

**STRATEGIC HUMAN RESOURCE MANAGEMENT AND FIRM  
PERFORMANCE: WHAT CAN WE LEARN FROM SMALL BUSINESSES?**

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**Mathew Ray Allen**

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STRATEGIC HUMAN RESOURCE MANAGEMENT AND FIRM  
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Mathew R. Allen, Ph.D.

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This study develops a theory of how human resource management systems contribute to the performance of small businesses. Based on theories from the field of strategic human resource management and small business performance, I argue that high involvement human resource management systems will be positively related to the performance of small businesses above and beyond known drivers of small business performance. A set of moderating variables for this relationship is also presented. I conclude by outlining a set of hypotheses and methods for testing the relationship between human resource management and performance in small businesses.

## BIOGRAPHICAL SKETCH

Mathew Ray Allen was raised in Kaysville Utah by Ray and Pat Allen along with three brothers and one sister. After graduation from high school Matt completed a two year mission in Chile for the Church of Jesus Christ of Latter Day Saints. Matt earned a B.S. in Accounting from the University of Utah and worked for his father's accounting firm, Ray H. Allen and Associates, before pursuing a Master of Business Administration degree from the University of Notre Dame. After working for two years at both IBM and Hewlett Packard, Matt returned to Cornell to pursue a PhD. Matt and his wife Heather are the parents of three children, McKenzie, Megan and Noah. Matt has recently accepted a position at Northeastern University as an Assistant Professor of Entrepreneurship in the College of Business Administration.

This dissertation and everything that it represents are dedicated to my wife Heather

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## CHAPTER 1: INTRODUCTION

Small businesses, defined by the U.S. Small Business Administration as independent U.S. businesses with less than 500 employees, play an important role in our economy. It is estimated that there are over 23 million small businesses in the U.S. making up over 99% of all U.S. businesses. In addition, these small businesses employ 50% of all private sector employees and have accounted for between 60% and 80% of all job growth in the U.S. over the last 10 years (US SBA). Given the importance of small businesses to our economy, it is important for researchers to understand what tools small businesses can leverage to improve their performance and increase their chances of survival.

Employees and employee management practices appear to be one way that companies are able to improve their performance. Strategic human resource management scholars have argued that an organization's success is at least partially dependent on its employees and their behaviors in carrying out the strategies of the business (Becker & Gerhart, 1996; Delery & Doty, 1996; Wright & McMahan, 1992; Dyer, 1984). Organizations that can effectively influence the behaviors and motivation of their employees through human resource management systems will be able to increase their performance and viability (Huselid, 1995). Small firms should also be able to leverage their employees through human resource management to improve their performance, but very little research has addressed the role of human resource management in small businesses. In this paper I will address the relationship between human resource management (HRM) and the performance of small businesses and explore the benefits that the context of small businesses provides for the study of strategic human resource management (SHRM).

A significant amount of research has been conducted examining the relationship between human resource management and firm performance. In a recent review of the literature, Wright et al., (2005) found a total of 68 empirical studies looking at the relationship between HRM and some aspect of firm performance. The review focused specifically on published, empirical studies testing a relationship between an HRM system and performance. Notably, all of the reviewed studies reported at least one significant relationship between HR systems and performance. Clearly from this review of the literature, there is an increasing agreement that a relationship does exist between HRM and firm performance. In spite of this agreement, however, there is still disagreement about the nature of this relationship (Wright et al., 2005; Becker & Gerhart, 1996).

While it is clear that past research on SHRM has consistently shown a positive relationship between various conceptualizations of HRM and firm performance (Wright et al., 2005), this research has focused almost exclusively on large multidivisional, multi-product, multinational corporations. Very little research has examined the generalizability of these findings to small businesses and our current understanding of the role that HRM plays in small businesses is limited (Cardon & Stevens, 2004). By testing the relationship between HRM and firm performance in small businesses, my study expands our understanding of SHRM into a new context.

In addition to providing a new arena in which to test the relationship between HRM and firm performance, the context of small businesses also provides the opportunity to more thoroughly test this relationship. Despite the growing body of research on the relationship between HRM and firm performance, several questions still exist around variable measurement, research design, and the role of contingencies in SHRM research. In spite of the success of this research in demonstrating a relationship between HRM and performance past research has not sufficiently made

the argument for HRM causing performance (Wright et al., 2005). Specifically past research has had difficulty controlling for or otherwise ruling out possible alternative drivers of performance. Many of these questions are driven by the complexity in both the relationship itself as well as the context of large organizations typically used to study this relationship (Becker & Gerhart, 1996).

SHRM research in large organizations involves dealing with multiple complexities making it difficult to measure and control for alternative drivers of performance such as the human capital of the top manager or the environment in which the firm operates (Blau & Schoenherr, 1971). By their very nature, large firms are extremely complex and present many research difficulties such as multiple levels, multiple products, complex strategies, and operations spread across multiple geographies to name just a few. Small businesses have none of these complexities and present a context in which the measurement of HRM as well as alternative drivers of performance for control purposes is not hindered by complexity. Thus, studying the effects of HRM in small businesses allows me to more directly look at the relationship between HRM and firm performance and understand whether HRM contributes to the performance of small businesses. Second, and possibly as important, studying the relationship in the context of small businesses enables me to understand the effects of HRM on firm performance above and beyond other known drivers of performance.

Finally, studying the relationship between HRM and performance also allows me to test potential moderating effects of these other known drivers of performance in small businesses. Delery & Doty, (1996) argued that it was likely that the effect of HRM on performance was contingent on the existence of another variable or variables such as strategy (Youndt, Snell, Dean & Lepak, 1996; Delery & Doty, 1996). Understanding these contingency relationships will help us to understand when and under what conditions HRM might be more or less instrumental in contributing to the

performance of the firm. Therefore, I make an additional significant contribution to the field by testing contingency relationships between known performance drivers in small businesses and the HRM to performance relationship leading to a broader understanding of the conditions under which HRM might lead to performance.

The purpose of this research then is threefold. First, to understand if human resource management contributes to the performance of small businesses; second, to explore and take advantage of the benefits related to using small firms as a context for studying the HRM to performance relationship; and third, to use the reduced complexity provided by the small business context to test for various contingencies in the HRM to performance relationship.

## CHAPTER 2: LITERATURE REVIEW

### Strategic Human Resource Management

Wright and McMahan (1992) defined strategic human resource management as “the pattern of planned human resource deployments and activities intended to enable the firm to achieve its goals” (1992, p. 298). There are two assumptions implied in this definition. First, organizations are able to impact firm level outcomes through their human resource management and second, it is the combination or system of HRM activities working in concert rather than single practices that defines the ability of HRM to impact the firm at a strategic level.

Although there has been some criticism, past and emerging research in SHRM indicates that human resource management does indeed have an impact on firm as well as other levels of outcomes. An increasing number of studies have found significant relationships between various measures of human resource management and performance. Measures of HRM that have been used in these studies include: high performance and high involvement work systems (Huselid, 1995; Batt, 2002; Arthur 1994), HR orientation (Snell & Youndt, 1995; Welbourne & Cyr, 1999), Work life balance: (Perry-Smith & Blum, 2000; Konrad & Mangel, 2000) and single HR practices: (Shaw, Gupta, & Delery, 2002; Gerhart & Milkovich, 1990). Global competition, technological advances, shortening of the business cycle as well as the shift from a manufacturing to a knowledge based economy have all influenced the business community in its search for sources of sustained competitive advantage (Dyer & Reeves, 1995). These changes put pressure on organizations to find new sources of competitive advantage. Employees and the systems of practices that are set up to

manage them are increasingly seen as a source of this competitive advantage (Wright, Dunford, & Snell, 2001).

Historically, the field of human resource management has been concerned with the study of specific HR functional areas often categorized as selection, training, appraisal and compensation by the field of industrial and organizational psychology (Boxall & Purcell 2001). Past research involved the study of these specific HR functional areas as means and ends within themselves. For example, training was studied in isolation from other functions with an emphasis on the inputs processes and outputs or outcomes specific to the training function. Not much research attention was given to how training might work in combination with other HRM functions such as compensation or selection or how individual level HR functions might impact firm level performance.

This focus on specific HR functional areas led to knowledge about specific HR functions evolving in isolation from each other without much coordination between different functional areas (Wright & McManan, 1992). The rise of the concept of strategy and strategic management (Miles & Snow, 1984, Porter, 1985) created an increased interest in how firms can position themselves strategically to compete. This was followed closely by an increased interest in how HRM might contribute to that process (Wright & McManan, 1992).

Initial studies addressing HRM and its relationship to business strategies continued to focus on specific HRM functional areas such as compensation and its individual impact on the accomplishment of business strategy. The findings from these initial studies suggested that HRM functions such as training or compensation could be aligned with firm strategy and proper alignment between these individual HRM functional areas and strategy contributed to sustainable competitive advantage (Schuler & Jackson, 1987; Miles & Snow, 1984). Russel, Terborg, and Powers (1985)



for example, examined human resource training at an organizational level and linked training to organizational performance. While this research addressed the issue of individual HR practices and performance as well as aligning specific HR practices with strategy, it did not address the alignment of individual HR practices with each other or the impact of the entire HRM system on firm performance.

With the advent of more internally focused strategic theories such as the resource based view (RBV), the practice of linking separate HR functions to the firm strategy evolved into a more integrated view of how HRM as a system impacted firm level strategies which in turn impact performance. SHRM became more a question of how bundles of HRM practices or philosophies and the HR function as a whole contributed to the accomplishment of firm strategies at a system level. This opened the door for research seeking to understand the strategic nature of human resources and human resource systems (Wright, Dunford & Snell, 2001).

#### SHRM and the Resource Based View

Although multiple theories have been used to explain the relationship between HRM and performance outcomes (Wright & McMahan, 1992), the predominant theory currently used by researchers studying SHRM is the resource based view (Wright, Dunford, & Snell, 2001; Delery, 1998). The resource based view proposes that competitive advantage comes from the internal resources that it possessed by an organization (Wernerfelt, 1984; Barney, 1991). The idea that internal resources of a firm can lead to competitive advantage was a significant departure from previous views of strategy which focused on the external environment and such factors as industry, customers, and competitors (Miles and Snow 1984; Porter 1985). The RBV provided a theoretical explanation of how the human resources of a firm could in fact contribute to performance and competitive advantage.

Though others had addressed the concept of the RBV previously, Barney (1991) solidified its application to SHRM research by outlining how firm resources contribute to the sustained competitive advantage of the firm. Resources that are valuable, rare, inimitable and non-substitutable will lead to competitive advantage. To the extent that the human resources within a firm meet these criteria, they will contribute to the competitive advantage of the firm by providing the firm with a valuable resource not easily replicated by competitors.

This raises the question as to which aspect of the human resources within a firm constitutes a resource. Wright, McMahan, and McWilliams (1994) argued that it is the actual human resources or human capital of a firm that constitute the resource leading to competitive advantage. From their view, HR practices or HR systems could easily be duplicated (imitated) by other firms and only the knowledge skills and abilities possessed by individuals within a firm would meet the criteria outlined by Barney (1991). Lado and Wilson (1994) on the other hand took an alternative point of view arguing that HR practices combined into an overall HR system can be unique and difficult to imitate and constitute a resource meeting the conditions necessary for sustained competitive advantage. While both views seem to be accepted in the literature, most SHRM researchers using RBV as its theoretical framework have focused on the HR system or overarching HR philosophy as a resource functioning to develop the human capital of the firm (Boxall, 1998).

In addressing the criticisms of Wright, McMahan and McWilliams (1994) that HRM practices or systems could be easily duplicated by competitors and thus could not be a source of sustained competitive advantage, Becker and Gerhart (1996) outlined two different reasons why HR systems of successful firms could not be easily duplicated. First, causal ambiguity implies that the exact manner in which human resource management contributes to the competitive advantage of the firm is either

unknown or sufficiently ambiguous so as to be difficult or impossible to imitate. According to Becker and Gerhart (1996), the ability to replicate a successful HR system would require an understanding of how all of the elements of this complex system interact, an understanding which is still elusive to HR researchers and practitioners alike.

Second, the path dependency of HR systems makes their understanding and replication extremely difficult if not impossible. HR systems are developed over time. Take for example a single HR practice such as the use of a variable pay system for management compensation. The development and implementation of this single HR practice takes place over time including time to solicit management input and buy-in, work out discrepancies, and align the practice with current strategies as well as firm culture and needs. The end result would be a practice that reflects the philosophies and culture of the firm and its management created to solve the specific needs of the organization. Compound that single HR practice with a whole system of practices each with its own history and evolution specific to a particular firm, its philosophies and current situation and you have an HR system that cannot be bought or easily replicated without a significant investment both of time and financial resources.

The RBV with its focus on the internal resources possessed by a firm has given the field a theoretical understanding of why human resource systems might lead to sustained competitive advantage. The application of the RBV in SHRM research has allowed the SHRM field to move away from individual HR functional areas and practices to focus more on the HR system and how this system of HR practices or philosophies contributes to competitive advantage. This in turn has opened the door for further development of the field by answering questions about HRM and firm performance such as whether the relationship between HRM and performance is causal and if so, by what mechanisms does HR lead to performance or what variables

might moderate that relationship? These questions built around the RBV are questions that the field of SHRM is currently attempting to address.

### Measurement and SHRM

In order to understand the relationship between HRM and sustained competitive advantage or performance, a brief discussion of measurement is necessary. While a complete discussion of measurement in SHRM is beyond the scope of this paper, I will identify the general frameworks that have been used to measure HRM and performance variables and the key measurement issues that have limited our understanding of the relationship between HRM and competitive advantage or performance. For a more thorough discussion of measurement issues see Rogers and Wright (1998).

Measurement of HRM. Following Lado and Wilson (1994), I argue that it is the HR system made up of practices, policies, and philosophies that constitute a resource for the firm. This view is consistent with prior research addressing the relationship between HRM and performance (Rogers & Wright, 1998). The HRM system facilitates the acquisition, development and motivation of human capital and when combined within the complex firm environment creates unique resource for the firm (Wright, Dunford & Snell, 2001). A recent review of the literature found that of some 73 studies empirically testing the relationship between HRM and organizational outcomes, all of these studies employed some measure of the HRM system as the independent variable as opposed to using direct measures of human capital (Wright, Gardnern, Moynihan & Allen, 2005).

In spite of the apparent agreement among researchers that measures of the HRM system represent the resource that potentially leads to competitive advantage, there are several different levels at which the HRM system is measured. Becker and Gerhart (1996) outlined these different levels as the practice level, the policy level and

the architecture level (see figure 1). They further argued that measurement of HRM at these different levels has different implications from a research standpoint.

The practice level is the most detailed level of HRM system measurement and deals with the measurement of very specific HR practices such as the use of standardized interview questions for recruiting. Because of its detail this level of measurement is the least generalizable across different contexts. The use of specific HR practices might differ greatly across different organizational variables such as size, age, industry etc.

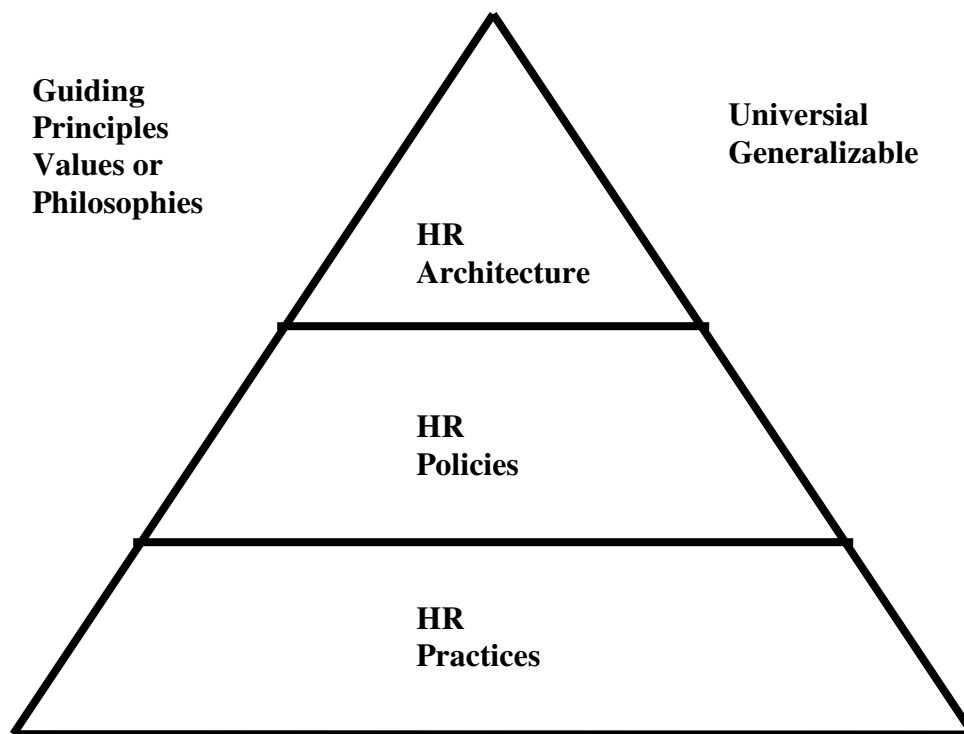


Figure 1: Levels of HR measurement (Becker & Gerhart. 1996)

The next level at which the HRM system can be measured is the policy level. This level is defined by Becker and Gerhart (1996) as the measurement of bundles of specific practices into more broad policies. An example might be a set of selection

practices whose intended purpose was to select employees with high knowledge or skills. While this level is less specific than the practice level, it is still directly related to specific practices and thus lacks some generalizability especially in diverse data sets.

The highest level at which the HR system can be measured is at the architecture level. This level refers to the measurement of guiding principles, values or philosophies related to HRM within a firm. These values or philosophies while differing from firm to firm are considered to be more universal and thus more generalizable than the other two. Theoretically, practices and policies are driven by HRM philosophies. An example of measurement at this level might be the existence of a general philosophy of hiring employees who fit well with the culture of the organization. This level of measurement would be most appropriate in situations where a high degree of generalizability is needed such as looking at HRM across a diverse set of companies. For the purposes of this research, I will focus on this architecture or philosophy view of HRM as opposed to specific HRM practices or policies. Small businesses differ greatly by size, industry, age, goals etc. Thus, it is important when measuring HRM in small businesses to choose a level for measurement that is generalizable across this diverse set of companies.

In addition small businesses tend to vary greatly in the level of sophistication of the HR system and often do not have an HR department or dedicated HR employee (Hornsby & Kuratko, 1990). Given this fact, I would not expect all small businesses to understand specific HR practices in the same way as might be the case in a sample of larger organizations. For example, a small business with only 8 employees may not have a formalized selection system in that they are using specific and documented practices to select employees. However, the fact that formalized practices do not exist does not mean that that firm does not need to or is not able to select employees. In

this case an understanding of the general philosophy around hiring would be more beneficial in understanding the HRM system than knowing whether or not the business has specific practices.

