practices” (Delaney & Goddard, 2001). Despite the name variances, many of these programs share common elements including rigorous recruitment and selection procedures, incentives based upon performance, and extensive training programs focused on the needs of the business (Becker, Huselid, Pickhus, & Spratt, 1997). Essentially HPWPs require heavy investment in human capital that is intended to enhance employee skills, knowledge, motivation, and flexibility with the expectation that the employer is providing employees the ability and the opportunity to provide input into workplace decisions (Van Buren, & Werner, 1996). Companies expect this empowerment to enable employees to adapt quickly and readily to rapidly changing product and labor market conditions, and to improve operational efficiency and firm performance (Becker & Huselid, 1998; Cappelli & Neumark, 1999).

Although high performance work practices (HPWPs) have often been touted as being good for both employers and employees, these practices require significant investments in human capital via training, coordination of initiatives, and time for managerial and employee input. Because of the large investment in human capital, the value of these practices may be lost if the investment is not offset by increased efficiency and effectiveness. Among others, Cappelli and Neumark’s (1999) review of the literature (Delaney & Goddard, 2001; Kling, 1995; U.S. Department of Labor, 1993) suggests, on average, that HPWPs are associated with increased productivity. However, Cappelli and Neumark (1999) caution that by examining only productivity effects, researchers ignore the cost side of the equation. Despite this caution, numerous other studies also find a strong relationship between HPWPs and firm performance - studies that do consider both the costs and the benefits of HPWPs (Huselid, 1995; MacDuffie (1995). Baker (1999: 28) concludes after extensively reviewing the literature, “The association of various practices with strong financial performance has been firmly established by a stream of relatively solid research.” Delaney and Goddard’s (2001) review also ascertained that most research, with two exceptions, also finds an association between HPWPs and firm performance. Interestingly, the Cappelli and Neumark’s (1999) study was one of two that found the costs did not offset the benefits but they concluded that the effects were neutral (neither positive nor negative for the employer). For our purposes, we use a perceptual measure of performance on four dimensions: marketing, sales growth, profitability, and market share. In sum, the bulk of the evidence is that HPWPs are associated with increased firm performance. Thus, we hypothesize:

*Hypothesis 1: More extensive use of High Performance Work Practices will be positively associated with market performance.*

Nicholson, Rees, and Brooks-Rooney (1990) argue that human resources have an important role to play in facilitating innovation. HPWPs are focused upon such objectives as enabling people to think for themselves and to manage their own work (Lawler, 1986; Pfeffer, 1994). High performance work practices can increase innovation by: decentralizing management in order to allow employees to discover and use knowledge; encouraging team practices that allow learning to grow through increased multi-disciplinary knowledge; and putting that knowledge to good use (Laursen, 2002). That thinking is consistent with the seminal work of Burns and Stalker (1961) who argued that the more organic the organizational form the more it stimulates organizational innovation. HPWPs systematically try to create organic organizations by moving decision-making downward. Laursen (2002) presents evidence that supports this contention. If the organizational objective is efficiency, more effective HRM systems are likely to increase firm performance, because HRM effectiveness focuses on building better production or service-delivery systems. In contrast, when a firm pursues innovative activities they are more likely to benefit from HPWPs since they move the level of decision making downward, making the organization better able to respond to environmental changes. Recent banking innovations have been associated with the ability to collect fees, and so we operationally define innovation as the proportion of non-interest income to total income.

*Hypothesis 2: More extensive use of High Performance Work Practices will be positively associated with increased organizational innovation.*

