

**HRM AND BUSINESS PERFORMANCE RESEARCH:
EMPIRICISM IN SEARCH OF THEORY**

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HRM AND BUSINESS PERFORMANCE RESEARCH: EMPIRICISM IN SEARCH OF THEORY

A substantial amount of empirical research on relationships between certain human resource management (HRM) practices and business performance has appeared in the last decade or so (see, as examples, Applebaum et al., 2000; Batt, 1999; Lee and Johnson, 1998; Ichniowski et al., 1997; Huselid et al., 1997; Berg et al., 1996; Ichniowski et al. 1996; Dunlop and Weil, 1996; MacDuffie, 1995; Huselid, 1995; Ichniowski, 1992; Morishima, 1991; Cutcher-Gernshenfeld, 1991; Mitchell et al., 1990). The main conclusion drawn from this research is that so-called high-involvement HRM practices are positively associated with such business performance measures as market value, rate of return on capital employed, revenue growth, revenue per employee, capacity utilization, productivity, and product and service quality. While these findings appear to be well known and widely accepted, they have not yet led to the development of a generally accepted theory of human resource management and business performance.²

This paper attempts to fill this gap by (1) reviewing and briefly assessing selected scholarly and popular works that appeared prior to the spate of recent empirical HRM-business performance research that might have but (apparently) did not provide impetus to the development of HRM-business performance theory, and (2) positing and providing empirical evidence for a “dual theory of HRM and business performance.” This evidence focuses on the high involvement HRM practice coverage of core and peripheral employees, respectively; the effects of low involvement HRM practices (for peripheral employees) on the financial/operating performance of four sets of business entities; and the “optimal” combination of core employees (covered by high involvement HRM

practices) and peripheral employees (covered by low involvement HRM practices) for a business.

Precursors of HRM-Business Performance Research

More than two centuries ago, Smith (1776) posited his famous theory of a market economy in which labor played a crucial role as a factor of production. In contrast to restrictive medieval and mercantilist-based economies dominated by the church and nation-state (Tawney, 1926), a market-based economy would, according to Smith, unleash the forces of expansion and production to meet growing consumer demand. In order to do so efficiently, a market economy would also lead to specialization, in particular, to specialized tasks performed by workers, or what Smith termed the “division of labor.” Embedded in this theory of a market economy, therefore, was a companion “labor theory of value” which positioned labor as the dominant productive force in such an economy. The firm, as such, and the financial performance of a firm, are nowhere to be found in Smith’s treatise, though he admits to the necessity of “administrative” requirements, primarily to coordinate the firm’s productive activity. It is perhaps for this reason that contemporary HRM-business performance researchers do not invoke the admittedly macro-oriented Smith in framing their micro-level studies. By contrast, contemporary HRM-business performance researchers often invoke Taylor (1910), not to borrow from or build on principles of industrial engineering that he applied to job and organizational design but instead, to represent the outdated, even wrong-headed, high-control HRM practices associated with famous doctrine of “scientific management” (e.g.

² For a somewhat different critique of the HRM-business performance research literature, see Godard and Delaney (2000).

Lawler, 1986; Simmons and Mares, 1985; Davis and Chems, 1975) — a micro-level version of Smith's macro-level division of labor. Taylor propounded what in retrospect was a remarkably dominant, consistent, and coherent micro-level theory of the division of labor. However, contemporary HRM-business performance researchers have not as yet developed a comparably dominant, consistent, or coherent theory of HRM and business performance.

In what might be regarded as an empirical "test" of Smith's theory of a market economy, Harbison and Myers (1964) and Harbison, Maruhnic, and Resnick (1974) studied economic growth in many of the world's nations over more than a century, and concluded that investments in labor in the forms of education, training, health care, and mobility accounted for more than half the variance in the growth rates of these nations, that is, a larger portion of the variance than was accounted for by differences among nations in investments in (physical) capital, technology, and infrastructure. These key findings were important to the more formal development of human capital theory (see Schultz, 1960, 1961; Becker, 1964; Mincer, 1962, 1974), which critically distinguished between expenditures on labor that represented consumption and those that represented investment (in human capital). Yet, contemporary HRM-business performance researchers seem largely to have ignored human capital theory, perhaps because (as with Smith) this theory was also developed from a macro rather than a micro-level perspective. In any case, HRM-business performance researchers have also not developed a theory of HRM and business performance that is as dominant, consistent, and coherent as human capital theory.

From roughly the 1940s through the 1970s, industrial relations and labor economics research focused heavily on measuring the impacts of unions on wages, first in the private sector and then in the public sector (see Rees, 1961; Lewis, 1963; Lewin, 1977; Freeman, 1986). The private sector-oriented research was later extended to measure the effects of unions on fringe benefits, capital investment, research and development expenditures, firm profitability, and even shareholder value (e.g., Voos and Mishel, 1986; Becker and Olson, 1986). The dominant finding of this research was that unions had significant positive effects on compensation (e.g., wages and benefits) and significant negative effects on firms' capital investment, research and development expenditures, profitability, and market value. This stream of research helps to explain the decline of unionism in the U.S. and abroad during the last half-century or so. More importantly, from the perspective of the present paper, empirical research into the effects of unionism on pay, fringe benefits, and other "outcomes" was rigorously framed and guided by neoclassical microeconomic theory. But while contemporary HRM-business performance researchers also clearly focus their work on particular firm-level outcomes (e.g., return on capital employed, productivity, and revenue growth), they generally do not attempt to draw from or build on microeconomic theory in conducting their empirical inquiries (though see Ichniowski et al., 1987; MacDuffie, 1995), and have not developed a theory of HRM and business performance that is as dominant, consistent, or coherent as neoclassical microeconomic theory.^{3,4}

³ More recently, labor economics has been characterized by the development of "the new economics of personnel," which emphasizes such phenomena as implicit employment contracting and efficiency wages (e.g. Lazear, 1992). However, the new economics of personnel does not constitute a distinctive, integrated theory and, in fact, is basically derived from neoclassical microeconomic theory.