Measurement of Performance. Measurement of the dependent variable, competitive advantage or sustained competitive advantage is most often through performance outcomes. A look at the general SHRM model is helpful in understanding what these performance outcomes might be. While there are multiple views on what the SHRM model looks like, most follow the general outline presented by Dyer (1984), (see figure 2). In this outline, HRM impacts the firm at different levels starting with its direct impact on employees referred to as HR impact. Measures at this level would include such items as job satisfaction, employee helping behaviors employee discretionary behaviors or employee turnover. The next level of impact would be at the operational level. The operational level is one step away from the HR level in that it is not directly impacted by HR systems, but rather the systems impact the people who in turn impact the operations. Measures at this level would include: output levels, quality, speed, labor productivity, customer service and others. Finally operational impacts are followed by financial outcomes. HR impacts the employees which in turn impact the operations which would then in turn impact financial performance. This level can be measured through profit, revenues, sales or even more distal market measures of firm performance as market reacts to the signals given by operational and financial results which in turn would impact stock price or other market based measures of performance.

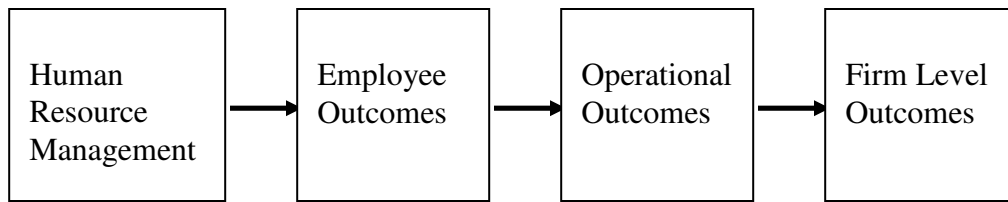


Figure 2: Basic model of the HRM to performance Relationship based on Dyer, 1984

As can be seen from the discussion above, the impacts of HR on performance proposed by Dyer (1984) get progressively further from the actual HR function. HRM first impacts HR or personnel outcomes which in turn impact operational outcomes followed by financial and market level outcomes with these latter measures being removed from the actual HR practices by several levels. Although the most direct effect of HR practices on performance would be at the HR level, because of the strategic interest as well as difficulty in measurement, most of the research has focused on the financial and market levels of performance (Rogers & Wright, 1998, Dyer & Reeves, 1995). This complexity in measuring the HR impact to performance is especially apparent in large organizations where the distance between HR systems and financial measures of performance is greater creating questions around appropriate levels of analysis. In addition, increased complexity makes understanding the relationship much more difficult. Because of this complexity, researchers should



focus on contexts where the distance between the HRM system and performance is shorter and levels of complexity are reduced such as smaller business units of large organizations, departments within larger organizations or small businesses.

#### Additional Issues in Testing Relationships between HRM and Performance

In spite of the increased attention on HRM and its performance implications, there is no consensus on the best way to measure HRM or competitive advantage (Becker & Gerhart, 1996; Rogers & Wright, 1998). In addition, the complexity of large organizations makes meaningful measurement of these variables difficult. Imagine at one extreme a firm level measurement of both HRM and performance from a large organization. Regardless of any relationship that is discovered, it is difficult to imagine that those firm level measures have accounted for differences in product lines, geographies, leadership and other variations within that organization from both an HRM standpoint as well as performance.

In addition, the relationship itself is complex by nature. Even in the simplified model of the HRM to performance relationship outlined by Dyer (1984) a significant amount of complexity remains in understanding this relationship and factors, contextual and otherwise that might influence it. This complexity is only compounded when addressed in a large organization where the distance between the different pieces of the relationship can be quite large.

Levels of analysis. One dimension of measurement and design that has received a significant amount of attention in the SHRM literature is that of levels of analysis. The level of analysis refers to the place or level within the organization at which the measurements are taken. Questions about the appropriate level of analysis have been applied to both the independent variable of HR practices as well as the dependent performance variable. Most large organizations consist of multiple levels

of management and employees. In addition, multiple products, geographies, divisions, and industries add to the complexity within those levels.

The question of which level to use for measurement has a theoretical, methodological and practical component. From a theoretical standpoint the question derives from the fact that business strategies can exist at several levels. According to Schendel and Hofer (1979) strategy occurs on at least three levels within a firm: corporate, business and functional. Given these differing levels of strategy, it can be assumed that HRM systems might differ between these levels raising questions about how they contribute to firm performance at different levels within the firm. From a methodological standpoint, different levels of analysis raise questions about balancing accessibility of data with the intent of the research as well as questions regarding the mixing of data from different levels of the firm such as HR practices measured at the corporate level and performance measures taken from the business or functional level and the implications of such research practices (Rogers & Wright 1998, Becker & Gerhart, 1996). Finally, the levels of analysis discussion has a practical or applied element in that research done at different levels of the firm can have different implications for the practical application of said research. For example, firm level findings indicating that a certain HRM system or philosophy is positively correlated with firm performance does not necessarily mean that the implementation of the same HR system at a functional level will lead to increased performance (Becker & Gerhart, 1996).

Becker and Gerhart (1996) argue that in spite of reduced generalizability, studies that look at the HRM to performance relationship in contexts with reduced complexity such as the business unit level will contribute to the understanding of the relationship because the smaller size of the business units compared to parent organizations reduces much of the complexity driven by levels of analysis. Future

research should focus on contexts like business units that reduce the complexity caused by multiple levels of analysis in order to gain a clearer understanding of how HRM impacts performance. Small businesses, for example, offer a context that reduces much if not all of the complexity caused by differing levels of analysis. In the case of small businesses, the corporate and business unit levels are often one and the same.

Complexity of the Relationship. Another issue in testing the relationship between HRM and firm performance involves the complexity of the relationship between HRM and performance. Performance is a difficult concept to understand and involves multiple drivers and complex relationships. It is likely that the relationship between HRM and performance is influenced by many other factors.

Researchers should focus on understanding when HRM contributes to performance or under what conditions HRM might contribute more or less to the performance of a firm. Contingency or moderation models argue that the relationship is likely contingent on various other variables and situations (Delery & Doty, 1996). Some research has studied variables that might moderate the relationship between HRM and performance with strategy being the most common contingency tested (Wai-Kwong, Priem & Cycyota, 2001; Veliyath & Shortell, 1993). Further research is needed. Additional moderators such as manager attributes or environmental factors are likely contributing to the complexity of the relationship. Difficulty in measuring some of these key performance variables has made understanding their moderating effects on HRM complicated. It is important for researchers to include these potential moderating variables in HRM research. Contingency effects of these other drivers of performance on the HRM to performance relationship should be tested to further our understanding of the relationship between HRM and performance. Knowledge about how HRM interacts with other performance drivers will help us answer contextual

questions about HRM and performance such as: under what conditions will HRM matter more or less?

Measurement issues, research design issues and problems dealing with complexity have hindered our ability to completely understand the relationship between HRM and performance. Specifically, complexity in the context being studied as well as complexity in the relationship being studied makes proper measurement and research design in HRM to performance research difficult. By using a less complex context such as small businesses, researchers can eliminate much of the complexity inherent in large organizations. This will allow for more meaningful measures for use in gaining a better understanding of the direct relationship between HRM and performance as well as potential moderating relationships.

#### HRM and Causation

The measurement and design difficulties mentioned above combine to hinder our efforts as a field to infer cause in the HRM to performance relationship. SHRM researchers are operating on the assumption that HRM leads to or causes performance outcomes, however, a review of the research indicates that current findings are insufficient to make this assumption (Wright et al., 2005). Cook and Campbell (1979) present three criteria which must be met in order to infer cause: covariation between the cause and effect variables, temporal precedence of the cause, and ruling out alternative explanations of cause. Because previous research has not addressed each of these three criteria, researchers' assertions that HR practices lead to performance outcomes have been weakened. In a recent paper Wright et al., (2005) examined the issue of cause in the SHRM literature and concludes that the majority of the research in the field up to this point has focused on the criteria of covariation between the cause and effect variables while neglecting the other two. Without the establishment of

temporal precedence and the ruling out of other explanations of cause, explanations of the findings such as reverse causation or spurious relationships cannot be ruled out.

Temporal precedence implies that the cause must occur before the proposed effect in time. A review of the literature by Wright et al., (2005) found that of 68 empirical studies testing the relationship between HRM and performance only eight used HRM measures taken prior to the performance measure used. The remainder of the studies measured the HRM concurrently with performance or in many cases in time periods that followed the performance measure. There appears to be a need for SHRM researchers to increase their focus on testing the causal relationship especially in ensuring that empirical studies establish temporal precedence between the cause and effect variables. That being said, HR systems tend to be static over long periods of time raising the question of whether or not even longitudinal studies will significantly contribute to our understanding of the causal relationship (Wright et al., 2005). Given the potential difficulty in demonstrating cause using temporal precedence and longitudinal studies, researchers should focus on the third criteria for establishing cause.

The third criterion posed by Cook and Campbell (1979) is that of eliminating alternative explanations of cause. In a simplistic sense, this can be accomplished through the use of proper controls in the research process. This implies that efforts should be made to control for as many alternative variables which might possibly be contributing to performance and covary with the HRM measures. While it is obvious that researchers will not be able to control for all other variables, the argument for causation will be strengthened to the extent that as many of those variables possible can be measured. Variables such as human capital (Hitt, Bierman, Shimizu, & Kochhar, 2001) or environment (Dess & Beard, 1984) need to be included in future research in addition to more standard variables used in past SHRM research.

Rogers and Wright (1998), in a review of the literature, concluded that 6 basic control variables had been used to varying degrees in SHRM research: size, industry, age, location, strategy and unionization. All of these variables were not used in every study and measurement of the control variables differed across studies indicating a lack of consistency in the control variables used in past SHRM research (Becker & Gerhart, 1996). In addition, Rogers and Wright (1998) point out that some of the control variables used, though included, are not measured in a way that is consistent with the constructs involved. The control variable of strategy, for example did not seem consistent with the theories being tested in all of the papers. Instead, strategy measures focused on familiar ideas such as Miles and Snow (1978) or Porter, (1985) frameworks. In relation to these measures of strategy used in SHRM research, Becker & Gerhart (1996) point out that these particular measures of strategy are firm level concepts and might not be applicable to other levels of analysis such as business unit level analysis.

Researchers should focus on discovering situations where meaningful measurement of these variables is possible in order to rule out these alternative explanations of performance and strengthen the argument that HRM causes or leads to performance. Small businesses, for example provide an interesting context for the collection of a set of control variables that can more adequately rule out alternative explanations of performance.

In summary, past research attempting to study the relationship between HRM and performance has adequately demonstrated a relationship between HRM and firm performance. Future research should focus on demonstrating that the relationship is causal. While actually proving cause is not a true possibility, additional research rigor such as the collection of proper control variables can add credibility to the causal assumption. Collecting proper control variables will allow us to rule out alternative

drivers of performance. Demonstrating that HRM contributes to performance above and beyond other known drivers of performance is a step in this direction.

## CHAPTER 3

### WHY STUDY HRM IN SMALL BUSINESSES

Small businesses play an important role in our economy. This is especially true from a labor standpoint where more than half of US employees are working for a small business (US SBA). It is important for researchers to understand the human resource management issues that might exist in these settings and the contribution if any that human resource management might make to the performance of these small businesses. In spite of the importance that small businesses play in our economy and labor force, very little research has sought to understand human resource management in small businesses (Heneman, Tansky, & Camp, 2000). Therefore, the most important reason for studying HRM in small businesses is to expand the HRM to performance research into this important context.

In addition, by studying the effects of HRM in small businesses I will be able to address or overcome several measurement and design issues prevalent in past SHRM research. In particular, small businesses provide a context that controls for or reduces many of the complexities that have hindered research in the past. This will allow me to 1) address issues related to causality by measuring more appropriate controls, 2) eliminate the complexity of multiple levels and layers, and 3) further the understanding of the process of when HRM might lead to performance by testing various moderator relationships of other performance drivers.

Thus, the benefits of the study of HRM in small businesses is twofold 1) to better understand this important segment of the business world previously neglected by HRM researchers and 2) use the context of small businesses to shed some light on important causality and contextual questions not yet understood by HRM researchers.



### Extension of HRM Research to Small Businesses

As was demonstrated previously, small businesses play an extremely important role in the U.S. economy. Given their role in the economy, it is important for business researchers to understand how small businesses function and what might be the same and different when compared to what is already known about large corporations. In spite of the significance of small firms in the US economy, HRM research in small firms has been limited (Heneman, Tansky, & Camp, 2000). Research addressing the question of how HRM impacts performance in small firms would benefit the SHRM field by extending that research into this important area. This research will also benefit current research on performance in small businesses by providing insights into the role that HRM plays in the performance of small firms. Finally, research in this area will benefit small business owners and managers by providing insights into how they can better run their business and improve their performance through effective management of their human resources.

### Small Businesses and Levels of Analysis

The context of small businesses reduces the complexity caused by multiple levels of analysis (Becker & Gerhart, 1996). While large organizations operate on multiple levels such as corporate, division, and business unit, small firms do not exhibit the same complexity and in most cases operate on a single level where corporate and business unit are the same thing. By using small businesses as a context, I will be able to eliminate many, if not all, of the complexity and measurement difficulties resulting from multiple levels of analysis and decisions about the appropriate levels for variable measurement (Becker & Gerhart, 1996). Take for example, business strategy. In large organizations strategies exist on multiple levels within the firm (Schendel & Hofer, 1979). These strategies are likely to differ across products, markets or geographies within a firm. Given these complexities it is difficult

to imagine a measure of strategy that will be representative of the firm as a whole. Small businesses on the other hand have a reduced number of levels, products, and geographies across which a strategy might vary thus simplifying the measurement of that particular variable. Similar arguments could be made for other dependent, independent and control variables.

In this way, using small businesses as a context for the study of HRM and performance is similar to studying the same relationship in smaller pieces of larger organizations such as business units or departments as was suggested by Becker and Gerhart, (1996) where it was argued that studying HRM in these smaller contexts might help reduce some of the complexities that have been discussed previously. In addition to the benefits of reduced size and complexity, small businesses provide the opportunity to study the HRM to performance relationship across the whole organization. Results will not be hindered by the impact of other levels, departments, or business units within a larger organization as would be the case in studying business units or subsidiaries.

While a department or business unit of a larger organization might reduce some of the complexities related to size, they are still plagued with issues stemming from their ties to a larger organization. The influence of higher levels of leadership, firm level strategies, or the influence of other parts of the organization on the business unit or department would be difficult to parse out. Small businesses allow researchers to look at the entire organization in a context with reduced complexity making them a desirable context for the study of the HRM to performance relationship.

#### Small Businesses and Proper Controls

As was discussed previously, prior research in SHRM has focused on demonstrating a relationship between HRM and performance, but has been weak in demonstrating cause. Given the static nature of HR systems over time one of the best

methods to strengthen the argument of cause is to properly control for alternative drivers of performance. Becker and Gerhart (1996) present two ways in which researchers can design controls into their research. Either a more comprehensive set of control variables, can be used or, a sample can be selected that by its makeup controls for some of the potentially omitted control variables. The use of small businesses as a context for SHRM research aids in the accomplishment of the first of these methods.

Small businesses as a context will allow for the collection of various control variables that would be much more difficult if not impossible to measure in a large organization. For example, variables such as managerial human capital or environment would be very difficult to measure in a large firm. Multiple layers of leaders across multiple products and geographies impacting employees at various levels make measuring for the impact of leader attributes in a large firm difficult. Similarly, the fact that large firms operate in multiple environments and markets makes it difficult to obtain a representative measure of the environment. Small businesses on the other hand, are much less complex in relation to these and other variables. The distance between the leader in a small firm and the employees is much shorter than in a large organization and often is a direct relationship making the measurement of leadership such as human capital much more feasible. Likewise, small businesses operate in smaller markets and less complex environments, thus improving the feasibility of a representative measure of the environment and its impact on the firm.

In summary, the reduced complexity provided by the context of small businesses will allow for meaningful measurement of several important control variables necessary for understanding the relationship between HRM and performance. The inclusion of these variables will allow me to create a stronger test

of the relationship between HRM and performance because I will be use the measures collected in this reduced complexity to demonstrate that HRM contributes to performance above and beyond other known drivers of performance.

### Small Businesses and Contextual Issues

In addition, the use of small businesses will enable me to test interactions that have not previously been understood. Researchers have suggested that the relationship between HRM and performance is not necessarily linear and likely involves complex interactions with other variables (Dyer & Reeves 1995; Delerey & Doty 1994). While this idea of moderating or contingency effects in the HRM to performance relationship is not new, results of research attempting to understand this relationship have been mixed. Pfeffer, (1994) went so far as to argue that support for these contingencies was so weak that a focus on best practices would be preferable to continued efforts to understand contingencies. It is likely that this difficulty in understanding contingencies in the HRM to performance relationship is caused at least in part by the complexity of the context in which they have been studied and the difficulty of obtaining meaningful measures of key contingency variables.

Small businesses like their larger counterparts operate under many different contexts. It is likely that the role HRM plays in the performance of small businesses is contingent on many of these contextual differences. Because of the reduced complexity provided by the small business context, feasible measurement of potential contingency or moderating variables such as measures of alternative performance drivers will be facilitated. Because measures of these constructs may be collected more readily in a small business context, I will be able to test for possible moderation effects with HRM allowing me to answer contextual questions regarding HRM and performance. For example, do attributes of the leader impact the relationship between HRM and performance? Does HR play a different role depending on the knowledge

or experience of the leader? Similar questions could also be posited around other important control variables such as strategy or the environment. The answering of such questions will contribute greatly to the field of HRM by broadening our understanding of how HRM interacts in the context of small businesses with these variables not previously understood in research using large organizations.

## CHAPTER 4: HRM AND SMALL BUSINESS PERFORMANCE

Prior research suggests that HRM systems as a resource can lead to competitive advantage (Wright, Dunford, & Snell, 2001). A number of studies have demonstrated relationships between different bundles of HR practices or philosophies and firm performance in larger firms (see Wright et al., 2005 review). In spite of the significant research in the area of SHRM in large firms, little has been done to test similar relationships in small businesses (Heneman, Tansky, & Camp, 2000).

Because of the demand placed on small business owners and managers to create and exploit growth opportunities, there is a potential for them to benefit from understanding and implementing HRM systems in a strategic way. Indeed, there is evidence to suggest that human resource management matters to small business managers and plays a role in the performance of small businesses. For example, small business owners have cited human resource issues including recruitment, motivation and retention as major issues that they deal with in managing their firms (Heneman, Tansky, & Camp, 2000; Hess, 1987; & Hornsby & Kuratko, 1990).

### Importance of HRM in Small Businesses

The bulk of work on HRM in small businesses has tended to focus on surveying firms to identify the frequency of use of different HR practices. This research has shown that small firms implement a wide variety of HR practices, though in a less sophisticated way than larger organizations (Heneman, Tansky, & Camp, 2000; Hornsby & Kuratko, 1990). Importantly, a study by Hornsby & Kuratko (1990) found that HR practices are significantly more prevalent in small businesses than had been previously thought, and mirrored those found in larger organizations. In a comparative study of both large and small manufacturing firms, Deshpande & Golhar

(1994) found that the small firms and large firms shared similar views on a set of workforce characteristics driven by HR practices. More importantly, this study indicated that the characteristics driven by HR practices such as lower turnover or higher levels of employee discretionary behavior were considered to be even more critical in the small businesses. Although limited, this body of research suggests that 1) HRM is being used in small businesses 2) Practices in small businesses are similar but less sophisticated than those of larger organizations and 3) Small business managers consider HRM to be of vital importance to the management and success of their businesses.

