



Cornell University
ILR School

Cornell University ILR School
DigitalCommons@ILR

CAHRS Working Paper Series

Center for Advanced Human Resource Studies
(CAHRS)

January 2003

Next Generation SHRM Research: From Covariation to Causation

Patrick M. Wright

Cornell University, pmw6@cornell.edu

Follow this and additional works at: <http://digitalcommons.ilr.cornell.edu/cahrswp>

This Article is brought to you for free and open access by the Center for Advanced Human Resource Studies (CAHRS) at DigitalCommons@ILR. It has been accepted for inclusion in CAHRS Working Paper Series by an authorized administrator of DigitalCommons@ILR. For more information, please contact hlmdigital@cornell.edu.

Next Generation SHRM Research: From Covariation to Causation

Abstract

[Excerpt] In response to the longstanding and repeated criticisms that HR does not add value to organizations, the past 10 years has seen a burgeoning of research attempting to demonstrate that progressive HR practices result in higher organizational performance. Huselid's (1995) groundbreaking study demonstrated that a set of HR practices he referred to as High Performance Work Systems (HPWS) were related to accounting profits and market value of firms. Since then, a number of studies have shown similar positive relationships between HR practices and various measures of firm performance.

While the studies comprising what I refer to as "first generation SHRM research" have added to what is becoming a more convincing body of evidence of the positive relationship between HR and performance, this body tends to lack sufficient data to demonstrate that the relationship is actually causal in the sense that HR practices, when instituted, lead to higher performance. This next generation of SHRM research will begin (and, in fact has begun) to focus on designing more rigorous tests of the hypothesis that employing progressive HRM systems actually results in higher organizational performance. This generation of research will focus on two aspects: demonstrating the HRM value chain, and proving causality as opposed to merely covariation.

Keywords

HR, organization, performance, practices, covariation, research, data

Comments

Suggested Citation

Wright, P. M. (2003). *Next generation SHRM research: From covariation to causation* (CAHRS Working Paper #03-01). Ithaca, NY: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies.

<http://digitalcommons.ilr.cornell.edu/cahrswp/24/>



Center for Advanced Human Resource Studies

CAHRS / Cornell University
187 Ives Hall
Ithaca, NY 14853-3901 USA
Tel. 607 255-9358
www.ilr.cornell.edu/CAHRS/

WORKING PAPER SERIES

Next Generation SHRM Research: From Covariation to Causation

Patrick M. Wright

Working Paper 03 - 01



Next Generation SHRM Research: From Covariation to Causation

Patrick M. Wright
Department of HR Studies
School of ILR
Cornell University
Ithaca, NY 14853-3901
pmw6@cornell.edu

January 16, 2003

<http://www.ilr.cornell.edu/cahrs>

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

Next Generation SHRM Research: From Covariation to Causation

In response to the longstanding and repeated criticisms that HR does not add value to organizations, the past 10 years has seen a burgeoning of research attempting to demonstrate that progressive HR practices result in higher organizational performance. Huselid's (1995) groundbreaking study demonstrated that a set of HR practices he referred to as High Performance Work Systems (HPWS) were related to accounting profits and market value of firms. Since then, a number of studies have shown similar positive relationships between HR practices and various measures of firm performance.

While the studies comprising what I refer to as "first generation SHRM research" have added to what is becoming a more convincing body of evidence of the positive relationship between HR and performance, this body tends to lack sufficient data to demonstrate that the relationship is actually causal in the sense that HR practices, when instituted, lead to higher performance. This next generation of SHRM research will begin (and, in fact has begun) to focus on designing more rigorous tests of the hypothesis that employing progressive HRM systems actually results in higher organizational performance. This generation of research will focus on two aspects: demonstrating the HRM value chain, and proving causality as opposed to merely covariation.

Demonstrating the HR Value Chain.

Demonstrating the HR value chain requires two related issues. First, researchers must define theoretically or conceptually how HR practices can or should impact performance. Then, once this model has been defined, researchers must gather data to demonstrate the validity of the proposed value chain model. Research has been much more focused on defining the chain than in actually testing it.