⁴ This same judgment can also be made about contemporary HRM strategy research that provides much of the initial impetus to HRM-business performance research (e.g. Cappelli and Singh, 1992; Ulrich, 1997; Arthur, 1992; Kochan et al., 1986).

More popular writings have also focused on the effects — always-positive effects, it seems — of certain HRM or “people management” practices on aspects of firm performance. Chief among these, perhaps, is the best-selling work by Peters and Waterman (1982), In Search of Excellence, which claimed that the “superior” financial performance (as measured by changes in market value) of a set of top companies was largely the result of the way in which these companies managed their people. Exactly what “way” these authors had in mind is difficult to discern from their book, but there is no denying that their central message was read and adopted by millions of people, not just managers, worldwide. Ouchi (1981) forwarded a similar message in a somewhat more scholarly but also best-selling work, Theory Z, which emphasized the importance of proper organizational design (e.g., decentralized or “clan”) to the performance of business enterprises. In yet another book that became especially well known in business circles, High-Involvement Management, Lawler (1986) offered numerous case examples of decentralized, team-based work arrangements that apparently led to higher productivity, as well as improved product quality, employee retention, and employee morale. More recently, Pfeffer and Viega (1999) and Pfeffer (1998a, 1998b) invoked case examples as well as summaries of empirical research to propose that seven specific HRM practices — employment security; targeted selection; workplace teams and decentralization; high pay contingent on organizational performance; employee training; reduction of status differentials; and business information-sharing with employees — collectively lead to higher revenue, profits, market value, and even organizational survival rates (see also Becker and Huselid, 1999).

These popular writings (save perhaps for that of Ouchi, 1981) do not pretend to offer a full-blown theory of HRM and business performance. Instead, they rely heavily on case examples to argue that “high involvement” type HRM practices enhance business performance. Recognizing this, it may nevertheless be asked whether, from a theoretical perspective, contemporary empirical HRM-business performance research is closer to the popular, case-based literature on “effective people management practices” or instead, to the more theoretically-grounded work on the role of labor in national economic development, human capital formation, the effects of unions on compensation, or even scientific management. In my judgment, the answer to this question is “the former,” that is, the popular literature, rather than what I have described here as the “precursor” scholarly literature. Therefore, and to advance contemporary HRM-business performance beyond the largely empirical stage, we need a theory of HRM and business performance; one such theory is elaborated below.

A Dual Theory of HRM and Business Performance

It may well be the case that high involvement HRM practices can enhance or “leverage” business performance. But if this case is so well established, then one wonders why most or all firms do not adopt such practices. Indeed, Pfeffer and Viega (1999) conclude that only about one of every eight firms adopt a full complement of high-involvement type HRM practices. They contend that one-half of firms do not believe the evidence about the effects of such practices on business performance, half of the remaining one-half adopt only one high involvement type HRM practice, and half of the remainder adopt the full complement of high involvement type HRM practices, but

abandon them after significant effects on business performance do not materialize in the short run (hence, $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = 1/8$). Alternatively, others have suggested that knowledge of the positive effects of high involvement HRM practices on business performance is only slowly becoming known to business practitioners and is therefore in the early stage of diffusion (Tushman and O'Reilly). This argument implies that the rate of the adoption of high involvement type HRM practices will rise over time. Still a different argument, one advanced in this paper, is that high involvement HRM practices constitute only one way of managing people to enhance business performance. Another way of managing people to achieve this end is to treat "labor" as an expense that must be contained or reduced.

A key way to reduce labor expense is to convert some portion of a firm's human resources from the core to the periphery (Lewin and Mitchell, 1995). The core work force consists of those who are employed full-time, are paid a regular salary or wage and covered by fringe benefits, have training, development, and promotion opportunities along well-defined career paths, and, perhaps most important, are or can be made to be heavily involved in decision-making through organizational decentralization, workplace teams, and other participative arrangements. This core work force is typically carefully selected, has employment security, has some pay at risk dependent on the performance of the firm or a unit thereof, and partakes in the sharing of business information by their firm's managers and executives. By contrast, the peripheral work force consists of part-time, temporary, contract, vendored, and outsourced "employees" who are generally paid a fixed wage, salary or, in the case of outsourced employees, a lump sum (project-based) cost, are partially or not at all covered by fringe benefits, have little or no training,

development, and promotion opportunities or involvement in decision-making, do not have pay at risk or employment security, and do not partake in the sharing of business information (Lewin, 2002). Many firms, perhaps most firms, have both a core work force and a peripheral work force, and this helps to explain why firms do not widely or uniformly adopt high-involvement type HRM practices. Thus, the core work force is managed primarily as an asset or investment (in human capital), while the peripheral work force is managed primarily as a labor expense (to be contained or reduced).

