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Measuring Organizational Performance in Strategic Human Resource Management: Problems and Prospects

Edward W. Rogers
Cornell University

Patrick M. Wright
Cornell University

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Measuring Organizational Performance in Strategic Human Resource Management: Problems and Prospects

Abstract

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Keywords

performance, research, human resource, research, HR, problem, practice, market, model

Disciplines

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Measuring Organizational Performance in Strategic Human Resource Management: Problems and Prospects

Edward W. Rogers
Patrick M. Wright

Working Paper 98-09



**Measuring Organizational Performance in
Strategic Human Resource Management:
Problems and Prospects**

Edward W. Rogers
and
Patrick M. Wright

Department of Human Resource Studies
School of Industrial and Labor Relations
Cornell University
393 Ives Hall
Ithaca, NY 14853-3901

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This paper has not undergone formal review or approval of the faculty of the ILR school. It is intended to make results of the Center research available to others interested in preliminary form to encourage discussion and suggestions.

ABSTRACT

A major challenge for Strategic Human Resource Management research in the next decade will be to establish a clear, coherent and consistent construct for organizational performance. This paper describes the variety of measures used in current empirical research linking human resource management and organizational performance. Implications for future research are discussed amidst the challenges of construct definition, divergent stakeholder criteria and the temporal dynamics of performance. The concept of performance information markets that addresses these challenges is proposed as a framework for the application of multi-dimensional weighted performance measurement systems.

Measuring Organizational Performance in Strategic Human Resource Management: Problems and Prospects

"What are you doing?" inquired the policeman of the drunk crawling on the pavement under the glow of a lamppost. "I am looking for my quarter," came the reply. "Where did you lose it?" asked the officer helpfully. "I dropped it over there by that payphone," retorted the drunk. Incredulous, the officer asked, "Then why are you looking in the middle of street?" "Because there is more light over here," he replied with his nose nearly to the ground.

Introduction

Human resource management (HRM) is a relatively young field, which has undergone a rapid evolution. From its initial roots as the function involved in the administrative aspects of hiring, firing, and payroll, it has seen stages where Union relations/avoidance, employee satisfaction, and legal compliance have served as dominant areas of emphasis and expertise (Noe, Hollenbeck, Gerhart & Wright, 1997). Most recently a trend has developed toward justifying the expenditures for and existence of the HR function. HR departments and programs have become an element of the firm's profit equation to be minimized as a cost and maximized as a value-adding component of firm strategy. In fact, some in the popular business press have characterized HR departments as bureaucratic wastelands and suggested doing away with them (Stewart, 1996). Consequently, HR practitioners have become preoccupied with demonstrating the value of the HR function, particularly through showing its impact on firm performance (Pfeffer, 1997; Ulrich, 1997).

Fueled by this practitioner concern, recent academic research has attempted to demonstrate the impact of HRM on firm performance. Not surprisingly, first attempts at empirical linkage looked in areas of HRM that were already the most brightly lit by prior research. Early in this stream, research linked individual HR practices such as training (Russel, Terborg & Powers, 1985) selection (Terpstra & Rozell, 1993) appraisals (Borman, 1991) and compensation (Milkovich, 1992) to firm financial performance. Huselid's (1995) work linking an index of HR practices to both financial and market outcomes and MacDuffie's (1995) study linking bundles of HR practices to productivity and quality exemplified a progression toward examining the link between systems of HR practices and performance. In

fact, academic interest in showing HR's impact on firm performance is evidenced by the fact that in the past 2 years three journals (Academy of Management Journal, 1996, No. 4; Industrial Relations, 1996, No. 3; and International Journal of Human Resource Management, 1997, No. 3) have devoted special issues to research establishing this linkage.

Thus, both research and practice have seen an increasing preoccupation with linking HRM to the firm's performance. In spite of this emphasis, current research may not provide sufficient justification for the function for three reasons. First, while a majority of the published studies do show significant relationships between HR and firm performance, these relationships are neither universal nor consistent (Becker & Gerhart, 1996; Wright & Sherman, in press). Second, while models of strategic HRM imply firm performance as the dependent variable of ultimate performance, theory building in the area requires greater precision regarding how firm performance should be defined and assessed (McMahan, Virick & Wright, in press; Wright & McMahan, 1992; Wright & Sherman, in press). Finally, from the standpoint of HR practitioners seeking to justify their programs along side those of their colleagues in accounting and finance, a focus on accounting and financial measures of performance may be futile, as it requires competing according to accounting rules, time frames and goal-value assumptions (Pfeffer, 1997).

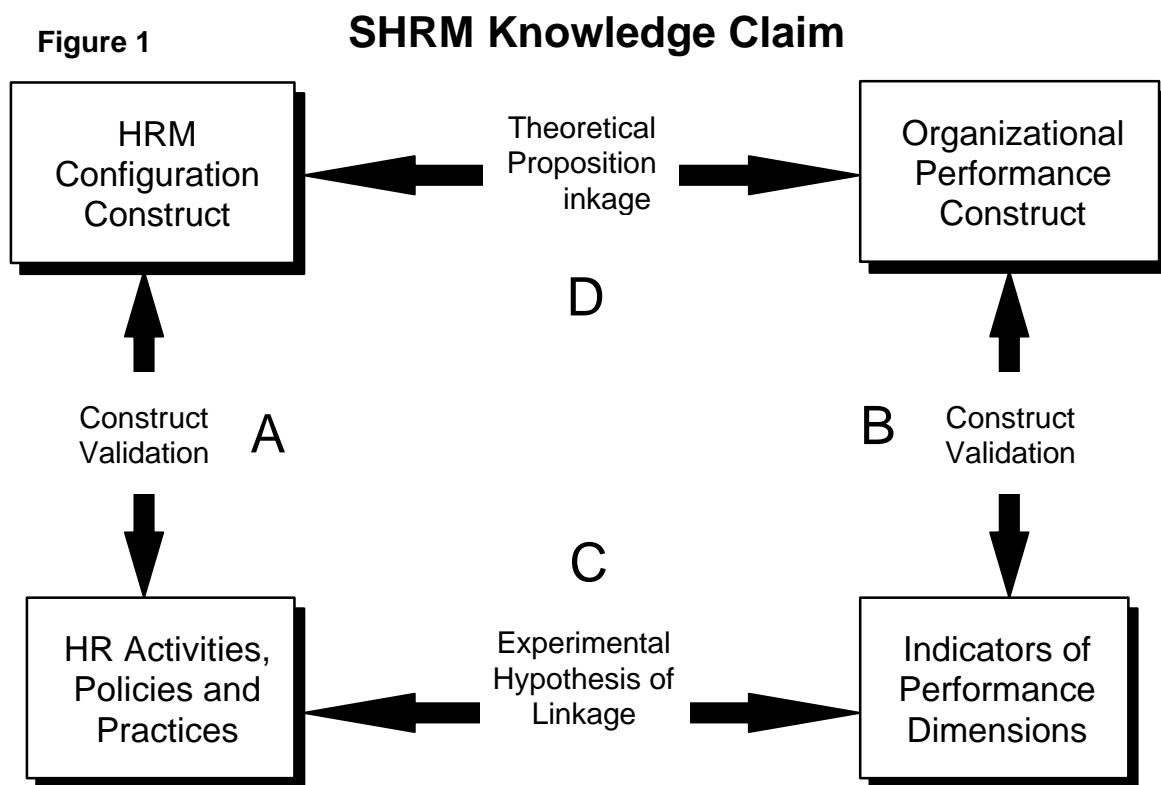
Thus, the purpose of this paper is to review the measures of firm performance that have been used in strategic HRM research, and to provide some recommendations for how the field might expand both its conceptual definition of performance, as well as broaden the measures used to assess the construct. In order to accomplish this, we will first examine the concept of construct validity and its importance in organizational research. We will then examine the construct of performance within both the strategy and strategic HRM literatures. We will then analyze the ways that performance has been operationalized in strategic HRM research. Finally, we propose some suggested future directions for assessing performance in this research including a performance information market concept as a means for addressing the challenge of construct definition within this stream of research.