Therefore, it seems likely that smaller organizations should be able to reap similar benefits to those found in larger organizations from effective HRM. While previous research on HRM and performance in small businesses is not vast, there has been some research that supports this idea. Welbourne and Cyr (1999), using a sample of small, fast growing, high-tech firms found that having a senior HRM manager on the staff as an indication of the importance of HRM to the firm resulted in better performance in the form of growth and survival. Welbourne and Andrews (1996) found that placing higher value on employees in initial public offering firms was related to the long term survival of the firm. In addition, Collins and Clark (2003) found that bundles of HR practices were related to social networks in the top management team which were in turn related to financial performance in smaller high-technology firms. While not testing a direct relationship between HRM and firm performance, these studies do indicate that such a relationship is likely. More research is needed to understand the role that HRM plays in the performance of small businesses.

There is currently no research that looks at differences in the impact of HRM on performance based on size, but given the nature of small businesses, it is possible

that the role of HRM in the performance of small businesses is even more critical than in larger organizations. Because of their size, the impact of changes in the environment, supply, demand or competitors can significantly impact small businesses. While all organizations experience changes in the environment, small businesses, unlike larger organizations are not able to buffer themselves from these environmental changes or spread these changes across multiple product lines, geographies or business units. Because of this, small businesses are less able to shield their employees from the effect of these changes or impacts. From an small business employee standpoint, this means that these changes in the external or competitive environment can have a direct impact on the nature of their jobs. This leads to an environment where the employment conditions for employees of small businesses can be constantly changing.

This constant change creates unique challenges for small business managers to maintain, find, develop and motivate employees in spite of the turbulent environment in which they and their employees operate. The potential for effective HRM to aide in that process is high. To the extent that small businesses are able to effectively manage their human resources, they will be able to mitigate the effects of this constantly changing environment on their employees. By doing this I argue that small businesses with effective HRM systems will be more likely to find, motivate and retain valuable employees and that employees working for small businesses with effective HRM systems will be more likely to act in a way that is beneficial to the business in spite of the impacts to small businesses caused by the changing environment.

In addition, small businesses are not able to spread their risk across multiple products, product markets geographies or sheer size. Because of this lack of ability to spread risk, the potential impact of mistakes or poor decision making is higher in small businesses than that of larger, more diversified firms (Mansi & Reeb, 2002). This



applies to mistakes or poor decision making in HRM as well. The potential impact to a small business of hiring the wrong person or not retaining a key employee is greater for small businesses where the impact cannot be spread across its size or diversified portfolio. For example a small business with only one or two salespeople would be impacted to a much greater degree by the hiring of an ineffective salesperson or losing an effective salesperson than would a large organization with hundreds of salespeople. Here again, effective HRM in a small firm has the potential to provide a substantial benefit by helping the small business to avoid or at least minimize costly HRM mistakes or poor HRM decision making.

#### Small Businesses and High Involvement Work Systems

As was discussed previously, various measures and concepts have been used to define human resource management systems. One HRM system that is of particular relevance to small firms is known as the high involvement work system. (Applebaum, Bailey, Berg & Kallenberg, 2000; Osterman, 1995; Tsui et al, 1997). Though defined in various ways, high involvement works systems generally include 3 basic components. High skill requirements demonstrated by selective recruiting, high levels of employee discretion, and incentives that increase motivation and a focus on creating an atmosphere of commitment to the organization. These conditions it is argued in turn lead to a set of employees with both the ability (high skill levels and high levels of discretion to complete their jobs) and motivation (incentives and opportunity) to act in ways that are beneficial to the organization thus leading to higher levels of performance (Batt, 2002). Wright, McMahan, and McWilliams, (1994) describe this as the skill/behavior distinction where both the right skills as well as the right behaviors are necessary for a HRM system to be effective in leading to higher performance.

High involvement work systems have been shown to contribute to higher levels of organizational performance in multiple settings (Arthur, 1994; Batt, 2002, Snell & Youndt, 1995). The focus of high involvement work systems on creating an atmosphere of motivation and commitment is of particular interest to small businesses (Ciavarella, 2004). Employees operating in the environment of small businesses can be forced to deal with constant changes and demands related to the inability of the small businesses to shield their employees from changes in the environment. An HRM system that increases employee commitment, motivation and discretion will help by mitigating the impact of external changes on and minimizing the occurrence of costly HRM mistakes.

A common approach to looking at the dimensions of high involvement work system is to assume that the impact of each dimension on performance is additive (Batt, 2002). An organization can receive some incremental results by investing in one component, but additional benefits will result from an investment in all components of the system. This approach has important implications for studying HRM in small businesses. Past research has shown that small businesses employ similar, but less sophisticated HRM systems than those in larger organizations. This may be the result of reduced resources or understanding on the part of small businesses. Because of this lack of sophistication, small businesses may not be able to effectively implement all components of a high involvement work system, but the more they are able to do the higher the benefit that they should receive.

Thus, HIWS can lead to benefits for small businesses by providing employees with the means and motivation to act in a way that is beneficial to the organization. The means is provided by the selective recruiting and high levels of employee discretion. In this way, organizations employing a HIWS are able to select employees that fit well with the organization and its goals. Those employees are then empowered

by being given high levels of discretion in choosing how they complete their jobs (Ciaverella, 2003; Batt, 2002). The motivation is provided by having incentives and opportunities that will motivate employees to act in ways that are beneficial to the organization. By providing employees with motivating rewards and opportunities, employees form an emotional attachment with the organization that results in higher levels of motivation (Ciaverella, 2003). The result of the combination of an enabled and motivated workforce is an increase in discretionary behaviors from employees. Motivated and enabled employees act in ways that are beneficial to the organization with employee outcomes such as increases in helping behaviors, creativity, productivity, and service quality (Ciaverella, 2003; Batt, 2002; Applebaum, Bailey, Berg & Kallenberg, 2000; Wright, McMahan & McWilliams, 1994; Arthur, 1994).

The first performance impact of a HIWS will be felt at the employee level (Dyer, 1984). Employees with higher levels of motivation and commitment to the organization will experience lower levels of intentions to leave the organization. This impact of the use of a HIWS will be seen in lower levels of voluntary turnover as fewer employees desire to leave the organization. Indeed, prior research has demonstrated the use of HIWS is in fact negatively related to turnover (Batt, 2002; Huselid, 1995; Arthur, 1994).

Hypothesis 1a: The use of high involvement work systems in small businesses will be negatively related to voluntary turnover.

In addition to the more immediate impacts to the employees of reducing turnover, I also expect that effective HRM in small businesses will also impact more distal operational outcomes such as product quality, innovation or customer satisfaction. By bringing in higher quality employees and providing them with the ability and motivation to achieve, small businesses employing HIWS will benefit by selecting and retaining employees who are better able to fulfill their job

responsibilities by better serving customers or building products that are higher in quality and responding to changes in the competition and environment (Batt, 2002; Wright, McMahan, & McWilliams, 1994). In addition, employees with higher levels of motivation and a higher commitment to the organization will be more likely exhibit discretionary behaviors that are beneficial to the organization resulting in higher levels of operational level performance in the form of innovation, customer service and quality (Batt, 2002; MacDuffie, 1995; Arthur, 1994).

Hypothesis 1b: The use of high involvement work systems in small businesses will be positively related to operational performance.

Finally, in spite of its distance from the immediate employee impact, I expect that the use of high involvement work systems in small firms will also impact the more distal financial outcomes. Lower turnover rates and higher levels of motivation, quality, customer service and innovation on the part of the employees do have financial performance implications. Organizations with employees possessing both the means and the motivation to perform well will benefit in the form of higher performance. Indeed, the firm level outcome is the outcome most often studied in HRM to performance research (Rogers & Wright, 1998) and multiple researchers have demonstrated a connection between effective HRM and firm level performance (Batt, 2002; Delaney & Huselid, 1996; Welbourne & Andrews, 1996; Huselid, 1995).

Hypothesis 1c: The use of high involvement work systems in small businesses will be positively related to financial performance.

### Small Businesses and Performance

As was discussed previously, past research on the HRM to performance relationship has neglected to rule out alternative drivers of performance as a potential cause of the observed relationship between HRM and performance. The testing of the relationship between HRM and performance in small businesses without other known

drivers of performance equates to a replication of past SHRM research in a new context. It answers the question of whether or not the relationships observed in larger organizations holds true in small businesses. While the objective of expanding this research into the area of small businesses is an important part of this research, stopping there would be ignoring the benefit that the reduced complexity of the small business context provides for HRM research.

The context of small businesses will enable me to collect meaningful measures of other potential drivers of performance and then demonstrate that HRM contributes to performance above and beyond these other known performance drivers. While this will not prove cause, it will lend more credibility to the effect of HRM on performance.

In order to understand the relationship between human resource management in the context of these other performance drivers, it is important to understand what is known about performance of small businesses in general. By identifying other key drivers of performance in small businesses, I will be able to test whether HRM contributes to firm performance above and beyond known drivers of performance thus lending credibility to the idea that HRM leads to or causes performance.

There is a significant and growing literature addressing the performance of small businesses. Small businesses are described as operating businesses with less than 500 employees (SBA). Much of the research contributing to our understanding of small businesses and performance comes out of the entrepreneurship literature. While this is not a study specifically on entrepreneurship or entrepreneurial firms, there is a significant amount of overlap between the two areas of research (Shane & Venkataraman, 2000; Gartner, 2001) and many of the studies purporting to study entrepreneurship actually use samples of small businesses. Given this fact, I will

draw on both small business research and entrepreneurship research to inform my understanding of what contributes to the performance of small businesses.

Past research on the performance of small businesses has focused on specific single aspects of performance such as founder or manager traits (Brockhaus, 1980; Ginn & Sexton, 1990; Montagno, Kuratko, & Scarcella, 1986), firm level strategy (Feeser & Willard, 1990; Chaganti, Chaganti, & Mahajan, 1989), or the environment in which the business operates (Bourgeois & Eisenhardt, 1988; Cooper, Willard, & Woo, 1986). Additional research has suggested that performance of small businesses can be better understood by looking at a combination of these factors rather than the individual factors in isolation. Sandberg & Hofer (1987) suggested that small business performance resulted from a combination of attributes of the entrepreneur or manager, the strategy of the business, and the environment or industry in which the business operates. This idea that the performance of small businesses is a product of a combination of attributes of the top manager, attributes of the organization and attributes of the environment is now well accepted in the literature (Chrisman, Bauerschmidt & Hofer, 2001; Baum, Locke & Smith, 2001; Shane, Locke, & Collins, 2003).

Given that individual, organizational and environmental dimensions of performance have been shown to contribute to performance in isolation, it has been predicted that when looked at in combinations these various levels of impact will provide a more comprehensive prediction of performance than any one of them alone. Baum, Locke & Smith, (2001) tested what they referred to as a “multidimensional” model of small business performance and found support for the multiple drivers of performance arguments. Given this multidimensional model of small business performance, I propose that any research attempting to demonstrate that HRM

contributes to performance in small businesses will have to demonstrate that this relationship exists in the presence of these other performance dimensions.

### Individual Characteristics

There is evidence that one driver of performance in small firms is the individual owner or manager (Baum, Locke, and Smith, 2001; Chrisman, Bauerschmidt, & Hofer, 1998). Hambrick and Mason (1984) argued that organizations are reflections of their leadership or top managers. The knowledge, skills and abilities of the top manager influence the decision making of the organization as well as strategy implementation. In this way the top managers have an impact on the performance of the organization (Hambrick & Mason, 1984). Because of the size of small businesses, individual owners or managers are able to directly impact the performance of the businesses they manage through their personalities, knowledge and experience. Research has demonstrated that the individual traits of the owner or manager in small businesses contribute to their performance (Baum, Locke, and Smith, 2001; Chrisman, Bauerschmidt, & Hofer, 1998).

Human Capital. According to the resource based view, the resources that a firm possesses can contribute to competitive advantage (Barney, 1991). Intangible resources are often thought to provide significant competitive advantage to businesses because they are complex and difficult to imitate (Hitt, Bierman, Shimizu, and Kochhar, 2001). One of these intangible resources is the human capital of the owner or manager. Human capital has been described as the attributes; education, skills and experience possessed by individuals (Finkelstein & Hambrick, 1996). Managers with higher levels of human capital represent an intangible resource to the firm in that they have higher levels of knowledge and skills that are relevant to management of a business. Managers with high levels of human capital are able to use that capital in decision making and management of the business in ways that are superior to

managers with lower levels of human capital (Hitt, Bierman, Shimizu, & Kochhar, 2001; Wright, Smart & McMahan, 1995, Finkelstein & Hambrick, 1996). In this way, the human capital of managers can be considered a resource to the firm providing competitive advantage (Barney, 1991). Human capital, defined in terms of education, experience and skills of individual firm members has been shown to contribute to firm level outcomes (Baum & Locke, 2004, Lee & Tsang, 2001, Box & White, 1993; Finkelstein & Hambrick, 1996; Wright, Smart, & McMahan, 1995).

### Organizational Characteristics

In addition to the individual characteristics of the entrepreneur or manager, organizational level factors also impact the performance of small businesses. One organizational level factor that is argued to impact the performance of both large and small firms alike is strategy. Strategy has been defined as “an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage” (Hitt, Ireland & Hoskisson, 2005 p 7). Following on that definition, strategy is the way in which a business chooses to utilize its resources to compete. Firms that are better able to align their actions and commitments with their core competencies would be expected to perform better than those that can not. In line with this argument, research has demonstrated that strategy is an important component of the performance of small firms. In a review of the literature on strategy and performance of new ventures and small firms, Chrisman, Bauerschmidt & Hofer (1998) found that measures of strategy formulation, goals and objectives, strategic direction, entry strategy, competitive weapons, segmentation, scope, investment strategy, and political strategy have all been shown to impact the performance of small businesses.

Measures of Business Level Strategy One specific concept of strategy that has been used extensively in SHRM research is that of cost verses differentiation proposed



by Porter (1980) (Youndt, Snell, Dean & Lepak, 1996; Wai-Kwong, Priem, and Cycyota, 2001, Rogers & Wright, 1998). Low cost strategies focus on efficiency and cost reduction or cost minimization in all areas of the organization. Differentiation strategies are intended to compete on some differentiating factor other than lower cost thus providing additional value to the customer. It has been argued that past strategy measures such as cost versus differentiation might be inadequate and too high level to explain the competitive strategy that is being employed at the business level (Rogers & Wright, 1998; Becker & Gerhart, 1996). This is especially true when they are used to measure the strategy of large and complex organizations.

In a review of strategies employed by small businesses, Chrisman, Bauerschmidt and Hofer (1999) found that small businesses did indeed employ cost and differentiation strategies, but that these strategies were often broken down further in order to explain the manner in which the business had chosen to compete. Cost strategies are fairly simple in their structure. The purpose is to increase efficiency and reduce or eliminate costs in all areas of the business. Differentiation strategies are not as simple to understand. The idea is to differentiate oneself from the competition in order to provide value to the customer. Businesses have a number of ways that they might use to achieve this differentiation. Chrisman, Bauerschmidt and Hofer (1999) found that small businesses use differentiators such as service, quality, and innovation in order to separate themselves from their competitors. It is likely that each type of differentiation as well as the use of a cost based strategy has different implications for firm level performance be it employee level, operational or financial. Indeed, studies looking at cost versus differentiation strategies have found that there are different performance implications of the chosen strategy (Baum, Locke & Smith, 2001; Youndt, Snell, Dean and Lepak, 1996).

## Environmental Characteristics

Porter (1980) argued that industry and environmental factors also impact firm performance. According to Porter (1980) the industry structure can impact the choice of whether or not to enter an industry through the creation of a new venture.

Eisenhardt and Schoonhoven (1990) expanded on that idea and argued that the industry or more broadly, the environment in which a firm operates can impact the ability of a business once established to garner resources and compete. The environment in which a firm operates can vary by concentration (Melicher, Rush, & Winn, 1976), complexity (McNamara, Luce & Thompson, 2002), munificence (Baum & Wally, 2003), and dynamism (Dess & Beard, 1984). These differences in the environment can impact the ability of a business obtain resources that are essential for survival (Dess & Beard, 1984) which should in turn impact their performance. In a review of the literature, Chrisman, Bauerschmidt and Hofer (1998) found multiple studies that provided evidence that different measures of industry structure, industry rivalry and the nature of the buyers and suppliers within the environment in which they operated all had an impact on the performance of small firms.

Small businesses operate in a unique industry environment compared to that of larger firms and given their size; they may not compete within that industry beyond their localized market. Given this local market orientation I argue that the environment in which the firm operates will have a greater impact on performance than industry in general. Rate of change of the environment in which an organization operates is one important environmental condition (Dess & Beard, 1984). The higher or the faster the rate of change, the lower the predictability of that environment and managers operating in that environment will be less able to prepare for the future than in environments with lower rates of change (Dess & Beard, 1984). This inability to understand and anticipate changes in the environment will make it difficult for

businesses to obtain or develop resources that are important to their success which will impact their performance. Studies have demonstrated that the rate of change of the environment in which small businesses operate does indeed impact the performance of those businesses (Baum, Locke, & Smith, 2001; Wilklund & Shepherd, 2003; Miles, Covin, & Heeley, 2000)

Past research has demonstrated that the individual traits of the manager, the strategy chosen by the organization and the environment in which the organization operates all have an impact on the performance of that organization. Because of its ability to impact the employees, HRM should impact the employee, operational, and financial outcomes of the firm above and beyond any impact of these alternative or other known drivers of performance.

Hypothesis 2a: The use of high involvement work systems in small businesses will continue to be negatively related to voluntary turnover in the presence of alternative small business performance drivers.

Hypothesis 2b: The use of high involvement work systems in small businesses will continue to be positively related to operational performance in the presence of alternative small business performance drivers.

Hypothesis 2c: The use of high involvement work systems in small businesses will continue to be positively related to financial or firm level performance in the presence of alternative small business performance drivers.

Past SHRM research has consistently demonstrated a positive relationship between HRM and firm performance. Most of this research has been done without controlling for alternative drivers of performance as was mentioned previously. This absence of key controls in past research raises the possibility that any relationships found are spurious and are not actually caused by the HRM, but by some other variable not included in the model (Wright et al, 2005). At a minimum, it is likely that

strength of previous HRM to performance relationships is inflated or exaggerated due to the lack of proper control variables. This is especially true when looking at outcomes such as operational or firm level performance where the impact of HRM is less direct. Because of this I argue that while HRM in small businesses will contribute to performance above and beyond alternative performance drivers, the strength of that relationship will be reduced by the inclusions of key small business performance drivers. In essence, the model that I am proposing for hypotheses 2a, b and c is a stronger model for testing the relationship between HRM and performance than has been used in the past because of the inclusion of alternative performance drivers. While I do not believe that the relationship itself is completely spurious, I do argue that the addition of alternative drivers of performance will weaken the relationship between HRM and performance.

Hypothesis 3a: The presence of small business performance drivers will reduce the impact of the use of high involvement work systems on operational performance

Hypothesis 3b: The presence of small business performance drivers will reduce the impact of the use of high involvement work systems on operational performance.