Herein lies the foundation of a “dual theory of HRM and business performance.” Expenditures on the core work force should (accounting conventions aside) be treated as an investment intended to increase the value added to the company by employees in this work force segment. Expenditures on the peripheral work force should (following accounting conventions) be treated as labor expense that the company seeks to contain or reduce and, in this way, also add value to the company. In both instances, the optimization problem facing the company is maximizing the return, or value, over cost. In the ideal, both sets of HRM practices should result in larger profit margins (i.e., revenue less cost) than would occur by following conventional HRM/labor practices in which there are few or no distinctions between core and peripheral employees.⁵ Is there empirical evidence to support these propositions? Yes, there is, and some of this evidence is presented below.

⁵ For a somewhat different theoretical formulation that also contrasts two types of human resource/labor relations systems within a firm, see Sherer (2000). Note too, that the recent evolution of two-tiered (that is, core and peripheral) employment systems in business entities contrasts markedly with the single, dominant continuous or permanent employment system that is often claimed to have predominated in the U.S. between the end of World War II and the mid-1980s. For an implicit contracting perspective on permanent employment, see Lewin and Mitchell (1995). For debate about whether and to what extent this permanent employment system has declined in the U.S., see (Jacoby, 1999; Cappelli, 1999).

High Involvement HRM Coverage by Core and Peripheral Employment

In the contemporary HRM-business performance literature, high involvement work practices are typically measured by indexes that incorporate, or assign points to the extent of team-based work and/or other employee participation arrangements, employee training and development, formal performance management systems, variable pay, business information sharing with employees, targeted or selective recruitment and hiring, and certain other practices. Those entities — companies, business units, manufacturing plants, and occasionally sales and service work groups — with high index scores can be said to practice what might be called “high high involvement” HRM; those entities with mid-level index scores can be said to practice what might be called “average high involvement” HRM; and those entities with low index scores can be said to practice what might be called “low high involvement” HRM. But though they typically are not explicit on this point, the studies included in this literature all seem to focus on regular, full-time employees, that is, the core work forces of sampled companies, when measuring the extent to which these companies use high involvement HRM practices. Consequently, it may be asked, “To what extent do companies use high involvement HRM practices for their peripheral work forces?”

An answer to this question comes from an ongoing study of HRM and business performance that focuses on company utilization of part-time, temporary, contract, vendored, and outsourced employees (Lewin, 2002, 2001). The multi-level samples included in this study totaled 289 companies, 313 business units (of companies), 457 manufacturing plants, and 249 sales and service field offices of a national insurance

company.⁶ Based on responses to mail surveys administered to each of these business entities, peripheral employment (as defined here) averaged 32 percent of total full-time equivalent employment in the company sample, 34 percent of total full-time equivalent employment in the business unit sample, 29 percent of total full-time equivalent employment in the manufacturing plant sample, and 31 percent of total full-time equivalent employment in the insurance company field offices sample.⁷ These cross-sectional data are for 1998; the longitudinal data also collected for this study show statistically significant increases in peripheral employment from 1995 to 1998 in all four samples.⁸

Turning to the use of high involvement HRM practices by these entities, Table 1 shows that such practices are used significantly more for core employees than for peripheral employees. Indeed, among the eight high involvement practices — employment continuity, selective hiring, training/development, teams/participation, variable pay, performance management, promotion opportunity, and business information sharing — that provided the basis for this comparison, each is far more widely used for core employees than for peripheral employees. Collectively, the use of this set of high involvement HR practices is two and one-half times greater for core than for peripheral employees (with means of 4.1 and 1.5, respectively, for “all practices”). Therefore and

⁶ The original sample sizes were 525 companies, 540 business units, 1,115 manufacturing plants, and 445 sales and service field offices. Two survey mailings, a telephone follow-up, an e-mail follow-up and, in the case of the insurance company, a letter from a senior official that accompanied the survey, helped achieve response rates of 55 percent, 58 percent, 41 percent, and 65 percent, respectively, among these four samples of business entities. Additional detail on the design of the surveys and sampling frames is provided in Lewin (2002, 2001).

⁷ For the four samples as a whole, peripheral employment accounted for a little less than 32 percent of total full-time equivalent employment in 1998, closely approximating the extent of peripheral employment at that time in the U.S. economy more broadly (see Clinton, 1997; Hipple, 1998; Melchionno, 1999).

⁸ Between 1995 and 1998, peripheral employment (as defined here) increased by about 14 percent in the company sample, 15 percent in the business unit sample, 16 percent in the manufacturing plant sample, and

despite the variation in usage of high involvement HRM practices by the sampled organizations, these data support the proposition that peripheral employment is low involvement employment — and, on a comparative basis, core employment is high involvement employment.