Construct Validity

Construct validity concerns the interface of psychometric and theoretical issues (Wright & McMahan, 1992). Schwab (1980) defined construct validity as "the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure or manipulate that construct (p. 6). This differs from substantive validity, which is

concerned with the relationship between two different constructs. The construct validation process consists of rigorously defining the referent construct, demonstrating internal consistency of the measure, demonstrating both the measure’s convergence with other measures of the construct and divergence from measures of other constructs, and specifying and substantiating its relationship with other constructs in the nomological net (Cook & Campbell, 1979; Nunally, 1978; Schwab, 1980).

The importance of construct validity in the theory building process is often underestimated. Bacharach’s (1989) model of theoretical social scientific inquiry examines the relationships among constructs, theory and the research process (Bacharach, 1989). (See Figure 1.) In this model, four links are proposed. Links A and B represent construct validity, or the relationship between constructs and operationalized measures of those constructs. D represents the theoretically specified relationship between two constructs of interest and C represents the empirically observed relationship between the respective measures of the constructs. The importance of construct validity stems from the fact that within the model, any one of the links can be inferred as valid only to the extent that the other three are demonstrated or assumed to be valid. Thus, if a statistically significant relationship at C is observed, the validity of the theoretical proposition D can only be inferred to the extent that both the A and B (construct validity) linkages can be convincingly assumed or demonstrated empirically.



In fact, Schwab stated that a consequence of inattention to construct validity concerns is that “our knowledge of substantive relationships is not as great as is often believed, and (more speculatively) not as great as would be true if the idea of construct validity received greater attention,” (1980: 4). In other words, when inadequate attention is paid to construct validity, our knowledge of substantive relationships is deficient. Such deficiency impedes the theory building process (Bacharach, 1989; Schwab, 1980). Given the calls for greater theoretical development in the field of strategic HRM (Becker & Gerhart, 1996; McMahan et al., in press; Wright & McMahan, 1992), it seems logical to examine the construct validity of the field’s major dependent variable: organizational performance. The lack of clear definition and validity for a performance construct may be the limiting factor in current strategic human resource management research.

The Organizational Performance Construct

Organizational Performance in Other Fields

Organizational performance is probably the most widely used dependent variable in organizational research today yet at the same time it remains one of the most vague and loosely defined constructs. The struggle to establish a meaning for performance has been ongoing for many years, and is not limited to the field of strategic HRM. Over thirty years ago, Katz and Kahn dryly commented that, “The existence of the problem of developing satisfactory criteria of organizational performance is clear enough; its solution is much less obvious” p150 (1966: 150). Even twenty years ago Scott lamented the state of measures of organizational effectiveness, concluding, “After reviewing a good deal of the literature on organizational effectiveness and its determinants, I have reached the conclusion that this topic is one about which we know less and less.” (1977: 63). More recently, Murphy, Trailer & Hill, after reviewing measures of performance in entrepreneurial research, concluded that, “... the lack of construct validity for what we call performance is so clear that we as a field should consider discontinuing the use of the term in research” (1996: 21).

Within the strategy field, the focus of attention on the performance construct has been almost entirely on financial measures of performance (Rowe, Morrow & Finch, 1995). Conceptually, it has been viewed as the comparison of the value created by a firm with the value owners expected to receive from the firm (Alchian & Demsetz, 1972; Barney, 1995). Venkatraman and Ramanujam (1986) noted that a narrow definition of performance “...centers on the use of simple outcome-based financial indicators that are assumed to reflect the

fulfillment of the economic goals of the firm,” (1986: 803). They argued that the narrow performance construct of “financial performance” had dominated the strategic management literature, and proposed a broader performance construct of “business performance” that would include both financial and operational (new products, product quality, market share) indicators. In addition, they proposed a construct of “organizational effectiveness” which would consist of business performance plus account for the accomplishment of the superordinate goals held by multiple stakeholders.

Organizational Performance in Strategic HRM

Wright and McMahan (1992) defined strategic HRM as “the pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals.” (p. 298). Implicit in this definition is that the ultimate goal of strategic HRM is to contribute to organizational performance (i.e., the achievement of the firm’s goals), however that performance is defined. Considerable research has attempted to test strategic HRM propositions, usually with the ultimate criterion being how strategic HRM contributes to firm financial performance (Dyer & Reeves, 1995; Wright & Sherman, in press).

Within the field of strategic HRM, Dyer and Reeves (1995), in their review of research on the efficacy of “bundling” HR practices, proposed four possible types of measurement for organizational performance: 1) HR outcomes (turnover, absenteeism, job satisfaction), 2) organizational outcomes (productivity, quality, service), 3) financial accounting outcomes (ROA, profitability), and 4) capital market outcomes, (stock price, growth, returns). They proposed that HR strategies were most likely to directly impact human resource outcomes, followed by organizational, financial, and capital market outcomes. This stemmed both from the facts that HR strategies are primarily designed to impact HR outcomes, and that the increasing complexity of factors which influence higher level outcomes would diminish the relative contribution of HR factors to those outcomes. They suggested these facts, coupled with the reality that human resource outcomes are deficient from the standpoint of most executives might explain why most of the strategic HR research has focused on organizational outcomes rather than the other three.

