

THE INFLUENCE OF COMPETITION AND BUSINESS STRATEGY ON  
ORGANIZATIONS' USE OF HIGH-PERFORMANCE WORK SYSTEMS

BY

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DISSERTATION

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## ABSTRACT

Articles on high-performance work systems (HPWS) often imply that competition will influence organizations' adoption of a HPWS, yet there are few studies that empirically test this relationship (for exception see Sanz-Valle, Sabater-Sanchez, & Aragon-Sanchez, 1999; Takeuchi, 2009). This dissertation seeks to develop a better understanding of the influence that competition has on organizations' use of a HPWS. It does so by developing theory on competition and the expected effect that it has on organizations' use of a HPWS. This dissertation empirically tests this relationship. The expectation was that organizations' use of a HPWS would increase as competition increased. Statistical evidence was found to support this hypothesis.

Next this dissertation takes a closer look at the effect of competition on organizations' use of a HPWS by investigating the extent to which the constructs of market commonality and resource similarity moderate the effect of competition on HPWSs. Market commonality, the extent to which competitors markets overlap, and resource similarity, the extent to which competitors have the same resources as each other, have both been theorized to effect organizational action in a theory of competition known as the Red Queen effect. This dissertation theorizes that market commonality and resource similarity would amplify organizations' use of a HPWS. There was no statistical support for these relationships.

After investigating competition, an antecedent from the external environment, on organizations' use of a HPWS, this dissertation shifts to investigate the influence of business strategy, an antecedent from the internal environment. There are a variety of business strategies that have been identified in the strategy literature. The business strategies used in this dissertation included the cost-reduction strategy, where organizations focus on reducing costs throughout their value

chain, and two differentiation strategies, innovation and quality management. This dissertation tested the direct effect of each of these strategies and then the moderation effect of these strategies on the competition – HPWS relationship. The expected relationship was that the presence of a cost-reduction strategy would decrease the use of a HPWS. The innovation and quality management differentiation strategies were expected to increase organizations' use of a HPWS. Similarly, the presence of a cost-reduction strategy was expected to diminish the effect of competition on organizations' use of a HPWS. Alternately, the innovation and quality management strategies were expected to amplify the competition – HPWS relationship. When tested, these hypotheses were not supported. Of most interest was the quality management strategy. When quality management was high, organizations reduced their use of a HPWS. This was contrary to what was expected and should be studied further in future studies. These hypotheses were tested using a sample collected from alumni from two different Midwestern universities and an HR association.

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## **CHAPTER 1: INTRODUCTION**

The field of strategic human resource management (SHRM) strives to understand how human resource (HR) management practices, often referred to as high-performance work practices (HPWPs), impact organizations' ability to perform effectively. HPWPs are practices that are used by organizations to encourage positive organizational outcomes such as increased involvement, commitment, and performance effectiveness. They include a greater use of specialized HR practices such as selection and recruitment, training and development, and compensation, that are used with the intent to increase alignment between employee behaviors and organizations' strategic needs as opposed to traditional, or routine HR practices where strategic alignment and fit are not the outcome of focus (Becker & Gerhart, 1996). Prior findings have found that SHRM and the use of HPWPs will lead to organizational outcomes such as increased productivity, performance and decreased turnover (Combs, Yongmei, Hall, & Ketchen, 2006; Huselid, 1995). Similarly, at the employee-level, the use of SHRM leads to increased employee productivity, organizational commitment, and organizational citizenship behaviors. A high-performance work system (HPWS) is present in an organization when they use a variety of different HPWPs designed to work synergistically together to provide greater benefit for the organization than the additive benefit of each practice alone (Delery & Doty, 1996a). HPWSs are used by organizations as the mechanism through which SHRM is implemented and includes the synergistic use of specialized HR practices to recruit, select, compensate, and train employees. When a HPWS works as intended it leads to positive organizational outcomes, which can give it a strategic advantage.

Despite the work that has been done to understand the benefits of SHRM, there is not much known about the antecedents that lead to the adoption and use of these practices. In fact, since 1980 fewer than 20% of published studies on SHRM have investigated the antecedents that lead to its adoption (Jackson, Schuler, & Kaifeng, 2014). The development and maturation of our understanding of SHRM requires that antecedents of HPWS be more fully understood. One such antecedent that has yet to receive much attention is competition, but there is anecdotal evidence that the level of competition organizations face will influence their use of a HPWS.

One example is how competition influenced banks' use of HPWSs in the early 1990s. Deregulation of the banking industry in the US led to increased innovation and subsequent competition for banks worldwide as non-depository institutions (i.e. insurance, investment, and credit card companies) attracted customers who traditionally deposited funds in banks. Between 1980 and 1990, German banks saw a 20% decrease in deposits as retail customers sought to invest in other investment products (Keltner, 1995). Ultimately, the majority of German banks and several US banks chose to implement a relationship building strategy to increase their competitiveness, wherein bankers continued to offer traditional bank products such as checking and savings accounts but also included investment and insurance products. To implement this relationship-building approach, firms implemented a high-performance work system (HPWS) that involved staffing policies that focused on hiring full-time as opposed to part-time employees, and advancement through the use of their internal labor market. Similarly, training and development programs were implemented to ensure that bankers could provide the service necessary to offer their clients a full-range of products. Organizational structures were also put into place that increased communication between employee groups to ensure better customer service (Keltner, 1995).

The result of banks employing a HPWS led to an increase in their ability to compete against non-depository institutions. They were able to maintain control of bond sales and increase their market share of life insurance products and credit card offerings (Keltner, 1995). While this is a great qualitative example of how competition can influence organizations' adoption of a HPWS, there is an absence of quantitative studies that look at the influence of competition on the adoption of a HPWS across organizations. The two papers that do touch on competition have contradictory findings: competition was found to increase adoption of HPWSs in one study (Ordiz-Fuertes & Fernández-Sánchez, 2003) but was found to be non-significant in the other (Patel & Cardon, 2010). In both studies, competition was not the main focus of the study, and little theory was developed to understand the relationship between competition and the use of a HPWS. The first goal of this dissertation is to develop a better understanding of the relationship between competition and HPWSs, and empirically test this relationship.

Understanding how competition influences organizations' use of a HPWS requires some knowledge about competition. When organizations are faced with competition they will often attempt to gain an advantage over the organizations that they compete with. In the process of trying to gain an advantage organizations will implement various competitive actions that can include, price cutting, launching a new product, etc. Many of the actions that organizations take are easily observable; therefore, if organizations have the resources necessary to match an action they will. When organizations take actions and their competitors take counter-actions to match these actions their efforts can result in a net zero gain for all parties, a phenomenon known as the Red Queen effect (Derfus, Maggitti, Grimm, & Smith, 2008). When competitors perceive that their actions will result in no long-term gain they will tacitly refrain from taking any actions, a concept known as mutual forbearance (Greve, 2008). The main factors that determine whether

the Red Queen effect and subsequent mutual forbearance will result are market commonality, an overlap of the markets that competitors serve, and resource similarity, which refers to competitors having access to similar resources (Derfus et al., 2008).

It is more difficult to observe when organizations implement a HPWS than an externally oriented organizational action such as price-cutting, or product innovation, because HPWSs are an action that takes place internally within the firm, and they attempt to keep these actions secret. When firms have high-levels of market commonality and resource similarity, the likelihood that an organizational action is perceived goes up. As a result, organizational action is constrained, as competitors whose markets overlap will quickly perceive the competitive action taken, and if they have similar resources can quickly respond with a similar actions. These actions and counter-actions will quickly result in the Red Queen effect. Therefore to avoid the Red Queen effect and mutual forbearance, organizations will implement competitive actions that are less observable, such as the implementation of a HPWS. The second set of relationships that this dissertation tests is to see how market commonality and resource similarity influence the relationship between competition and organizations' use of a HPWS.

The last goal of this dissertation is to investigate the relationship between business strategy and organizations' use of a HPWS. This is a relationship that has been theorized about (Miles & Snow, 1984; Schuler & Jackson, 1987a, b), yet has had relatively little empirical work done to test this theory (e.g. Sanz-Valle, Sabater-Sánchez, & Aragón-Sánchez, 1999; Takeuchi, 2009). This dissertation will review theory that has been developed on business strategy. It investigates the cost-reduction, and two different types of differentiation strategies, innovation and quality management strategies (Porter, 1980). This has obvious relevance to the connection between HPWSs and SHRM. The linkage between these two important concepts needs more

explicit development. One of the shortcomings that has been discussed about past research is the combination of innovation and quality management into one measure known as a differentiation strategy (Jackson et al., 2014). This study breaks these dimensions of differentiation into two distinct strategies and tests them. It also tests the influence of business strategy on the HPWS – competition relationship.

In summary, the first purpose of this dissertation is to investigate competition as an antecedent to the adoption of a HPWS. Additionally, it investigates the constructs of market commonality and resource similarity and how they influence organizations' use of a HPWS. These constructs are the main determinants of if the phenomenon of the Red Queen effect will take place. When organizations perceive that these constructs are high, there is a greater chance that they will act to avoid actions that can easily be replicated by their competitors. The second main purpose of this dissertation is to develop a better understanding of how business strategy influences organizations' use of a HPWS.

### **Outline of Subsequent Chapters**

This dissertation is composed of six chapters, a section for tables and figures, and appendices. Following this introductory chapter, Chapter 2 defines the concepts of SHRM, HPWPs, and HPWSs. In addition to providing an introductory definition for each of these constructs, there is a discussion on strategic vs. operational human resource management. This chapter concludes with a short literature review on the different HPWP categories. Chapter 3 provides insight into why organizations implement SHRM by reviewing some of the different outcomes of SHRM. It does so by discussing some of the employee and organization-level outcomes before finishing with a short discussing on how SHRM can be used strategically. Chapter 4 transitions from looking at the outcomes of a HPWS to discussing the antecedents of

the external environment that led to organizations' adoption of a HPWS. As chapter 4 progresses, it narrows its focus from the antecedents that have already been established in the literature to competition. It then outlines several reasons why organizations' use of a HPWS should go up as competition increases. This includes a review of the Red Queen effect and the constructs of market commonality and resource similarity. The first hypotheses of the dissertation are introduced in chapter 4. Chapter 5 shifts the focus from what goes on outside of the organizations to the antecedents that influence the use of a HPWS that evolve in the internal environment of the organization. It introduces the concept of business strategy. A short discussion is provided about how the three strategies used in this research: cost-reduction, innovation, and quality management can have a direct effect on organizations' use of HPWS, as well as how the organizations' strategy can moderate the relationship between competition and organizations' use of a HPWS. Chapter 6 outlines the survey method used to conduct this research. It defines the construct operationalizations and describes the research setting. Chapter 7 provides a description of the analysis and results, including exploratory post-hoc analysis. Chapter 8 provides a discussion of the impact of this research and its limitations, and then ends with a conclusion that focuses on the future directions that should be taken by the field. Finally, the appendices include an example of the email sent to respondents, which changed slightly based on the group it was sent to and the questionnaire used. It ends with a list of the references used throughout this dissertation.

Figure 1 titled competition and business strategy as antecedents to high-performance work systems is developed and used to test the hypotheses of this dissertation. It will be included again at the end of the dissertation. First, it proposes that increased competition leads to an increase in organizations' use of a HPWS. Next, it proposes that the constructs of market commonality and

resource similarity will moderate the relationship between competition and organizations' use of a HPWS. After addressing these hypotheses, this dissertation shifts its focus to studying the effect of three different types of business strategy, cost-reduction, innovation, and quality management. It does so by testing the direct effect of the three different strategy types on organizations' use of a HPWS and then testing how the three different types of business strategy will moderate the relationship between competition and organizations' use of a HPWS.