Low Involvement HRM Practices and Business Performance

Given the considerable research evidence that high involvement HRM practices (applied largely to core employees) are significantly positively associated with various measures of business performance, it is important to consider whether low involvement HRM practices (applied largely to peripheral employees) are also significantly positively associated with business performance. For this purpose, an index of low involvement work practices (LIWP) was constructed that consists of the proportion of an organization's work force represented by part-time, temporary, and contract employees as well as employees who have been placed with vendors, and employees leased from outsourcing firms. The aforementioned surveys yielded the data for determining the LIWP index score at a point in time (1998) and changes in the score over time (1995-1998) for each company, business unit, manufacturing plant, and sales and service field office included in the study.⁹ Business performance data were obtained from secondary sources in the cases of the company and business unit samples, and from the surveys in the cases of the manufacturing plant and insurance company field office samples. Specific measures of business performance for each of the four types of sampled business

15 percent in the insurance sales and service field office sample. For further details, including changes in specific categories of peripheral employment in these four samples of business entities, see Lewin (2002).

⁹These data were elicited for each of seven major occupational groups and were summed for the purpose of the present analysis.

entities were then regressed onto the LIWP index and vectors of control variables.¹⁰ The main findings from these ordinary least squares (OLS) regression analyses are summarized in Tables 2-5.

For the company sample (Table 2), the LIWP index is significantly positively associated with return on capital employed (ROCE), market value (MKTVAL), and revenue per employee (REVEMP) in both the cross-sectional and longitudinal regression tests.¹¹ Standardizing the regression coefficients and evaluated at the mean value, a one standard deviation increase in the LIWP, or proportional peripheral employment, is associated with a statistically significant 1.5 percent increase in ROCE, a 2.7 percent increase in market value, and a 3.2 percent increase in revenue per employee.¹² For the business unit sample (Table 3), the LIWP index is significantly positively associated with ROCE and REVEMP, both in the cross-section and longitudinally. Standardizing the regression coefficients and evaluated at the mean value, a one standard deviation increase in the LIWP, or proportional peripheral employment, is associated with a statistically significant 2.2 percent increase in ROCE and a 4.1 percent increase in REVEMP.

For the manufacturing plant sample (Table 4), the LIWP index is significantly negatively associated with total labor cost as a proportion of total operating cost (LABORCOST) in both the cross-sectional and longitudinal regression tests.

¹⁰ Details of the rationale for specification of the business performance dependent variables, and the control variables as well as definitions of these variables can be found in Lewin (2002, 2001).

¹¹ For this sample as well as the three others discussed below, additional longitudinal regression analyses were conducted to test for "fixed effects," that is, whether other factors correlated with the LIWP index (and later, with a high involvement work practices — HIWP — index) influence the regression estimates. Those tests did not yield significantly different findings and are therefore not reported here. For additional detail, see Lewin (2002).

¹² In Table 2 as well as in Tables 3-5, the coefficients on the LIWP index resulted from regression estimates that also included an HIWP index (the findings for which are discussed later in the text). In all four samples, the coefficients on the LIWP index were larger (and, in some cases, even more significant) when the HIWP index was excluded from the analysis. To conserve space, those results are not reported here, but see (Lewin, 2002) for further details.

Standardizing the regression coefficients and evaluated at the mean value, a one standard deviation increase in the LIWP, or proportional peripheral employment, is associated with a statistically significant 5.8 percent reduction in LABORCOST. Equally or perhaps more notable, the LIWP index is not significantly associated with productivity (PROD) or product quality (PRODQUAL) in these regression analyses. In other words, and contrary to certain expectations, these manufacturing plants apparently do not experience lower productivity or product quality as a result of employing peripheral workers and managing them with low involvement work practices.

For the insurance company field office sample (Table 5), the LIWP index is significantly negatively associated with the ratio of payroll cost to sales revenue (PAYCOST), both in the cross-section and longitudinally. Standardizing the regression coefficients and evaluated at the mean value, a one standard deviation increase in the LIWP, or proportional peripheral employment, is associated with a statistically significant 4.8 percent decrease in PAYCOST. By contrast, the LIWP index is not significantly associated with revenue growth (REVGROW), quality of service (QUALSERV), or customer satisfaction (CUSTSAT) in these regression analyses. Consequently, and again contrary to certain expectations, these insurance sales and service field offices apparently do not experience lower revenue growth, service quality or customer satisfaction as a result of employing peripheral workers and managing them in a low involvement fashion.

If high involvement work practice researchers can be said to have ignored low involvement work practices (and peripheral employees), then the same criticism can be leveled against the present study's singular focus on low involvement work practices (and

peripheral employees). To correct for this limitation, a high involvement work practice (HIWP) index was constructed that consists of the eight practices shown in Table 1. Organizational index scores were constructed in two ways: first, by summing respondent ratings of the extent of usage of each of the eight high involvement work practices by their respective organizations as a whole; second, by summing respondents' estimates of the percentage of core employees in each of seven occupational categories covered by each of the eight high involvement work practices. This portion of the research was limited to the companies, business units, and manufacturing plants because high involvement work practices in the insurance company are standardized across the entire organization and therefore do not vary among sales and service field offices. These two versions of the HIWP index then served as additional (main) independent variables in the original regression equations and were tested separately for their associations with the business performance dependent variables. The findings from testing the first version of the HIWP index are included in Tables 2-5.