Numerous authors have suggested the need to better understand the processes through which HR practices might impact performance (Becker & Huselid, 1998; Dyer & Reeves, 1995;

Hutchison, Kinney, & Purcell, 2002; Wright & Gardner, 2003). In an early effort to define the HR value chain, Dyer and Reeves (1995) reviewed much of the existing research on the relationship between HR practices and performance, and proposed that measures of performance could be broken down into four categories. First, employee outcomes deal with the consequences of the practices on employees such as their attitudes and behavior, particularly behaviors such as absenteeism and turnover. Organizational outcomes focus on more operational measures of performance such as productivity, quality, and shrinkage, many or all of which would be precursors to profitability. Financial/accounting outcomes refer to the actual financial performance measures such as expenses, revenues, and profitability. Finally, they suggested market-based outcomes were those outcomes reflecting how the financial markets valued a firm, particularly stock price or variations of it. Beyond merely offering a categorization of outcomes, however, they suggested that these outcomes represented a causal order; HR practices impacted employee outcomes, which consequently influenced organizational outcomes, thereby affecting financial outcomes, ultimately resulting in market-based outcomes.

Becker and Huselid (1998) provided the most detailed model offered to date. In essence this model suggests that business strategies drive the design of the HR system. The HR system directly impacts employee skills and motivation and the structure and design of work. These factors influence employee behavior, which translates into improved operating performance. This drives profits and growth, and the final consequence is market value.

While numerous models of the HR – performance relationship may exist, the empirical work testing these models has not progressed as significantly. Rogers and Wright (1998) reviewed the empirical research on the HR – Performance relationship surveying 29 studies reporting 80 effect sizes (i.e., reported statistical relationships between HR practice and performance measures). They found that very few studies had examined human resource outcomes, many had used accounting and financial market measures, and the largest number

of effect sizes was observed for organizational outcomes (productivity, quality, service, etc.) However, very little of this empirical research has examined multiple potential linkages (Wright & Gardner, 2003). To understand how HR practices impact profitability, one would need to see how they impact proximal outcomes (e.g., HR outcomes) that impact more distal outcomes (e.g., organizational outcomes) that consequently impact the most distal outcomes (e.g., profits). Given the paucity of research on HR outcomes alone, and the lack of research examining multiple outcomes in a causal chain, the existing research base presents little empirical data to shed light on the causal process through which HR practices impact performance.

Timing of Measurement. While not obvious to most, the timing of measurement in much of the research on the impact of HR practices on performance has precluded drawing firm causal conclusions of this relationship. Cook and Campbell (1979) suggest three criteria for inferring cause: Covariation between the presumed cause and effect, the temporal precedence of the cause, and the ability to control or rule out alternative explanations for a possible cause and effect connection. While past research has demonstrated covariation, very few studies have demonstrated temporal precedence, and/or ruled out alternative explanations.

Very few studies have used simple cross-sectional designs which present problems in drawing causal inferences. However, many of the studies accepted as being somewhat predictive are not true predictive designs. For instance, Ichniowski, Shaw and Prennushi (1997) used monthly performance data from steel finishing lines over a three-year period. However, they measured HR practices by asking respondents after the three-year production period to recall what the HR systems were in place at different points during the time frame. Similarly, Guthrie (2001) used performance data from 1996/7 but asked respondents during that time to report the practices that existed during 1995/96. Given the potential problems noted by others (Gerhart et al., 2000; Wright et al. 2001) with regard to unreliability of single rater responses

compounded with the memory requirements to report practices that existed from one to three years in the past, such retrospective designs are problematic for drawing causal conclusions.

Others, while not using purely cross-sectional designs, gathered contemporaneous data. For instance, Delery and Doty (1996) gathered HR practice data during 1992, and used the year-end performance data. Because the year-end data includes performance from months prior to and concurrent with the HR practice measure, it is difficult to draw firm causal conclusions. Huselid (1995) gathered both contemporaneous and subsequent year performance data, and reported only the subsequent year data in his study in order to provide more conservative effect size estimates.

Only two studies to date have attempted to test whether firm performance predicts future HR practices or vice versa. A study conducted by the consulting firm Watson Wyatt (2002) used data on 51 corporations with HR practice and financial performance scores for 1999 and 2001. They found that the 1999 HR correlated .41 with 2001 financial performance, but 1999 financial performance correlated only .19 with 2001 HR practices, and concluded that this demonstrated that HR practices were “leading indicators” of future financial performance.