Note that implicit in this model, as well as others (e.g. Huselid, 1995; Truss & Gratton, 1994; Wright & Snell, in press) is the basic idea that outcomes can be differentiated at hierarchical levels, with outcomes at one level contributing (along with other outcomes) to outcomes at the next level. While each model differs in the number of levels and the exact

outcomes, a generic form of the model is that HR practices have their most direct impact on HR outcomes, which in turn, contribute to higher level organizational performance constructs.

The following section presents a detailed examination of the types of measures of firm performance that have been used in strategic HRM research. By reviewing the measures used, we sought to answer 3 basic questions: (1) What kinds of measures are being used, (2) are the types of measures systematically related to aspects of the research such as the level of analysis or source of the information, and (3) what control variables seem to be most often used in this research. We also sought to clarify some of the tacit assumptions that color thinking about organizational performance in hopes of shifting the research focus from where there may be the most current research light to where there is the greatest need for further empirical illumination.

Frequency of Use of Different Measures of Firm Performance

To assess the different types of measures of firm performance that have been used in strategic HRM research, we examined the published literature linking HR practices to organizational-level measures of performance. Studies were gathered from the three special issues noted above, along with other studies of a similar calibre that have appeared in top level HR journals. We limited our search to published studies because we felt it important to examine only those measures used in research studies which have passed a refereeing process. We recognize that this may skew the results if studies using certain types of measures are being systematically rejected (i.e., it is the referee process, and not the research designs which have limited the types of measures). However, if that were the case, the implication might only be that our suggestions regarding performance measures might apply more to reviewers than to researchers.

This investigation builds on work done by Dyer and Reeves (1995) and Paauwe and Richardson (1997). Dyer and Reeves (1995) reviewed 4 studies on the impact of “bundling” HR practices on firm performance. Paauwe and Richardson (1997) identified 9 different studies containing 22 empirically established relationships between HRM and performance. Expanding on these lists, we identified a total of 33 studies on this relationship. Of these 29 were found to have quantifiable comparable variables (empirical data). Thus, our analysis is based on the empirical results of the 29 studies containing 80 distinct observations of an empirically tested link between HRM and organizational performance.

In categorizing the different measures, we adapted the typology offered by Dyer and Reeves (1995). These authors broke down performance measures into human resource, organizational, financial, and market measures. We followed these categories as closely as possible using only the preselected group of articles from the journals previously mentioned. In our analyses, the human resource category consisted of 3 studies that measured turnover. The organizational category contained measures of productivity, quality, customer satisfaction and manufacturing flexibility. The financial accounting category included measures of return on assets (ROA) return on equity (ROE), profits, sales and employee value. The financial market category consisted of measures of stock price, and two other derived market values.

In addition to the performance measure, we classified the studies based on the level of analysis, the type of HR practices examined, the source of the performance measures, and the types of control variables used. Level of analysis was coded as the firm (corporation), business unit (SBU), or plant (site). The source of the performance measure was classified as being either via survey, company records, or publicly available information. The HRM variables were grouped into six categories: work organization, high performance work systems (HPWS), strategic HRM (SHRM), participation and motivation, training and selection, and compensation. The studies were also coded as to control variables used in order to provide guidance regarding what kinds of control variables seem most popular and/or appropriate. The purpose of the data collection was not to perform a meta-analysis to determine a population effect size, but rather to simply assess areas of opportunity for further research and to see what the empirical research to date reveals about an implicit meaning of performance for SHRM.

The results of the analysis are frequency tables shown in tables 1 through 3. The tables presented are for a descriptive look at what progress has been made in establishing empirical linkages and what gaps still exist particularly with respect to converging on a meaningful construct for organizational performance.

Table 1

DV TYPE	Level of DV Analysis			Total
	Firm	Bus Unit	Plant	
HR Outcomes	2	0	1	3
Organization Outcomes	14	4	16	34
Accounting Measures	21	1	2	24
Fin Market Measures	19	0	0	19
Total	56	5	19	80

It is immediately apparent that HRM outcomes have indeed become less interesting in the context of organizational performance as there were few studies reporting HRM outcomes (only three in this set that reported a turnover variable outcome). This would confirm what Dyer and Reeves pointed as the deficiency of HRM outcomes to be credible indicators or meaningful representations of organizational performance.

Noticeable from Table 1 is the paucity of studies done at the business unit level. Only 5 of the 80 relationships came from studies at the business unit level. In addition, 56 of the 80 relationships were at the firm level. The preference for firm level performance measures is not surprising given both the concern with demonstrating HR's impact on firm level performance and the relatively easy availability of these measure from public data bases such as Compustat. However, the preference for firm over business level measures may be problematic for both empirical and theoretical reasons. Empirically, the numerous complex factors that operate to determine performance at this level (Dyer & Reeves, 1995) may make it difficult to get accurate estimates of the impact of HR practices. More importantly, theoretically, one would expect a tighter link between HR and strategy at the business rather than firm level (Chadwick & Cappelli, in press; Wright & Sherman, in press). Clearly there is a need for more empirical work at the business unit level to determine linkages between HRM and performance in the context of strategic parameters influencing choice and direction of HRM policies and practices.

Table 2 reports the source of the data for the dependent variable used as a measure of organizational performance. Not surprisingly, public data is most often the source for market measures and surveys are the most frequent source of organizational, HR, and attitudinal outcomes. While not overly surprising given the characteristics of the type of data in each

case, the fact remains that what is being called organizational performance is construed differently and obtained from very different sources. Clearly, there is room to integrate these different sources of data into a broader construct of organizational performance instead of just choosing from among them.

Table 2

DV TYPE	Source of DV Data			Total
	Survey	Company	Public DB	
HR Outcomes	3	0	0	3
Organization Outcomes	25	7	2	34
Accounting Measures	4	2	18	24
Fin Market Measures	2	0	17	19
Total	34	9	37	80

Table 3 shows a surprisingly good distribution across the different HRM variable categories. However, it is important to note that many authors have questioned the operationalizations of the HR construct itself. Dyer and Reeves (1995) noted a failure to observe significant overlap among items across the “bundles” of purported effective HR practices in the 4 studies they reviewed. Becker and Gerhart (1996) also noted very little overlap of items in the 7 studies they reviewed. Wright and Sherman (in press) noted the need to come to consensus on both which HR practices should be measured and how they should be measured. To empirically investigate the full relationship between HRM and performance will require many more studies and much closer attention to the operationalization of both the HR and performance constructs.