With regard to the company sample (Table 2), the HIWP index is insignificantly positively associated with the three business performance measures in the cross-section analysis, but significantly positively associated with the three business performance measures in the longitudinal analysis. In both analyses, however, the LIWP index is (that is, remains) significantly positively associated with return on capital employed, market value, and revenue per employee — though the coefficients on the LIWP variable are smaller than when the HIWP variable was excluded from the analyses. Standardization of the coefficients on all the variables included in Table 1 showed that the positive associations between LIWP and the three business performance measures are

significantly larger than the positive associations between HIWP and these business performance measures. Nevertheless, in this sample of companies, both low involvement and high involvement work practices contribute positively to company financial performance, with the effects of the former manifesting themselves in both the short and long run and the effects of the latter manifesting themselves only in the long run.

Turning to the business unit sample (Table 3), the HIWP index is significantly positively associated with return on capital employed and revenue per employee, both in the cross-section and longitudinal analyses. Also in both analyses, however, the LIWP index remains significantly positively associated with each of these dependent variables — though, again, the coefficients on the LIWP variable are smaller than when the HIWP variable was excluded from the analyses. In this instance, moreover, standardization of the coefficients on all the variables included in Table 3 showed that the positive associations between HIWP and the two business performance measures are slightly larger than the positive associations between LIWP and these business performance measures. In any case, in this sample of business units, both low and high involvement work practices contribute positively to company financial performance, with the effects of the two sets of practices manifesting themselves in the short run and the long run.

Concerning the manufacturing plant sample (Table 4), the HIWP index is significantly positively associated with labor cost and product quality in the cross-section analysis, and with labor cost, productivity, and product quality in the longitudinal analysis. In both analyses, however, the LIWP index remains significantly negatively associated with labor cost and insignificantly negatively associated with productivity and product quality. Note that the coefficients on LIWP in the labor cost equations are larger

than when the HIWP variable was excluded from the analyses. Standardization of the coefficients on all the variables included in Table 4 showed that the negative association between LIWP and labor cost is substantially larger than the positive association between HIWP and labor cost. These findings are especially suggestive about how it is that manufacturing plants benefit from using high and low involvement HRM practices. The former set of practices add to plant operating costs but also generate additional value, particularly in enhancing product quality, whereas the latter set of practices serve to reduce plant operating costs with no significant loss of value in terms of productivity and product quality — both in the short run and the long run.

Implications for the Dual Theory of HRM-Business Performance

Cumulatively, these empirical findings provide support for a dual theory of HRM and business performance. On the one hand, and as attested to by the bulk of HRM-business performance research conducted over the last decade or so, adoption by and diffusion within business entities of sets (or bundles or packages) of so-called high involvement HRM practices serve significantly to enhance company, business unit, manufacturing plant, and sales/service unit performance, as measured, for example, by market value, return on capital employed, productivity, and revenue growth. These high involvement HRM practices as well as the extant HRM-business performance research, however, are largely aimed at core employees working full-time and more or less continuously. When applied to such core employees, high involvement HRM practices apparently add to the cost but, even more, to the value generated by business entities.

On the other hand, and as attested to by the research presented here, the adoption by and diffusion within business entities of part-time, temporary, contract, vendored, and outsourced employment also serve significantly to enhance company, business unit, manufacturing plant, and sales/service unit performance — and by the same or similar measures of performance used in the high involvement HRM-business performance research. As a set, those employed part-time, temporarily, on fixed-time contracts, with vendors, and through outsourcing constitute peripheral employees, who in comparison with core employees, are far less likely to be continuously employed; selectively hired; trained/developed; working in teams or other participatory arrangements and to have variable pay; formal performance management; promotion opportunities; and business information sharing. In other words, these employees are subject to low involvement HRM practices. As applied to peripheral employees, such practices apparently reduce the cost but not the value generated by business entities.

Further, both high involvement and low involvement HRM practices typically are used by a business, that is, a business utilizes core employees and peripheral employees simultaneously. To illustrate, among all the business entities included in the present study ($n = 1308$), more than 95 percent reported having some peripheral employment, and such employment (converted to full-time equivalent employment) averaged about 32 percent of total employment. Among these same businesses, the mean score on the HIWP index, which ranged from 8 to 40, was 25.5, and less than five percent of these businesses had HIWP index scores of less than 15. Hence, the overwhelming proportion of business entities in the multi-level samples used for this study utilize both core employees to whom high involvement HRM practices are applied and peripheral employees to whom

low involvement HRM practices are applied.¹³ Still further, the cross-section and longitudinal regression findings summarized above showed that both low involvement and high involvement HRM practices are significantly positively associated with certain measures of business performance, and that the positive effects of low involvement HRM practices (applied to peripheral employees) are not vitiated when the effects of high involvement HRM practices (applied to core employees) are simultaneously taken into account. All in all, the findings and interpretations from this study appear strongly to support a dual theory of HRM and business performance.