## **CHAPTER 2: DEFINITIONS OF STRATEGIC HUMAN RESOURCE MANAGEMENT AND HIGH-PERFORMANCE WORK SYSTEMS**

This chapter grounds this study with definitions for the terms: strategic human resource management (SHRM), high-performance work practices (HPWPs), and high-performance work systems (HPWS). Having a clear definition of constructs, and their relationship to each other is essential for any substantive research effort. In addition to providing a basic definition of these constructs, a discussion about strategic versus operational human resource (HR) management is provided. This discussion of strategic versus operational HR is included to provide greater clarity on what strategic HR is and when it is considered strategic as opposed to operational. This chapter concludes by introducing nine different categories of HPWPs. Currently, any practice included in a HPWS can be classified as coming from one of these categories. The point of including these practice categories in this chapter is to expose the reader to the variety of practices that HR managers can select from when building a HPWS.

### **Strategic Human Resource Management**

SHRM has been referred to as “the pattern of planned HR deployments and activities intended to enable organizations to achieve their goals” (Wright & McMahan, 1992: 298). More recently, this definition has been expanded to include the study of HR systems and subsystems and their interaction with both the internal and external environments of the organization (Jackson et al., 2014). Stated simply, SHRM refers to how organizations use HR practices to achieve strategic goals and interact with their environment.

SHRM is cross-level in nature as human resource practices implemented at the organizational-level influence employees at the individual-level, which in turn influence outcomes at both the individual and organizational-level. As extra-organizational contingencies

in the larger competitive environment are included in the SHRM plan, a third level is added. The most commonly cited benefit of using HR strategically is that it can increase organizational financial performance and productivity (Combs et al., 2006; Huselid, 1995; Kaifeng, Lepak, Jia, & Baer, 2012). At the organizational-level, SHRM can be used strategically to align employee behaviors with strategy, and to increase organizational flexibility and capabilities in the face of environmental challenges and opportunities.

**SHRM versus operational HR.** When is HR being used as a part of SHRM and when is it simply operational HR? This is a natural question that arises in discussions on SHRM. The simple answer to this question is that HR practices are considered a part of SHRM when they are explicitly used to increase employee abilities, motivation, and opportunity to act and when they are used to align employee behaviors with the long-term strategy and/or strategic initiatives of the organization. For example, some of the outcomes that will be discussed in Chapter 3 are that the use of SHRM can lead to increased employee-level outcomes such as increased commitment, productivity, and performance (Combs et al., 2006; Huselid, 1995). SHRM can also be used to achieve a better fit between employees' trained and incentivized behaviors (Wright & Snell, 1998) and the organizations strategy and other initiatives, such as a firm's implementation of a total quality management program (Bayo-Moriones & de Cerio, 2001). On the other hand, operational HR is the use of HR to comply with laws and regulations (i.e. OSHA), and to regulate compliance of employees to perform the tasks specified in their contracts, and can be used to facilitate the short-term needs of the organization.

The strategic versus operational question can further be answered by grounding it in Lepak and Snell's (1999) design of HR architecture that looks at the employment mode, relationship, and HR configuration (system) that is used in the four different quadrants of HR

architecture that they organized along an axis that measures the uniqueness and value of firms' human capital. They theorized that based on the uniqueness and value of their human capital a different HR configuration (collaborative, commitment, compliance, or market based) would be used to manage firms HR. When human capital is unique organizations are more likely to implement some form of SHRM (i.e. collaborative or commitment configurations). When human capital is not unique organizations will use compliance and market based HR configurations. The compliance and market based HR configurations are more operational than strategic HR because the HR system is not designed to develop the workforce's skills and use them for to gain a long-term advantage. Lepak and Snell (1999) state that employees in the compliance and market based quadrant tend to be contract workers, and the HR system used to manage these employees focuses primarily on ensuring that employees complete their work as agreed upon in their contract. "To ensure compliance, firms likely will concentrate on enforcing rules and regulations, upholding specific provisions regarding work protocols, and ensuring conformance to preset standards" (Lepak & Snell, 1999: 40). While the HR configuration of compliance might be used as the strategy that the firm has implemented to manage their employees, this type of HR does not fall under the categorization of SHRM because there is an absence of using HR as a long-term strategic action that gains value through increasing the ability, motivation, and opportunity of its employees.

This fits with other streams of research, such as research on the employee-organization relationship. Research on the employer-organization relationship has identified that there are a variety of different relationship types that employers can pursue with their employees. The relationship between employer and organization being defined by the expected inducements that an organization will give and the contributions that an employee will provide (Tsui, Pearce,

Porter, & Tripoli, 1997). The operational HR system aligns well with a balanced or underinvestment approach to the employee-organization relationship. A balanced approach is one where employer and employee provide exactly what is stipulated in their contracts, but neither provides more to each other (Tsui et al., 1997). Underinvestment refers to an unbalanced relationship where employees provide a greater level of contribution compared to the inducements provided by the organization (Tsui et al., 1997). The underinvestment approach is generally implemented by organizations' that have an expectation that employees will be with their organization for a short-period of time and don't require contributions beyond the formal role in which an employee is hired. A possible example of this would be seasonal retail hires that increase firms' workforce during the busy holiday season just prior to Thanksgiving through the end of the year. Employees are often taking these jobs to earn extra money during the holidays, and employers need extra employees to fill increased demand, but in general, neither have any loyalties or commitment to each other beyond fulfilling this spot-contract. While this type of employment can fit with the strategy of the firm, it does not implement a HR practices that will develop a workforce that is likely to have any commitment or behaviors that benefit the organization beyond those which are explicitly stated in their contract.

In short, there are HR systems in place that focus primarily on compliance but do not seek to use HR to develop a flexible workforce that has high-levels of commitment to the organization. In these operational HR systems, employees are compelled to do the bare minimum to earn their pay check and avoid getting fired, but skill development, compensation practices centered on motivating employees, and autonomy to contribute beyond their specified job tasks are limited. Each organization must evaluate their needs and determine which type of HR system fits best with the organizations' goals.

## **High-Performance Work Practices**

SHRM research examines how HR practices can be used as a mechanism to achieve strategic organizational outcomes. The study of HPWS is a stream of research within SHRM that focuses on identifying the HR practices that can be used in combination with each other to attain higher positive organizational outcomes (i.e. increased performance, employee commitment, etc.), and to develop theory as to why these practices lead to these outcomes.

The label that SHRM researchers attribute to the use of these practices has varied and generally coincides with the outcome under consideration. For example, when Huselid (1995) examined how the strategic use of HR practices influenced organizational performance, he referred to HR practices as HPWPs. Similarly, Guthrie (2001) refers to these practices as high-involvement practices. With few exceptions (Cappelli & Neumark, 2001; Way, 2002), it is believed that the use of these practices positively influences organizational performance. This outcome and others are achieved as practices are used as a mechanism that influences employee behaviors, attitudes, involvement, and commitment, which in turn positively influences organizational outcomes. As the purpose of these HR practices is to improve organizational performance, throughout this dissertation I refer to the use of these practices as HPWPs when referring to the isolated use of a single practice and as a HPWS when multiple HPWPs are used as a configuration of practices that form an overall system. A more specific discussion on these practices will be provided later, but first I will provide a short discussion on high-performance work systems.

## High-Performance Work Systems

While it is important to understand the effect and implications of each HPWP on its own, HR practices are rarely if ever implemented in isolation (Becker & Gerhart, 1996; Delery & Doty, 1996b; Macduffie, 1995a; Youndt, Snell, Dean, & Lepak, 1996). The use of multiple interconnected HPWPs implemented in conjunction with each other comprises a HPWS (Datta, Guthrie, & Wright, 2005; Macduffie, 1995a; Takeuchi, Chen, & Lepak, 2009b). HPWSs are expected to have synergistic effects that are greater than the additive effect that would be attained if practices were to be implemented separate from each other (Delery & Shaw, 2001; Macduffie, 1995b). These synergies exist because it is impossible to maximize the benefits of any one practice in isolation. A good example of the complementarity of HPWPs can be illustrated by discussing the use of the HPWP training. It is commonly understood that training increases employees' knowledge, skills, and abilities (the combination of these three characteristics are referred to hereafter as *skills*). However, solely having the *skills* to perform a task does not ensure that a given task will be accomplished. To maximize the benefit of the *skills* acquired through training, it is important to also give employees the opportunity to use their *skills* and to motivate employees to perform tasks desired of them. Giving employees' opportunities and motivating them to perform these tasks are two outcomes that can be accomplished by implementing complementary HPWPs such as delegation of authority and incentive compensation practices that align employees' authority to act with rewards for the accomplishment of desired tasks. As a system, the use of HPWPs in conjunction with each other result in empowering employees with the ability to act, the motivation necessary to move them to action, and the opportunity to act on their motivation and ability (Combs et al., 2006; Kehoe & Wright, 2013). This is discussed in more detail below.

## High-Performance Work Practice Categories

Recently, in an attempt to bring more organization to the field, these HPWPs were organized into a taxonomy of nine different categories (Posthuma, Campion, Masimova, & Campion, 2013). For the theoretical development of this dissertation research, I have followed their taxonomy. The different categories they list reads as follows: compensation and benefits, job and work design, training and development, recruitment and selection, employee relations, communication, performance and management appraisal, promotions, and finally turnover, retention, and exit management (Posthuma et al., 2013). These categories are discussed in more detail below. Within each category, there is a wide range of HPWPs available for organizations to implement, the list of which is continually growing. To highlight this growth, one need merely compare the meta-analysis conducted by Combs et al. (2006) and the more recent taxonomy developed by Posthuma et al. (2013). Combs et al. (2006) identified a total of 22 different HPWPs. A few years later, Posthuma et al. (2013) identified 61 different practices. It is likely that this growth in the variety of practices will continue. Practitioners have a large and growing number of practices within the HPWP categories to choose from when determining how best to structure their HR system.

**Compensation and benefits.** Of the nine categories, compensation and benefits is one of the most commonly used by organizations that implement a HPWS (Way, 2002). There are two underlying reasons why this category is included as a HPWS. Employee compensation and benefits are one of the primary ways by which HR managers align employee motivation and behaviors with desired employee tasks (e.g. Combs et al., 2006; Guthrie, 2001; Huselid, 1995). These practices are implemented to increase the likelihood that employees will exhibit the desired attitudes and behaviors that are expected to increase organizational performance. Next,

the use of compensation and benefits is expected to aid in giving organizations an increased ability to attain a sustained competitive advantage. In addition to helping align employee attitudes and behaviors with key organizational functions, compensation and benefits can provide organizations with a sustained competitive advantage as organizations that pay well are expected to help organizations attract skilled employees who increase the capabilities of the firm (Becker & Huselid, 1998). Compensation practices are also essential to retaining employees and thereby keep human capital from going to competitors.

**Job and work design.** Job and work design refers to the “practices that deal with the specific elements of jobs, relationships between jobs, and the organizational structure” (Posthuma et al., 2013: 12). This broad category includes practices such as teamwork and job rotation, as well as structural considerations involving how much authority employees have, such as the extent of decentralization and delegation of control. Many of the practices that are included in job and work design are likely to affect the underlying social structure within organizations, which in turn is likely to affect the efficacy of HPWPs implemented in organizations (Evans & Davis, 2005). Three dominant practices of job and work design include teamwork, job rotation, and authority structure.