Table 3

DV TYPE	HR Independent Variable						Total
	WorkOrg	HPWT	SHRM	PartMot	TrainSel	Comp	
HR Outcomes	0	1	1	1	0	0	3
Organization Outcomes	7	3	8	4	6	6	34
Accounting Measures	3	0	3	5	4	9	24
Fin Market Measures	0	5	2	5	2	5	19
Total	10	9	14	15	12	20	80

Finally, control variables are used in research because they are related to both the independent (HR) and dependent (performance) variables. Failure to control for such variables can result in either observing spurious relationships (observed relationships which are entirely due to both variables covarying with the control) or suppression (when no observed relationship is observed between the IV and DV because one of those variables has a negative relationship with the control) (Schmitt & Klimoski, 1988). Thus, we wanted to identify those variables that strategic HRM researchers have believed to be relevant to control for in the HR - performance relationship. The most common control variable by far is size (75% of studies), followed by Industry (35%), age (27%), location (24%) strategy (18%), and Unionization (11%). This variance in controls used across studies may be due to the fact that the large number of plant level studies do not allow for most of the controls commonly used. Another reason may be the different hypothetical frameworks employed do not cover all of these control variables. While using only study-relevant controls is appropriate for each research endeavor, the poor overlap of control variable usage makes comparative analysis among studies difficult or impossible.

Surprisingly, if strategic HRM propositions are correct that strategy is related to HR practices and fit between strategy and HR is a precondition for effective performance then business strategy seems clearly underutilized as a control variable. This may stem from the fact that the plethora of typologies and matrices make strategy definition and codification difficult. Few studies seem willing to venture beyond familiar Miles and Snow (1978) or Porter (1985) frameworks. Chadwick and Cappelli (in press) have noted problems with such measures of strategy in strategic HRM research.

The variance in use of controls may be somewhat problematic. One would expect that if control variables stem from theoretical analysis of the types of variables that might be relevant to the HR - performance relationship, then a consistent set of variables would emerge. Perhaps the field is too young as yet to have identified such variables., Without a clear and consistent definition of performance researchers are left to define the dependent variable according to what exogenous variable information may be available or particularly pertinent. Their choice of level of analysis may likewise simply be that which is convenient. Certainly this speaks for the need in future research and for the need to move beyond the circle of light below the lamppost of traditional micro HRM approaches in the search for HRM significance at the organizational level.

Towards an Expanded Model of Organizational Performance

The previous analysis identified some of the empirical trends in the use of performance measures in strategic HRM research. As noted, while this research has helped advance the field, the measures used seem to have some problems, that if not rectified, might result in impeding theoretical development. In this section, we will examine some of the implications and suggestions for measuring firm performance in future strategic HRM research. These implications include varying the levels of analysis, distinguishing between efficiency and effectiveness measures, integrating purpose and stakeholders into the performance construct, and dealing with timing issues.

Varying Levels of Analysis

Again, our analysis indicates that significant research has tied HR to performance at the firm and the plant levels of analysis, but that little research has examined this relationship at the level of the SBU. With regard to specific HR practices, it is quite likely that a strong link should exist at the level of the plant or site as MacDuffie (1995), Arthur (1994) and Delery and Doty (1996) have demonstrated. In addition, as previously noted, significant theoretical rationale exists for a tightly linked relationship between strategy and HR practices at the level of the SBU, yet this relationship seems virtually untested. Finally, the link between HR practices and corporate strategy and corporate performance are less theoretically clear, yet this seems to have been the focus of most of the strategic HRM research.

Wright and Sherman (in press) suggested that one of the reasons for the failure to find support for the efficacy of “fit” between HR and strategy may be a failure to recognize level of

analysis issues. Similarly, Chadwick and Cappelli (in press) noted with regard to the operationalization of strategy measures that level of analysis issues are important. For example, they suggest that production strategies (e.g., lean manufacturing) are more relevant to most auto assembly plant managers rather than Porter's generic cost/differentiation/focus (business level) strategy might be. In addition, within the strategy literature, corporate-level strategies consist of decisions regarding the proper level and type of diversification and the types of controls used by corporate headquarters to manage different business units (Hill & Hoskisson, 1987; Hoskisson, 1987; Hoskisson, Hitt & Hill, 1991; Rowe & Wright, 1997), rather than the cost/differentiation/focus typology. Interestingly, most of the measures of strategy have been based on the Porter typology (a business level typology), yet only 7% of the effect sizes are from studies at the business level. The remaining 83% of the effect sizes come from research at either the corporate or plant level, where a business-level typology is less appropriate (Chadwick & Cappelli, in press). In addition, corporate-level strategies (i.e., diversification, controls) remain untested in strategic HRM research at the corporate level (Rowe & Wright, 1997).

In defense of the corporate level of analysis, Becker and Huselid argued "In our work, we have chosen to emphasize the link between HPWS and *corporate* financial performance. We do not argue that this is the only appropriate level of analysis, or that this research question is not without methodological challenges. It is, however, ultimately the *raison d'être* for a strategic HRM role in a firm." (italics authors) (Becker & Huselid, in press): 14. Their candor is to be appreciated even if the assumptions about SHRM are sweeping. While we do not question the validity of examining this relationship at this level, we believe that given the methodological and theoretical problems, it has been overemphasized in strategic HRM research.

Distinguishing between Efficiency and Effectiveness Measures

Defining the performance construct necessarily entails a discussion of both effectiveness and efficiency simultaneously. Here effectiveness means the achievement of objectives. It is clearly a goal oriented measure (as opposed to a natural systems measure) (Perrow, 1968). Efficiency refers to rates of resource usage in achieving objectives. To balance these two dimensions requires an examination of assumptions regarding the objectives of the organization in order to make a meaningful assessment of achievement. For example, Ostroff & Schmitt (1993) demonstrated that organizations have different views of

performance in part because they view the relative importance of effectiveness and efficiency differently. Ostroff & Schmitt (1993) and Steers (1975) both demonstrated that organizations have different goals relating to effectiveness and efficiency measures. This means that one simple indicator may not be sufficient to measure a broad array of organizations.