### **Human Resource Management Effectiveness**

Pfeffer (1994) argues that sustained competitive advantage emerges from effective human resource management. Huselid, Jackson, and Schuler (1997) define HRM effectiveness as "the delivery of high-quality technical and strategic HRM activities." Operationally, we define HRM effectiveness as human resource management satisfaction with various human resource activities. These notions of effectiveness are premised on the fact that it is difficult to implement HRM policies and practices successfully. The general assumption of the HPWPs literature is that firms implement these practices in a holistic, meaningful, and effective manner. However, as noted by Kling (1995) many firms implement these practices in a piecemeal fashion, which means that their efficacy is eroded by inconsistency and a lack of supporting HRM systems. Further, firms may adopt HRM practices for institutional reasons in contrast to adopting and implementing practices to provide a potent organizational force (Huselid, *et al.*, 1997). Russo and Fouts (1997) note, for example, that what matters is how a firm employs its organizational capabilities and its ability to manage human resources because

resources or practices do not produce on their own. Further eroding firm effectiveness is an organizational environment confronting typical problems of turnover, absenteeism, and other workplace dysfunctions -particularly given the high level of investment in human capital that is required. Thus, HPWPs are by no means synonymous with effective HRM systems.

Traditional HRM systems, predicated on an efficiency objective, offer stable procedures and protocols with set processes for dealing with routine employment problems such as absenteeism, discipline, and discharge. As noted by Perrow (1986, p. 4), "Bureaucracies are set up to deal with stable routine tasks; that is the basis of organization efficiency." Traditional HRM systems establish rules and procedures that promote consistency and fairness throughout the organization. Thus, an effective HRM system should enhance the firm's ability to attract and retain qualified employees and promote efficiency.

However, effective HRM practices most likely lack the flexibility of HPWPs. If the firm is pursuing an innovation objective, then effective HRM practices may interfere with this goal by focusing on routines and rules that do not provide an environment conducive for stimulating innovation. Further, organizations that are structured to deal with stable routine tasks are less able to adapt to uncertain, dynamic environments. Consequently, we expect that:

*Hypothesis 3: Perceived human resource effectiveness will be positively associated with market performance.*

*Hypothesis 4: Perceived human resource effectiveness will be negatively associated with innovation.*

### **The Interaction of HPWPs and HRM Effectiveness**

Many organizations today face complex environments. Lawler (1986) notes that firms' management strategies must adjust and conform to the existing business environment. The present business environment demands that firms respond to change and, at the same time, promote efficiency. Thus, firms that can combine effectiveness and flexibility objectives may be in the optimal strategic position whether they are pursuing objectives of innovation or market performance.

Contingency theories posit that the relationship between the relevant independent and the dependent variables vary by different levels of a critical contingency variable. The organization's strategy remains the primary contingency factor in the human resource management literature (Delery & Doty, 1996). Numerous studies support the contingency perspective, which remains a viable approach to human resource management (Arthur, 1994; Ichnowski, Shaw, & Prensushi 1997; Kochan & Osterman, 1994; Youndt, Snell, Dean, Jr., & Lepak, 1996). For example, Youndt, et al.'s (1996) results reveal that manufacturing strategy moderates the HRM practice-performance relationship, and thus, supports the contingency approach. While noteworthy, none of the previous studies have focused on the use of internal contingencies in looking at HPWPs and their fit with

external contingencies such as business strategy. Internal contingencies include those factors encompassed by the HRM system such as types of human capital, HRM processes, HRM practices, technical HRM effectiveness, and strategic HRM effectiveness (Ferris, Arthur, Berkson, Kaplan, Harrel-Cook, & Frink, 1998; Ferris, Hochwarter, Buckley, Harrel-Cook, & Frink, 1999). We posit that the alignment of internal factors, in our case HPWPs and HRM effectiveness, relates to additional performance gains above and beyond main effects. Thus,

*Hypothesis 5: More extensive use of High Performance Work Practices with HRM effectiveness will be positively associated with market performance.*

*Hypothesis 6: More extensive use of High Performance Work Practices with HRM effectiveness will be positively associated with organizational innovation.*

## Methodology

### Data

To examine within-industry differences, we studied a single industry, banking. The banking industry has become a highly competitive environment because of banking industry deregulation. The regulatory changes coincided with such technological advances as ATMs, telephone banking, pc-based banking, and information system advances. The industry responded to the changes by a significant wave of consolidation that reduced the industry from 12,000 to 8,000 banks between the years 1987 to 1995 (Berger, Kashyap, and Scalise, 1995). Regulation essentially prevented firms from implementing the full range of strategic choices (Johnson, Sambharya, & Bobko, 1989). Deregulation freed financial institutions to exercise strategic choice.