Balancing Core and Peripheral Employment

From a practical or managerial perspective, it appears that both high involvement and low involvement HRM practices can “pay off” in enhancing business performance. This observation leads rather naturally to the question, “Is there a proper or optimal balance of core and peripheral employment for a business?” In an attempt to answer this question, a series of regression analyses was performed in which the ratio of full-time equivalent peripheral employment to total employment for each business entity in each of the four samples served as the dependent variable, and the various business performance measures served as independent variables — in effect, “reverse” regression analyses. In these cross-section regressions, the peripheral employment/total employment ratios were for 1998 and the business performance measures were reverse lagged by one year (that is,

¹³ Together with the aforementioned argument by Pfeffer and Viega (1999) that only about one out of eight business entities adopts and sustains usage of the “full complement” of high involvement HRM practices, these data can be interpreted to mean that business entities are relatively more receptive to and thus more likely to adopt and sustain the usage of low involvement HRM practices. Further supporting this interpretation is the argument that low involvement HRM practices (applied to peripheral employees) are intended primarily to contain or reduce labor costs, whereas high involvement HRM practices (applied to

these measures were for 1997). An accompanying series of longitudinal regression analyses was performed in which changes in the business performance measures during 1995-1997 were used to "predict" changes in the ratio of peripheral employment to total employment during 1996-1998. Control variables were also included in both sets of regression analyses. The main findings from these analyses (that is, only for the business performance variables) are summarized in Table 6.

The coefficients in column (1) of this table imply that better performing companies make relatively greater use of peripheral employment than poorer performing companies, while the coefficients in column (2) imply that better performing companies increase their use of peripheral employment significantly more than poorer performing companies. The same may be said for business units, based on the coefficients in columns (3) and (4) of the table. The coefficient on the LABORCOST variable in column (5) of Table 6 implies that better performing manufacturing plants make relatively greater use of peripheral employment than poorer performing manufacturing plants, while the coefficient on this variable in column (6) implies that better performing manufacturing plants increase their use of peripheral employment significantly more than poorer performing companies. The coefficients on the PAYCOST variable in columns (7) and (8) of the table imply that better performing sales and service field offices of the national insurance company studied here make relatively greater use of peripheral employment and increase their use of peripheral employment significantly more than poorer performing field offices.

core employees) that are intended primarily to add value to a business nevertheless also require additional costs.

These findings do not mean that business entities should simply or linearly continue to increase their ratios of peripheral employment to total employment, however. This is because when the company, business unit, manufacturing plant, and sales and service field office samples were partitioned into quartiles based on changes (during 1995-1998) in one or another measure of their financial or operating performance, the top performing quartile in each sample had a significantly higher ratio of peripheral employment to total employment than the bottom two performing quartiles, but a significantly lower ratio of peripheral employment to total employment than the second (best performing) quartile. Specifically, the top performing quartile of business entities in the total sample had a mean ratio of peripheral employment to total employment of .34 compared to ratios of .17 for the bottom or poorest performing quartile, .26 for the third or second-worst performing quartile, and .40 for the second or second-best performing quartile. Stated differently, on average, the gain in business performance associated with increasing use of peripheral employment is sharpest when the ratio of peripheral employment to total employment rises from about one-quarter to one-third. Increases in the ratio beyond this point are associated with declining business performance. Thus, from a business performance perspective, a balance of one-third peripheral employment and two-thirds core employment appears “optimal.”¹⁴

Conclusions

Contemporary HRM-business performance research has particularly emphasized the contribution of high involvement type practices to business performance. While this

¹⁴ Not included in this “calculation,” however, is the potential or hidden cost to a business if its (relatively low cost) peripheral work force becomes so large that it seeks to become part of its (higher-cost) core work

research has unquestionably advanced HRM scholarship, it consists largely of empirical studies that contrast quite sharply with more theoretically-oriented predecessor work on the role of labor in market and economic development; scientific management; union impacts on compensation and other outcomes; and human capital formation. Contemporary HRM-business performance research also contrasts, though less sharply, with popular and largely case-based accounts of successful “people management” practices. Neither of these markedly different “precursor” literatures nor recent empirical research, however, has yielded a well-accepted theory of HRM and business performance. Consequently, the present paper forwards, elaborates, and provides new empirical support for a “dual theory of HRM-business performance.”

Central to this theory are core employment and peripheral employment. The former encompasses the types of employees and employment that constitute the central focus of received HRM-business performance research; that focus is on high involvement HRM practices. The latter encompasses the types of employees and employment that constitute the main focus of this paper; that focus is on low involvement HRM practices. The study reported here finds that peripheral employees — those working part-time, temporarily, on fixed-time contracts, with vendors and on an outsourcing basis — are significantly less likely than core employees — those working full-time and more or less continuously — to be covered by high involvement type HRM practices. Therefore, it is appropriate to treat core employment and peripheral employment as dichotomous with respect to HRM practices.

This study also finds that peripheral employment (or low involvement HRM) is significantly positively associated with company-level financial performance measures,

force.

such as market value, and with business unit financial performance measures, such as return on capital employed, and significantly negatively associated with manufacturing plant labor cost and insurance sales and service field office payroll cost. Further, peripheral employment is not significantly (negatively) associated with manufacturing plant productivity and product quality, or with insurance sales and service field office revenue growth, quality of service, and customer satisfaction. Thus, low involvement HRM practices applied to peripheral employees contribute to business performance primarily by reducing/containing labor expense. These findings continue to hold when account is taken of high involvement HRM practices used for core employees by the business entities included in the study. Such high involvement HRM practices are also shown to contribute positively to business performance in these entities, suggesting that these practices add value beyond their additional cost. Taken together, these findings provide empirical support for the dual theory of HRM and business performance offered herein.