It would therefore seem reasonable that since different organizations have different goals and objectives with regard to what effective or efficient means, there should be a dynamic mechanism of measurement that is able to account for these differences. At the very least, assumptions about what the organizational objectives are taken to be could be made much more explicit. Probably some constraint is also in order regarding studies that link an aspect of HRM with one particular outcome measure. These studies often banner an HRM connection to organizational performance when a much more specific and narrow linkage is actually what has been investigated.

Considering Organizational Purpose and Stakeholders

Related to the issue of efficiency/effectiveness is the issue of purpose. To clarify organizational performance, it is necessary to consider notions of organizational purpose since outcome evaluation dictates an articulation of purpose. Steers, for example, analyzed 17 models of organizational effectiveness and found that the field was not very effective at measuring effectiveness because researchers for the most part ignored organizational goals. He concluded that "...attempts to measure effectiveness should be made with reference to the operative goals that an organization is pursuing; that is, criterion specification should be flexible enough to account for diversity in goal preferences." (Steers, 1975): 555.

Purpose is necessary for performance measurement because it is not the simple possession of an attribute (say a high sales volume or low turnover) but the utilization of that attribute toward some end that reflects on performance. A specific utilization implies a purpose or goal toward which the resource can either be used efficiently (and achieve the goal) or used poorly, not used or used for alternatives). For example, a high sales volume could be used to pay high wages or it could be used to increase stockholder returns or even to pay for toxic waste cleanup. Thus having a high sales volume in itself does not necessarily indicate organizational performance.

The discussion of purpose necessarily causes a reconsideration of stakeholder models of organizations because purpose implies a beneficiary. Stakeholder theory is by no means new to HR but was in fact one of the historical arguments for supporting the HR function. HR

was supposed to address a different group of stakeholders (employees) than the investor relations group or the public relations department. A stakeholder model claims many individuals and groups have an interest in the existence, processes, outcomes and reputation of an organization beyond the recognized interest of capital owners. The stakeholder discussion focuses the attention of organizational research on the dependent variable because the choice of organizational performance indicator implies a chosen relative importance of different stakeholders.

For profit firms are assumed by many researchers to have a goal of wealth maximization for their shareholders. This is clearly the position of Becker, Huselid, and Welbourne (Becker & Huselid, in press; Huselid & Becker, 1997; Welbourne & Andrews, 1996). However, other researchers focus on labor productivity, safety or equality in compensation (Cowherd & Levine, 1992; MacDuffie, 1995). In addition, as previously noted, researchers within the strategy literature have called for expanding measures of organizational performance to include the concept of purpose and to account for the desires of multiple stakeholders (Venkatraman & Ramanujam, 1986). The selection of performance criteria implies a set of assumptions about the relative importance of possible measures of performance in relation to organizational goals and the interests of different stakeholders

Recognizing the limitations of single indicator measures of performance has led to multi-dimensional systems of performance measurement. The correlation of accounting data and non-accounting measures is an old question in organizational research. Johnson and Kaplan (1987) argue that accounting data is not really objective at all in the sense of it being constructed for accounting and management purposes (Johnson & Kaplan, 1987). Johnson (1992) proposed that firms adopt more quality measures in performance evaluations to better align organizational incentives with output oriented to the long term success of the enterprise (Johnson, 1992).

Kaplan and Norton (1996) have established the practice of designing performance indicators around the various stakeholders at the individual level as a means to align managerial incentive systems with broader organizational goals. This “balanced scorecard” approach entails identifying the 3-4 major stakeholder groups (usually including shareholders, employees, and customers), and then developing objective indicators of performance with regard to each group (e.g., ROE, turnover, and market share, respectively). This balanced

scorecard approach has similarly been advocated as a way for HR to demonstrate its impact on firm performance (Ulrich, 1997; Yeung & Berman, 1997).

Another approach has been to combine a variety of seemingly disparate measures into a composite score for performance. Martell and Carroll's (1995) study of SBU performance is an example of this multi-dimensional weighted performance measurement system (MDWP). The items on a MDWP type of measure do not necessarily correlate with each other. In fact, they are theoretically selected specifically because they do not load onto a single factor. Maximizing product quality may not maximize profits or minimize costs. It is the Platonic approach to performance measurement, "moderation in all things," as the key to a long and satisfied organizational life. The questions remains of how to build a meaningful performance construct from multi-item factors that must be optimized together.

The appeal of a MDWP approach derives from the implied sub-maximization of some measures to achieve a higher correlation with the abstract construct of organizational performance through an optimization of the combined measures. Three assumptions lie behind the design of a MDWP. The first is that the different dimensions included in the scale cannot be approximated by one of the items alone. Second, maximum organizational performance does not necessarily mean maximum achievement on any one particular item in the scale. Interaction is assumed. Third, time is recognized as an explicit dimension of measurement as far as goal setting. Martell and Carroll found no short-term effect for SHRM but also pointed out that it was probably not visible in cross-sectional data. (Martell & Carroll, 1995) It may be that cross-sectional SHRM studies are overly limited in their ability to detect any HRM-Organizational Performance linkage. We will return to this issue later.

Given the need to integrate organizational purpose and stakeholder interests, it seems likely that organizational performance will develop into a multi-dimensional construct. Consequently, there will have to be mechanisms for taking into account different organizational circumstances. This will likely involve some form of weighting scheme. The dimensions can be weighted in line with the stated organizational objectives surrounding each area of activity or policy to produce a desired organizational outcome against which actual outcomes can be compared. What is still needed is an external set of performance measures and an external assessment of what the organizational objectives should be. Both of these complications will be addressed with the PIM model presented in this paper.

There are different dimensions of performance and different weightings of importance for different organizations. The organizational performance construct must be contingent to the organization and target audience including the utility of the performance data. Along with developing multi-dimensional performance measures it will be necessary to rejoin effectiveness and efficiency conceptually. Multi-dimensional performance implies for example that a school must both meet objectives (effectiveness) and meet standards (efficiency) of operation. Just as managers face an optimization choice under a multi-dimensional incentive program, organizations in reality face similar optimization choices rather than simple one-dimensional maximization options. Research constructs for organizational performance will take this multi-faceted aspect of organizational performance into account in the continuing theoretical development of SHRM.