## CHAPTER 5: MODERATION OF HRM IN SMALL BUSINESSES

Finally, given the diversity of the general makeup of small firms, it is likely that the role of HRM in contributing to performance is moderated by multiple variables. Sometimes referred to as contingency effects, (Delery & Doty, 1996), moderation in the HRM to performance relationship implies that the relationship between HRM and performance is contingent upon some other variable. While direct effects of HRM on performance are more generalizable, understanding moderating relationships in HRM research is important for understanding situationally specific aspects of the HRM to performance relationship (Youndt, Snell, Dean, & Lepak, 1996; Delery & Doty, 1996; Becker & Gerhart, 1996). Past contingency research in HRM has focused on the role of strategy as a moderator of the HRM to performance relationship and there is evidence that strategy does indeed moderate the relationship between HRM and performance. (Youndt, Snell, Dean & Lepak, 1996, Delery & Doty, 1996; Guthrie, Spell, Chester & Namori, 2002) Findings related to other potential moderators of the HRM to performance relationship have demonstrated mixed results (Becker & Gerhart, 1996; Pfeffer, 1994)

Given the complexity of the relationship between HR practices and performance and the performance relationship itself, I expect that other variables in addition to strategy moderate the relationship between HRM and performance. Specifically, I expect that the other drivers of performance in small businesses such as environmental and individual leader characteristics discussed previously moderate the relationship between HRM and performance.

Importantly, addressing the HRM to performance relationship in small businesses will enable me to control for variables that have not previously been used

in the SHRM research. I will also be able to make a significant contribution to the field of SHRM by also testing possible moderating effects of those variables. Specifically I expect that Individual, firm level and environmental variables will moderate the relationship between HRM and performance. In addition, there is some research demonstrating that the size of the business will also play a role in the ability of HRM to impact performance (Deshpande & Golhar, 1994; Hornsby & Kuratko, 1990), and that relationship will be tested as well.

#### Moderating Effects of Individual Characteristics

Human capital is a potential resource for organizations management (Finkelstein & Hambrick, 1996). Small businesses with managers who possess higher levels of human capital in the form of skills, education and experience have a potential advantage over businesses whose managers do not possess high levels of human capital. These managers are able to apply their knowledge and experience to the decision making and day to day operations of the organization and will arguable be able to use that experience to make better decisions and more effectively manage business operations.

I argue that this advantage also applies to the management of people within an organization. A small business manager or owner with higher levels of human capital should be able to apply his or her knowledge and experience to the management of people within the organization. Following on the arguments of Finkelstein and Hambrick, (1996), a manager's philosophy or view of how people should be managed will be influence by the knowledge and experience possessed by that manager. Managers with greater experience will have greater people management knowledge at their disposal when making decisions regarding people management issues. Specifically, small business managers with high levels of human capital will be able to gain greater benefits from effective HRM by applying their experience and knowledge

to the implementation and use of HRM systems and tools. Managers with high levels of human capital will be able to apply their knowledge and experience to the implementation and management of HRM systems allowing them to get more out of those systems. Therefore, managers with higher levels of human capital will experience greater benefits from effective HRM than those managers with lower levels of human capital.

Hypothesis 4: The positive effect of high involvement HRM systems on performance will be stronger for organizations whose top managers possess higher levels of human capital.

#### Moderating Effects of Organizational Characteristics

As was discussed previously, past research has demonstrated that the role between HRM and performance in large organizations is moderated by strategy. I expect that this same relationship exists in small businesses. One perspective that has consistently been used to explain the moderating role of strategy is the behavioral perspective (Jackson, Schuler, & Rivero, 1989). According to the behavioral perspective, organizational characteristics are expected to elicit certain behaviors or responses from employees. For example, Guthrie, Spell, & Nyamori (2002) looked at the moderating role of differentiation strategies vs. cost based strategies in the role of HRM on performance. Different strategies are thought to require different behaviors from employees which in turn require different needs from the HRM system. Using the behavioral perspective they argued that differentiation, which they describe as innovation, required greater discretion from employees because differentiation based companies are likely to have more broadly defined jobs as compared to companies employing a cost based strategy. This increased discretion requires more depth and breadth of skills from employees as well as more commitment to the organization. In this sense it was argued that HRM systems would be more likely to

positively impact firms employing a differentiation strategy because the increased flexibility and discretion from employees required by the strategy allowed for greater impact from the HRM in helping to foster those needed behaviors from employees. In a sense, the more complex or demanding the behaviors required by a certain strategy, the greater the potential impact of HRM on performance if it is able to encourage those needed behaviors (Guthrie, Spell, & Nyamori, 2002).

Firms exhibiting a higher use of differentiating strategies such as customer service, innovation or quality will require more from their employees. Following on the moderating role of differentiation strategies and the behavioral perspective, I expect that firms focusing more on customer service, quality or innovation in order to compete would require higher levels of flexibility and innovation from employees than businesses with lower levels of these characteristics. Likewise competing on these factors would require employees with higher depth and breadth of skills in order to meet the added demands of following this kind of a strategy. This in turn would lead to a greater ability of the HRM system to impact those employees which would in turn impact the performance. Because of the higher demands placed on employees as the result of a differentiation strategy, organizations choosing to use a differentiation strategy will be able to reap greater benefits from an effective HRM system. This leads me to conclude that strategy, specifically the use of the different forms of a differentiation will moderate the relationship between HRM and performance in small firms. Specifically, those businesses using a differentiation strategy to compete will experience a greater benefit from the use of an effective HRM system than those businesses using a cost based strategy.

Hypothesis 5a: The positive effect of high involvement work systems on the performance of small businesses will be stronger for businesses with a higher focus on a customer service strategy.



Hypothesis 5b: The positive effect of high involvement work systems on the performance of small businesses will be stronger for businesses with a higher focus on a quality strategy

Hypothesis 5c: The positive effect of high involvement work systems on the performance of small businesses will be stronger for businesses with a higher focus on an innovation strategy.

Hypothesis 5d: The positive effect of high involvement work systems on the performance of small businesses will be weaker for businesses with a higher focus on a low cost strategy.

#### Moderating Effects of Environmental Characteristics

Small businesses represent a unique employment setting. Employees of small firms are subject to increased variation in demand in their jobs. In addition, due to the lack of a large employee base over which risk can be spread, I argue that small businesses will feel the negative impact of HRM mistakes in the form of not hiring the right person or being unable to retain key employees. I further expect that these potentially negative effects of employment in small businesses will be amplified when a small business is operating in a complex environment.

Environmental rate of change. As I discussed previously, environments that change quickly will make it difficult for businesses to predict and understand the environment. This inability to predict the environment will have direct ramifications for employees in the form of changes in demands of the job and increased uncertainty because organizations would be less able to anticipate and plan for the future. Likewise, businesses operating in environments that are changing quickly are likely to make more HRM mistakes such as hiring the wrong employee or not being able to retain key employees. Inability to predict the future will make forecasting future employment needs difficult and as mentioned, they make creating a stable

environment for employees difficult. Because of the potentially negative impact on employees of environments high in complexity, the potential for HRM systems to mitigate the effects caused by the environment should be higher than for businesses operating in more stable environments. The role that HRM plays in the performance of small businesses should be moderated by the environment in which they operate. Specifically, those businesses that are operating in a fast changing environment will receive a greater benefit from the use of an effective HRM system than those operating in a slower changing environment.

Hypothesis 6: The positive effect of high involvement work systems on the performance of small businesses will be stronger for firms operating in environments with a high or fast rate of change

#### Moderating Effects of Firm Size

Even within the context of small businesses, the size of the business plays a role in moderating the impact of HRM. The larger the company, the higher the complexity involved in its management. Very small companies are low in complexity with few, if any layers of management and few products distributed in a small market. As a company gets larger, complexity increases, and likewise the number of employees increases creating increased complexity in the management of its people. In addition, the ability of the top leader or managers to foster personal relationships with each and every employee decreases as the size of the organization increases. Because of the increase of complexity and bureaucracy and the decrease in personal touch from top management, the need for and the benefit from an effective HRM system will increase with the size of the company. Because of this, larger small businesses will see a greater benefit from an effective HRM system than smaller small businesses because the effective HRM system will help larger businesses to overcome increased complexity, bureaucracy and lack of personal touch.

A concept which is helpful in understanding how increased size leads to added complexity is that of span of control. Span of control refers to the number of subordinates managed by a single manager. Past studies have demonstrated that average managerial span of control is around 7 (Hatrup & Kleiner, 1993). Thus, as the number of employees increases, the number of managers needed to manage those employees increases as well. This process continues as the size of the firm increases with additional managers and additional layers being added. Additional managers and layers of management decrease the ability of the leader to directly impact employees and increase the overall complexity of the people management needs.

Given this increase in managerial complexity brought on by growth, it is expected that HRM systems to deal with this complexity will be needed. There is some evidence to support this idea. Hornsby and Kuratko (1990) found that within the context of small businesses the frequency as well as the complexity of HR practices tended to increase with the size of the business. Presumably this increase in sophistication of HR practices is in an effort to deal with the increased complexity in the people management processes. Given this, I expect that as firms get larger and thus more complex, they will experience a greater benefit from their HR systems that will translate into greater performance effects of those systems.

Hypothesis 7: The positive effect of high involvement work systems on performance will be stronger for larger businesses than for smaller businesses within the context of small businesses.

## CHAPTER 6: METHODS

### Research Overview

My population for the study was owners or managers of small businesses representing multiple industries. The unit of analysis is the firm. The names of the firms to be used in this study were provided by a consulting firm that focused on small businesses. Participants were both clients of the above mentioned firm as well as potential clients. From this population companies with at least 10 employees and no more than 500 employees were chosen.

A significant amount of fieldwork preceded the development of the survey instruments. Because of the lack of prior research on HRM in small businesses, I felt that the fieldwork was necessary in order to understand more about HRM in small businesses. In order to gain this understanding I conducted interviews with owners, managers and employees of small businesses similar to those that would be used in the study. I wanted to understand what these organizations were doing in the way of HRM, what level of understanding they had about their HRM system and how they measured their success both from an HRM standpoint, but also their general performance.

This fieldwork began in 2004 when I conducted qualitative interviews with approximately 20 different small business organizations. I conducted interviews with either the CEO or a key employee responsible for human resource management functions within the organization. The interviews were semi-structured and addressed four key questions. These questions were: 1) What was the level of sophistication of the HR practices and HR philosophies currently employed in the organization? 2) What were the key human resource problems or issues currently faced by the

organization? 3) What were the key strategies used by the organization in order to compete, and 4) What measurements or key drivers were used by the organization to assess its success or failure?

I used the information gathered in the semi-structured interviews to guide the development of the survey instruments. I developed two survey instruments for this study, one for the top manager and one for employees. This was done by using a combination of information gathered during the interview process and items and measures from existing studies. One was developed to be completed by the owner or top manager of the organization. The other was developed for completion by several employees of each organization. The purpose of the employee survey is to validate the self responses of the top manager and to collect a secondary performance measure not provided by the top manager of the organization.

Procedure. I sent surveys either through regular mail or email to the top manager of each organization in the sample depending on the contact information with which I was provided inviting them to participate in the study by completing the survey. At the end of the CEO or top manager survey, the top managers were asked to provide contact information for up to 15 employees so that employee surveys could be sent to those individuals. In return for their participation, top managers received ongoing reports summarizing the findings of the study. Up to four follow-up mailings were used to encourage response.

Surveys were then sent to the employee provided by the top managers asking them to provide information about their organization as well as assess the performance of their organization

**(See Appendix A for a summary of measures used for this research)**

**(See Appendix B for copies of the original manager and employee surveys)**

The survey research resulted in 270 usable company responses where I received a response from the top manager as well as at least one employee response and an average of three employee responses per organization. Companies in the sample ranged in size from 10 to 500 employees and spanned multiple geographies and industries.

Average size of businesses represented was 121 employees with businesses weighted toward the smaller size range (see figure 3). Businesses included in the represented multiple industries and were categorized as high end service meaning service industries required significant amounts of knowledge, low end service meaning service businesses requiring reduced levels of knowledge, manufacturing and retail. Representation from each of these industries was fairly uniform (see figure 4).

<b>Size Range</b>	<b>Number of Firms</b>	<b>Percent</b>
10 to 50	136	50%
51 to 100	32	12%
101 to 200	40	15%
201 to 300	28	10%
301 to 400	17	6%
401 to 500	17	6%
Total	270	100%

Figure 3. Size Distribution of Organizations

<b>Industry</b>	<b>Percent</b>
Low End Service	21%
High End Service	24%
Manufacturing	37%
Retail	18%

Figure 4. Industry Representation of Organizations

The businesses represented were small businesses but not necessarily start ups or entrepreneurial organizations. The average age of organizations represented was 24 years old and only 50% were still being run by the founder or original CEO. Over 50% of the organizations had a dedicated HR professional, but interviews with these individuals indicated that their job descriptions varied significantly and the level of sophistication of the HR function also varied greatly from organization to organization.

### Measures

#### The HRM System

Item Development Process. Because of the lack of previous research regarding HIWSs and performance in small businesses, no standard measure was available to assess the use of HIWS practices or philosophies in small businesses. Because of the diversity of the sample and the fact that the source for the HRM system measurement was coming from the top manager of the organization I chose to measure the HRM system at the philosophical level. Becker and Gerhart, (1996) argued that measurements at this level are more generalizable across diverse samples. In addition, my qualitative interviews with top managers revealed that the top managers were comfortable with and had a solid understanding of their HRM system at the philosophy level.

While multiple views of high involvement works systems have been used in previous research, these studies indicate that the basic components of a high involvement work system includes selection or selective recruiting for high skills and or fit, high amounts of employee discretion, and rewards or other forms of motivation (Batt, 2002). In this way, organizations are selectively recruiting for the right skills or fit, they are then providing discretion to these employees to allow them to use their knowledge or skills in carrying out their job responsibilities and are providing

incentives or other motivators to insure the discretion and skills are used in ways that are beneficial to the organization.

Drawing from previous SHRM studies, I developed a list of multiple HRM philosophies related to the areas of selection, control, and motivation/rewards. These lists were then converted to statements regarding their use within an organization. Subject matter experts (faculty and graduate students with expertise in HRM systems) then performed a Q-sort to ensure that there was general agreement regarding how the different items fell into those HIWS categories. Items that did not sort consistently in the Q-sort were dropped from the survey. The result of the development process was a list of 26 HRM items (statements about the HRM philosophy within the organization) conforming to the theoretical description of a high involvement work system and focusing on the areas of selection, discretion, and motivation and rewards (Batt, 2002). Items were included in the questionnaire using 5 point Likert type scales asking respondents the extent to which they agreed with each statement (1 = strongly disagree, 5 = strongly agree) in relation to their organization.

Testing the Factor Structure. I first examined the factor structure of all 26 HIWS items. Items were factored using principal components as the extraction method and were rotated using varimax rotation. After removing crossloading and single loading items, I was left with four distinct factors conforming to the selection, discretion, motivation and rewards components of the high involvement work system. Based on item factor loadings, I describe the distinct factors as Selection for Fit, Employee Discretion, Feedback, and Employee Opportunity (See Table 1)



Table 1. Factor Loadings for Four-Factor HIWS Model N=270 <sup>a b</sup>

	<b>Factor 1 Formal feedback to the employee regarding performance and opportunity</b>	<b>Factor 2 Selection for company fit</b>	<b>Factor 3 Opportunities for employee growth and social opportunities</b>	<b>Factor 4 Employee discretion in decision making and performance of duties</b>
<b>Feedback 1</b>	.720	.076	.062	-.234
<b>Feedback 2</b>	.690	.052	.247	-.295
<b>Feedback 3</b>	.800	.063	.267	-.072
<b>Feedback 4</b>	.733	.097	.016	.069
<b>Select 1</b>	.062	.822	.154	.127
<b>Select 2</b>	.025	.820	-.049	-.102
<b>Select 3</b>	.174	.803	.177	-.003
<b>Attach/Reward 1</b>	.123	.121	.812	.030
<b>Attach/Reward 2</b>	.414	.115	.681	.018
<b>Attach/Reward 3</b>	.055	.051	.824	-.101
<b>Control 1 R</b>	-.132	.015	-.139	.852
<b>Control 2 R</b>	-.140	.003	.089	.849

<sup>a</sup> Principle components

<sup>b</sup> Varimax rotation

Reliability Analysis. I also examined the internal consistency (reliability) of the four HIWS factors using Cronbach's alpha. Internal consistency of the four factors was high and ranged from  $\alpha$  .70 to .78 in the following breakout: Feedback, four items  $\alpha$  = .78, Select Fit, 3 items  $\alpha$  = .76, Employee Opportunity, 3 items,  $\alpha$  = .72 and Employee Discretion, 2 items  $\alpha$  = .70.

HIWS Measure. The HIWS measure was created by combining the four factors into an additive index. I expect that the true benefits of the use of a high involvement work system will be experienced at a system level with each factor contributing to the performance of the organization, but the overall contribution felt at the system level. The additive index was used for two reasons. First, the additive index provides a conservative estimate of the combined benefits of the HIWS compared to a less conservative multiplicative index (Batt, 2002). Second, past research has demonstrated that HRM in small businesses is less sophisticated than larger organizations. It is possible that due to knowledge or resource constraints, small businesses are not able to effectively implement each component of a high involvement work system. I wanted to be able to capture the additional benefits that these small businesses receive as they are able to add different components of an effective HRM system. By being able to invest in some or one component of an effective HRM system, small businesses will see some benefits, the more positive results will be achieved if they are able to use all components of a HIWS.

Dependent Variables.

Following on suggestion from past SHRM research that multiple measures of performance be used in order to triangulate the effects if any of HRM on performance I used five different measures of performance, one to measure performance at the employee outcome level (voluntary turnover) , two to measure performance at the operational level (perceptual operational performance and employee perceptual

performance) and two financial measures of performance (perceptual financial performance and commercial credit score).

It should be noted at this point that I used perceptual measures of performance for three of the five performance measures. This was because of the difficulty of obtaining objective measures of performance in the context of small businesses. The majority of these businesses are privately held making performance data in the form of sales figures, stock price and other financial measures used in large company research publicly unavailable. Because of this, it became necessary to use perceptual measures of performance.

Past research has suggested that perceptual or subjective measures of performance are a good source of performance information when objective measures are not available. Studies have demonstrated that perceptual performance measures are similar to more objective measures both from a validity as well as a reliability standpoint. Perceptual measures of performance have been shown to yield results similar to more objective measures of performance when compared in the same sample and have also been demonstrated to be an accurate reflection of actual performance (Dess & Robinson, 1984; Wall, et al, 2004; Delaney & Huselid, 1996).

Voluntary Turnover. I measured voluntary turnover as the percent of total employees who voluntarily left the company over the previous year (number of employees who voluntarily left the organization over the previous year divided by the total number of employees). I measured turnover as a percentage due the large variation in company size in my sample. I wanted to have a measure of turnover that was comparable across all organizations in the sample. Due to the sensitivity of turnover information for small businesses, not all organizations were willing to provide me with turnover information resulting in an N= 246 for this particular variable.

Perceptual Operational Performance. I measured perceptual operational performance using a 3 item scale of operational performance. The five point scale measured the extent to which the CEO or top manager perceived the performance of their organization to be higher or lower than that of other similar organizations in the areas of; quality, innovation and customer service (1= worse, 5= much better). These three items were created using information gathered during the qualitative interview process. Top managers indicated that these were the factors with which they gauged their success in relation to their performance at the operational level. The items factored cleanly on a single factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .67$ .