Finally, and with regard to the balancing of core (high involvement HRM) and peripheral (low involvement HRM) employment in business entities, the quantitative findings from this study suggest that a proximate one-third peripheral employment and two-thirds core employment is "optimal" from a business performance perspective. Business entities can enhance their performance by making relatively greater use of peripheral employment when such employment constitutes less than one-third of total employment, but additional peripheral employment beyond this point is likely to retard business performance. In other words, rather than being entirely linear, the (relative)

utilization of peripheral employment (that is, low involvement HRM) is associated with increasing returns for a while, but with declining returns thereafter.

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TABLE 1

Extent Of High Involvement HRM Practice Usage Among
Core (C) And Peripheral (P) Employees, 1998
(Mean Values on a 1 = Low, 5 = High Scale)

Variable	Companies		Business Units		Manufacturing Plants		Sales & Service Field Offices		Total	
	C*	P*	C*	P*	C*	P*	C*	P*	C*	P*
Employment Continuity	3.4	1.5	3.2	1.4	3.0	1.6	3.3	1.3	3.3	1.5
Selective Hiring	4.3	1.7	4.4	1.8	4.2	1.8	4.1	1.4	4.3	1.6
Training/ Development	3.9	1.4	4.0	1.5	3.8	1.3	4.2	1.6	4.0	1.4
Teams/ Participation	4.2	1.3	4.3	1.4	4.0	1.6	3.8	1.3	4.1	1.4
Performance Management	4.5	1.6	4.4	1.5	4.1	1.8	4.2	1.6	4.3	1.6
Promotion Opportunity	3.9	1.2	4.2	1.4	3.6	1.2	3.8	1.3	3.9	1.3
Variable Pay	4.6	1.4	4.5	1.3	4.2	1.3	4.5	1.7	4.5	1.4
Business Info. Sharing	4.0	1.5	4.2	1.6	4.5	1.5	3.8	1.4	4.1	1.5
All Practices	4.1	1.5	4.2	1.5	3.9	1.5	4.0	1.4	4.1	1.5
N =	289	289	313	313	457	457	249	249	1308	1308

*All differences between means within pairs of columns significant at $p < .01$.

TABLE 2

OLS Regression Coefficients On Company
Financial Performance
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable:					
	ROCE (1)	1998 MKTVAL (2)	REVPEM (3)	ROCE (4)	1995-1998 MKTVAL (5)	REVPEM (6)
Constant	1.19* (0.57)	0.64* (0.28)	1.35* (0.62)	1.09* (0.51)	0.54* (0.23)	1.26* (0.60)
LIWP	0.46* (0.20)	0.44* (0.19)	0.52** (0.20)	0.51** (0.21)	0.47* (0.22)	0.56** (0.23)
Size	0.25* (0.11)	0.20* (0.09)	0.16 (0.10)	0.24* (0.11)	0.22* (0.10)	0.17 (0.11)
Cap/Lab	-0.57** (-0.23)	-0.50* (-0.22)	-0.28 (-0.15)	-0.68** (-0.27)	-0.54* (-0.23)	-0.31 (-0.18)
Union	-0.21 (-0.12)	-0.22 (-0.13)	-0.13 (-0.08)	-0.23 (-0.14)	-0.26 (-0.17)	-0.16 (-0.10)
RevGrowth	0.41 (0.24)	0.58* (0.27)	0.69** (0.28)	0.44 (0.25)	0.64* (0.30)	0.76** (0.31)
Concentration	-0.55** (-0.22)	-0.45* (-0.21)	-0.43* (-0.20)	-0.58** (-0.23)	-0.49* (-0.22)	-0.48* (-0.21)
S, G & A	-0.19 (-0.11)	-0.21 (-0.12)	-0.32* (-0.14)	-0.21 (-0.12)	-0.24 (-0.15)	-0.34* (-0.15)
Risk	-0.37* (-0.16)	-0.31 (-0.17)	-0.24 (-0.14)	-0.40* (-0.18)	-0.33 (-0.19)	-0.29 (-0.15)
HIWP	0.34 (0.20)	0.32 (0.18)	0.41 (0.23)	0.39* (0.19)	0.37* (0.20)	0.47* (0.22)
R ²	0.24*	0.21*	0.20*	0.26*	0.24*	0.22*
N	289	289	289	254	254	254

*Significant at $p < .05$

**Significant at $p < .01$

TABLE 3

OLS Regression Coefficients On Business
Unit Financial Performance
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable:			
	1998		1995-1998	
	ROCE (1)	REVPEM (2)	ROCE (3)	REVPEM (4)
Constant	1.29* (0.59)	1.43* (0.67)	1.16* (0.54)	1.36* (0.63)
LIWP	0.44* (0.19)	0.49** (0.20)	0.48** (0.19)	0.52** (0.20)
Size	0.26* (0.12)	0.17 (0.11)	0.28* (0.13)	0.19 (0.13)
Cap/Lab	-0.61** (-0.25)	-0.31 (-0.17)	-0.69** (-0.28)	-0.34 (-0.19)
Union	-0.27* (-0.13)	-0.17 (-0.10)	-0.28* (-0.13)	-0.14 (-0.08)
RevGrowth	0.37 (0.21)	0.64** (0.26)	0.39 (0.21)	0.71** (0.27)
Concentration	-0.51** (-0.20)	-0.40* (-0.18)	-0.56** (-0.22)	-0.45* (-0.20)
S, G & A	-0.20 (-0.12)	-0.36* (-0.15)	-0.23 (-0.13)	-0.37* (-0.17)
HIWP	0.41* (0.18)	0.45* (0.20)	0.44* (0.19)	0.49* (0.23)
R ²	0.25*	0.22*	0.26*	0.24*
N	313	313	276	276