There really is no such thing as organizational performance without organizational purpose and there is no meaningful purpose apart from some specific stakeholder. This concept is what has been called the 'ultimate construct' stream of thinking traceable from earliest philosophers but also recently apparent in specific reference to organizational studies (Pedhazur & Schmelkin, 1991; Schwab, 1980). The ultimate construct here is clearly the abstraction of organizational performance and it clearly means different things to different people. This paper suggests an approach toward simplifying the stakeholder issue with regard to the ultimate construct through what we call a Performance Information Market system.

The Performance Information Market (PIM) system will allow organizations to be evaluated on their stated objectives and allow stakeholders to evaluate both the organizational objectives themselves and how well the organization is achieving them. Four distinct performance information markets are proposed: 1) the financial market, 2) the labor market, 3) the consumer (product) market, and 4) the political (social) market. Organizations compete in all four markets for success though with different preferential weights of importance.

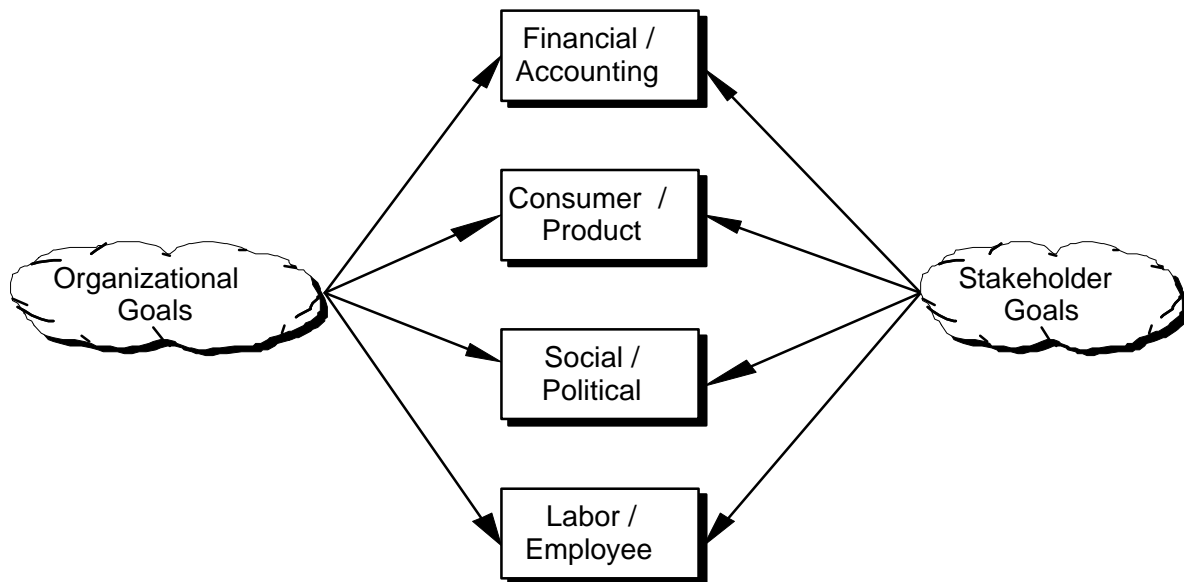
Without knowing the relative importance of these performance information markets to the organization, the organization's objectives and therefore its effectiveness cannot be adequately determined. It seems strange to think of the IRS as an organization driven by maximizing profits. It is equally absurd to assess GM primarily on its job creation capabilities or a public school system on its financial efficiency. That's because these organizations have different weights of importance for the four different PIM's. Nevertheless, a school system grossly inefficient over a long period of time loses credibility and probably viability in the

political market. In other words, organizations play in all four PIM's but with very different weights and different time frames. Researchers routinely recognize these different emphases in their choice of performance measures but have not had a way to integrate the variability across organizations.

Figure 2 is a simple representation of the PIM concept. Organizations set goals and strive to achieve them. Stakeholders have expectations and standards they look for in assessing organizational performance. By categorizing the various types of organizational performance measures into four information markets, these two groups can arrive at a market clearing 'price' for participation. For example, if a for-profit firm is entirely concerned about financial returns while it dumps toxic waste in the river, environmental performance demands will rise and exert pressure for the firm to increase its internal weighting of the importance of measures of performance relevant to the social/political performance information market. A good example of the interplay of these markets is the story of Ben & Jerry's ice cream business. The well publicized struggle over salary and the appointment of a new executive officer were clear examples of their attempts to manage performance simultaneously in different PIM's.

Figure 2

Organizational Performance Information Markets



Likewise, the public expects fairness from the IRS (a high weight on a social PIM) yet the IRS also clearly participates in the labor PIM. Depending on the organization structure and purpose, the weighting of the PIM's will vary. These weightings will also change with time and circumstance. (the Exxon Valdez accident raised Exxon's relative importance in the Political/Social market). This framework of PIM's may provide a mechanism to integrate and quantify organizational objectives to build a multi-dimensional dynamic construct for organizational performance. Through the use of surveys and ranking studies combined with already in use objective performance measures, scales for each PIM can be constructed with very broad range of application.

Considering Timing Issues

Finally, strategic HRM research must recognize that organizations exist over time. They do not necessarily have an endpoint as a goal. To obtain many of the measures used to assess organizational performance a time frame is arbitrarily chosen. It may be an accounting cycle, a business cycle or other period of time. Over the chosen time period an intermediate criterion is used to obtain a point estimate of performance in time. Often an assumption is made of linearity of change over the time period. The arbitrary selection of a time frame is a compromise that is accepted. However, it is important to be careful about selecting a time frame because time frames can be stakeholder specific. Financial returns do not coincide with cycles of toxic waste dumping. Agency theory may help explain some of the opportunistic behavior when different stakeholder time frames do not coincide. The PIM model allows for some differentiation of time frames because the different PIM's themselves can carry inherently different time bases. By having four different markets, the non-financial measures can be released from the rigid and short term financial reporting cycles. The time constraints of financial information markets is a commonly cited obstacle to achieving more robust measures of organizational performance. Recognizing different PIM's allows a relaxation of the need for singularity of time period in the performance construct.