**Teamwork.** This involves having employees work together on projects or tasks as opposed to conducting work in isolation. There are several reasons why organizations would implement teamwork. One such reason is that when faced with a problem, teams are more likely to determine the optimal solution. This is likely to take place as each member of the team will contain different information that can help the group to solve problems or difficulties that might arise (Stasser & Stewart, 1992). Additionally, teamwork can be used as a control mechanism as

team members are likely to feel pressure to perform for their team (Pfeffer, 1998) and are less likely to leave their team in the middle of a project (Cappelli, 1999).

***Job rotation.*** This refers to the systematic transferring of employees to different departments within the organization. Employees who participate in job rotations are more likely to develop a broad set of skills which increase the likelihood that employees will be able to perform needed functions outside of their defined role purview (Smith, Organ, & Near, 1983). The performance of these extra-role tasks assist those who are struggling with their workload (Organ, 1988; Smith et al., 1983), and increases organizational flexibility as the need to perform previously undefined tasks increases with the dynamism of the environment (Beltran-Martin, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008; Wright & Snell, 1998).

***Authority structure.*** Authority structure refers to who has authority to make decisions and how this is structured into the organization. An organizational structure that is decentralized is one in which decision-making authority has been pushed to lower levels of the organization. This increases employees' ability to react quickly to problems as they arise, adapt to changes in the external environment, and to increase commitment as employees derive more intrinsic worth from their jobs. This feeling of increased worth comes as employees' have more responsibility and greater control in how to react to problems or market shifts as they arise (Colombo, Delmastro, & Rabbiosi, 2007).

**Training and development.** Training and development practices are those practices used by organizations to develop the knowledge, skills, and abilities of their employees. This can range from new-hire training and socialization to initiatives that continue throughout an employee's career. Training and development programs can also focus on improving employees' organization-specific skills or more generic skill training. Training has long been viewed as a

HPWP that can lead to increased organizational performance (Pfeffer, 1994, 1998) and is commonly included as a practice category used in the development of a HPWS (Batt, 2002; Combs et al., 2006; Posthuma et al., 2013). Each manager will need to determine the best approach to training and development programs as the effectiveness of these programs has been shown to be influenced by the cognitive ability and personality traits of the employees in each program (Oakes, Ferris, Martocchio, Buckley, & Broach, 2001).

**Recruitment and selection.** Recruitment includes the practices used by organizations to attract potential employees to apply to the organization, and selection is the subsequent set of practices used by organizations to determine which applicant is the “best fit” with their organization. The proper implementation of recruitment and selection practices have been linked to increased organizational performance (Takeuchi, Lepak, Wang, & Takeuchi, 2007; Terpstra & Rozell, 1993) and employee productivity (Huselid, 1995). Recruitment of potential applicants can take place through a wide variety of mediums such as advertising through TV, radio, the Internet, and through word-of-mouth as current employees inform their friends of opportunities. Likewise, selection practices can vary in a variety of ways and can include activities such as qualitative assessments like interviews (one-on-one and panel), references and standardized tests that include psychometric, ability, and technical tests. When initiated properly, recruitment and selection practices should align with organizations’ strategy and initiatives (Boudreau & Ramstad, 2003).

**Employee relations.** Employee relations refers to managing the relationship between employees and management (Posthuma et al., 2013). From the employer’s perspective, there are at least four different approaches that employers can take to manage their relationship with their employees (Tsui et al., 1997). Two of these approaches are conducive to a HPWS approach as

the employer looks to develop a good relationship with their employees by providing either a greater-level or equal-level of inducements compared to employee contributions to the relationship. These approaches emphasize building a continuing long-term relationship. The other two involve implementing practices where employees are expected to contribute more to the organization. The employee relations approach that organizations pursue has a strong influence on the culture and climate of the organization (Godard & Delaney, 2000). The culture and climate developed through the employee-employer relationship has also been shown to influence both the implementation (Wei, Liu, Zhang, & Chiu, 2008) and effectiveness of a HPWS (Chuang & Liao, 2010).

**Communication.** Communications in this context refers to the practices used by organizations to provide information to their employees and obtain information from them. This includes the mediums used to convey information such as company newsletters, an intranet, or town hall meetings as well as the extent of information that is shared through these mediums. For example, it is well known that Apple shares as little information as possible between groups as it attempts to keep new innovations secret. On the other hand, Southwest Airlines has more open levels of communication, which has led to employee input in the development of new practices that have been implemented to overcome problems they have faced. Work in HPWSs has long advocated the need to communicate as much information as possible to employees (Pfeffer, 1994, 1998). The logic of such practice is that if employees do not have adequate information on which to base their decisions, then the competence of the workforce will not be as influential, be it developed through recruitment and selection practices or training and development initiatives. Subsequent work has shown a positive relationship between the amount of information shared by

an organization and its performance (Gibson, Porath, Benson, & Lawler, 2007; Gittell, Seidner, & Wimbush, 2010).

**Performance management & employee appraisal.** Performance and management appraisal refers to the practices that an organization implements to provide feedback to their employees. It is through the use of such practices that managers can make sure that employee actions align with the goals and strategy of the organization. Such practices help employees attend to priority tasks, develop better understanding and skill through feedback, and create opportunities to problem-solved and reach integrative solutions. Feedback has been shown to increase newcomer organizational citizenship behaviors (Li, Harris, Boswell, & Xie, 2011). These practices include formal and informal managerial feedback, 360 degree feedback, and similar programs (Posthuma et al., 2013).

**Promotions.** Promotions take place as employees advance from one position in the organization to another. When an employee is promoted they generally take on greater levels of responsibility and in return are given an increase in pay commensurate with their increase in responsibility. Organizations have long used promotions as an incentive to perform. In addition to the increase in pay, employees also gain prestige as they advance through the organization (Baron, Davis-Blake, & Bielby, 1986). Promotions help to create a structure of opportunity where an increased likelihood of future rewards, satisfaction and security exists. The use of promotions is sensitive to the growth of the economy and health of the organization as these influence the opportunities to promote employees, yet despite the difficulties of recent years, the use of promotions has been retained as a key incentive practice for most organizations.

**Turnover, retention, & exit management.** The last category of HPWSs includes turnover, retention, and exit management programs. While decreased turnover is often a specific

benefit of implementing a HPWS, this is not the purpose of discussing these practices in this section. Turnover as an outcome will be discussed later on; this section concerns practices that organizations use to manage turnover, retention, and exiting employees. Practices in this section can include exit meetings that organizations can use to find out why employees are leaving. These meetings can also be used to develop and manage the relationship with an employee post-exit interview or survey. For example, some organizations, such as McKenzie and Company, plan on a large number of their employees being with them for only a few years, and they leverage this into their strategic plan by creating an alumni network of former employees that they later use to obtain consulting opportunities (Hoffman, Casnocha, & Yeh, 2013).

In summary, this chapter introduces the concepts of SHRM, HPWPs, and HPWS. It provides the basic definitions of each of these constructs and helps to bring clarity to this discussion by describing how HR can be used in non-strategic ways as operational needs are fulfilled without making the necessary connections and alignment with strategy to be considered SHRM. By implementing a HPWS, organizations have an increased ability to use HR strategically. A HPWS is comprised of HPWPs that can come from a variety of HR practice categories. In developing an HR system that fits key external contingencies and implementing them properly, a HPWS can lead to positive organizational outcomes. The next chapter will discuss these outcomes.

### **CHAPTER 3: HIGH-PERFORMANCE WORK SYSTEMS & STRATEGIC HUMAN RESOURCE MANAGEMENT OUTCOMES**

The purpose of this chapter is to answer the question, “Why implement a high-performance work system (HPWS)?” This question is answered by discussing the various outcomes of strategic human resource management (SHRM). First, this dissertation will look at the positive organizational outcomes such as increased performance, organizational citizenship behaviors, and decreased turnover. Next, it takes a look at some of the possible negative outcomes of implementing a HPWS, such as increased labor costs and potential problems that can come as a result of work intensification. This chapter finishes by looking at how SHRM can be used strategically by using it to increase organizational fit, flexibility, and capability. A short discussion is also provided on the flexible workforce to help set some of the boundary conditions that apply to this dissertation. The purpose of highlighting the positive organizational outcomes and strategic uses of SHRM is to help develop an understanding of the competitive benefits of implementing SHRM in an organization.

#### **Why Implement a High-Performance Work System?**

Organizations implement HPWSs to obtain a variety of positive organizational outcomes. These include increased organizational performance, increased organizational citizenship behaviors, and decreased turnover (Combs et al., 2006; Huselid, 1995; Kehoe & Wright, 2013; Messersmith, Patel, Lepak, & Gould-Williams, 2011). All of these positive outcomes lead to the development of an organization that is more likely to withstand the ebbs and flow of the business cycle and to remain profitable as competition increases.

**Performance.** The primary reason why organizations implement a HPWS is that they expect to see an increase in performance. This includes performance measured by the total

impact on the firm's bottom line, increased productivity, and increased efficiency (Combs et al., 2006; Huselid, 1995). Aside from a few studies, the general finding is that the use of a HPWS will increase firm performance (for exceptions see Cappelli & Neumark, 2001; Way, 2002).

**Organizational citizenship behaviors.** Another commonly discussed benefit of using a HPWS is the expected increase in employees exhibiting organizational citizenship behaviors (OCB) that result from their use. OCBs refer to employees performing tasks that benefit the organization that are not specifically a part of their job description. For example, there are times when employees' co-workers will need assistance in accomplishing a valuable task. Though not specifically a part of their job description, nor something they are likely to be specifically compensated for, employees' willingness to assist their peers can increase the overall productivity of the entire organization by aiding their peers in moving their work along. Prior research has shown that organizational effectiveness increases when employees perform OCBs (Organ, 1988). Work on HPWSs has shown that a HPWS can lead to an increase in OCBs, which in turn lead to positive outcomes such as increased job satisfaction, organizational commitment, and performance (Messersmith et al., 2011).

**Turnover.** Decrease in employee turnover is a common benefit that has been associated with organizations' use of a HPWS (Guthrie, 2001; Huselid, 1995; Way, 2002). This fits with prior research that has shown outcomes associated with HPWSs, such as increased autonomy, skill variety, and task significance that increase employee motivation and overall job satisfaction (Hackman & Oldham, 1976). As turnover decreases, organizations retain a larger percentage of their skilled workforce, which leads to reduced replacement costs and greater organizational performance.

Despite the optimism inherent in the discussion above, HPWSs do not come without criticisms. While there are many potential positive employee behaviors and outcomes, there have also been negative consequences associated with the use of HPWSs. The most common concern is that labor costs will increase to unsustainable levels (Cappelli & Neumark, 2001; Way, 2002) and work intensification will occur (Macky & Boxall, 2008).

**Increased labor costs.** This refers to the financial costs associated with implementing a HPWS. The implementation of a HPWS will often increase costs associated with managing an organization's workforce. Generally, performance gains garnished from implementing a HPWS will outpace costs of implementation; however, at least two studies have found that increased labor costs associated with the implementation of a HPWS have been greater than associated performance gains (Cappelli & Neumark, 2001; Way, 2002). Current research suggests that larger organizations are more likely to yield performance gains from the implementation of a HPWS compared to smaller organizations (Way, 2002). HR managers should take into consideration the expected costs and gains when making the decision on whether to implement a HPWS.