The firm was the unit of analysis for this study. We employed both secondary data sources and a questionnaire. The questionnaire provided information on HPWPs, HRM effectiveness, and market performance. We drew objective measures of organizational innovation and the four control variables from the Sheshunoff Bank Search database. The Sheshunoff database contains data from financial reports that the government is mandated to gather.

Banks in California, Kentucky, and North Carolina were surveyed to gain greater variation across dependent measures (e.g., market performance). After we pre-tested and modified the questionnaire, we contacted each bank to obtain the name of the human resource director. When possible, we contacted those directors directly and asked them to participate. In week one, we telephoned 576 banks, but 100 contacts initially refused to participate, so we mailed 476 surveys. In week two, we sent a reminder card. In week three we sent another survey. In week four we repeated the process with the same set of firms that we used in round 1, starting with a telephone call to ask for their participation again.

An additional 83 HRM executives declined to participate in the second round mainly due to (1) time constraints posed by the volatile nature of the banking industry (mergers, acquisitions) and (2) unwillingness to provide organizational demography (race and gender composition) data that was a separate component of the survey. Eighty surveys were returned, presenting a 20 percent overall response rate from those agreeing to be surveyed and 13.8 percent response rate for the entire sample.

We sought to assess whether characteristics of individual banks made their HRM managers less likely to complete and return the survey. Following the work of Osterman (1994) as well as Delery and Doty's (1996) banking study, we used a logistic regression, with the dependent variable defined as a dummy variable - coded 1 if the HRM director responded and 0 if the director did not. Following Delery and Doty (1996) we used holding company affiliation and total assets. Organizational innovation was included as one of our independent variables because that is one of the key variables of interest in this study and we did not want our sample limited to the most innovative banks. None of the variables were significant and that indicates a lack of support for a response bias.

### **Dependent Measures**

Table 1 lists the variables with their individual items where appropriate, their data source, and their coding. Lumpkin and Dess (1996) note that research testing hypotheses should include multiple performance measures to avoid misleading descriptive and normative theory building. Such measures should include intermediate and bottom-line measures of firm effectiveness. We collected perceived market performance assessment measures directly from the HRM executives. Following Delaney and Huselid (1996), we asked the respondents the following: "Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last three years (i.e., 1994, 1995, 1996) in terms of: 1) marketing, 2) growth in sales, 3) profitability, and 4) market share. Each item was measured on a four-point Likert-type scale ranging from 1 = worst to 4 = much better and averaged to form the composite measure of acceptable reliability ( $\alpha = .81$ ). Marketing refers to the success in targeting and reaching a larger customer base. Although related, this process is distinct from actual market share or growth in sales. From a measurement standpoint, a company can tell by an increase in customer interest in products (i.e., service inquiries). Again, this does not refer to the increase in customers which would be market share. This perceptual bottom-line measure was associated with an objective measure, return-on-equity ( $r = .40, p < .01$ ).

Organizational innovation is our other dependent measure. Since deregulation, many banks have introduced new products and services that do not fit the traditional margin-maximizing schema where margin is the difference between the loan rate and the deposit rate. Instead, fee income such as origination fees from corporate cash management accounts, letters of credit, and home mortgages have become an increasing important source of bank revenues. Hence, the proportion of total