In one sense, cross-sectional research which is relational by definition, can never hope to explain HRM causal effects on performance, which are time-laden effects. Issues of simultaneity and reverse causation will continue to plague research in this area until consistent and logical time frames are incorporated into the performance measures. Performance will become a more explicitly time dependent construct in future work of HRM researchers

because research that attempts to show an SHRM effect will need to be more than cross-sectional in nature. (Ostroff & Schmitt, 1993)

Finally, there may be some lessons for SHRM to learn from the development of macroeconomics. Von Mises argued vehemently against the Keynesian logic of using averages to predict means because the aggregates and means are not really related at any one point in time (Mises, 1990). Indeed, a reason of the downfall of Keynesian theory was its inability to explain individual behavior in response to money supply or taxation in relation to economic growth. As Hayek and later Friedman pointed out, it is the microeconomic elements of individual action, which cause sequential effects over time to affect the relative structures of price and production. To avoid the same pitfall, SHRM must capture the sequential effect of micro HR effects over time in assessing organizational performance with respect to different stakeholder groups. Then SHRM may become more effective at developing a theoretical base for linking macro HR structures and strategies with micro HR policies and practices.

Conclusion

Like the drunk in the middle of the street, early SHRM research to link HRM with organizational performance has spent much effort looking where there is already light. As our quick analysis has shown, there are gaps and thin spots where much more empirical work needs to be done. Importantly, future empirical work to formulate a clear and comparable construct for organizational performance that integrates the stakeholder markets with respect to time will require expanding the concept of performance. The PIM model is suggested as a means of doing that. Instead of searching for the universal theory of HRM under the lamppost of stock price, the recommendation of this paper is that the field should establish construct validity and dimensionality that will allow development of theories of macro HRM for all types of organizations: profit, not for profit, government agencies and perhaps even universities.

Universal application of macro HRM models of analysis with dynamic constructs for performance may prove more achievable and useful than the search for a single universal linkage of micro HR to a particular measure of organizational performance. Just as happened with the field of economics, human resource management is developing a clearly distinguishable macro side. The HR field must face the questions of micro-macro linkage, bias in aggregation, and plausible mechanisms of action to connect individual human activity in the form of HRM with organizational performance. How these questions are answered will in large

part determine the direction and utility of the field in the next decade. A case has been made for expanding the concept of performance to enable establishment of a general construct for organizational performance through the adoption of a performance information market concept.

References

- Alchian, A. & Demsetz, H. (1972). Production, information costs and economic organization. American Economic Review, 62, 777-795.
- Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. Academy of Management Journal, 37(3), 670-687.
- Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. Academy of Management Review, 14(4), 496-515.
- Banker, R. D., Field, J. M., Schroeder, R. G., & Sinha, K. K. (1996). Impact of work teams on manufacturing performance: A longitudinal field study. Academy of Management Journal, 39(4), 867-890.
- Banker, R. D., Lee, S.-Y., Potter, G., & Srinivasan, D. (1996). Contextual analysis of performance impacts of outcome-based incentive compensation. Academy of Management Journal, 39(4), 920-948.
- Barney, J. B. (1995). Advances in Strategic Management: Theory and Practice, Reading, MA: Addison-Wesley Publishing Company.
- Becker, B., & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. Academy of Management Journal, 39(4), 779-801.
- Becker, B. E., & Huselid, M. A. (in press). High performance work systems and firm performance: A synthesis of research and managerial implications. In G. R. Ferris (Ed.), Research in Personnel and Human Resource Management (Vol. 16,). Greenwich, CT: JAI Press.
- Berg, P., Appelbaum, E., Baily, T., & Kallenberg, A. L. (1996). The performance effects of modular production in the apparel industry. Industrial Relations, 35(3), 356-373.
- Blasi, J., Conte, M., & Kruse, D. (1996). Employee stock ownership and corporate performance among public companies. Industrial and Labor Relations Review, 50(1), 60-79.
- Borman, W. C. (1991). Job behavior, performance, and effectiveness. In M. D. Dunnette & L. M. Hough (Eds.), Handbook of Industrial and Organizational Psychology (2nd ed., pp. 271-326).
- Chadwick, & Cappelli. (in press).
- Cook, T. D. & Campbell, D. T. (1979). Quasi-experimentation: Design & Analysis Issues for Field Settings, Chicago: Rand McNally.
- Cooke, W. N. (1994). Employee participation programs, group-based incentives, and company performance: A union-nonunion comparison. Industrial and Labor Relations Review, 47(4), 594-609.

- Cowherd, D. M., & Levine, D. I. (1992). Product quality and pay equity between lower-level employees and top management: An investigation of distributive justice theory. Administrative Science Quarterly, *37*, 302-320.
- Davidson, W. N. I., Worrell, D. L., & Fox, J. B. (1996). Early retirement programs and firm performance. Academy of Management Journal, *39*(4), 970-984.
- Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. Academy of Management Journal, *39*(4), 949-969.
- Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency and configurational performance predictions. Academy of Management Journal, *39*(4), 802-835.
- Dunlop, J. T., & Weil, D. (1996). Diffusion and performance of modular production in the U.S. Industrial Relations, *35*(3), 334-355.
- Dyer, L., & Reeves, T. (1995, May 31-June 4, 1995). Human resource strategies and firm performance: What do we know and where do we need to go? Paper presented at the 10th World Congress of the International Industrial Relations Association, Washington, DC.
- Flood, P. C., Fong, C.-M., Smith, K. G., O'Regan, P., Moore, S., & Morley, M. (1997). Top management teams and pioneering: A resource-based view. International Journal of Human Resource Management, *8*(3), 291-306.
- Gerhart, B., & Milkovich, G. T. (1990). Organizational differences in managerial compensation and financial performance. Academy of Management Journal, *33*(4), 663-691.
- Hambrick, D. C., & Finkelstein, S. (1995). The effects of ownership structure on conditions at the top: The case of CEO pay raises. Strategic Management Journal, *16*, 175-193.
- Hansen, G. S., & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. Strategic Management Journal, *10*, 399-411.
- Hill, C. W. L., & Hoskisson, R. E. (1987). Strategy and structure in the multi-product firm. Academy of Management Review, *12*, 331-341.
- Hoskisson, R. E. (1987). Multidivisional structure and performance: The contingency of diversification strategy. Academy of Management Journal, *30*, 625-644.
- Hoskisson, R. E., Hitt, M. A., & Hill, C. W. L. (1991). Managerial risk taking in diversified firms: An evolutionary perspective. Organizational Science, *23*, 296-314.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. Academy of Management Journal, *38*(3), 635-672.