**Work intensification.** Another negative outcome associated with the implementation of a HPWS is the possible increase in work intensification. Work intensification refers to the increased workload that employees take upon themselves as they participate in a HPWS (Macky & Boxall, 2008). As explained above, HPWSs lead to increased effort by employees. This takes place as employees seek to improve performance of the stated job role and as they participate in OCBs. This increase in organizational effort is generally viewed as a good thing; however, the downside of this increase in work is that it can lead to relationship conflicts at work, increased employee stress, and decreased job satisfaction (Macky & Boxall, 2008).

## **Strategic Outcomes of Strategic Human Resource Management at the Organizational-Level**

The outcomes of using a HPWS thus far in this chapter have focused mostly on outcomes at the employee-level. However, in addition to an increase in overall performance and the financial benefits that come to the organization as a whole from decreased turnover, the strategic use of human resources (HR) that comes from the implementation of a HPWS can also lead to outcomes that are focused on the organizational-level. The outcomes that are discussed below—fit, flexibility, and organizational capability—are organizational-level outcomes that can increase the likelihood that an organization can attain a sustained competitive advantage.

**Strategic human resource management & fit.** As discussed above, there are three main benefits to organizations' use of SHRM. The first is related to the concept of fit. Broadly defined, fit refers to “the degree to which the needs, demands, goals, objectives and/or structure of one component are consistent with the needs, demands, goals, objectives, and/or structure” of the organization (Nadler & Tushman, 1980). Fit takes places in a variety of ways as congruence or alignment of practices with the organization's strategy (Schuler & Jackson, 1987a; Wright & Snell, 1998), among HR practices (Baird & Meshoulam, 1988; Wright & Snell, 1998), or with contingencies of its external environment (Toh, Morgeson, & Campion, 2008) is attained. HR is a useful tool for organizations to attain fit (Wright & Snell, 1998). Fit matters to organizations because it can lead to complementarities that will help organizations to attain a sustained competitive advantage (Barney & Wright, 1998; Wright, Dunford, & Snell, 2001) and other positive organizational outcomes (Wright & Snell, 1991). There are at least four different types of fit that take place in HR: vertical fit, horizontal or internal fit, business cycle fit, and environmental fit. I will provide a short review of each type of fit below.

***Vertical fit.*** Vertical fit refers to the alignment of HR practices with the firm's non-HR practices and strategy (Fombrun, Tichy, & Devanna, 1984; Schuler & Jackson, 1987a; Wright & Snell, 1998). This type of fit occurs when HR practices motivate and support the organization's strategy. For example, if a firm has implemented a strategy of cost-leadership, HR practices that compensate employees who cut costs or that provide training on how to cut costs would motivate and support a strategy of cost-reduction. In support of this assertion, Singh (2003) found that financial pay-offs will be higher if firms strategically align and invest in HR.

Multiple studies support the importance of vertical fit in organizations. For example, Wang and Zang (2005) found that entrepreneurial firms who used HR practices that were collectively-based and globally oriented performed better than those that did not use these practices. Additionally, Aguilera and Dencker (2004) found that organizations that planned the HR strategy and personnel issues with the firm's merger and acquisition strategy were more likely to have a successful merger and acquisition. Implied in their argument is that a failure to effect such an alignment will result in reduced performance, or a failed merger and acquisition. This is consistent with Samnani and Singh's (2013) assertion that failure to attain a fit between HR practices and strategy, or strategic initiatives, will send conflicting messages to employees and lead to confusion.

***Horizontal fit (internal fit).*** Horizontal fit, or internal fit as it is sometimes called, refers to the congruence or synergies between HR practices (Baird & Meshoulam, 1988; Wright & Snell, 1998). This type of fit is one of the contributions of SHRM as theorists of SHRM were the first to investigate horizontal fit and the synergies that come from the complementarities between HR practices (Becker & Gerhart, 1996; Delery & Doty, 1996b). While a system of HR practices is expected to have synergistic qualities, it is also possible that HR practices bundled together in

a HR system will produce effects that work against each other. It is important that HR managers identify such counter-productive practices and eliminate them. Counter-productive practices are those that either substitute for other practices in the system thereby adding no value, or worse, represent a “deadly combination” wherein the presence of one practice works against others in the HR system, resulting in an HR system that decreases organizational performance as opposed to improving it (Becker & Gerhart, 1996; Delery, 1998).

***Life cycle fit.*** Life cycle fit refers to aligning HR practices with the needs of the business that take place at various stages in the life cycle of the organization. For example, an organization in its infancy will need to use different recruitment practices than a mature one, since young organizations will generally need to do more to establish name recognition than developed ones. Baird and Meshoulam (1988) used the term external fit to refer to life cycle fit, but using this term to describe the fit with an organization’s life cycle can be confusing since “external fit” intuitively seems like it would be referring to environmental fit.

***Environmental fit.*** Environmental fit is the final type of fit. It refers to the need to adapt an organization’s HR practices with the contingencies of its external environment (Delery & Doty, 1996a; Toh et al., 2008). This is most obvious when changes take place that act as Schumpeterian shocks, such as the bank deregulation example mentioned in the introduction (e.g. Keltner, 1995), but also when constant smaller changes are required of organizations to thrive in increasingly dynamic environments. Similarly, environmental fit takes place as organizations try to balance their HR practices and strategy with the expectations of the national context they face as they enter new countries (Takeuchi, Chen, & Lam, 2009a).

**Strategic human resource management & flexibility.** In their seminal piece on fit and flexibility, Wright and Snell (1998) borrow their primary definition of flexibility from the strategy literature. They define flexibility “as a firm’s ability to respond to various demands from dynamic competitive environments” (Sanchez, 1995: 138). More recently, the firm’s human capital has been viewed as a dynamic capability. Firms’ have dynamic capabilities when they can pro-actively respond to the changing competitive environments and thereby maintain a sustainable competitive advantage (Eisenhardt & Martin, 2000; Ketkar & Sett, 2010; Teece, 2007; Teece, Pisano, & Shuen, 1997). The human capital of a firm is a strong determinant of its dynamic capability and therefore its organizational flexibility. Prior studies have shown that the more flexible the HR system, the greater the firm performance (Panayotopoulou, Bourantas, & Papalexandris, 2003).

While the strategy literature identifies a variety of different types of organizational flexibility, the two most applicable to HR are resource and coordination flexibility. Resource flexibility refers to the extent that resources of the firm can be adapted to different uses (Ketkar & Sett, 2010; Sanchez, 1995). For example, adapting machinery in a factory to produce different goods allows organizations to use its resources in a variety of different ways. Coordination flexibility is the organization’s ability to reconfigure and redeploy its resources (Ketkar & Sett, 2010; Sanchez, 1995). Likewise, being able to coordinate a redeployment of a sales force from selling product A in region A to selling product B in region B or C can be facilitated through flexibility of organizations’ HR. The use of SHRM influences both resource and coordination flexibility.

Wright and Snell (1998) identified three components that an organization’s HR system needs to have to increase the flexibility of the organization. First, the HR systems itself needs to

have the ability to quickly adapt to changes in the environment. Going back to the bank example, in the 1980s and early 1990s, banks faced an increase in competition as deregulation led to non-depository institutions attracting customers' money. Banks adopted a HPWS to be flexible and adapt their business model to be relationship-oriented as they offered a greater range of products (Keltner, 1995). The business they lost in declining deposits was made up by them as they reconfigured, adapted, and changed from being primarily depository institutions to offering a broader product-spectrum. This change was facilitated through a workforce that was skilled enough to provide the service needed to provide a more expansive product offering.

Next, the HR system needs to include practices that will develop a workforce with a wide array of skills. Having a wide array of skills increases the likelihood that employees will be able to perform necessary tasks as job roles and demands shift to meet the needs of the changing environment. Examples of practices that can be implemented to develop a flexible workforce include developing employee skills through the implementation of programs such as in-house training programs, cross-training, and tuition reimbursement programs.

Finally, Wright and Snell (1998) posit that organizations need to promote a culture of behavioral flexibility among employees. This is done by implementing HPWPs such as recruitment and selection practices designed to attract employees who can fulfill a variety of job scripts or schemas, compensation practices designed to motivate adaptability of these behaviors, and an organizational structure that provides employees with the ability to adapt. A good example of an organization that had this type of flexibility is Southwest Airlines. Early in their history, Southwest Airlines had a fleet of four planes, one of which was grounded due to mechanical problems. Their workforce was skilled, motivated, and given the opportunity to act to make the changes necessary to face the problem of being down a plane. As a result, the 5-

minute turnaround was developed and Southwest was able to adjust to the change in the size of their fleet. As a result, they were able to be successful and survive the mechanical problems that took down a quarter of their fleet (Pfeffer, 1998).

**Strategic human resource management & organizational capability.** In addition to the different types of fit that SHRM can attain, and increased flexibility, SHRM can also lead to an increase organizations' overall capability. This is done as SHRM will lead to a workforce that has developed greater *skills*. As the workforce develops its *skills*, employees have a greater capacity to perform their roles and to perform new roles as they develop. They can also derive greater value from the non-human resources of the firm. All of this helps organizations to develop greater capabilities.

In summary, there are a number of outcomes that can result from the use of SHRM. Most of these are positive (i.e. increased productivity and organizational citizenship behaviors, decreased turnover), some can be negative (i.e. increased labor cost and work intensification). Most importantly, as the name implies, SHRM can be used strategically as a competitive action by increasing, or ensuring different types of fit needed to run an efficient and effective organization. SHRM can also be used to increase the flexibility and capabilities of the organization. As a result, these outcomes and strategic uses of SHRM can be used as a competitive action to increase an organization's ability to compete. The next chapter will introduce the theoretical reasoning of why SHRM leads to these outcomes.

## **CHAPTER 4: ANTECEDENTS OF HIGH-PERFORMANCE WORK SYSTEMS & COMPETITION**

The focus of chapters 2-3 of this dissertation was to develop a greater understanding of the what, why and how of strategic human resource management (SHRM). This includes defining SHRM, high-performance work practices (HPWPs) and high-performance work systems (HPWSs), the various expected outcomes that explain why firms implement SHRM. An area of SHRM research that I have yet to discuss is what influences the implementation of HPWSs and the underlying theories that are used to explain how SHRM can be used to gain a competitive advantage. The purpose of this chapter is to review what is known about the determinants of HPWSs, to discuss competition, how SHRM works, and to provide a logical basis for why competition should be included as a determinant to SHRM.

In this chapter, I shift the focus from looking at the use of a HPWS as an explanatory variable to positioning it as a dependent variable, and I provide an overview about what is known about the antecedents that lead to the adoption of a HPWS. After reviewing what is known, I introduce the concept of competition. I develop the first hypothesis of this dissertation, which investigates the main effect of competition on the use of HPWSs in organizations. As I do this, I discuss three different theories (ability-motivation-opportunity model, human capital theory, and the resource-based view) used in HPWS to explain how HPWS increase organizations' competitiveness. I introduce the first hypothesis, and then proceed to introduce a phenomenon of competition known as the Red Queen effect. After introducing the Red Queen effect I outline the second hypothesis of this dissertation that can be seen in figure 1, which investigates the main factors of the Red Queen effect, market commonality and resource similarity, as moderators to the relationship of competition on the use of HPWSs.

## **Determinants of High-Performance Work Systems within Contingency Theory**

Contingency theory is the theoretical perspective most commonly used to explain the determinants of SHRM. The core premise underlying contingency theory is that organizations must adapt to the contingencies of their environment to maximize performance (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). This includes contingencies that are present in the external environment (Burns & Stalker, 1961) and the internal environment, such as organizational structure (Lawrence & Lorsch, 1967), business strategy (Chandler, 1962), and organizational size (Child, 1975). To maximize performance, organizations attempt to align their organization to fit with these contingencies.