**Table 1**  
**Variables, Data Sources, and Measures**

Variable Name	Variable Source	Coding
Size	Sheshunoff database	Total assets
Holding company affiliated	Sheshunoff database	Dummy code where 1 = holding and 0 = other
California dummy control	Sample selection	California = 1 and other states = 0
Kentucky dummy control	Sample selection	Kentucky = 1 and other states = 0
High Performance Work Practices ( $\alpha = .90$ )	Survey	Sum of the ten items percentages.
What percentage of the workforce ... <ul style="list-style-type: none"> <li>• is included in a formal information-sharing program (e.g., newsletter)?</li> <li>• hold jobs that have been included in a formal job analysis?</li> <li>• is regularly administered attitude surveys?</li> <li>• participate in Quality of Life (QWL), Quality Circles (QC), and/or labor management participation programs?</li> <li>• is eligible for company incentive plans, profit-sharing plans, and/or gainsharing plans?</li> <li>• received training by an experienced employee (i.e., someone employed more than one year)?</li> <li>• has access to a formal grievance procedure and/or complaint resolution system?</li> <li>• has their merit increase or other incentive pay determined by a performance appraisal?</li> <li>• receives formal performance appraisals?</li> <li>• are promoted based primarily on merit (as opposed to seniority)?</li> </ul>		
Human Resource Management Effectiveness ( $\alpha = .89$ )	Survey	Each item was on a five point Likert scale ranging from 1 = highly satisfied to 5 = very dissatisfied, reversed coded, and summed.
Satisfaction with the results being achieved with their employee participation and empowerment		
Teamwork		
Workforce planning-flexibility and deployment		
Advanced issue identification-strategic studies		
Management and executive development		
Succession and development planning		
Workforce productivity and quality of output		
Employee and manager communications		
Market Performance ( $\alpha = .81$ )	Survey	Average of the four performance items on a four point Likert scale ranging from 1 = worst to 4 = much better.
Compared to other organizations that do the same kind of work, how would you compare your organization's performance over the last 3 years in terms of Marketing, Growth in Sales, Profitability, and Market Share		
Innovation	Sheshunoff database	Ratio of net-interest income to total income.

income generated by these alternative fee-based products and services represents an important measure of banking innovation. This measure was obtained from the Sheshunoff bank database by calculating the ratio of non-interest income/total income consistent with Richard and Johnson (1999).

### **Independent Variables**

We used a ten-item scale validated and deemed reliable by Huselid (1995) to capture High Performance Work Practices. By using an existing scale, we avoid the criticism that comes from employing a new and inconsistent set of HPWPs that do not allow comparison to previous research (Becker & Gerhart, 1996). We asked the respondents to indicate what percent of time they devote to ten HPWPs. These percentages were then summed to comprise the HPWP measure. We also found the scale to have internal reliability ( $\alpha = .90$ ).

Human resource management effectiveness was measured from a scale derived by Huselid, *et al.* (1997). The operational definition includes activities that align the human capital pool with long-term business needs. The human resource managers were asked to use a five-point scale to report their satisfaction with the results being achieved with employee participation and empowerment, teamwork, workforce planning-flexibility and deployment, advanced issue identification-strategic studies, management and executive development, succession and development planning (managers), workforce productivity and quality of output, and employee and manager communications. The items were measured on a Likert-type scale ranging from (1) highly satisfied to (5) very dissatisfied and were reversed coded to ease interpretation. The sum of all eight items measured effectiveness. There was acceptable internal reliability ( $\alpha = .89$ ).

### **Controls**

Several control variables were used. We operationalized firm size by using the total dollar value of assets obtained from Sheshunoff. Previous research has shown a relationship between size and profitability in the banking industry (Delery & Doty, 1996; Ramaswamy, 1997). Sheshunoff also provided the data used to construct an indicator variable that was included to measure whether the bank is part of a holding company (= 1 if holding company; = 0 other). Two dummy variables controlled for state differences (California = 1; other = 0; and Kentucky = 1; 0 = other - leaving North Carolina as the omitted state).

### **Analysis**

Hierarchical regression analysis was employed to test the hypotheses. In the first step, the control variables were entered. The second step, HRM effectiveness and HPWPs were added to test Hypotheses 1 through 4, which examined whether HPWPs and HRM effectiveness related significantly to the dependent measures after accounting for the controls. Step 3 tested the interaction effects proposed in the fifth and sixth hypotheses.



## Results

### Correlations

Table 2 provides descriptive statistical information (e.g., means, standard deviations, and correlations) for all measures.

Table 3 shows the results of our hierarchical regression for market performance and organization innovation.