- Huselid, M. A., & Becker, B. E. (1996). Methodological issues in cross-sectional and panel estimates of the human resource-firm link. Industrial Relations, 35(3), 400-422.
- Huselid, M. A., & Becker, B. E. (1997, January 3, 1997). The impact of high performance work systems, implementation effectiveness, and alignment with strategy on shareholder wealth. Paper presented at the 1997 Academy of Management Annual Meetings, Human Resource Division, Boston, MA.
- Huselid, M. A., Jackson, S. E., & Schuler, R. S. (1997). Technical and strategic human resource management effectiveness as determinants of firm performance. Academy of Management Journal, 40(1), 171-188.
- Johnson, H. T. (1992). Relevance Regained: From Top-down Control to Bottom-up Empowerment. New York: Free Press.
- Johnson, H. T., & Kaplan, R. S. (1987). Relevance Lost: The Rise and Fall of Management Accounting. Boston: Harvard Business School Press.
- Kalleberg, A. L., & Moody, J. W. (1994). Human resource management and organizational performance. American Behavioral Scientist, 37(7), 948-962.
- Kaplan, R. S., & Norton, D. P. (1996). The Balanced Scorecard: Translating Strategy into Action. Boston: Harvard Business School Press.
- Katz, D., & Kahn, R. L. (1966). The social psychology of organizations. New York: John Wiley & Sons.
- Katz, H. C., Kochan, T. A., & Weber, M. R. (1985). Assessing the effects of industrial relations systems and efforts to improve the quality of working life on organizational effectiveness. Academy of Management Journal, 28(3), 509-526.
- Keefe, J. H., & Katz, H. C. (1990). Job classifications and plant performance in the auto industry. Industrial Relations, 29(1), 111-118.
- Kelley, M. R. (1996). Participative bureaucracy and productivity in the machined products sector. Industrial Relations, 35(3), 374-399.
- Koch, M. J., & McGrath, R. G. (1996). Improving labor productivity: Human resource management policies do matter. Strategic Management Journal, 17, 335-354.
- MacDuffie, J. P. (1995). Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. Industrial and Labor Relations Review, 48(2), 197-221.
- Martell, K., & Carroll, S. J. (1995). How strategic is HRM? Human Resource Management, 34(2), 253-267.
- McMahan, G. Virick, & Wright, P. (in press). .
- Miles, R. E., & Snow, C. C. (1978). Organizational Strategy, Structure and Process. New York: McGraw-Hill.

- Milkovich, G. (1992). Strengthening the pay performance relationship: The research. Compensation and Benefits Review, 24(6), 53-62.
- Misa, K. F., & Stein, T. (1983). Strategic HRM and the bottom line. Personnel Administrator, 27-30.
- Morrow, C., Jarrett, M., & Rupinski, M. (1997). An investigation of the effect and economic utility of corporate-wide training. Personnel Psychology, 50, 91-119.
- Murphy, G. B., Trailer, J. W., & Hill, R. C. (1996). Measuring performance in entrepreneurship research. Journal of Business Research, 36, 15-23.
- Noe, Hollenbeck, Gerhart, & Wright, P. M. (1997). Human resource management: Gaining a competitive advantage. Burr Ridge, IL: Irwin.
- Nunnally, J. (1978). Psychometric Theory (2nd ed.). New York: McGraw-Hill.
- Ostroff, C., & Schmitt, N. (1993). Configurations of organizational effectiveness and efficiency. Academy of Management Journal, 36(6), 1345-1361.
- Paauwe, J., & Richardson, R. (1997). Introduction to special issue: Strategic human resource management and performance. International Journal of Human Resource Management, 8(3), 257-262.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). Measurement, Design, and Analysis: An Integrated Approach. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Perrow, C. (1968). Organizational goals. In S. D. (Ed.), International Encyclopedia of the Social Sciences (Vol. II,). New York: Macmillan Co. and The Free Press.
- Pfeffer, J. (1997). Pitfalls on the road to measurement: The dangerous liaison of human resources with the ideas of accounting and finance. Human Resource Management, 36(3), 357.
- Pil, F. K., & MacDuffie, J. P. (1996). The adoption of high-involvement work practices. Industrial Relations, 35(3), 423-455.
- Porter. (1985). Competitive Advantage: Creating and Sustaining Superior Performance: Free Press.
- Rowe, W. G., Morrow, J. L. J., & Finch, J. F. (1995,). Accounting, market, and subjective measures of firm performance: Three sides of the same coin? Paper presented at the Unpublished Manuscript.
- Rowe, W. G., & Wright, P. M. (1997). Related and unrelated diversification and their effect on human resource management controls. Strategic Management Journal, 18(4), 329-338.
- Russel, J. S., Terborg, J. R. & Powers, M. L. (1985). Organizational performance and organizational level training and support, Personnel Psychology. 38(4), 849-863.

- Schmitt, N. W., & Klimoski, R. J. (1988). Research Methods in Human Resources Management. In G. R. Ferris & K. Rowland, M. (Eds.), Research Methods in Human Resources Management . Cincinnati, OH: South-Western Publishing Co.
- Schwab, D. P. (1980). Construct validity in organizational behavior. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 2, pp. 3-43). Greenwich, CT: JAI Press, Inc.
- Scott, W. R. (1977). Effectiveness of organizational effectiveness studies, New Perspectives on Organizational Effectiveness (pp. 63-95). San Francisco: Jossey-Bass Publishers.
- Steers, R. M. (1975). Problems in the measurement of organization effectiveness. Administrative Science Quarterly, 20, 546-558.
- Stewart, T. (1996). Taking on the last bureaucracy. Fortune. 133:1, 105.
- Terpstra, D. E., & Rozell, E. J. (1993). The relationship of staffing practices to organizational level measures of performance. Personnel Psychology, 46, 27-48.
- Truss, C., & Gratton, L. (1994). Strategic human resource management: A conceptual approach. The International Journal of Human Resource Management(September), 663-686.
- Ulrich, D. (1997). Measuring human resources: An overview of practice and a prescription for results. Human Resource Management, 36(3), 303.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. Academy of Management Review, 11(2), 801-814.
- Welbourne, T. M., & Andrews, A. O. (1996). Predicting performance of initial public offerings: Should human resource management be in the equation? Academy of Management Journal, 39(4), 891-919.
- Wright, P., Ferris, S. P., Hiller, J. S., & Kroll, M. (1995). Competitiveness through management of diversity: Effects on stock price valuation. Academy of Management Journal, 38(1), 272-287.
- Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. Journal of Management, 18(2), 295-320.
- Wright, P. M., & Sherman, W. S. (in press). Failing to find fit in strategic human resource management: Theoretical and empirical problems. under review.
- Yeung, A. K. & Berman, R. (1997). Adding value through human resources: Reorienting human resources to drive business performance. Human Resource Management, 36(3) 321.
- Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. Academy of Management Journal, 39(4).