The logic of contingency theory can be applied as a lens to understand why various factors will influence the implementation of a HPWS. Organizations will adapt their use of a HPWS to fit with the contingencies of both the external and internal environment. There are a variety of ways in which contingency theory has been applied to the study of SHRM and has been the basis for a number of findings.

When I refer to something as a determinant to HPWSs, I refer to any factor that influences whether or not an organization will implement a HPWS and the intensity with which it will implement such a system. In a recent review of SHRM in the *Academy of Management Annals*, Jackson et al. (2014) found that 30 of the 152 articles they identified on SHRM and HPWS studied the determinants of why organizations adopted SHRM. I have organized the literature on determinants of SHRM into two broad groups: those that evolve from outside the organization (external environment) and those from within the organization (the internal environment; see chapter 5).

**The external environment.** There are a variety of factors in the external environment that have been shown to influence the adoption of HPWSs. At the industry-level, munificence (Hambrick & Abrahamson, 1995), and dynamism (Keats & Hitt, 1988) have been shown to influence organizational action. Similarly, the capital intensity of the industry wherein an organization resides, will influence the effectiveness of a HPWS (Datta et al., 2005). Additionally, it was found that non-profit organizations or governmental agencies as opposed to for-profit organizations were less likely to implement a HPWS (Kalleberg, Marsden, Reynolds, & Knoke, 2006). It is possible that non-profit and governmental organizations' feel less pressure from competition, therefore they are less likely to implement a HPWS. Economic factors such as imports and exports of an industry have also been shown to influence the use of HPWSs with imports decreasing use and exports increasing it (Blasi & Kruse, 2006). In sum, the implementation of HPWSs in organizations is strongly influenced by factors in an organizations' environment.

Consistent with the discussion of the external environment, several studies have looked at country-level factors that influence organizations' use of a HPWS. Looking at Asian countries, research has found that many organizations in Japan (Doeringer, Lorenz, & Terkla, 2003) and China (Su & Wright, 2012) will adopt a hybrid HPWS, which has been shown to be more effective in Asian countries than the forms of HPWSs implemented in Western contexts. Additionally, it has been shown that MNEs will adapt their use of HPWSs to fit with the institutional factors of the host-country (Lawler, Chen, Wu, Bae, & Bai, 2011), which include national culture but also expand to include country-specific government regulations. Although viewed as a different theoretical framework, these studies support the underlying assumptions of other studies that show organizations will adapt their practices to fit with contingencies of their

environment and, by doing so, will have greater performance. The antecedents of the internal environment will be discussed at the beginning of chapter 5, but first it is important to develop a better understanding of competition.

## **Competition**

Competition is a determinant that evolves from the external environment, which has only been tested in two articles (Ordiz-Fuertes & Fernández-Sánchez, 2003; Patel & Cardon, 2010). In an international context, Ordiz-Fuertes and Fernández-Sánchez (2003) found that the intensity of the environment would lead to an increase in the adoption of HPWSs. While this finding helps to introduce competition as an antecedent to the adoption of HPWSs, the use of a single item on a survey to get at the latent construct of competition is likely to fall short in fully capturing the level of competition in the environment. Methodologically, Patel and Cardon (2010) do a better job by using five items to measure product-market competition, but this measure is somewhat narrow as organizations are likely to face competition in the pursuit of resources and in establishing distribution networks. Additionally, the sample that Patel and Cardon (2010) used is specific to small business enterprises (SBEs) — firms with fewer than 100 employees. Prior studies suggest that SBEs are less likely to adopt HR practices for a variety of reasons such as resource constraints, lack of an HR department, or the time demands it would place on the founding team. Despite the benefits of these prior studies, there are still gaps in our knowledge about the effect of competition on organizations' adoption of a HPWS.

Before taking a closer look at the relationship between competition and organizations' use of a HPWS, I will transition to define competition and talk about some of the factors that influence competition. Competition is a concept that is present in many different streams of research. The conceptualization of competition that I use in this paper is found within the

strategy literature (Chen, 1996; Greve, 2008). Competition takes place as organizations take actions (i.e. cutting prices) to gain customers, employees, and resources from rival organizations. There is large variance in competitive actions that organizations take as competitive actions are broadly defined as any action that a competitor takes to beat out rival organizations. Competitors are those organizations that operate in the same industry and offer similar products or who need the same type of employee or other tangible resources (Chen, 1996). Organizations compete with competitors as each tries to maximize the financial returns they can attain. Organizations are expected to be competitive through the actions they take to gain an advantage and by their ability to adapt to actions that competitors take, market shocks that take place through government regulations, or other changes to their environment.

In assessing the influence of competition on organizational action, it is important to note that organizations often develop their own cognitive perceptions of their competitors (Porac & Thomas, 1990). This perception of competition will drive organizations' competitive actions since organizations' perceptions of the competitive environment as opposed to objective assessments are used as the basis for action. For example, in their study of knitwear producers in Scotland, Paton and Wilson (2001) found that knitwear producers relied on their social interactions with other knitwear producers to assess their competitive environment. Likewise, Coulson and Lacy (1996) found that journalists' perceptions of competition influenced their strategic decisions regarding which stories to pursue. The importance of the perception of competition on an organization's actions is summarized well by Paton and Wilson (2001):

“While successful competition requires organizational strategists to compare their organizations with others and anticipate profitable sources of competitive advantage,

these comparisons are embedded in belief systems and reflect idiosyncratic perceptions of operating conditions and environments, organizational forms and membership” (290).

**HPWSs as a competitive action.** One of the common assumptions about the use of a HPWS is that their use will lead to improved organizational performance. While the HPWS-performance link has been shown in multiple studies (Combs et al., 2006; Huselid, 1995), it is implicitly assumed that HPWSs will also help organizations to be more competitive, and thereby can be considered a competitive action. There are several underlying theories that help to explain this. There are three key theoretical paradigms that are often used to explain how SHRM works, including the behavioral perspective, human capital theory, and the resource-based view. These will be discussed below.

***The behavioral perspective.*** The behavioral perspective focuses on how the implementation of a HPWS will influence employee behavior. The concepts within this model are grounded in psychology and focuses primarily on how the use of a HPWS will influence the psychological motivations and abilities of employees when they are empowered with the *skills*, incentives, and opportunities to act. The outcomes most closely linked with this perspective are the increases in employee commitment, organizational citizenship behaviors, decreased turnover, and increased employee performance and productivity that result from implementing a HPWS (Combs et al., 2006; Huselid, 1995). This perspective assumes that it is through the implementation of a HPWS that positive employee behaviors are elicited and that these behaviors lead to positive organizational outcomes (Jackson et al., 2014). The most commonly used model within the behavioral perspective is the ability-motivation-opportunity (AMO) model (Blumberg & Pringle, 1982; Kaifeng et al., 2012; Kehoe & Wright, 2013).

*The ability-motivation-opportunity model.* This model posits that successful HPWSs provide employees with the ability to do their job, the motivation to do their job, and the opportunities to perform their role and non-role behaviors needed for the organization to attain higher levels of performance. These three elements work in conjunction with each other to comprise the AMO model. When a HPWS is implemented that touches on all three components, positive organizational outcomes result as employees have gained the *skills* needed to perform a task, the motivation to do it, and the opportunity to use them (Blumberg & Pringle, 1982; Kaifeng et al., 2012; Kehoe & Wright, 2013). This model focuses on how HPWSs influence employee behavior. As employee behavior is aligned with the goals, and needs of the organization, organizations will attain a higher-level of performance and become more competitive.

Ability-enhancing practices. These practices refer to organization's ability to attract and train employees to have both the competencies necessary to perform the functions that fit with the strategic initiatives of the organization (Kaifeng et al., 2012; Kehoe & Wright, 2013) and the flexibility to adapt to any changes that take place in the external environment. This is accomplished as organizations attract and retain employees with the needed *skills*, or develop them in their workforce by implementing appropriate training and development programs. Ability-enhancing practices are most commonly found in the high-performance work practice (HPWP) categories of recruitment and selection, and training and development (Kehoe & Wright, 2013); however, promotions, job and work design categories can also be used as ability-enhancing practices as these practices help to facilitate the development of employees' skills.

Motivation-enhancing practices. While an employee might have the *skills* to perform a given task, the system is incomplete if incentives are not in place to motivate employees to act

(Kaifeng et al., 2012; Kehoe & Wright, 2013). Motivation-enhancing practices are any practices that increase employees motivation to perform their roles and any extra-role behaviors that when performed benefit the organization. Compensation and benefits are often the first practice category that comes to mind when one thinks of motivation, but other practices like promotions can also be used as an incentive. Additionally, teamwork practices from the job and work design category or communication practices that help to foster commitment to the organization or their fellow employees are other sources of motivation, because employees who are committed to their organization are more likely to take action to address problems that their organization faces.

Opportunity-enhancing practices. Once an employee has ability and motivation, it is important for the organization to provide them with the opportunity to act. By opportunity, I refer to providing employees with the authority and tasks that allow them to apply the *skills* they have developed (Kaifeng et al., 2012; Kehoe & Wright, 2013). It is not uncommon for employee opportunity to be stifled. For example, when decision-making power is highly centralized within an organization, employees will have limited authority. If problems arise that fall outside of their decision-making authority then employees will be forced to seek permission from a manager or supervisor who could be several layers up the hierarchical chain before they can address a given problem. Even if employees at lower levels in the hierarchy have the *skills* needed to solve a problem, they are often constrained in their ability to act. Oftentimes in a HPWS, organizations will structure their job and work design to decentralize decision-making authority. This form of organizational structure overcomes the common constraints that are inherent in organizations with a high-level of bureaucratic control, thereby increasing employees' opportunity to use their *skills*.

***Human capital theory.*** Human capital theory is closely aligned to the strategy field since human capital is viewed as a firm asset. One of the main concepts underlying human capital theory is that the human capital of a firm will lead to a competitive advantage over other organizations if the firm can attain, retain, train, and motivate human capital at a cost that is lower than its competitors (Coff & Kryscynski, 2011). As human resources (HR) is used strategically, and by extension a HPWS is implemented, firms can increase the idiosyncratic value that its human capital has as employees gain greater skills and capabilities to perform their role and extra-role behaviors. As the overall skill level of a firm's human capital increases, the likelihood that a firm will gain a competitive advantage through having a greater level of firm-specific skills, social complexity and causal ambiguity will increase (Coff & Kryscynski, 2011; Coff, 1997).

Developing human capital that has a high-level of firm-specific skills is beneficial to organizations, because when employees develop skills that are only valuable to the organization that they work, for they are less likely to exit the firm and take their skillset to a competitor. Social complexity refers to the embeddedness of a firm's human capital. The greater the level of embeddedness, the greater the value that is derived as a result of the social connections that employees have with each other, as value comes from employees' increased ability to work in sync with each other (Coff & Kryscynski, 2011). The social ties that exist in between employees in an organization can be difficult to replicate, as each tie is specific to each employee involved in the ties they have with their employees. This leads to the last concept I will discuss from human capital theory, casual ambiguity. This refers to the extent that individual assets can be linked to organizational performance and that such organizational performance can be replicated (Coff & Kryscynski, 2011; Lippman & Rumelt, 1982). Generally, causal ambiguity also refers to

an inability to make direct causal links between how a firm operates and how it attains value. If the benefits of implementing a HPWS leads to an increased value to the firm's human capital, but firm-specific factors interact with the implementation of such a system to add even greater value, then it becomes difficult, if not impossible, to replicate the causal path that leads to increased performance through the firm's human capital. As a result, the competitive advantage attained by a firm can be sustained over longer periods of time because it is difficult, if not impossible, to imitate.