In one of the most extensive efforts to examine causal order, Huselid and Becker (1996) compared cross-sectional and panel estimates to determine which direction the causal arrow pointed. They found that longitudinal estimates were substantially smaller than cross sectional estimates, and when using the most appropriate statistical analyses, non-significant. However, they found that after making the necessary statistical corrections for measurement error, the data seemed to indicate that previous HR practices predicted future corporate financial performance.

As can be seen by this detailed analysis of the designs, some of the seminal studies in the HR – performance literature fail to provide predictive designs that allow drawing more confident causal inferences. Concurrent and retrospective designs are particularly weak for drawing causal conclusions because they may be subject to implicit performance theories

suggesting that knowledge of firm performance can influence reports of HR practices. For instance, a study by Gardner and Wright (2002) presented executives and graduate students with fictitious descriptions of high and low performing companies and found evidence that their reports of HR practices can be influenced by knowledge of the company's past performance. Thus, studies gathering concurrent HR practice and performance (or retrospective HR) data may have HR practice measures that are contaminated by respondents' implicit performance theories.

And, even studies that are predictive in design may still not allow complete confidence in drawing causal conclusions. As Huselid and Becker (1996) showed, if financial performance also predicts HR practices, then both predictive designs, or designs that examine cross lagged correlations (such as the Watson Wyatt study) may show relationships between past HR practices and future HR performance, without truly proving that it is the HR practices leading to performance, rather than vice versa.

Conclusion

Research on the relationship between HR practices and performance has provided a firm foundation from which the next generation of research can build. While models of the process through which HR practices impact performance have progressed, they have not been tested empirically. In addition, research has not attended to demonstrating true causality. Consequently, the next generation of research will require study designs which are better able to demonstrate the causal order to show that HR practices, when implemented correctly, can positively generate higher firm performance. Such research will provide for decision makers a more convincing business case for the need to properly manage human resources

References

- Becker, B. E., & Huselid, M. A. (1998). 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 (pp. 53-101). Greenwich, CT: JAI Press.
- Cook, D. & Campbell, D. (1979). Quasi-Experimentation: Design, & Analysis Issues for Field Settings. Houghton-Mifflin: Boston
- Delery, J.E., and 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
- Dyer, L. & Reeves, T. (1995). HR strategies and firm performance: what do we know and where do we need to go. International Journal of Human Resource Management 6:3 656-670
- Gerhart, B., Wright, P. M., McMahan, G. C., & Snell, S. A. (2000). Measurement error in research on human resources and firm performance: How much error is there and how does it influence effect size estimates? Personnel Psychology, 53, 803-834.
- Guthrie, J. (2001). High Involvement work practices, turnover, and productivity: Evidence from New Zealand. Academy of Management Journal, 44, 180-192
- Hutchison, S., Kinney, N., & Purcell, J. Bringing Policies to Life: Discretionary Behaviour and the Impact on Business Performance. Paper presented at the Bath Conference, University of Bath School of Management, 10-11 April, 2002
- 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 performance link. Industrial Relations, 35, 400-422.
- Ichniowski C., Shaw, K & Prensushi, G. (1997). The effects of human resource management practices on productivity. American Economic Review, 87, 291-313
- Rogers, E. W., & Wright, P. M. (1998). Measuring organizational performance in strategic human resource management: Problems, prospects, and performance information markets. Human Resource Management Review, 8: 311-331.
- Watson Wyatt (2002). Human Capital Index: Human Capital as a Lead Indicator of Shareholder Value. (www.watsonwyatt.com)
- Wright, P., & Gardner, T. (2003). Theoretical and empirical challenges in studying the HR practice – firm performance relationship. In D. Holman, T.D. Wall, C. Clegg, P. Sparrow, and A. Howard (eds.), The New Workplace: People Technology, and Organisation, John Wiley and Sons.
- Wright, P., Gardner, T., Moynihan, L., Park, H., Gerhart, B. & Delery, J. (2001). Measurement Error in Research on Human Resources and Firm Performance: Additional Data and Suggestions for Future Research. Personnel Psychology, 54, 875-902