Employee Perceptual Performance. In order to avoid potential same source biases resulting from gathering both HRM and performance information from the top manager, I also collected performance information from the employees. I measured performance from the employees using a four item scale developed for the purpose of this study. The items measured how the employees of the organization felt like the organization was performing compared to key competitors, in achieving its potential, satisfying others, and satisfying customers. My interviews with employees indicated that while the employees did not always have a clear picture of financial performance, they did understand the nature of the business in relation to competitors and customers leading me to believe that they were a good source for this kind of performance information. Items were scaled on a five point scale (1 = strongly disagree, 5 = strongly agree). While questions regarding performance compared to competitors could be construed as firm level or financial level performance, my qualitative interviews with employees revealed that the employee understanding of performance and performance drivers is almost exclusively centered on operational levels of performance. This is in line with previous arguments regarding the more direct impact

of employee actions on operational performance (Dyer, 1984). The items factored cleanly on a single factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .88$ .

Because the employee measure of performance came from multiple respondents in most cases (avg. of 3 employee responses per organization) I also conducted agreement analysis to test for consensus between the different raters of performance within each organization to understand if the responses from the multiple employees in each organization could be effectively combined for a single employee performance measure. Aggregation statistics suggest a group level influence on employee perceptions of performance (average ICC(1) = .24). Reliability of group means was a bit low, but at an acceptable level as well (average ICC(2) = .66). (See table 2)

Table 2: Employee Perceptual Performance Measure

<b>Items</b>	<b>ICC1</b>	<b>ICC2</b>	<b>Alpha</b>
1. This organization's performance is much better than the performance of our main competitors.	.32	.75	
2. This organization is achieving its full potential.	.20	.61	
3. People are satisfied with the level of performance of this organization	.27	.69	
4. This organization does a good job of satisfying its customers	.19	.60	
<b>Total</b>	.24	.66	.88

Perceptual Financial Performance. Perceptual financial performance was measured using a three item scale created for the purpose of this research. The five point scale measured the extent to which the CEO or top manager perceived the performance of their organization to be higher or lower than that of other similar organizations in the areas of sales growth, profitability and market share (1 = worse, 5 = much better). As with the operational performance items, these three items were adapted from information gathered during the qualitative interview process where top managers expressed that these were the factors with which they gauged their success in relation to their performance at the financial or firm level. The items factored cleanly on a single factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .82$ .

Commercial Credit Score. In an effort to avoid common method bias as well as introduce an additional objective measure of performance, I also collected a commercial credit score from Dunn & Bradstreet for each organization in the sample where available. The Dunn & Bradstreet commercial credit score is a rating of credit worthiness of the organization based on past credit history. Each organization is rated on a scale of one to five with one being the highest possible credit score and five being the lowest. Organizations with a high credit score have a poor credit history and organizations with a low credit score have a good credit history. The measure was reverse scored to match other performance measures with one being lowest credit rating and five being the highest. While Dunn & Bradstreet tracks a significant number of companies, not all companies were available in the Dunn & Bradstreet database resulting in an N=220 for this particular variable.

### Alternative Drivers of Performance.

Following the previous discussion regarding small business performance, alternative performance drivers represent key drivers of small business performance from previous research. Measures of human capital, strategy and the environment in which the firm operates were included.

Human Capital. Human capital was measured using two distinct measures. The first was a measure of the amount of experience possessed by the top manager or CEO, (CEO human capital), and was an additive measure of their self reported years of experience in the industry in which they are now working and their self reported years of experience in their current position. This is in line with other human capital research using years of experience as a proxy for the human capital possessed by the individual (Hitt, Bierman, Shimizu, & Kochhar, 2001). Because the experience of the CEOs in the sample was not linear as well as the fact that there are likely diminishing returns to the amount of experience possessed by a top manager, I used the log of the CEO experience as my final measure of CEO experience.

My second measure of human capital was a more specific measure of the HRM related human capital possessed by the top manager or managers within the organization. This HR human capital measure was measured using a 2 item scale developed for this research. The five point scale asked top managers or CEOs the extent to which they felt like they and their top managers in their organization lacked the knowledge, or time and resources necessary for the design and implementation of effective employee management practices (1 = strongly disagree, 5 = strongly agree). Items were reverse coded. The two items factored cleanly on a single factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .83$

Business level Strategy. Business level strategy was measured using a variation of the cost verses differentiation strategy construct proposed by Porter,



(1980). This concept was expanded based on previous small business research as well as responses from the qualitative interviews to include three different types of differentiation strategies that might be used by a small business 1) innovation, 2) quality, and 3) customer service (Chrisman, Bauerschmidt and Hofer, 1999).

Top managers and CEOs were asked to rate which organization imperative best characterized their current approach to the marketplace: 1) Innovation- Continuously developing new products or services, 2) Quality – Continuously improving the quality of its products or services, 3) Customer Service – Continually adapting its products or services to customer needs, and 4) Low Cost – Continually increasing the efficiency with which it operates. Responses were coded as four dummy variables for the low cost and each of the three components of a differentiation strategy.

Because of the difficulty of interpreting dummy variables in a moderation relationship, managers were also asked to rate the extent to which their company's financial performance is dependent on each of the above 4 strategies using a 5 point scale (1 = strongly disagree, 5 = strongly agree). This second scaled measure of business strategy was used when assessing the moderating effects of each of the four different business level strategies.

Environment. The environment in which the firm operates was measured using a two item five point scale based on the work by Dess and Beard (1984). The scale measured the rate of change within the environment and asked the top manager or CEO the extent to which they agreed with statements about the rate of change of technology and the rate of change generally in the environment ( 1 = strongly disagree, 5 = strongly agree). The items factored cleanly on a single factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .69$

### Control Variables.

I included several control variables that have been shown to be related to both HRM and the dependent variables. For example, research indicates that HRM practices in small firms vary based on the size of the firm (Hornsby & Kuratko, 1990). Performance can also vary based on firm size. Therefore, I controlled for the size of the firm using number of employees as my indicator of firm size. Because the distribution of the size of the firms in my sample was not linear, I logged the size and used the log of the size as the final size variable. I also control for the age of the organization as the age can also have an impact on the number of or level of sophistication of HRM practices in an organization as well as the financial viability or performance. Similar to the size variable, the distribution of firms by age of the organizations was not linear and I took the log of the age for the final age control variable.

I also controlled for the industry. By using a combination of self reported industry descriptions as well as SIC codes I created 4 basic industry groupings: 1) high end services, 2) low end services, 3) manufacturing and 4) retail. High end services were service based organizations for which a high amount of knowledge was needed such as consulting, medical, engineering, and architecture firms. Low end services were service based organizations where a lower amount of knowledge was needed such as lawn care, pest control or repair shops. Manufacturing comprised organizations in both the manufacturing and construction industries and retail was made up of organizations whose main focus was retail sales. After categorizing each organization into one of the four industries, 4 dummy variables were created to control for industry.

Because of the size of organizations in the sample, many of the organizations did not have a dedicated HR professional. It is expected that HRM will differ based on the amount of attention that it receives in the organization and the existence of an

HR manager is a good indication of resources available for HRM. The presence of the HR manager was controlled for using a dummy variable coded as 1 for the presence of an HR manager and 0 if there was no HR manager present.

Past research has also indicated that the original CEO plays an important role in shaping the HRM system as well as other aspects of the organization (Baron, Hannan & Burton, 2001). Because of the strong effect that the original CEO can potentially have, I controlled for the presence of the original CEO using a dummy variable coded as 1 if the firm was still led by the original CEO or founder and 0 if it was not.

Finally, because the sample came from clients and potential clients of a payroll and insurance outsourcing firm, I wanted to be sure that I controlled for any impact of the use of consultants to outsource different pieces of the employee management process. This measure of the amount of outsourcing or consulting used by the organization was measured using a 2 item scale. Top managers or CEOs were asked the extent to which they agreed with statements indicating that they relied on external sources to carry out employee management practices ( 1 = strongly disagree, 5 = strongly agree). The two items factored cleanly on one factor and reliability was acceptable with a Cronbach's alpha  $\alpha = .76$ .

#### Interaction Variables.

The interaction variables were created by taking the cross-product of the HIWS variable with CEO experience, HR resources, innovation strategy, quality strategy, customer service strategy, low cost strategy, environment, and size. In order to reduce problems with multicollinearity, all variables were standardized prior to creating the interaction variables.

## CHAPTER 7: RESULTS

Table 3 provides descriptive statistics for the variables and table 4 provides pairwise correlations for all continuous variables in the model. To test hypothesis 1 and 2, I used hierarchical regression analysis. My overall procedure for each of the five dependent performance variables remained the same. In step 1, I added the basic control variables. This was done to control for any extraneous effects of industry, size, age as well as the other control variables. In step 2, I added the HRM HIWS variable. A significant effect for the HIWS variable in this step would provide support for hypothesis 1a, b and c, that HRM specifically HIWS was positively related to the various levels of performance. With the control variables and the HRM system variable in place, this model represented a replication of previous HR to performance research, but in the context of small businesses. In step 3, I added the alternative small business performance drivers. A significant effect here would indicate that the performance drivers measured for this study did indeed significantly explain performance. More importantly, continued significance of the HRM variable in step 3 would indicate that HRM did contribute to the various levels of performance above and beyond known drivers of small business performance providing support for hypothesis 2a, b and c (See tables 5-9)

Table 3: Means and Standard Deviations

<b>Variable</b>	<b>Mean</b>	<b>Std. Deviation</b>
Consulting_Help	2.46	1.21
HR_Manager	0.56	0.50
Log_Age	2.73	1.06
Log_Size	4.09	1.24
Original_CEO	0.51	0.50
HI_Service	0.24	0.43
LE_Service	0.21	0.41
Manufacturing	0.37	0.48
Retail	0.18	0.38
CEO Human Capital	4.57	1.55
HR Human Capital	3.30	1.13
Strategy Innovation	0.18	0.39
Strategy Quality	0.29	0.45
Strategy Low Cost	0.30	0.46
Strategy Customer Service	0.24	0.43
Environment	3.29	1.06
Voluntary_Turnover	0.13	0.20
Perceptual Operational Perf	4.05	0.63
Employee Perceptual Perf	3.46	0.71
Perceptual Financial Perf	3.66	0.87
Commercial Credit	3.15	1.12
HPWS	13.92	2.06
HPWS_X_Environment	0.04	1.00
HPWS_X_CEO Human Capital	-0.10	1.02
HPWS_X_HR Human Capital	0.33	1.07
HPWS_X_Size	0.27	0.98
HPWS_X_Innovation Strategy	0.10	1.03
HPWS_X_Quality Strategy	0.10	0.91
HPWS_X_LowCost Strategy	0.01	0.93
HPWS_X_CustService Strategy	0.09	0.86

Table 4: Pairwise Correlations <sup>a b</sup>

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Consulting Help	1																		
2 Log Age	-.10	1																	
3 Log Size	-.23	.23	1																
4 CEO Human Capital	-.02	.13	-.11	1															
5 HR Human Capital	-.12	.05	.12	-.10	1														
6 Environmental Change	.11	.00	.07	.10	-.01	1													
7 Voluntary Turnover	-.02	-.11	-.12	-.12	-.07	.07	1												
8 Perceptual Operational Perf.	.07	-.02	.00	-.02	.33	.00	-.01	1											
9 Employee Perceptual Perf	.04	-.04	-.18	.02	.11	-.10	.05	.26	1										
10 Perceptual Financial Perf.	.03	-.08	.10	-.02	.28	-.06	-.02	.49	.35	1									
11 Commercial Credit	.09	.11	-.15	.11	.05	-.07	-.09	.05	.14	.08	1								
12 HPWS	-.14	.03	.27	-.10	.33	.04	-.25	.31	.08	.27	-.04	1							
13 HPWS X Environment	.13	.01	-.05	.10	-.09	.01	-.21	-.05	-.03	-.03	-.10	-.11	1						
14 CEO Human Capital	.09	-.03	.00	-.07	.07	.10	-.03	.03	-.09	-.02	.06	.02	-.08	1					
15 HPWS X HR Human Capital	-.11	.18	-.04	.07	-.08	-.08	.05	-.06	.04	-.09	-.07	-.12	.12	-.20	1				
16 HPWS X Size	-.01	.12	.08	.00	-.05	-.05	.16	-.05	.05	-.02	-.15	-.10	.06	-.11	.30	1			
17 HPWS X Innovation Strat.	.14	.05	.08	-.06	.09	.09	-.04	.06	.04	.06	-.03	.11	.15	.20	-.26	-.06	1		
18 HPWS X Quality Strat.	.04	.00	.06	-.12	-.03	.08	-.10	.04	-.04	-.02	-.05	.23	-.07	.06	-.02	-.01	.35	1	
19 HPWS X Low Cost Strat.	.01	-.05	.05	.03	.13	-.06	-.08	.02	-.03	-.05	-.06	.10	.09	.01	-.05	-.22	.00	-.02	1
20 HPWS X Cust Serv Strat.	.03	-.01	.08	-.08	.10	-.02	-.24	.14	.03	.09	-.03	.29	.06	.07	-.07	-.16	.44	.43	.06

<sup>a</sup> For all correlations greater than .12  $p < .05$

<sup>b</sup> For voluntary turnover and commercial credit all correlations greater than .13  $p < .05$

Table 5: Results of Regression for HIWS, Small Business Performance Drivers and Voluntary Turnover.<sup>a b c</sup>

Variables	Model 1	Model 2	Model 3	Model 4
Control				
Consulting Help	-.06	-.08	-.11 <sup>^</sup>	
HR Manager	-.05	-.01	-.06	
Log Age	-.09	-.09	-.07	
Log Size	-.06	-.01	-.02	
Original CEO	.05	.05	.03	
HI Service	-.01	.00	.00	
LE Service	.04	.07	.09	
Retail	.05	.04	.04	
Human Resource Management System				
HIWS		-.24 **	-.25 **	
Small Business Performance Variables				
CEO Human Capital			-.17 **	
HR Human Capital			.01	
Innovation Strategy			-.02	
Quality Strategy			-.08	
Customer Service Strategy			-.04	
Environment			.13 *	
HR/Small Business Performance Interactions <sup>c</sup>				
HR x CEO Human Capital				-.02
HR x HR Human Capital				.04
HR x Innovation Strategy				-.02
HR x Quality Strategy				-.08
HR x Customer Service Strategy				-.18 **
HR x Low Cost Strategy				-.05
HR x Environment				-.22 **
HR x Size				.19 **
$\Delta R^2$		.05	.04	
$R^2$	.03	.08	.12	
$\Delta F$		12.88 **	1.78	

<sup>a</sup> N= 246. Standardized regression coefficients are shown

<sup>b</sup> Voluntary Turnover was collected from the top manager and is the percentage of employees who voluntarily left the company in the previous year.

<sup>c</sup> Standardized regression coefficients for the interaction variables are the result of entering each interaction term individually into the model to avoid effects of other interaction terms. All individual interaction coefficients are shown here for convenience.

<sup>^</sup> p < .10

\* p < .05

\*\* p < .01

Table 6: Results of Regression for HIWS , Small Business Performance Drivers and Perceptual Operational Performance. <sup>a b c</sup>

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Control</b>				
Consulting Help	.08	.11 <sup>^</sup>	.13 <sup>*</sup>	
HR Manager	-.03	-.09	-.12	
Log Age	.00	.01	-.01	
Log Size	.06	.00	.02	
Original CEO	.11 <sup>^</sup>	.11 <sup>^</sup>	.11 <sup>^</sup>	
HI Service	-.01	-.02	-.05	
LE Service	-.08	-.12 <sup>^</sup>	-.14 <sup>*</sup>	
Retail	-.03	-.01	-.04	
<b>Human Resource Management System</b>				
HIWS		.37 <sup>**</sup>	.28 <sup>**</sup>	
<b>Small Business Performance Variables</b>				
CEO Human Capital			.03	
HR Human Capital			.26 <sup>**</sup>	
Innovation Strategy			.00	
Quality Strategy			.13 <sup>^</sup>	
Customer Service Strategy			.09	
Environment			-.02	
<b>HR/Small Business Performance Interactions <sup>c</sup></b>				
HR x CEO Human Capital				.03
HR x HR Human Capital				.00
HR x Innovation Strategy				.01
HR x Quality Strategy				.03
HR x Customer Service Strategy				.05
HR x Low Cost Strategy				-.06
HR x Environment				-.03
HR x Size				-.02
$\Delta R^2$		.12	.08	
$R^2$	.02	.14	.22	
$\Delta F$		35.75 <sup>**</sup>	4.45 <sup>**</sup>	

<sup>a</sup> N= 270. Standardized regression coefficients are shown

<sup>b</sup> Perceptual Operational Performance was collected from the top manager of each organization

<sup>c</sup> Standardized regression coefficients for the interaction variables are the result of entering each interaction term individually into the model to avoid effects of other interaction terms. All individual interaction coefficients are shown here for convenience.

<sup>^</sup> p < .10

<sup>\*</sup> p < .05

<sup>\*\*</sup> p < .01



Table 7: Results of Regression for HIWS , Small Business Performance Drivers and Employee Perceptual Performance. <sup>a b c</sup>

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Control</b>				
Consulting Help	-.01	.01	.02	
HR Manager	-.04	-.07	-.07	
Log Age	.01	.01	.00	
Log Size	-.14 <sup>^</sup>	-.16 <sup>*</sup>	-.17 <sup>*</sup>	
Original CEO	-.01	-.01	-.01	
HI Service	.16 <sup>*</sup>	.16 <sup>*</sup>	.12 <sup>^</sup>	
LE Service	.12 <sup>^</sup>	.11	.05	
Retail	.21 <sup>**</sup>	.22 <sup>**</sup>	.21 <sup>**</sup>	
<b>Human Resource Management System</b>				
HIWS		.16 <sup>**</sup>	.13 <sup>*</sup>	
<b>Small Business Performance Variables</b>				
CEO Human Capital			.02	
HR Human Capital			.08	
Innovation Strategy			-.04	
Quality Strategy			.19 <sup>**</sup>	
Customer Service Strategy			-.05	
Environment			-.06	
<b>HR/Small Business Performance Interactions <sup>c</sup></b>				
HR x CEO Human Capital				-.09
HR x HR Human Capital				.06
HR x Innovation Strategy				.03
HR x Quality Strategy				-.03
HR x Customer Service Strategy				.01
HR x Low Cost Strategy				-.06
HR x Environment				-.03
HR x Size				.10 <sup>^</sup>
$\Delta R^2$		.02	.06	
$R^2$	.08	.10	.17	
$\Delta F$		6.68 <sup>*</sup>	3.14 <sup>**</sup>	

<sup>a</sup> N= 270. Standardized regression coefficients are shown

<sup>b</sup> Employee Perceptual Performance was collected from the employees in each organization (avg of 3 employee responses per organization)

<sup>c</sup> Standardized regression coefficients for the interaction variables are the result of entering each interaction term individually into the model to avoid effects of other interaction terms. All individual interaction coefficients are shown here for convenience.