***Resource-based view.*** The resource-based view (RBV) of the firm has also been used to explain how SHRM can be used to attain positive organizational outcomes; the RBV, however, is specifically focused on how changes to the resources of the firm can lead to attaining a sustained competitive advantage. Similar to human capital theory, the RBV is grounded in the strategy literature. This approach informs us that organizations will assess their competitive position by assessing their resources in relation to those of competing firms (Barney, 1991). This assessment is made using four different criteria that determine how valuable, rare, in-imitable and non-substitutable the resources of the organization are (Barney, 1991). When an organization is rated as being high on these criteria, it is expected that they will be able to achieve and sustain a competitive advantage, wherein they will be able to attain a position of competition that allows them to win customers and employees from competitors, or preclude competitors from attaining non-human resources (i.e., organizational assets, physical capital, intellectual properties, reputational capital, organizational capital, financial assets, and technological assets). The resource-based view of the firm is an internal assessment of the resources that determine an organization's competitiveness in relation to competitors.

When organizations implement a HPWS, they actively seek to improve their human resources. By so doing, they can increase the value, rareness, in-imitability, and non-substitutability of one of the firm's core resources. Therefore, by implementing a HPWS, organizations increase their ability to attain a sustained competitive advantage.

### **Hypotheses on Competition**

The previous chapters have introduced the concepts of HPWSs, and have reviewed some of the key findings that have resulted from studying HPWS. This includes a discussion on the different practices that comprise a HPWS, the expected outcomes of using a HPWS, and an introduction to some of the antecedents of HPWSs and a discussion of some of the underlying theories used to explain these outcomes and the antecedents that influence adoption. This brings us to the introduction of the first hypothesis of this dissertation.

Contingency theory shows us that the actions that organizations take are influenced by their external environment (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). Competition is a likely influence that evolves from the external environment. As competition increases, organizations will feel pressure to respond. Pressure to take action to maintain their competitive position so they can stay viable as an organization, and if possible to increase profitability.

The implementation, or increased use of a HPWS is a likely organizational response to increased pressure. The reasons for organizations' increased use of a HPWS can be grounded in the expected outcomes that result from using a HPWS at the organizational-level. These include the increased types of fit (vertical, horizontal, business cycle, and environmental), flexibility, and organizational capability. By influencing each of these organizational-level outcomes, organizations can better respond to and withstand competitive pressures as they arise.

First, a HPWS can help to increase the different types of fit. The most applicable to helping organizations to respond to competitive pressures is vertical fit, as employee behaviors become more aligned with strategy. Attaining this type of alignment helps to ensure that the organization's strategy will be adopted and properly implemented throughout the organization (Wright & Snell, 1998). Environmental fit is also an important consideration that needs to be taken into account as organizations that fit with the expectations of the external environment are more likely to gain legitimacy in their environment and thereby access to important resources (North, 1990).

The theoretical paradigm that best explains how the use of a HPWS will lead to increased fit is the AMO model. In regards to vertical fit, the ability component of the AMO model highlights the importance of developing employees with the skills needed to implement a given strategy. Giving employees the opportunity to use these skills can also be important in implementing strategy, but perhaps the most important aspect of the AMO for aligning vertical fit is the motivation aspect of the AMO model, as it outlines how to align desired behaviors through the proper use of incentives. Contingency theory is perhaps the best explanation that can be used to explain the importance of environmental fit. As it stipulates that organizations must adjust their practices to fit with the demands of the country, or locale they are in to maximize performance.

Next, as discussed by Ordiz-Fuertes and Fernández-Sánchez (2003), by implementing a HPWS organizations become more flexible and are better able to adjust to shifts in the environment. Flexibility increases in an organization as employees develop the abilities to perform a variety of tasks so that the skills to adapt to a change are present in an organization as the need arises. From human capital theory, the concept of employees developing social

connectedness applies as employees who have developed the ability to work closely with each other will be better able to adjust to changes as they arise.

Finally, the increased capability that comes from implementing a HPWS can increase an organizations ability to respond to competitive pressures. This increase in capabilities comes as HPWSs develop employees' ability, motivation, and opportunity to act. In turn, this increases the prevalence of employee behaviors such as increased organizational commitment, and organizational citizenship behaviors (Combs et al., 2006). This fits well with human capital theory as increased employee capabilities increase the value that human capital adds to the firm. Likewise, increased capabilities are reflective of an increase in the value and rarity of the organizations' workforce, which are key tenets of the resource-based view of the firm.

The increased fit, flexibility, and capabilities of organizations that result from implementing a HPWS will increase organizations' ability to withstand competitive pressures. By having an organization that has a high-level of internal fit, organizations maximize their ability to execute their strategy. By attaining environmental fit, organizations can gain access to valuable resources. The more flexible an organization is the greater its ability to adjust as competitors take actions that must be responded to. Finally, an organization with greater capabilities has a greater capacity to perform and therefore can withstand the pressures that come from competition. Therefore, as organizations face increasing competitive pressures, they will increase their use of a HPWS as a mechanism to increase their ability to withstand the competition that they face.

*Hypothesis 1: As competition increases, organizations will increase their use of a HPWS.*

Taking competitive actions is how organizations compete in a market. In general, firms are motivated to take as many competitive actions as they can since such actions lead to greater performance (Derfus et al., 2008). However, there are times when such competitive actions and counter-actions by competitors leads to the Red Queen effect, wherein competing organizations “run at a standstill” as each negates the other’s actions and attempts to improve performance, resulting in expended resources and no net change in their competitive position (Derfus et al., 2008). To avoid establishing a Red Queen effect among competitors, there are times when organizations will refrain from taking competitive action. This is referred to as mutual forbearance (Greve, 2008). Mutual forbearance is more likely to take place among competitors who have high levels of market commonality and resource similarity.

**Market commonality.** Market commonality takes place when organizations compete in the same markets. The greater the market overlap, the greater competitors’ knowledge of each other’s competitive actions (Chen, 1996). This increased knowledge, will take place as firms monitor actions of organizations that they identify as competitors. As a result, competitors can quickly match each other’s competitive actions reducing the time in which either competitor can attain a competitive advantage, which increases the likelihood that firms will practice mutual forbearance to avoid participating in the Red Queen effect.

Implementing a HPWS can be thought of as a competitive action that organizations take as they try to outmaneuver their competitors. HPWSs are unique from many competitive actions in that HPWSs are actions that takes place solely within the firm, therefore they are less observable. Despite having a high level of market commonality, organizations can implement a HPWS without their competitors knowing. Implementing a HPWS is a much more subtle competitive action than other actions, such as cutting prices or launching new products, which

are more open to the public eye and therefore more easily noticed by competitors with high levels of market commonality. In fact, high levels of market commonality are likely to lead to a greater use of a HPWS as organizations that have a high level of market commonality with their competitors are going to be constrained in actions they can take. Since more visible actions that organizations take when market commonality is high are likely to result in the Red Queen effect, they will attempt to take actions, like implementing a HPWS, which are less likely to be perceived by their competitors. By implementing a HPWS, organizations increase their ability to attain a sustainable competitive advantage as they develop a workforce that is valuable, rare, and difficult to imitate. Therefore, when market commonality is high, organizations' will implement an even greater use of a HPWS when faced with high-levels of competition than it would when market commonality is low.

*Hypothesis 2a: Market commonality will have an amplifying effect on the relationship between competition and HPWSs. As market commonality increases and organizational action is constrained, organizations' will increase their use of a HPWS at an even greater rate.*

**Resource similarity.** This refers to the extent to which resources that competitors have overlap with each other. This concept is similar to market commonality in that high levels of resource similarity among competitors will lead to mutual forbearance. Resource similarity is different; it does not lead to mutual forbearance because competitors will be aware of each other's actions. Competitors who lack idiosyncratic resources lack the ability to do anything unique from their competitors and are likely to participate in the Red Queen effect, since competitive actions taken by one organization can easily be replicated by the counter-actions of a competitor (Chen, 1996; Derfus et al., 2008).

One can also expect organizations facing high levels of resource similarity to have a greater use of a HPWS. The reason for this being that the other resources (i.e. organizational assets, physical capital, reputational capital, organizational capital, financial assets, and technological assets) can be difficult or costly to acquire. While the implementation of a HPWS can lead to increased labor costs (Cappelli & Neumark, 2001), it is a way to increase the value that employees—a resource organizations already have—provide and increase the value that employees derive from the firm's other resources. Organizations do not necessarily need to attain new resources to implement such a system. Therefore, in a competitive environment where other resources are scarce or too costly to add, firms can implement or increase their use of a HPWS to improve their competitive position.

Most importantly, firms can use a HPWS to increase the value their employees provide directly and the value they provide indirectly to their other resources. This means that a HPWS can be used by organizations as a way to take actions that their competitors might not match despite having similar resources. In this way, instead of acting to avoid the Red Queen effect by implementing a plan of mutual forbearance, firms can create a greater level of resource idiosyncrasy compared to their competitors by implementing a HPWS. Therefore, organizations faced with high levels of resource similarity are likely to implement a HPWS at an even greater rate when faced with competition than they would when resource similarity is low.

*Hypothesis 2a: Resource similarity will have an amplifying effect on the relationship between competition and HPWSs. As resource similarity increases and organizational action is constrained, organizations' will increase their use of a HPWS at an even greater rate.*

In summary, there are a variety of antecedents that influence organizations' adoption of a HPWS. As outlined by contingency theory, these antecedents can evolve from both the internal and external environment of an organization. Competition is an antecedent that evolves from the external environment that takes place as organizations try to "beat out" other organizations for customers or resources (Chen, 1996). It is likely that competition will influence organizations' use of a HPWS, because, as we learn from the AMO model, human capital theory, and the RBV, a HPWS can be used to increase organizations' competitiveness. One phenomena that takes place when firms compete is the Red Queen effect (Derfus et al., 2008). This effect stipulates that when competing organizations have high levels of market commonality and/or resource similarity, any competitive actions taken by competing organizations will result in wasted resources with no net change in their ability to compete against each other. As a result, when market commonality and resource similarity are high, organizations will often practice mutual forbearance (Derfus et al., 2008). Mutual forbearance refers to competitors' tacit agreement not to implement any competitive actions (Greve, 2008). While many of the competitive actions that organizations take are quickly visible to competitors, the HR system that organizations use is less visible. Therefore, organizations can use a HPWS to increase their competitiveness when more traditional "visible" actions (i.e. cost-cutting, product diversification, etc.) are constrained.

## **CHAPTER 5: INTERNAL ANTECEDENTS TO HIGH-PERFORMANCE WORK SYSTEMS; BUSINESS STRATEGY**

This chapter shifts the focus from competition and antecedents of the external environment. It starts by reviewing some of the antecedents of the internal environment before focusing explicitly on the business strategy of the firm. Specifically, this chapter will introduce three different strategies: cost-reduction, innovation, and quality management. These are strategies that are commonly employed by organizations and are often used in the extant academic literature. To date, most of the work on strategy has been purely theoretical (for exception see Sanz-Valle et al., 1999; Takeuchi, 2009). After providing an introduction to each of the three strategies, this chapter will review theoretical connections that have been made between strategy and organizations' use of human resources. It will then develop hypotheses on the effect that the three strategy types have on organizations' use of a high-performance work system (HPWS) before ending this chapter by looking at how an organization's strategy will moderate the influence of competition on organizations' use of a HPWS.