*Significant at $p < .05$

**Significant at $p < .01$

TABLE 4

OLS Regression Coefficients On Manufacturing
Plant Operating Performance
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable:					
	<u>1998</u>			<u>1995-1998</u>		
	LABORCOST (1)	PROD (2)	PRODQUAL (3)	LABORCOST (4)	PROD (5)	PRODQUAL (6)
Constant	2.19* (1.07)	2.34* (1.12)	2.48* (1.21)	2.23* (1.07)	2.41* (1.15)	2.59* (1.24)
LIWP	-0.63* (0.28)	-0.26 (0.15)	-0.32 (0.17)	0.74** (0.30)	-0.30 (-0.16)	-0.35 (-0.18)
Size	0.30 (0.16)	0.24 (0.13)	-0.43* (-0.19)	0.38* (0.18)	0.27 (0.14)	-0.41* (-0.18)
Cap/Lab	-0.33* (-0.16)	0.37* (0.17)	0.24 (0.14)	-0.36* (-0.17)	0.39* (0.18)	0.27 (0.15)
Union	0.38* (0.18)	0.14 (0.08)	0.12 (0.07)	0.44* (0.20)	0.17 (0.09)	0.15 (0.18)
Years	0.27 (0.15)	-0.40* (-0.18)	0.18 (0.10)	0.30 (0.16)	-0.49* (-0.23)	0.19 (0.11)
HIWP	0.48* (0.22)	0.31 (0.16)	0.49* (0.22)	0.52* (0.23)	0.43* (0.19)	0.55* (0.24)
R ²	0.29*	0.31*	0.24*	0.30*	0.33*	0.26*
N =	457	457	457	384	384	384

*Significant at $p = < .05$

**Significant at $p = < .01$

TABLE 5

OLS Regression Coefficients On Insurance Company
Sales & Service Field Office Operating Performance
(Standard Errors in Parentheses)

Independent Variable	Dependent Variable:							
	1998				1995-1998			
	PAY-COST (1)	REV-GROW (2)	QUAL-SERV (3)	CUST-SAT (4)	PAY-COST (5)	REV-GROW (6)	QUAL-SERV (7)	CUST-SAT (8)
Constant	1.84* (0.85)	1.62* (0.78)	1.59* (0.73)	1.73* (0.82)	1.90* (0.88)	1.76* (0.83)	1.68* (0.79)	1.81* (0.87)
LIWP	-0.54* (0.24)	-0.25 (-0.14)	-0.21 (-0.12)	0.18 (0.10)	-0.63** (0.26)	-0.29 (-0.16)	-0.27 (-0.15)	0.23 (0.13)
Size	0.41* (0.18)	0.38* (0.17)	-0.24 (-0.13)	-0.16 (-0.10)	0.46** (0.19)	0.40* (0.18)	-0.28 (-0.15)	-0.22 (-0.13)
Employ	-0.23 (-0.14)	0.44* (0.19)	-0.18 (-0.10)	-0.19 (-0.11)	-0.28 (-0.15)	0.52** (0.21)	-0.24 (-0.13)	-0.25 (-0.14)
Years	-0.29 (-0.15)	0.33 (0.17)	0.43* (0.20)	0.31 (0.16)	-0.32 (-0.17)	0.35 (0.19)	0.48* (0.22)	0.36 (0.19)
R ²	0.22*	0.26*	0.23*	0.21*	0.24*	0.28*	0.26*	0.24*
N	249	249	249	249	217	217	217	217

*Significant at $p < .05$

**Significant at $p < .01$

TABLE 6

OLS Regression Coefficients On Ratio Of Peripheral To Total
Employment In Four Samples Of Business Entities
(CS = Cross Section; LONG = Longitudinal; Standard Errors in Parentheses)

Independent Variable	Dependent Variable: Ratio of Peripheral to Total Employment							
	Companies		Business Units		Manufacturing Plants		Sales & Service Field Offices	
	CS (1)	LONG (2)	CS (3)	LONG (4)	CS (5)	LONG (6)	CS (7)	LONG (8)
MKTVAL	3.07* (1.41)	4.71* (2.22)						
ROCE	2.58* (1.23)	2.81* (1.30)	2.89* (1.34)	3.31* (1.53)				
REVEMP	3.37* (1.54)	4.60** (1.82)	3.71* (1.61)	5.92** (2.33)				
LABCOST					-0.39* (-0.18)	-0.73** (-0.28)		
PROD					-0.28 (-0.19)	-0.42 (-0.29)		
PRODQUAL					-0.18 (-0.12)	-0.37 (-0.26)		
PAYCOST							-0.42* (-0.19)	-0.75** (-0.29)
REVGROW							-0.31 (-0.20)	-0.52 (-0.39)
QUALSERV							-0.26 (-0.19)	-0.44 (-0.31)
CUSTSAT							0.12 (0.09)	0.21 (0.15)
R ²	0.19*	0.24*	0.21*	0.28*	0.20*	0.26*	0.22*	0.28*
N	289	254	313	276	457	384	249	217

*Significant at $p < .05$

**Significant at $p < .01$.