<sup>^</sup> p < .10

<sup>\*</sup> p < .05

<sup>\*\*</sup> p < .01

Table 8: Results of Regression for HIWS , Small Business Performance Drivers and Perceptual Financial Performance. <sup>a b c</sup>

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Control</b>				
Consulting Help	.06	.08	.12 *	
HR Manager	-.02	-.07	-.08	
Log Age	-.09	-.09	-.10	
Log Size	.14 ^	.10	.10	
Original CEO	.04	.04	.07	
HI Service	.03	.02	.02	
LE Service	-.08	-.11	-.12 ^	
Retail	.02	.04	.05	
<b>Human Resource Management System</b>				
HIWS		.29 **	.23 **	
<b>Small Business Performance Variables</b>				
CEO Human Capital			.06	
HR Human Capital			.22 **	
Innovation Strategy			.16 *	
Quality Strategy			.23 **	
Customer Service Strategy			.11	
Environment			-.09	
<b>HR/Small Business Performance Interactions <sup>c</sup></b>				
HR x CEO Human Capital				-.03
HR x HR Human Capital				-.02
HR x Innovation Strategy				.03
HR x Quality Strategy				-.02
HR x Customer Service Strategy				.02
HR x Low Cost Strategy				-.13 *
HR x Environment				-.03
HR x Size				.00
$\Delta R^2$		.08	.09	
$R^2$	.03	.11	.20	
$\Delta F$		22.26 **	4.81 **	

<sup>a</sup> N= 270. Standardized regression coefficients are shown

<sup>b</sup> Perceptual Financial Performance was collected from the top manager at each organization.

<sup>c</sup> Standardized regression coefficients for the interaction variables are the result of entering each interaction term individually into the model to avoid effects of other interaction terms. All individual interaction coefficients are shown here for convenience.

^ p < .10

\* p < .05

\*\* p < .01

Table 9: Results of Regression for HIWS , Small Business Performance Drivers and Commercial Credit Rating. <sup>a b c</sup>

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Control</b>				
Consulting Help	.07	.07	.08	
HR Manager	-.01	-.01	.01	
Log Age	.15 *	.15 *	.13 ^	
Log Size	-.16 ^	-.16 ^	-.15	
Original CEO	.00	.00	-.01	
HI Service	.02	.02	.01	
LE Service	.00	.00	.00	
Retail	-.08	-.08	-.10	
<b>Human Resource Management System</b>				
HIWS		-.01	-.03	
<b>Small Business Performance Variables</b>				
CEO Human Capital			.08	
HR Human Capital			.08	
Innovation Strategy			-.07	
Quality Strategy			-.04	
Customer Service Strategy			-.10	
Environment			-.07	
<b>HR/Small Business Performance Interactions <sup>c</sup></b>				
HR x CEO Human Capital				.05
HR x HR Human Capital				-.09
HR x Innovation Strategy				-.05
HR x Quality Strategy				-.03
HR x Customer Service Strategy				-.05
HR x Low Cost Strategy				-.06
HR x Environment				-.11
HR x Size				-.16 *
$\Delta R^2$		.00	.03	
$R^2$	.05	.05	.08	
$\Delta F$		.02	.98	

<sup>a</sup> N= 220. Standardized regression coefficients are shown

<sup>b</sup> Commercial Credit Rating came from the Dunn & Bradstreet small business database.

<sup>c</sup> Standardized regression coefficients for the interaction variables are the result of entering each interaction term individually into the model to avoid effects of other interaction terms. All individual interaction coefficients are shown here for convenience.

<sup>^</sup> p < .10

\* p < .05

\*\* p < .01

Hypothesis 1a, b and c, Main Effects of HRM. With the basic control variables in place the presence of a HIWS was significantly related to the employee level measure of voluntary turnover (  $\Delta R^2 = .05$ ,  $\Delta F = 12.88$ ,  $p < .01$  ). This provides support for hypothesis 1a, that the use of a HIWS in small businesses would be positively related to employee level measures of performance.

The presence of a HIWS was significantly related to both measures of operational performance; perceptual operational performance (  $\Delta R^2 = .12$ ,  $\Delta F = 35.75$ ,  $p < .01$  ) and employee perceptual performance (  $\Delta R^2 = .02$ ,  $\Delta F = 6.68$ ,  $p < .05$  ). This provides support for hypothesis 1b, that the use of a HIWS in small businesses would be positively related to operational measures of performance.

With the control variables in place, the presence of a HIWS was significantly related to one of the measures of firm level or financial performance; perceptual financial performance (  $\Delta R^2 = .08$ ,  $\Delta F = 22.26$ ,  $p < .01$  ). The use of a HIWS was not significantly related to the commercial credit score of the organization. This provides partial support for hypothesis 1c, that the use of a HIWS in small businesses would be positively related to firm level or financial measures of performance.

Hypothesis 2a, b and c, HRM with Alternative Performance Drivers. Model 3 added in the alternative performance drivers of human capital, business level strategy and the environment. In hypotheses 2a, b and c, I argued that the use of HIWS would remain significant even in the presence of these alternative drivers of performance. Because this is only relevant for those variables that were significant in step two, the dependent variable of commercial credit rating is not of interest for the testing of hypothesis two.

While not a specific hypothesis, it should be noted that step 3, which includes the alternative performance drivers as a model, was a significant predictor of performance in every case except for those of voluntary turnover and commercial

credit. The overall group of small business performance variables were significantly related to perceptual operational performance ( $\Delta R^2 = .08$ ,  $\Delta F = 4.45$ ,  $p < .01$ ), employee perceptual performance ( $\Delta R^2 = .06$ ,  $\Delta F = 3.14$ ,  $p < .01$ ) and perceptual financial performance ( $\Delta R^2 = .09$ ,  $\Delta F = 4.81$ ,  $p < .01$ ). This lends some credibility to the model of small business performance drivers used and their influence on performance.

I found support for hypotheses 2a and 2b and partial support for 2c. For hypothesis 2a, in the presence of alternative performance drivers, the use of HIWS remained significant in its negative relationship with voluntary turnover ( $p < .01$ ). For hypothesis 2b, in the presence of key small business performance drivers, the use of HIWS remained significant in its positive relationship with perceptual operational performance ( $p < .01$ ). In addition, HIWS remained significant in its positive relationship with employee perceptual performance ( $p < .05$ ). For hypothesis 2c, in the presence of key small business performance drivers, the use of HIWS remained significant in its positive relationship with perceptual financial performance ( $p < .01$ ). Because commercial credit was not a significant predictor of performance in step 2, its effect in step three is not relevant.

### Reduction in Effect Sizes Due to the Inclusion of Key Performance Drivers.

Hypotheses 3a and b were related to the reduction of the effect sizes of the HIWS variable when the key small business performance drivers were added to the model in step 3. The significance of a reduction in the effect size was calculated by creating a 95% confidence interval for the un-standardized regression coefficient for the HIWS variable in step 3. Since the coefficients decreased in all cases from step 2 to step 3 I was interested in the upper bound of the confidence interval created by taking the coefficient plus two standard errors. A lack of overlap with the coefficient from step 2 would indicate a significant change in effect size at the .05 level. (See table 10)

Hypotheses 3a and b were not supported. There was significant overlap in the 95% confidence interval for the un-standardized regression coefficients indicating that there is not sufficient evidence to conclude that there is any change in the effect size of the HIWS variable as a result of including the key small business performance drivers.

Table 10: Confidence intervals for effect size changes.

HIWS variable	Step 2 unstandardized coefficient	Step 2 Standard Error	Step 3 unstandardized coefficient	Step 3 Standard Error	Step 3 upper bound (+2 * standard error)	Change is significant at the .05 level
Perceptual Operational Performance	.112	.019	.087	.019	.125	No
Employee Perceptual Performance	.056	.022	.046	.022	.090	No
Perceptual Financial Performance	.125	.026	.098	.027	.151	No

HRM Interactions. I tested hypotheses 4- 7 by adding the 8 interaction variables; HRM with CEO human capital, HRM with HRM human capital, HRM with an innovation strategy, HRM with a quality strategy, HRM with a customer service strategy, HRM with a low cost strategy, HRM with environment and HRM with size. Each interaction variable was entered into the hierarchical regression model as step 4, one at a time for each of the five dependent performance variables for a total of  $8 \times 5 = 40$  interactions tested. In addition, because the interactions involved the scaled measures of the four strategy types, the dummy strategy variables were replaced by the scaled measures in step 4. The result of the changes is that step 4 is not a true hierarchical moderated regression, but rather just a convenient method to report the individual interaction results. Results for the individual interactions tested can be seen in step 4 of tables 5-9.

Hypothesis 4, the impact of HIWS in small businesses on performance will be greater in organizations with higher levels of human capital in their top managers was not supported. The two human capital interaction variables were not significant with any measures of performance.

Hypothesis 5a, b, c and d, the impact of HIWS in small businesses on performance will be greater in organizations with high levels of any of the three differentiation strategies and lower in organizations using high levels of a low cost strategy was partially supported. Two interactions were found to be significant at the .05 level, HR with a customer service strategy on voluntary turnover was significant ( $P < .01$ ). In looking at the graph (See figure 3), for interpretation of this result, it is apparent that the when the level of the customer service strategy being used is high, the impact of HRM on turnover is greater as indicated by the steeper slope than when the use of a customer service strategy is low. This indicates that where a customer



service strategy is being used, the impact of HIWS on reducing turnover is greater providing partial support for hypothesis 5c. Countering that finding, the interaction of HRM with a low cost strategy on perceptual financial performance significant ( $p < .05$ ). In looking at the graph for interpretation (See figure 3), the slope for the high use of a low cost strategy was slightly steeper than the slope for low use of a low cost strategy. This indicates that where a low cost strategy is being used, the impact of HIWS on perceptual financial performance is higher. This goes against hypothesis 5d and overall provides mixed results for the moderating effects of cost vs. differentiation strategies.

Hypothesis 6, the impact of HIWS use in small businesses will be greater when the rate of change in the environment is higher or faster was partially supported. I found one interaction to be significant at the .05 level. HRM with a fast changing environment on voluntary turnover was significant ( $p < .01$ ). In looking to the graph for interpretation, it is apparent that the slope on the line for a high rate of change in the environment is steeper than the slope for the low rate of change in the environment. This indicates that when the environment is changing quickly, the impact of a HIWS on reducing turnover will be greater (See figure 4).

Hypothesis 7, the impact of HIWS use in small businesses will be greater in larger small businesses was supported. Two interactions were found to be significant; HR with size on voluntary turnover and HR with size on commercial credit. The turnover interaction was significant ( $p < .01$ ). Likewise, the commercial credit interaction was also significant ( $p < .05$ ). In looking at the graphs for interpretation of these results (See figure 5), in both the commercial credit and the voluntary turnover case, the slope is steeper under the condition of larger organizations than smaller organizations. This indicates that the impact of HIWS on increasing credit scores and on lowering turnover is greater as the size of the small business increases.

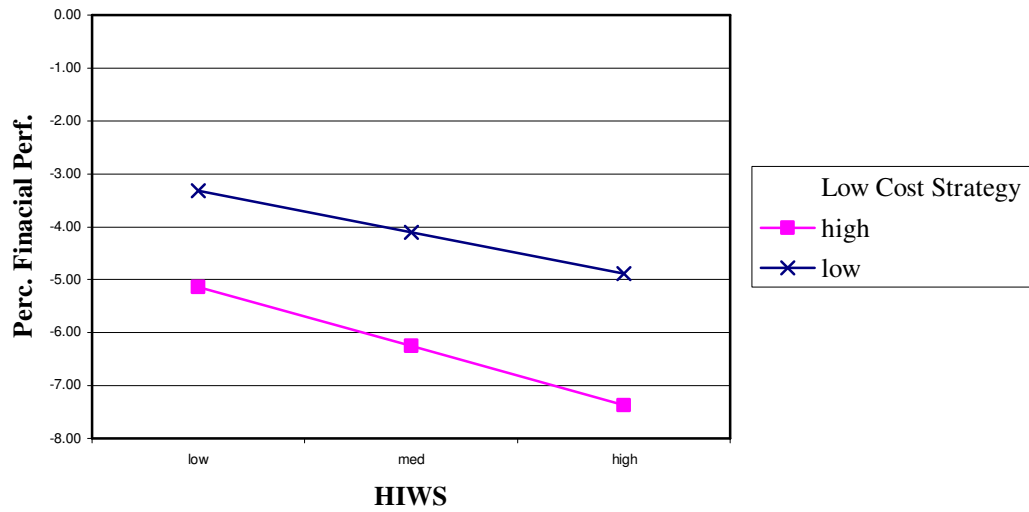
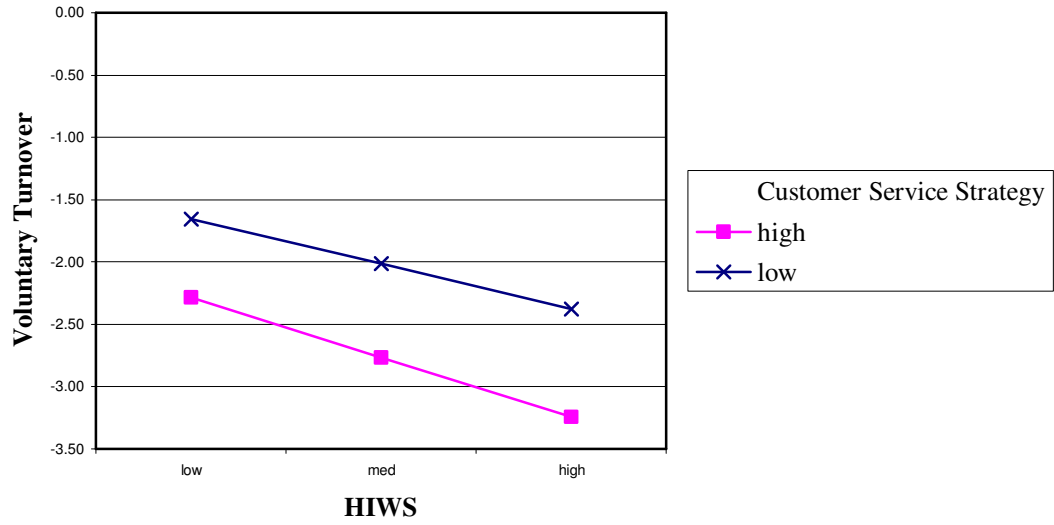


Figure 5: HIWS and Business Level Strategy Interactions

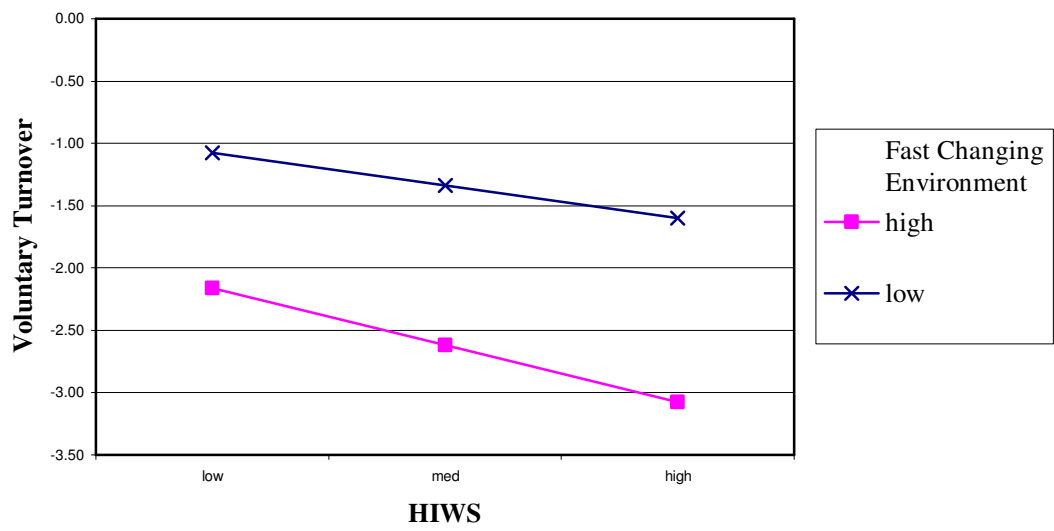


Figure 6: HIWS and Environment Interaction

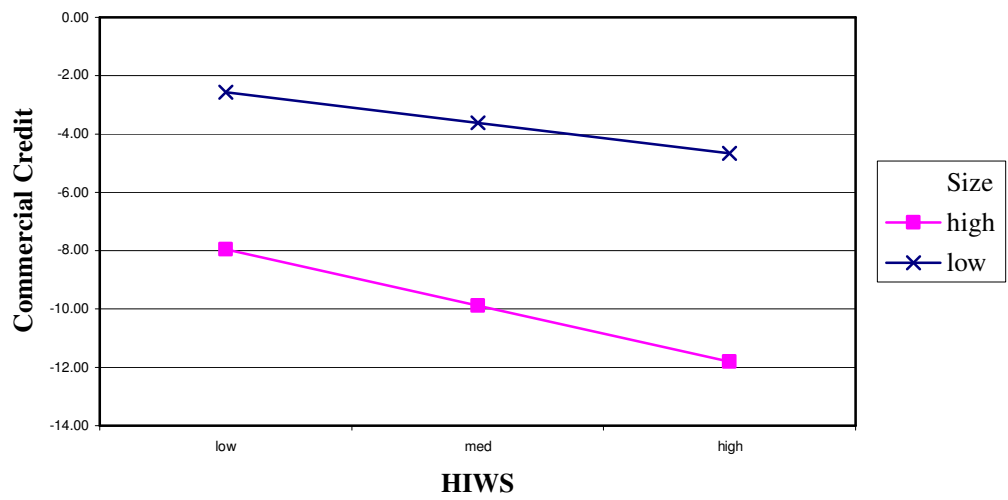
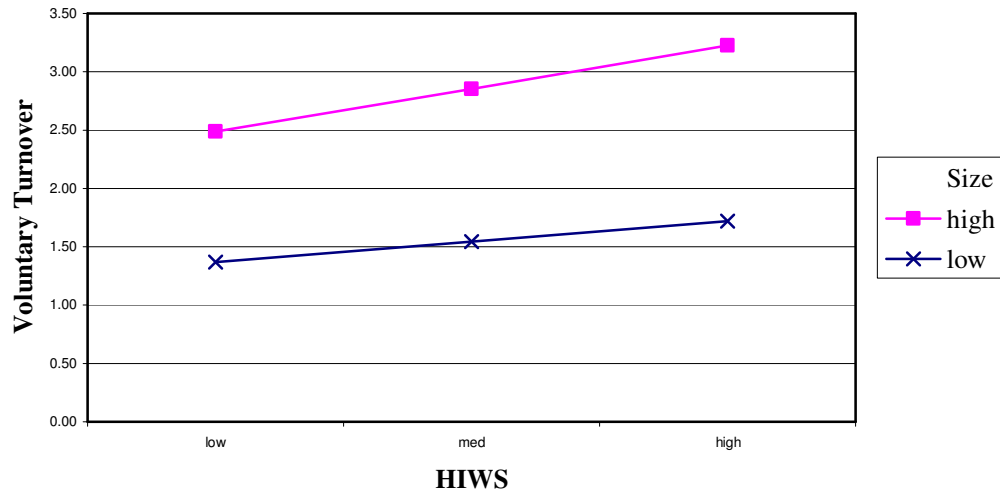


Figure 7: HIWS and Size Interactions

## CHAPTER 8: DISCUSSION

### Summary of Findings and Implications

The purpose of this research was threefold 1) to find out whether or not HRM contributed to performance in small businesses, 2) to use the context of small businesses in order to gather meaningful measures of control variables not normally used in past HR to performance research in order to provide a stronger test for the impact of HRM on performance in small firms and 3) to use the ability to gather meaningful control variables to test for interactions with those control variables and HRM in its effect on performance. The research is important because very little research has addressed the role of HRM in contributing to the performance of small businesses (Heneman, Tansky, & Camp, 2000). In addition, recent research has suggested that more needs to be done by the way of proper control variables to better understand the relationship between HRM and performance (Wright et al, 2005).