### **The Internal Environment.**

There are many determinants within organizations that influence the decision to adopt a HPWS. This broad grouping is intended to capture the effect that factors internal to the organization have on the adoption of a HPWS. For example, it has been found that organizational size, structure, and technology used by an organization will influence its use of HPWSs (Jackson, Schuler, & Carlos Rivero, 1989). This also includes the effect that the human resource (HR) manager, organizational initiatives, and business strategy have on organizations' use of a HPWS.

As organizations evolve, business managers make decisions regarding the functioning of the business, which includes anything from departmental initiatives to shifts in the overall business strategy of the organization. Prior research has shown that actions business leaders take to run their organization affects HR practices and the presence of a HPWS in organizations. This includes decisions such as technology that is used to manufacture products (Jackson et al., 1989), as well as organizational initiatives such as total quality management programs (Bayo-Moriones & de Cerio, 2001). For example, Bayo-Moriones and de Cerio (2001) found that the implementation of a quality assurance program increased the likelihood that organizations will adopt a HPWS. As organizational initiatives and business strategy change, HR managers are responsible for adapting and aligning corresponding changes in the HR system whether these changes take place as departmental initiatives or organization-wide strategic changes (Miles & Snow, 1984; Schuler & Jackson, 1987a, b). While providing a conceptual foundation that makes sound logical connections between organizations' business strategy and their HR systems, most of the work on business strategy and HR stops short in providing any empirical evidence substantiating this link. In fact, most research on how business strategy affects HR in organizations has been contained in the strategy literature with few exceptions where the link between strategy and HR have been empirically studied in SHRM (i.e. Takeuchi et al., 2009a). So while it is clear that the contingencies of the organizations environment will influence the business strategy of the organization, it is not clear how the organizations' business strategy will influence its use of a HPWS.

In addition to the influence that organizational initiatives and business strategy have on the adoption of HPWSs, it has been suggested that HR practitioners will have a strong effect on the decision to implement a HPWSs (Legge, 1978). To date, the main finding of this work is that

HR practitioner's networking skills and the importance of the HR group in the organization are characteristics that have an influence on the implementation of a HPWS (Murphy & Southey, 2003). Other factors, such as HR managers' political acumen, *skills*, and professionalism, were not found to have an effect on the adoption of a HPWS. In a separate study, Erickson and Jacoby (2003) found that HR practitioners with more extensive networks are more likely to influence organizations to implement a HPWS. While providing a good introduction into research on the effect that HR practitioners have on implementation, there is still room for work to be done in understanding the effect of the HR practitioner. Despite the value of such research, the specific focus of this dissertation does not seek to extend work on the influence of the HR practitioner on organizations' use of a HPWS.

### **Business Strategy**

Now that a brief introduction of the internal antecedents to HPWS has been provided, it is time to look at how the business strategy of the organization influences the adoption of a HPWS and how the relationship between a HPWS and the organizations' business strategy will affect the impact competition has on the implementation of a HPWS. I will start first by providing a brief summary of business strategy and then progress to exploring the specific link between business strategy and organizations' use of a HPWS and the influence of strategy on the competition-HPWS relationship.

For organizations to be successful, they need to have a strategy.. The business strategy that a firm implements can be determined by the contingencies of the external environment (Chandler, 1962). There are a number of strategies that managers have developed as they try to find the unique value mixture that maximizes performance for their organization in their environment, but the majority involve a strategy that involves some form of cost reduction

and/or differentiation (i.e. Porter, 1980). The strategy that an organization in a single business adopts is often referred to as its business strategy. As competition increases, firms are forced to make an explicit choice about what strategy will be pursued. A more explicit choice needs to be made because not doing so will result in a lack of focus where resources, goals, and workforce efforts are divided, a phenomenon referred to as being “caught in the middle” (Porter, 1980).

There have been several theory pieces that have discussed the relationship between SHRM and organizations’ business strategy (Miles & Snow, 1984; Schuler & Jackson, 1987a, b), but very few have tried to study this relationship empirically (e.g. Sanz-Valle et al., 1999; Takeuchi, 2009). A consistent view in the theory development of this concept is that an organization’s business strategy should have a strong influence on the human resource (HR) practices that organizations implement and will adjust their HR practices to be congruent with business-level strategy (Miles & Snow, 1984; Schuler & Jackson, 1987a, b). Empirically, Takeuchi (2009) has shown that the business strategy that organizations take will influence the effect that organizations’ HR systems have on their performance. There are only a handful of empirical studies that investigate the effect that business strategy has on organizations’ use of a HPWS (Arthur, 1992; Guthrie, Spell, & Nyamori, 2002).

One of the goals of this dissertation is to develop empirically-based knowledge that looks at the link between business strategy and the adoption of a HPWS. In his study, Takeuchi (2009) included three different measures of business strategy: cost-reduction, differentiation, and quality management. These same concepts are used in this study and are explained in more detail below.

**Cost-reduction.** This refers to organizations’ attempts to reduce their cost structure (Porter, 1980). Increased organizational competitiveness can come by increasing profitability by lowering costs throughout the value chain. By implementing greater cost-control measures,

organizations can increase profit. If they become a cost-leader in their market, they can take competitive actions that include competitive pricing since cost reduction in their value chain enables them to push out rivals who cannot keep up, and thereby provide increased profit through an increase in the size of their customer base (Porter, 1980).

**Differentiation (innovation).** This refers to the development of an innovative product or process that allows organizations to provide a unique product to their customers (Porter, 1980). Organizations implement this business strategy by developing new product(s) to bring to market. This is done by either providing consumers with a new product or by adapting an old one. It is also done by introducing an innovative new process earlier in the value chain. A good example of this are the numerous innovations that Apple has released such as the iPhone, iPad, etc and the Tesla electric car. In both cases, their innovations have helped them to gain a competitive advantage in their industry, each time changing the underlying structure of their industry.

**Differentiation (quality management).** This is the third and final business strategy that will be discussed in this proposal. This strategy refers to when organizations compete based on the quality of their product (Sanz-Valle et al., 1999; Schuler & Jackson, 1987a). Quality can come as a result of refining the process used to make a product or through improving the quality of raw materials used. Organizations that use this strategy can achieve competitive success as they increase sales by attracting quality-sensitive customers or by reducing the number of defective products and thereby decrease waste, which leads to increased profitability. A good example of a firm that uses a quality management strategy are Japanese auto firms, Honda and Toyota. They empower their employees through total quality initiatives to fix problems that come up at any point in the manufacturing process. This strategy has led these organizations to several decades of dominance in the auto industry. Of course, empowering employees with this

responsibility and power requires organizations' employees to have both the skills and motivation to effectively implement such a program.

**HPWS & business strategy.** As mentioned above, there has been little work done investigating the link between HPWSs and business strategy. Theoretically, it makes sense that organizations will try to match their human resource strategy to be congruent with their business-level strategy (Miles & Snow, 1984; Schuler & Jackson, 1987a, b). Empirically, there is evidence to support this assertion. Sanz-Valle et al. (1999) found that firms that pursued a quality or innovation strategy were more likely to spend more on training, whereas those pursuing a cost-reduction strategy were less-likely to spend funds on training. Similar findings were found in regards to HPWPs like recruitment and selection, career development initiatives, and compensation.

The underlying goal of a cost-reduction strategy is to increase profit and flexibility by implementing competitive actions that decrease costs. While a HPWS will often increase the performance of an organization (Combs et al., 2006; Huselid, 1995), the implementation of a HPWS can also increase the total labor costs of an organization (Cappelli & Neumark, 2001; Way, 2002). The increase in labor costs associated with a HPWS can deter organizations that have implemented a cost-reduction strategy from concurrently implementing a HPWS. The converse of this logic is that HPWS will enable organizations to do more with fewer people. It is possible that even when compensation costs per employee are higher, the overall compensation costs of the firm could be contained by hiring fewer employees, but employees who are competent, informed, incited and have greater decision discretion than employees would be if the organization did not implement a HPWS. However, given the logic presented by Cappelli

and Neumark (2001), it is expected that an organization pursuing a cost-reduction strategy will be less likely to adopt a HPWS compared to those that are not pursuing a cost-reduction strategy.

*Hypothesis 3a: Organizations that implement a cost-reduction strategy will report using lower levels of a HPWS than organizations that do not.*

Traditionally, differentiation has referred to providing a product that is uniquely different than its competitors. This difference can come as a product innovation wherein the product offered by an organization provides something unique from the equivalent product offered by its competitors. It has also been used to refer to a product that provides superior quality compared to similar products. Past research has shown support for a positive relationship between the implementation of a differentiation strategy and the adoption of a HPWS (Arthur, 1992). However, it is unclear if there is a different effect between the two types of differentiation strategies, innovation or product quality. Dividing differentiation into different types, innovation versus quality management, is one way that knowledge of SHRM can be expanded (Jackson et al., 2014).

Organizations that pursue either differentiation strategy are less concerned about cost compared to those pursuing a cost-reduction strategy. Organizations pursuing an innovation or quality management strategy are more concerned with having employees who can provide solutions to the problems that arise as they attempt to differentiate themselves through innovation or the quality of their product or service. A HPWS is good at developing a workforce that has the attributes that innovation and quality management strategies require. A HPWS can increase employees' ability through training and development programs. They also lead to increased commitment and organizational citizenship behaviors that are essential to employees that develop new ideas and who provide higher quality service (Messersmith et al., 2011).

Though both strategies are theoretically different, both benefit from the implementation of a HPWS. Therefore, organizations that pursue a differentiation strategy of innovation or quality management are more likely to implement a HPWS than those organizations that pursue a cost-reduction strategy.

*Hypothesis 3b: Organizations that implement an innovation strategy will report using higher levels of a HPWS than those using a cost-reduction strategy or no specific strategy at all.*

*Hypothesis 3c: Organizations that implement a quality management strategy will report using higher levels of a HPWS than those using a cost-reduction strategy or no specific strategy at all.*

### **Strategy, Competition & HPWSs**

In addition to business strategy having a direct effect on organizations' use of a HPWS, it is also likely that strategy will influence the relationship between competition and organizations' use of a HPWS. This interaction will take place as both competition and organizations' business strategy will influence the extent to which organizations' implement a HPWS. A short discussion of how competition and business strategy are expected to interact is outlined below.

The cost-reduction strategy, will diminish the influence that competition has on organizations' use of a HPWS. The logic underlying this statement is that organizations that have implemented a cost-reduction strategy have already determined that they will reduce costs throughout the organization to be competitive. As competition increases, they are likely to respond by cutting costs further. Since HPWSs increase labor costs (Cappelli & Neumark, 2001; Way, 2002), implementing, or increasing the use of a HPWS will be met with resistance from

management as increasing the use of these practices will be contrary to the strategic approach that the organization has already determined to take.

*Hypothesis 4a: The intensity with which organizations implement a HPWS in the face of competition will be diminished when firms use a cost-reduction strategy.*

Alternately when faced with increasing competition, organizations that pursue an innovation, or quality management strategy are likely to increase their use of a HPWS at an even greater rate than in the absence of these strategies. This magnified use that is expected to take place because increasing their use of a HPWS is consistent with the strategy that has already been implemented. For example, organizations that have a more specific recruitment and selection practices, and training and development programs will lead to a workforce that has greater skills, and with these skills a greater capacity to develop new products, or to deliver a higher-level of quality than they would otherwise be able to deliver. As a result, when organizations are faced with increasing competition they are likely to respond by increasing their use of a HPWS at an even greater rate than what they would in the absence of a specific strategy. While the logic for hypotheses 4b and 4c is similar, the moderating effect of an innovation strategy and quality management strategy will be kept separate to keep in line with Jackson, Schuler, and Kaifeng (2014), call to test these separately. The hypotheses read as follows.