Hypothesis 1 states that there will be a positive relationship between HPWPs and market performance. In the second step of the outcome regression, with total assets, holding company ownership, and state controlled, HPWPs were not significantly related to market performance ( $\beta = .08$ ,  $p = .25$ ). Thus, no support was found for this hypothesis. The second hypothesis posits a positive relationship between HPWPs and innovation. In Step 2 of the regression, after entering the control variables, HPWPs were significantly and positively related to organization innovation ( $\beta = .22$ ,  $p = .03$ ), lending support for this hypothesis.

The third hypothesis predicted that HRM effectiveness would positively relate to market performance and, after entering the control variables, this hypothesis was supported ( $\beta = .24$ ,  $p = .03$ ). Hypothesis 4 predicted that HRM effectiveness would relate negatively to innovation. In the second step of the organization innovation regression, the coefficient was only marginally significant but in the predicted negative direction. Thus, this hypothesis received minimal support ( $\beta = -.19$ ,  $p = .07$ ).

Hypotheses 5 and 6 state that HPWPs and HRM effectiveness will influence market performance and organizational innovation through a positive interaction effect. In the third step, the interaction effect significantly resulted in a change in  $R^2$  increase for both market performance ( $\beta = .35$ ,  $p = .017$ ) and organization innovation ( $\beta = .33$ ,  $p = .019$ ). The results suggest that internal alignment between HPWPs and HRM effectiveness increase both market performance and organization innovation, supporting the last two hypotheses. In sum, we received support for the second, third, fifth and six hypotheses. The fourth hypothesis received marginal support.

### Discussion

Many have viewed HPWPs as a substitute for traditional HRM, believing that firms must choose either to implement HPWPs or to approach HRM in the textbook manner consistent with traditional bureaucratic organizations. This view, consistent with the strategic approach, suggests that firms must match their human resource management practices with their business strategy to achieve superior results. Based upon this reasoning, we hypothesized and found support for the argument that HPWPs are associated with increased innovation, HRM effectiveness is associated with increased performance, and together both HPWPs and HRM effectiveness is associated with both goals. However, we took strategic theory further to argue that although HPWPs and HRM effectiveness are typically viewed as substitutes, they may complement each other. Thus, HPWPs

**Table 2**  
**Correlations**

Variable	Mean	Standard Deviation	1	2	3	4	5	6	7	8
1. Size	11.72	1.41	1.00							
2. Holding	.48	.50	.34**	1.00						
3. California	.66	.48	-.01	-.22**	1.00					
4. Kentucky	.18	.38	-.05	.36**	-.64**	1.00				
5. HPWPs	508	158	.30**	.26*	-.01	.05	1.00			
6. HRM Effectness	28	5	.19	.08	.28*	-.19	-.02	1.00		
7. Market Performance	3	.65	.15	.14	-.24*	.19	.09	.26*	1.00	
8. Organizational Innovation	.43	.40	-.05	-.06	.13**	-.02	.22	-.21	-.18	1.00

\*  $p < .05$ ; \*\*  $p < .01$  (two-tailed tests)  $n=74$

**Table 3**  
**Simultaneous Hierarchical Regression Results for Dependent Outcomes**

Variable	Market Performance		Innovation	
	R <sup>2</sup> Change	β	R <sup>2</sup> Change	β
<b>Step 1: Controls</b>	.08		.04	
Size		.11		.11
Holding		.04		-.01
California		-.19		.23†
Kentucky		.05		.12
<b>Step 2: Main Effects</b>	.06†		.07*	
HPWPs		.08		.22*
HRM Effectiveness		.24*		-.19†
<b>Step 3: Interaction</b>	.06*		.05*	
HPWPs X HRM Effectiveness		.35*		.33*
N		78		78
R <sup>2</sup>	.20		.16	
Adjusted R <sup>2</sup>	.11		.07	
Equation F-Value	2.27*		1.84†	

Standardized betas reported

†  $p < .10$

\*  $p < .05$

\*\*  $p < .01$ ; one-tailed tests.

apparently yield more benefits in an environment where HRM is managed well, and HR management is enhanced because HPWPs lend flexibility. Our results are consistent with this view.