HRM in Small Businesses. I hypothesized that HRM, in the form of high involvement work systems would be positively related to employee level performance, operational level performance, and financial performance in small businesses. The data indicate strong evidence that HIWS are significantly related to performance in small businesses at all three of these levels. The relationship was found to be significant for all dependent variables except for the financial performance variable of commercial credit rating.

That being said, the use of a HIWS was found to be significant with all other dependent performance variables used for this study. This is a strong indication that the relationships between HRM and performance in larger organizations can be

replicated in small organizations and that the relationship does indeed exist for small businesses.

This is a significant contribution to the field of SHRM in that it expands past SHRM research into the important area of small businesses. While not much is known about HRM in small businesses, they make up a significant part of our economy both from a labor as well as an employment standpoint. By demonstrating the existence of a relationship between HRM and performance in this context, this research provides a foundation upon which future SHRM research can build in attempting to better understand this relationship and how it works.

One possible reason I failed to find a relationship between the use of HIWS and the commercial credit score is that credit scores are not an effective measure of firm performance. First, the relationship between an organization's credit is not necessarily directly related to performance. While it might be difficult for an organization that is performing very poorly to meet its obligations to its creditors resulting in a lower credit score, the inverse is not necessarily true. Organizations performing very well do not necessarily need to meet their obligations to creditors resulting in a high credit score. Organizations for reasons other than performance may choose to pay late or otherwise not meet obligations to creditors resulting in a low credit score or rating in spite of good performance.

Second, the data indicate that the credit score for the reasons mentioned above or other reasons unknown is not a meaningful measure of performance (see table 9). In analyzing the variables included in the different steps 1-3 of the hierarchical regression analysis, it is interesting to note that commercial credit is not significantly related to any other known driver of firm performance or HRM. Even size and age which should be significantly related to the credit of an organization due to the fact that a longer life and a larger sales base should both help an organization to meet is

credit obligations are marginally significant at best. This leads me to conclude that despite my best efforts to find a more objective measure of performance, commercial credit is not a meaningful measure of performance for small businesses.

While the purpose of this study was not to compare the effects of HRM in small businesses to those in larger organizations, I did want to understand if the models that I had created compared favorably to prior research. In order to gain a basic understanding of how my research fit in with previous studies, I compared the  $R^2$  for my models with those of other studies using turnover and perceptual measures of performance as dependent variables (see figure 6). The purpose of this exercise was not to definitively understand how my study compared to others, but rather to compare the variance explained to demonstrate that my study was explaining a similar amount of variance when compared to previous work. From table 6 it can be seen that the base model, which includes the HIWS variable and controls only from my study produced  $R^2$  numbers that are somewhat lower than previous research while the full model which included alternative performance drivers was in line with previous research as far as effect sizes for the models. Overall, the models used in my study appear to be comparable to other work using similar dependent variables. Because of differences in the variables included in different models from different studies, I am not able to make any claims about the effect of HRM in the small business setting versus that of larger organizations, but it does raise some interesting questions for future research.

	Turnover (base model)	Turnover (full model)	Perceptual Performance (base model)	Perceptual Performance (full model)
Current Study				
Perceptual Operational			.14	.22
Perceptual Financial			.10	.17
Employee Perceptual Turnover	.08	.12	.11	.20
Delaney & Huselid (1996)			.18	
Bae & Lawler (2000)			.34	
Batt (2002)	.17			
Huselid (1995)	.38			

Figure 8.  $R^2$  comparisons with past studies using similar dependent variables

Alternative Performance Drivers. The second purpose of this research was to use the context of small businesses in order to gather meaningful measures of control variables not used in prior research. This was done in order to demonstrate a stronger argument for the impact of HRM on performance by showing that HRM matters above and beyond known drivers of small business performance.

Here again the data strongly support the hypothesis that HRM, specifically the use of a HIWS, is significantly related to performance even in the presence of these other known drivers of performance. With the exception of commercial credit rating discussed above, this held true for employee level performance, operational performance and financial performance.

It should be noted also, that while not specifically hypothesized, the change in F statistic for step three which was the addition of the alternative performance drivers was significant for all dependent variables except for voluntary turnover. This is a strong indication that with the exception of voluntary turnover, the small business performance variables included in this research were indeed alternative drivers of performance lending even more credibility to the argument that HRM does contribute to performance above and beyond other small business performance drivers.



The lack of significance for the change in F in the case of voluntary turnover is not surprising. While it could be reasoned that human capital, business level strategy and the environment are related to turnover, past research in small businesses using these variables as performance drivers has tended to focus on more operational and firm level performance rather than the very HR measure of turnover (Chrisman, Bauerschmidt, & Hofer, 1999).

Overall, my findings provide a significant contribution to HRM research. By using the context of small businesses, I was able to more thoroughly test the HRM to performance model and demonstrate that HRM does matter even in the presence of key performance drivers not historically used in SHRM research. This lends more credibility to the argument that HRM matters. It is also a step in the right direction in addressing the issue of causation. While demonstrating that HRM matters above alternative performance drivers does not prove that HRM causes performance, it does help by ruling out potential spurious relationships where performance might be caused by another performance driver not included in the model (Wright et al, 2005).

Reduction in Effect Sizes. Hypotheses 3a and b that the inclusion of the alternative drivers of performance would reduce the effects of HRM on performance were not supported. Effect sizes from step 2 were well within confidence intervals created using standard errors step 3. While this data do not support my hypotheses, the findings here actually strengthen the argument for the impact of HRM on performance. Even in the presence of alternative drivers of performance the effect of HRM on performance is both significant and remains statistically constant. This counters arguments that the discovered relationship between HRM and performance is spurious at least with the performance drivers included here for this study.

There two reasons why this might be the case. First, the relationship between HRM and performance is not spurious. Given my results with the more stringent test,

there is stronger evidence that there is a relationship between HRM and performance and that this relationship is not the result of some other variable causing both HRM and performance.

Second, the relationship is spurious, but I did not gather the correct variables. A spurious relationship involves some other variable causing both high levels of HRM and high levels of performance. It is possible that there are other variables not included in this study for which this is the case. More research is needed to test for this potential spurious relationship.

Regardless, my study makes a significant contribution in providing a stronger test for the relationship between HRM and performance. By including the alternative performance drivers in this study I have demonstrated that HRM is related to performance above and beyond these other known drivers of performance. In addition, I have demonstrated that the effect size or overall effect of HRM on performance is not significantly reduced by the inclusion of other known drivers of performance.

HR Interactions. My third purpose of this study was to use the context of small businesses to test for interaction effects of HRM with other variables in the model. Because the context of small businesses would allow me to collect meaningful measures of some of the key performance drivers in small business, I was able to test for the interactions of these performance drivers with HRM in contributing to performance.

The data provided strong evidence for some of the hypothesized relationships between small business performance drivers, HRM and performance. While there was some evidence that moderating relationships existed, rate of change in the environment, and size, the majority of the 40 interactions tested did not result in significant findings.

One reason for this might be the general difficulty in finding significant interactions in SHRM research. Researchers in the field of SHRM have had difficulty finding meaningful interactions in the HRM to performance relationship (Becker and Gerhart, 1996; Pfeffer, 1994). Small effect sizes and difficulty in detecting interactions especially with scaled variables like those used in this study might have limited my ability to get more support for my interaction hypotheses.

Another potential reason for the low number of significant interactions is that I did not measure the right things. While my research focused on gathering information on known small business performance drivers for testing interactions, it is possible that other variables are driving differences. Variables such as leadership style or personality might have a stronger impact on the HRM to performance relationship than the variables I chose to use in this research.

Finally, the diversity of my sample may have constrained my ability to find more significant interactions. While a diverse sample is good for generalizability, it may be inhibiting my ability to find key interactions. It is possible that interactions are specific to certain industries or to a certain size level within the small business context or even to a certain strategy. My sample spans a wide range of sizes, industries and business level strategies employed. Sample size limitations at this time do not allow me to split up the sample and test for interactions under those specific conditions.

Practical Implications. My findings may have important practical implications in addition to the academic contributions discussed above. Managers and owners of small businesses are constantly seeking new ways to improve their performance and strengthen their condition with competitors. This research indicates that the way people are managed in those organizations can play an important role.

Managers and owners of small businesses would do well to focus on how they manage their human resources as this study demonstrates that HRM is a significant predictor of various levels of performance in small businesses. Not only was HRM shown to be a significant predictor of employee levels of performance by reducing voluntary turnover, it was also shown that HRM was significantly related to higher and more distal measures of performance such as financial and operational performance. These are the very measures of performance found to be most important in assessing success to the small business owners and managers interviewed as part of the qualitative portion of this study.

Perhaps even more important from a practical standpoint, I found that the way people are managed in small businesses was significantly related to performance above and beyond other known performance drivers. This is significant to practitioners because it demonstrates that HRM is important above and beyond some of the more traditional performance drivers such as business level strategy. Managers can expect to see additional benefits to effective HRM beyond those benefits they might receive by having an effective business level strategy.

Finally, while the data did not provide strong support for all interactions, the findings do have some practical implications for managers. For example, it appears from this research that HRM matters more under certain circumstances such as when the rate of change in the environment is great or in larger small businesses. While more research is needed to tease out additional contingencies, it is of extreme importance for practitioners to understand where effective people management might matter more or even less.

#### Study Limitations and Future Research

It is important to acknowledge the limitations of this research and discuss how they might be addressed in future research. First, with the exception of voluntary

turnover and commercial credit, I collected perceptual rather than objective measures of performance. While research has demonstrated that perceptual measures of performance are appropriate where more objective measures of performance are not available, the research could be strengthened by the inclusion of more objective performance measures (Dess & Robinson, 1984; Wall, et al, 2004; Delaney & Huselid, 1996). While availability of objective performance measures in small businesses is limited, future research might focus on small business databases such as Dunn & Bradstreet to provide more objective performance measures.

A second limitation of this research is that I used only a limited number of alternative performance drivers. As I discussed previously, past research has demonstrated that small business performance is the result of top leader attributes, organizational level attributes and environmental attributes (Baum, Locke and Smith, 2001). While I used components of each of these attributes in this research the variables were not exhaustive by any means. It is possible that other variables such as leadership behaviors, leader personality, other measure of business level strategy or other environmental attributes also contribute to small business performance. Inclusion of these variables in future research will strengthen the argument that HRM does indeed contribute to performance even further.

A third limitation of this study is the potential for same source and perception bias as a result of collecting the HRM variables as well as several of the dependent variables from the same source at the same time. I attempted to reduce this bias potential by also collecting more objective performance measure such as turnover and commercial credit. In addition, performance was also collected from a second source by asking the employees to rate the performance. In spite of these efforts, there is still a potential for bias in the data due to the fact that the dependent and independent variables were collected at the same time and from the same person. Future research

should attempt to avoid these biases by seeking multiple responses from individuals in an effort to collect HR and performance variables at different times or using multiple respondents to provide the different variables. A focus on more objective performance measures as suggested above will also alleviate this limitation.

A fourth limitation of this study is the sample size. While a sample of 270 is sufficient for the current study, as was mentioned previously, it did limit my ability to perform additional analysis around the effects of specific industries, specific firm sizes or specific business level strategies employed by organizations within the sample. Future research using a diverse sample such as the sample in this study should work to increase the sample size to allow for enough power to perform these additional analyses. Alternatively, future research could also attempt to use more specified samples such as within a single industry or a single size grouping in order to address some of the issues specific to those different groups.

Notwithstanding the methodological limitations of this research, the findings do raise some interesting questions for future research. For example, this study provides evidence that the use of a HIWS contributes significantly to the performance of small businesses, but that does not mean that the HIWS is the only or even the best system of HRM for small businesses. Future research could extend the findings of this study by looking at other HR systems such as high performance work systems, or high commitment work systems to understand the role that different HRM systems play in the performance of small businesses. In an interesting study, Baron, Hannan and Burton (2001) found evidence of a cluster model of HRM systems where different bundles of HRM components were important for different high tech start up firms. Given this finding, it is possible that the ideal model of HRM for small businesses does not match any model currently available from past SHRM research.

The results of the study showed some support for interactions or situations under which HRM might matter more or less. Understanding these contingencies is important for researchers and practitioners alike. Future research on HRM in small businesses could build on my research by more thoroughly testing for some of these contingency relationships. As was mentioned previously, the collection of alternative contingency variables or a focus on specific industries, business size or strategy could aid in this effort to understand the interactions or contingency relationships.

Finally, I argued that the inclusion of key small business performance drivers was a step in the right direction to demonstrate cause in the HRM to performance relationship. The context of small businesses is an ideal context for further investigation into the issue of causality. In addition to the ability to use the reduced complexity of the context to control for alternative drivers of performance, the context of small businesses is an ideal setting for addressing the issue of temporal precedence (Wright et al, 2005). Because of their size, small businesses are able to make changes more quickly than larger organizations and likewise the impact of these changes is likely to be felt more quickly. Because of this fact, the context of small businesses is a good context for a longitudinal design looking at changes in HRM over time and their subsequent impact on performance. The ability to implement changes more quickly and the impact of those changes being felt more quickly will likely help to overcome some of the limitations of past attempts to look HRM to performance relationships using a longitudinal design (Wright et al, 2005).

### Conclusion

In conclusion, my research contributes to our understanding of the role of HRM in small businesses. Findings indicate that the use of a HIWS in small businesses is significantly related to performance at multiple levels. My study extends current SHRM research by focusing on small businesses, an area ignored by past

research, but an extremely important part of our economy. In addition, my study strengthens our understanding of the HRM to performance relationship by ruling out alternative performance drivers as the cause for the observed relationship between HRM and performance. In this way, my study provides a more thorough test of the HRM to performance relationship. While not fully supported, this research also provided evidence for various contingency relationships.

By testing these relationships in the context of small businesses, this research provides a foundation for future research. Because of the role they play in our economy, the importance of small businesses and understanding the relationship between HRM and their performance is of significant importance. In addition to this, continued research using the context of small businesses has the potential to provide valuable benefits in furthering our understanding of this complex relationship and making significant strides in demonstrating that the relationship is indeed causal.



APPENDIX A  
VARIABLE ITEMS

**Independent Variable**  
**HR FACTORS**

**Feedback ( $\alpha$  .78)**

1. Managers follow a regular schedule in providing feedback to employees.
2. We have a formal process of performance appraisals to provide feedback to employees.
3. We have formal job duties and descriptions so that employees know their roles and responsibilities.
4. We use performance appraisals primarily to help employees identify new skills to develop.

**Discretion ( $\alpha$  .70)**

1. Managers closely monitor the day-to-day activities of employees.
2. Managers tightly control the pace and schedule at which employees complete their work.

**Selection Fit ( $\alpha$  .77)**

1. Our hiring practices focus on how well the individual fits with the culture of our company.
2. When interviewing applicants, we primarily assess their ability to work with our current employees.
3. When selecting new employees, we primarily assess their overall fit with the organization's values.

**Opportunity ( $\alpha$  .72)**

1. We sponsor company social events so employees can get to know one another.
2. We provide opportunities for employees to continue to learn and grow.
3. We sponsor outside activities (e.g., sports teams, events) to build a sense of community.

## **Dependent Variables**

Using the scale below, compare your organization's performance over the last three years to that of other organizations that do the same kind of work in terms of:

1 = worse    2 = slightly worse    3 = about the same  
4 = slightly better    5 = much better

### **Perceptual Operational Performance .67 (From the CEO )**

1. Quality of products, services, or solutions?
2. Development of new products, services, or solutions?
3. Satisfaction of customers or clients?

### **Perceptual Operational Performance .82 (From the CEO)**

1. Growth in sales?
2. Profitability?
3. Market share?

Please use the scale below to indicate the extent to which you agree with the following questions regarding your company's current performance.

1 = strongly disagree    2 = moderately disagree  
3 = neutral    4 = moderately agree    5 = strongly agree

### **Perceptual Performance (From the Employees .88 ICC1- .24 ICC2- .66 )**

1. This organization's performance is much better than the performance of our main competitors'.
2. This organization is achieving its full potential.
3. People are satisfied with the level of performance of this organization.
4. This organization does a good job of satisfying its customers.

### **Voluntary Turnover**

Voluntary Turnover for prior year = (# of employees) / Total number of employees

### **Commercial Credit Rating**

Dunn & Bradstreet rating of commercial credit scores rated from one to five reverse coded so that 1 is the worst and 5 is the best.

## **Alternative Drivers of Small Business Performance**

### **CEO Experience**

The natural log of the industry experience and job tenure of the CEO added together

### **HR Resources ( $\alpha$ .83)**

1. The top managers at this company lack the knowledge needed to design and implement effective employee management practices. (Reverse Coded)
2. The top managers here do not have the time or resources to effectively design and implement effective employee management practices. (Reverse Coded)

### **Rate of Change ( $\alpha$ .69)**

1. There are frequent changes in technology in our industry.
2. Things change quickly in this industry.

### **Business Strategy**

Businesses rated their top strategy in one of five categories created as dummy variables

1. Innovation
2. Customer Service
3. Product Quality
4. Efficiency

Which organizational imperative best characterize your organization's current approach to the marketplace?

1. Continuously developing new products or services. (Innovation)
2. Continuously improving the quality of its products or services. (Quality)
3. Continually increasing the efficiency with which it operates. (Efficiency)
4. Continually adapting its products or services to customer needs. (Customer Service)

## **Control Variables**

### **Consulting Help ( $\alpha$ .76)**

1. This company relies on external sources such as consultants or service providers to carry out employee management practices (payroll, recruiting, training, risk-management, etc.)
2. This company depends on external sources to provide us with the knowledge and information necessary to design and implement effective employee management practices.

### **Presence of an HR Manager**

Dummy variable indicating the presence of an HR manager (1= HR manager present)

### **Size**

Natural log of the size of the company as measured by the number of employees

### **Age**

Natural log of the age of the company in years.

### **Original CEO**

Dummy variable indicating the presence of the original CEO (1= Original CEO present)

### **Industry**

Dummy variables for 4 basic industry codes; High End Service, Low End Service, Manufacturing & Construction, and Retail

APPENDIX B  
ORIGINAL MANAGER AND EMPLOYEE SURVEYS

Included below are relevant portions of both the manager and employee surveys. The full surveys included additional sections not relevant to this research and have been omitted from this appendix.

## **GENERAL INSTRUCTIONS—TOP MANAGEMENT SURVEY**

Before you begin, if you would prefer to complete this survey online, please go to: [www.sri.cornell.edu/topmgmt/](http://www.sri.cornell.edu/topmgmt/) and follow the instructions you find there.

We wish to thank you in advance for your participation in this study. In return for your participation, we will provide you with a summary report of our findings as well as a benchmark report comparing your company to an average of companies which are similar to yours in terms of size and industry. We are confident that these reports will benefit your organization and will provide important insights into ways of increasing organizational effectiveness.

Please try to answer the questions as honestly and as candidly as possible. ***There are no trick questions:*** this is *NOT* a test, so there are no right or wrong answers. We suggest that you move through the survey quickly without spending too much time on any one question—your first response usually will be the most accurate. The survey will take some time to complete—we estimate about twenty minutes. You will probably find some redundancy in the questions. This is deliberate and is done for statistical reasons. Please answer the questions even if they seem similar to ones you've already answered; you need not go back to the previous questions to make sure that your answers are consistent.