HRM researchers have suggested that HPWPs universally benefit all employers (Pfeffer, 1994; Huselid, 1995). The contingency theorists contend that strategic fit is crucial for superior performance so that firms must match their HRM practices with their business strategies. They argue that high investments in training and employees will pay off in terms of employee commitment and work effort. However, because HPWPs do not come cheaply, firms either need to offset these expenses with productivity increases or operate in an innovative environment that can absorb these costs (Cappelli & Neumark, 1999). Thus, HPWPs are less compatible with firms pursuing efficiency objectives and more compatible with firms whose success is more dependent on innovation as opposed to efficiency. A major benefit of HPWPs is to move the level of decision making downward to reduce the need for formal supervision so that employees are to think for themselves. These objectives may be of great importance for employers seeking to

innovate or provide a responsive service, but may be problematic for employers pursuing efficiency objectives. Notably, employers who have highly developed hierarchical and formal structures that follow an evolved model of scientific management may not benefit from HPWPs. These employers have designed formal rules and procedures specifically to *avoid* employees thinking for themselves. Thus, we argued that employers with innovation objectives would benefit more from HPWPs than would employers seeking a market efficiency objective. On the other hand, employers who are seeking market efficiencies would directly benefit more if HRM were implemented effectively.

Our results support these suppositions. Market performance correlated with HRM effectiveness but there was no evidence of HPWPs having direct effects on market performance. This is consistent with the general research trend that finds either positive or neutral effects of these work practices on performance (for example, Cappelli & Neumark, 1999). Thus, this suggests that performance objectives are best met through effective management and that HPWPs alone are not the panacea to performance concerns. On the other hand, HPWPs correlated strongly with innovation objectives suggesting that they are much more consistent with generating ideas rather than efficiencies. Weak evidence hinted that innovation may be stymied by HRM effectiveness, after controlling for HPWPs, suggesting that effectiveness alone may be too rigid to enhance innovation. Interestingly, we also found significant moderating effects suggesting that well designed and integrated HRM systems with HPWPs may enhance both performance and innovation objectives.

Thus, these results modify the strategic human resource management notion of fit — the idea that firms must match their HRM objectives with the firm's business strategy. Our results send a powerful message to firms: if you can do only one thing well (e.g., HRM effectiveness) then pursue an HRM system that fits with the firm's strategic objective (e.g., performance). Thus, fit is important if your capabilities are not well developed. However, if you can effectively use human capital *and* implement HPWPs, then do both.

Porter (1980) deemed that some organizations are “stuck-in-the middle” — they lack a clearly defined strategic position, take a defensive position, react to the environment, and drift along without specific goals and objectives. At best they muddle along; at worst they fail. He argued that these groups, trying to be all things to all people, are instead nothing to everyone. Although those arguments are compelling, our results suggest that having a combined focus, if done well, can work and pays off — it depends upon how well the multiple strategies are executed. Clearly, doing one thing well will provide a return if it is consistent with business strategy. But doing two things well is even better and enables organizations to perform on multiple dimensions.

As resource-based scholars suggest, it is hard to implement effective management practices. Our research findings imply that employers may want to first establish their objective, focus on HRM policies and practices to achieve that objective, and then work to expand their capabilities to incorporate alternative

practices that will enhance their primary strategy. Given these findings, we answer the question posed in the title of the paper - HPWPs and HRM effectiveness may be both substitutes and complements. The main effects suggest that they are substitutes as they relate to different dependent variables, but the interactions show that if HPWPs and HRM effectiveness are combined they can also have complementary effects.

These results are subject to the limitation of common method variance because one of the dependent variables, with the exception of innovation, and the key independent variables were collected from the same respondent at the same time. Hence, future studies will need to examine these questions using more objective performance measures to see if these relationships hold.

In sum, this research suggests that firms first need to concentrate their efforts on fit. Once fit is established, then the firms can extend their HRM practices to other domains. Firms that have both HPWPs and HRM effectiveness are the most successful on both innovation and market performance measures. Although scholars have indicated that doing both is hard, our results indicate that it may be well worth it.

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