This survey is strictly confidential. ***Under no circumstances will your individual responses be made available to anyone other than the Cornell research team.*** Information from the survey will be compiled into overall research reports consisting of aggregated results from many companies. The results may be published at a later time in aggregate form only. Please remember, individual responses will ***not*** be a part of these reports and participating companies will not be identified in any publications or reports generated from this study.

Please complete the survey within the next five business days and return to the Cornell research team using the preaddressed, stamped envelope provided.

If you have any questions, please contact one of the research directors at the School of Industrial and Labor Relations at Cornell University:

Matt Allen  
[mra26@cornell.edu](mailto:mra26@cornell.edu)

Jeff Ericksen  
[gae1@cornell.edu](mailto:gae1@cornell.edu)

Dr. Chris Collins  
(607)255-8859  
[cjc53@cornell.edu](mailto:cjc53@cornell.edu)

**PART 1: PERSONAL AND COMPANY BACKGROUND INFORMATION**

1. What is the name of your company?  
\_\_\_\_\_
2. In what industry does your company compete?  
\_\_\_\_\_
3. What is your title or position?  
\_\_\_\_\_
4. How many CEOs has your organization had including the founder \_\_\_\_\_
5. When was the company founded? \_\_\_\_\_
6. Does your organization currently employ a manager whose primary responsibilities are Human Resource Management? ( ) Yes ( ) No
7. If you answered yes to question 6, when did you begin to employ a person in this role? \_\_\_\_\_
8. How many years have you worked at your **present company**? \_\_\_\_\_ years \_\_\_\_\_ months
9. How many years have you worked **in this industry**?  
\_\_\_\_\_ years \_\_\_\_\_ months
10. How many years have you held a **position similar** to the one you currently hold?  
\_\_\_\_\_ years \_\_\_\_\_ months
11. How many employees does your organization currently employ? \_\_\_\_\_
12. How many employees did your organization employ three years ago? \_\_\_\_\_
13. How many employees left your organization in the last year because they were terminated or released by the organization? \_\_\_\_\_
14. How many employees quit your organization in the last year? \_\_\_\_\_

**PART 2: BUSINESS ENVIRONMENT**

**1 = strongly disagree   2 = moderately disagree   3 = neutral   4 = moderately agree   5 = strongly agree**

Using the scale above, assess the degree to which the following statements characterize the uncertainty of the environment of your business.

- \_\_\_\_\_ 1. There is a high degree of fluctuation in the demand for this organization's products, services, or solutions.
- \_\_\_\_\_ 2. There are frequent changes in technology in our industry.
- \_\_\_\_\_ 3. This organization faces stiff competition from numerous other organizations.
- \_\_\_\_\_ 4. It is easy to make money in this industry segment.
- \_\_\_\_\_ 5. It is easy to understand this industry.
- \_\_\_\_\_ 6. Things change quickly in this industry.

Using the scale above, assess the extent to which your company's financial performance is dependent on the following:

- \_\_\_\_\_ 7. Continuously developing new products or services.
- \_\_\_\_\_ 8. Continually seeking to acquire new customers.
- \_\_\_\_\_ 9. Continuously improving the quality of its products or services.
- \_\_\_\_\_ 10. Continually increasing the efficiency with which it operates.
- \_\_\_\_\_ 11. Continually adapting its products or services to customer needs.
- \_\_\_\_\_ 12. Continually responding to a rapidly changing technological environment.
- \_\_\_\_\_ 13. Which two organizational imperatives best characterize your organization's current approach to the marketplace? Please choose two imperatives from questions 7-12 above:

### PART 3: CHANGES IN EMPLOYMENT

In the following two tables, please record the total number of employees that your organization (1) currently employs and (2) employed 3 years ago in the following areas:

	Currently	3 Years Ago
Executives		
Professional and managerial		
Technical and scientific		
Hourly		
	Currently	3 Years Ago
<u>Regular full-time workers.</u> Individuals on the organization's payroll who work a full work week and a full work year.		
<u>Part-time workers.</u> Individuals on your company's payroll who work less than a full work week and/or less than a full work year. Examples include part-time, on-call, and seasonal hires.		
<u>Contract workers.</u> Individuals who work at your organization but who are paid by another organization. Examples include staff from temporary agencies or contractors.		

### PART 4: ALIGNMENT AND ADAPTATION

Please use the scale below to indicate the extent to which you agree with each of the following statements.

**1 = strongly disagree 2 = moderately disagree  
3 = neutral 4 = moderately agree 5 = strongly agree**

- \_\_\_\_\_ 1. This company always has the right number of people.
- \_\_\_\_\_ 2. We often have more work to do than employees to do it.
- \_\_\_\_\_ 3. This company always has an appropriately sized workforce.
- \_\_\_\_\_ 4. This company has all the expertise it needs to be successful.
- \_\_\_\_\_ 5. This company has the people with the right knowledge and skill sets.

- \_\_\_\_\_ 6. We sometimes lack people with the knowledge and skills necessary to do the job right.
- \_\_\_\_\_ 7. This company tightly controls the costs associated with managing its employees.
- \_\_\_\_\_ 8. We would benefit from investing more heavily in employee management practices.
- \_\_\_\_\_ 9. This company is at a competitive disadvantage because of its employee management costs.
- \_\_\_\_\_ 10. The people in this company are highly focused on realizing organizational results.
- \_\_\_\_\_ 11. The people in this company are always working to improve company performance.
- \_\_\_\_\_ 12. The people in this company always act in ways that help the organization achieve its goals.
- \_\_\_\_\_ 13. This company effectively utilizes its people at all times.
- \_\_\_\_\_ 14. This company provides people with ample opportunities to do their best possible work.
- \_\_\_\_\_ 15. This company consistently gets the most out of its employees' knowledge and skills.
- \_\_\_\_\_ 16. Our employees' knowledge and skills have changed greatly over the last three years.
- \_\_\_\_\_ 17. Three years ago, this organization employed completely different types of employees.
- \_\_\_\_\_ 18. Compared to three years ago, our employees possess different kinds of knowledge and skills.
- \_\_\_\_\_ 19. The size of this company's workforce has changed dramatically over the last three years.
- \_\_\_\_\_ 20. The number of employees who work at this organization has fluctuated over the last 3 years.
- \_\_\_\_\_ 21. The size of this company's workforce has remained stable over the last three years.
- \_\_\_\_\_ 22. Over the last three years, people in this organization shifted roles many times.
- \_\_\_\_\_ 23. Our employees are working on completely different assignments now than three years ago.
- \_\_\_\_\_ 24. Every employee's role at this organization has changed over the last three years.
- \_\_\_\_\_ 25. We do a better job managing employee management costs now than three years ago.
- \_\_\_\_\_ 26. Over the last three years, this organization has become more competitive with respect to employee management costs.
- \_\_\_\_\_ 27. Compared to three years ago, we do a considerably better job managing the costs of employee management practices.
- \_\_\_\_\_ 28. The way work gets done in this organization has changed dramatically over the last three years.
- \_\_\_\_\_ 29. In the last three years, the ways that employees contribute to this organization's success have changed considerably.
- \_\_\_\_\_ 30. What people in this organization do on a daily basis has changed a lot over the last three years.



## PART 5: ASSESSMENT OF EMPLOYEE MANAGEMENT PRACTICES

The items below are about the practices your company uses to manage its employees. Using the scale below, please write in the number that indicates your agreement with each of the following statements.

**1 = strongly disagree 2 = moderately disagree 3 = neutral 4 = moderately agree 5 = strongly agree**

- \_\_\_\_\_ 1. When screening job applicants, we mainly assess their fit to the requirements of specific job openings.
- \_\_\_\_\_ 2. The practices that we use for selection focus on the potential long-term contribution of applicants.
- \_\_\_\_\_ 3. We tend to evaluate candidates based on their ability to contribute immediately in their job without training.
- \_\_\_\_\_ 4. Our hiring practices focus on how well the individual fits with the culture of our company.
- \_\_\_\_\_ 5. When screening applicants for jobs, we focus on the ability to perform right away.
- \_\_\_\_\_ 6. We will leave a positions open until we can find the best and brightest possible new employee.
- \_\_\_\_\_ 7. When interviewing applicants, we primarily assess their ability to work with our current employees.
- \_\_\_\_\_ 8. We look to elite sources (e.g., top universities, head hunters) to find the best available talent.
- \_\_\_\_\_ 9. When selecting new employees, we primarily assess their overall fit with the organization's values.
- \_\_\_\_\_ 10. Managers closely monitor the day-to-day activities of employees.
- \_\_\_\_\_ 11. We have formal job duties and descriptions so that employees know their roles and responsibilities.
- \_\_\_\_\_ 12. Peers have a great deal of input into the performance evaluations of other employees.
- \_\_\_\_\_ 13. We give employees a great deal of discretion to monitor their own performance.
- \_\_\_\_\_ 14. We employ a high percentage of managers and supervisors relative to other organizations.
- \_\_\_\_\_ 15. Managers follow a regular schedule in providing feedback to employees.
- \_\_\_\_\_ 16. In general, employees are expected to provide feedback to one another on job performance.
- \_\_\_\_\_ 17. Managers tightly control the pace and schedule at which employees complete their work.
- \_\_\_\_\_ 18. Employees are trusted to get the job done right the first time without direct oversight.
- \_\_\_\_\_ 19. Employees in this organization are expected to track one another's work and effort.
- \_\_\_\_\_ 20. We have a formal process of performance appraisals to provide feedback to employees.

- \_\_\_\_\_ 21. Employees are given discretion to complete their tasks however they see fit.
- \_\_\_\_\_ 22. We attract and retain employees primarily by paying a higher wage than our competitors.
- \_\_\_\_\_ 23. We use individual bonuses or incentive pay to motivate employees.
- \_\_\_\_\_ 24. We allow employees to work flexible hours.
  
- \_\_\_\_\_ 25. We sponsor company social events so employees can get to know one another.
- \_\_\_\_\_ 26. We provide opportunities for employees to continue to learn and grow.
- \_\_\_\_\_ 27. We sponsor outside activities (e.g., sports teams, events) to build a sense of community.
- \_\_\_\_\_ 28. Employee bonuses are based mainly on how the organization as a whole is performing.
- \_\_\_\_\_ 29. Performance appraisals are used primarily to determine pay raises.
- \_\_\_\_\_ 30. We use job rotation to expand the skills of employees.
- \_\_\_\_\_ 31. We use incentives (e.g., stock options, sign-on bonuses) to attract individuals to this organization.
- \_\_\_\_\_ 32. We hold regular company-wide meetings to share information about the organization with employees.
- \_\_\_\_\_ 33. We provide employees with challenging work opportunities.
- \_\_\_\_\_ 34. We use performance appraisals primarily to help employees identify new skills to develop.
- \_\_\_\_\_ 35. This company relies on external sources such as consultants or service providers to carry out employee management practices (payroll, recruiting, training, risk-management, etc.)
- \_\_\_\_\_ 36. This company depends on external sources to provide us with the knowledge and information necessary to design and implement effective employee management practices.
- \_\_\_\_\_ 37. The top managers at this company lack the knowledge needed to design and implement effective employee management practices.
- \_\_\_\_\_ 38. The top managers here do not have the time or resources to effectively design and implement effective employee management practices.

**PART 6: MANAGEMENT PHILOSOPHY OF OWNER AND TOP MANAGERS**

From the THREE statements below, put a check next to the statement that most accurately describes the beliefs of the owner and the other top managers regarding retaining employees.

- The best way to retain employees is through creating a family-like environment.
- The best way to retain employees is to give them work that is challenging and interesting.
- The best way to retain employees is by paying them fairly for their level of skills and effort.

From the FOUR statements below, put a check next to the statement that most accurately describes the beliefs of the owner and the other top managers regarding managing the performance of individual employees.

- Individual employee performance is best managed through peer pressure from other employees or a work environment based on teams.
- Individual employee performance is best managed by hiring individuals who are committed to excellence based on their professional training.
- Individual employee performance is best managed through formal processes and procedures.
- Individual employee performance is best managed by close managerial supervision of all employee activities.

From the THREE statements below, put a check next to the statement that most accurately describes the beliefs of the owner and the other top managers regarding attracting new employees.

- The best way to staff a company is to attract and hire people that have the skills and experience to fill current needs or job openings.
- The best way to staff a company is to attract and hire really bright people who have high potential to impact long-term company success.
- The best way to staff a company is to attract and hire people who fit with the company's culture.

**PART 7: COMPANY PERFORMANCE**

Please use the scale below to indicate the extent to which you agree with the following questions regarding your company's current performance.

**1 = strongly disagree 2 = moderately disagree  
3 = neutral 4 = moderately agree 5 = strongly agree**

- 1. This organization's performance is much better than the performance of our main competitors'.
- 2. This organization is achieving its full potential.
- 3. People are satisfied with the level of performance of this organization.
- 4. This organization does a good job of satisfying its customers.

Company Financial Performance: please fill in percentage in space available

- % 5. By what % has your organization's revenues increased (decreased) in the past year?
- % 6. By what % has your organization's profitability increased (decreased) in the past year?

Using the scale below, compare your organization's performance over the last three years to that of other organizations that do the same kind of work in terms of:

**1 = worse 2 = slightly worse 3 = about the same  
4 = slightly better 5 = much better**

- 7. Quality of products, services, or solutions?
- 8. Development of new products, services, or solutions?
- 9. Satisfaction of customers or clients?
- 10. Marketing?
- 11. Growth in sales?
- 12. Profitability?
- 13. Market share?

## GENERAL INSTRUCTIONS—EMPLOYEE SURVEY

Before you begin, if you would prefer to complete this survey online, please go to:  
[www.sri.cornell.edu/topemployee/](http://www.sri.cornell.edu/topemployee/) and follow the instructions you find there.

This survey is designed to find out about the perceptions of employees within your organization. Key themes covered in the survey concern your background and your perceptions of certain characteristics of your organization and work. We believe that employee beliefs about what is going on in the company are very important, therefore, we are trying to assess your beliefs about the company, not those of the owner or your manager.

Please try to answer the questions as honestly and as candidly as possible. **There are no trick questions:** this is NOT a test, so there are no right or wrong answers. We suggest that you move through the survey quickly without thinking about it too much—your first response usually will be the most accurate. The survey appears somewhat lengthy, but should take approximately 15 minutes to complete. Also, you will probably find some redundancy in the questions. This is deliberate and is done for statistical reasons. Please answer the questions even if they seem similar to ones you've already answered; you need not go back to the previous questions. Some questions ask you to assess fairly specific management practices and/or to reflect back over three years. Please answer these questions to the best of your ability even if you have not been with the company for three years or if you are somewhat unsure of the answer.

This is a strictly confidential survey. **Under no circumstances will your individual responses be made available to anyone in your organization.** Information from the survey will be compiled at the University into overall research reports consisting of aggregated results from many individuals across many companies. The results may be published at a later time in aggregate form only. Please remember, individual responses will **not** be a part of these reports and will **not** be available to anyone except the research team.

In advance, we wish to thank you for your participation in this study. We are confident that results of this study will benefit your organization and will provide important insights into ways of increasing organizational effectiveness.

Please complete the survey within the next five business days, place it in the attached pre-paid envelope and send your survey back to the researchers using the preaddressed, stamped envelope provided.

If you have any questions, please contact one of the research directors at Cornell University:

Matt Allen  
e-mail: [mra26@cornell.edu](mailto:mra26@cornell.edu)

Jeff Ericksen  
e-mail: [gae1@cornell.edu](mailto:gae1@cornell.edu)

Dr. Christopher Collins  
Phone: (607) 255-8859  
e-mail: [cjc53@cornell.edu](mailto:cjc53@cornell.edu)  
fax: (607) 255-1836

**PART 1: PERSONAL BACKGROUND**

1. What is the name of your company?  
\_\_\_\_\_
2. What is your title or position?  
\_\_\_\_\_
3. In what department do you work?  
\_\_\_\_\_
4. How many years have you worked at your present organization?  
\_\_\_\_\_ years \_\_\_\_\_ months
5. How many years have you worked in this industry?  
\_\_\_\_\_ years \_\_\_\_\_ months
6. How many years have you held a position similar to the one you currently hold?  
\_\_\_\_\_ years \_\_\_\_\_ months
7. How many years of post-high school education have you completed, if any? \_\_\_\_\_ years

**PART 2: EMPLOYEE BELIEFS ABOUT THE COMPANY**

Please use the scale below to assess the following statements about the employees and managers in your company.

**1 = strongly disagree    2 = disagree    3 = neutral    4 = agree    5 = strongly agree**

- |   |  |
|---|--|
| <p>_____ 1. Employees at this company would be happy to spend the rest of their careers here.</p> <p>_____ 2. Employees enjoy discussing our organization with the people outside of it.</p> <p>_____ 3. Employees here really feel as if this company's problems are their own.</p> <p>_____ 4. This company has a great deal of meaning for the employees here.</p> <p>_____ 5. Employees feel emotionally attached to this company.</p> <p>_____ 6. Employees at this company help out others who have been absent and return to work.</p> <p>_____ 7. Employees at this company help out others that have heavy workloads.</p> <p>_____ 8. Employees at this organization help orient new employees to the company.</p> <p>_____ 9. Employees at this company willingly help others who have work related problems.</p> <p>_____ 10. Employees here are always ready to lend a helping hand to other employees around them.</p> <p>_____ 11. Overall, employees in this company are very satisfied with their jobs.</p> <p>_____ 12. This company always has the right number of people.</p> <p>_____ 13. We often have more work to do than employees to do it.</p> <p>_____ 14. This company always has an appropriately sized workforce.</p> <p>_____ 15. This company has all the expertise it needs to be successful.</p> <p>_____ 16. This company has the people with the right knowledge and skill sets.</p> <p>_____ 17. We sometimes lack people with the knowledge and skills necessary to do the job right.</p> | <p>_____ 18. The people in this company are highly focused on realizing organizational results.</p> <p>_____ 19. The people in this company are always working to improve company performance.</p> <p>_____ 20. The people in this company always act in ways that help the organization achieve its goals.</p> <p>_____ 21. This company effectively utilizes its people at all times.</p> <p>_____ 22. This company provides people with ample opportunities to do their best possible work.</p> <p>_____ 23. This company consistently gets the most out of its employees' knowledge and skills.</p> <p>_____ 24. When performing their jobs, the customer is the most important thing to employees at this company.</p> <p>_____ 25. Where I work, day-to-day employee actions demonstrate that customers are a top priority.</p> <p>_____ 26. If possible, employees in this company meet all requests made by customers.</p> <p>_____ 27. Employees in this company work to ensure that customers receive the best possible service available.</p> <p>_____ 28. Employees here believe that providing timely, efficient service is a major function of their jobs.</p> <p>_____ 29. Overall, our employees are known for delivering superior customer service to employees.</p> <p>_____ 30. Employees have the job knowledge and skills to deliver superior quality service to customers.</p> <p>_____ 31. This company's performance is much better than the performance of our main competitors.</p> <p>_____ 32. This company is achieving its full potential.</p> <p>_____ 33. People are satisfied with the level of performance of this company.</p> <p>_____ 34. This company does a good job of satisfying its customers.</p> |
|---|--|

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