*Hypothesis 4b: The intensity with which organizations implement a HPWS in the face of competition will be increased when firms use an innovation strategy.*

*Hypothesis 4c: The intensity with which organizations implement a HPWS in the face of competition will be increased when firms use a quality management strategy.*

In summary, this chapter shifted its focus from the external to the internal environment of the organization. It did so by discussing the internal antecedents to HPWSs and by introducing three types of business strategy, cost-reduction, innovation, and quality management as antecedents. Prior work on strategy and its influence on organizations' human resource practices has been mixed. It is possible that these mixed results are due to most studies using a differentiation strategy that aggregates innovation and quality management (Jackson et al., 2014). This dissertation separates these differentiation strategies into their own unique construct. It is expected that an organizations strategy will affect its use of a HPWS. It is also expected that organizations' strategy will moderate the relationship of competition on organizations' use of a HPWS with the cost-reduction approach having a diminishing effect and the innovation and quality management strategies having an amplifying effect.

## **CHAPTER 6: RESEARCH SETTING & OPERATIONALIZATION**

In this chapter, I describe the sample, survey methodology and operationalization for the constructs used to conduct this study. I start by describing the sample. I then go into an explanation of how I operationalized each of the variables in this dissertation, starting with the dependent variable of high-performance work systems (HPWS) and ending with controls.

### **Sample**

The data for this dissertation was collected using online surveys that were distributed to alumni from two Midwestern universities and an association of human resource professionals. The invitations were sent to approximately 5,000 people asking them to participate in the survey. Of the 5,000 invitations sent, 259 people started the survey, with 132 finishing. In the data cleaning process, five respondents were thrown out leaving a total sample of 127 respondents.

The data from the two Midwestern universities comprises 105 respondents. The organizational ages of respondents' organization in this sample ranges from 2-204 years. 40% of respondents are human resource managers, 21% are business managers responsible for HR, with the remaining 39% not having any HR responsibilities. 18% of the organizations are still managed by the founder, 36.2% of the organizations are privately owned, 30.5% are publicly traded, with 33.4% being a non-profit or government organization. Only 9 (8.6%) of the organizations surveyed are managed by a private equity firm. 12.4% of the organizations in this pool reported being in manufacturing, 13.3% in other services, 9.5% educational services, 8.6% in professional, scientific and technical services, and 6.7% in health care and social assistance, the rest of the population is evenly spread between other industry classifications.

The data from the HR professional organization comprises 22 respondents. The organizational ages of respondents' organization in this pool ranges from 0-127 years. 0% of the respondents are human resource managers, 27.3% are business managers responsible for HR, with the remaining 73% not having any HR responsibilities. The lack of HR managers in this sample was unexpected considering this data was collected from members of an HR association. 36% of the organizations are still managed by the founder. 59.1% are privately owned, 31.8% are publicly traded, with the remaining 9.1% being comprised of government and non-profits. 36.4% of the organizations' represented are from the finance and insurance industry, with the second largest respondent group (22.7%) coming from the general services category, the rest of the population being evenly spread between the other industry classifications.

The combined sample pools of data comprises organizations that range from 0-204 years in existence. 28.3% have fewer than 100 employees, with 47.2% having fewer than 500 employees. The founder still manages 27 of them, with 11 being managed by a private equity firm. 95% of the firms are located in the US. 51 of the firms are privately owned, 39 are publicly traded with 37 working for the government or some other type of non-profit.

### **Mean Substitution**

Mean substitution was used to replace missing data in the 127 remaining respondents and represents less than 1.3% of the data. The item that was missing the most data asked which industry the respondent's firm is in; 23 of 127 (18%) these were not replaced and lowered the usable sample down to 104 firms. The item missing the second most data measured the level of stock market performance, with 16 of 127 (13%) respondents getting replaced.

## Survey Methodology

The survey process involved gaining access to employees through the use of alumni databases at two large Midwestern universities. For one university and the human resource association, the true identity of the respondents was unknown to me. The alumni relations personnel were provided an email (for example see Appendix 1, identifying information redacted) that they sent to alumni inviting them to participate in the survey. The email differed slightly between the two universities and human resource association. In the email, a link was provided. Participation in the study took place when participants clicked on the link and answered the questions provided. Per the Institutional Review Board (IRB) regulations, participants were provided with a consent form at the beginning of the survey. They were not permitted to participate in the survey unless they specifically entered their consent to participate. Participants were informed on the consent page that they could opt out of the survey at any time by simply closing their web browser. Partially completed responses were thrown out, which resulted in a total of 127 full participants.

## Dependent Variable

**High-performance work systems (HPWS).** For the measure of the organizations' HPWS, I used the scale developed by Guthrie (2001), which has been adopted in recent studies (i.e. Datta et al., 2005; Messersmith et al., 2011). This scale uses 18 different items to measure the intensity of HPWS adoption among both exempt and non-exempt employees in an organization. Items include statements such as “one or more tests administered prior to hiring” or “provided financial performance information”. Respondents were asked to estimate the percentage of full-time employees covered by each of the 18 high-performance work practices (HPWPs) included in the Datta et al. (2005) scale.

Upon reviewing this scale and comparing it to the taxonomy of HPWSs developed by Posthuma et al. (2013) a few measures were added to include the categories not included or adequately covered by the Datta et al. (2005) scale. For example, the category of turnover, retention, and exit management was not included in the Datta et al. (2005), so I added “actively manages relationship with departing employees (i.e. exit interview, maintain contact information)” as an item in the survey. There wasn’t an item on job rotation programs, so I included the following: “employees participate in a job rotation program”. I also added an additional variable to measure organizational-level compensation schemes: “compensation partially contingent on group performance (e.g. profit sharing, stock or share schemes etc.)”. With the addition of these and other measures, the new scale now has a total of 21 items. Results were tested using both the Guthrie (2001) scale, and the combined Guthrie (2001) scale with exploratory items added in.

### **Independent Variables**

**Competition.** The type of competition measured in this study is the perception of market competition. Market competition is the type of competition that takes place as organizations compete over customers to attain greater sales through an increase in market share. It does so by adopting the measure of competition developed by prior scholars (Hoque, Mia, & Alam, 2001; Lee & Yang, 2011). This measure asks respondents to rate the extent to which they agree/disagree with five different items on a five point-Likert scale. These items include statements such as “your company faces a high degree price competition for products/services” or “your company faces a high degree of market competition in gaining market share.” Statistically, these items have held together well in prior studies with Lee and Yang (2011) reporting a Cronbach’s alpha of 0.823 with an eigenvalue of 2.941.

**Market commonality.** This refers to the extent to which there is overlap in the markets in which competitors compete (Chen, 1996). This was measured using a five point-Likert scale. Items include respondents rating the extent to which they either agreed or disagreed to statements about their competitors, such as, “We compete in exactly the same product/service markets,” and, “They sell the same products/services”.

**Resource similarity.** This refers to the extent to which resources that competing firms have access to are not idiosyncratic (Chen, 1996). This was measured using a five point-Likert scale. Items include respondents rating the extent to which they either agreed or disagreed to statements about their competitors, such as, “They have access to the same resources that my firm has,” and, “We use relatively the same resources”.

**Strategy.** There are a number of business strategies that organizations can adopt. The more common strategies that have been studied in human resources are the cost-reduction and differentiation strategies (Schuler, 1987; Schuler & Jackson, 1987a, b; Takeuchi, 2009). Recently, Jackson et al. (2014) noted that one of the reasons that there have been contradictory findings in relation to the differentiation strategy is that organizations’ differentiate through innovation, or through superior quality. I included scales for three different types of business strategy: cost-reduction, innovation, and quality management using the same scales that Takeuchi (2009) employed.

Prior studies have used short vignettes to describe each business strategy and then had respondents identify which vignette best described their organization (Snow & Hambrick, 1980), or they have used multiple-item measures (Arthur, 1992; Galbraith & Schendel, 1983; Takeuchi, 2009; Zahra & George, 1999). In recent years, the multiple-item measure approach has been the

preferred approach to assessing the business strategy of the firm. This study employs this approach by adopting the measures used by Takeuchi (2009) and Zahra and George (1999).

## **Controls**

The cross-level nature of this paper necessitates that I include control variables at both the organizational and industry-levels of study. At the organizational-level, I have included organizational size, organizational age, and firm performance. The industry-level includes the variables of services versus manufacturing, munificence and dynamism.

**Organizational size.** This control refers to the number of employees who work at an organization. Organizational size has been shown to influence the use of HR practices in an organization (Jackson et al., 1989). I measure organizational size by asking respondents how many employees work at their organization. The natural log of this number is then used to represent organizational size in the analysis to get the data closer to normally distributed.

**Organizational age.** Pil and Macduffie (1996) showed that the longer the tenure of a plant, the more likely it is to increase the usage of a HPWS. As a result, I have included the age of the organization. The age of each organization is assessed by asking each respondent the year that their organization was established. Age can then be calculated by subtracting the given response from the current year.

**Firm performance.** This measure refers to how well the firm is performing on a variety of criteria. Respondents were asked to evaluate their firm in comparison to other firms in their industry on a five-point Likert scale that ranged from “Poor or at the low end of the industry (1)” to “Superior (5)”. The items in this construct included evaluating the firms’ profitability, financial success, and operational efficiency. The item asking respondents to evaluate their

firm's stock market performance was not included in the final scale, because a large portion of firms in the sample were not publicly traded (only 39 of 127, close to 31%).

**Industry.** The information used to calculate industry level controls has traditionally been calculated using the SIC code that best represents the primary industry that the firm operates in. There was concern during the pilot testing that respondents would not be able to identify the SIC code that best represented their industry. There were several things done to overcome this problem. First, I included the North American Industry Classification system sectors in a drop-down menu that allowed respondents to identify the sector of the industry that their business most closely aligned with. I have included the list of the twenty options below in the order that they appeared in the drop-down list in the survey:

Agriculture, Forestry, Fishing and Hunting (1), Mining, Quarrying, and Oil and Gas Extraction (2), Utilities (3), Construction (4), Manufacturing (5), Wholesale Trade (6), Retail Trade (7), Transportation and Warehousing (8), Information (9), Finance and Insurance (10), Real Estate and Rental and Leasing (11), Professional, Scientific, and Technical Services (12), Management of Companies and Enterprises (13), Administrative and Support and Waste Management and Remediation Services (14), Educational Services (15), Health Care and Social Assistance (16), Arts, Entertainment, and Recreation (17), Accommodation and Food Services (18), Public Administration (19), Other Services (20).

**Services vs. manufacturing.** One industry-level designation that I wanted to be able to control for was if there was a difference between services versus manufacturing industries in their use of a HPWS. While common logic would dictate that employees in the service industries are the most important asset used to convey value to customers and therefore will need more commitment, competencies, etc., there have been a few studies that have shown that

manufacturing companies have seen performance benefits from the use of a HPWS (Lawler, Mohrman, & Ledford, 1995). The relationship between industry types, services vs. manufacturing, is unclear; therefore, I wanted to be able to control for possible differences. This scale was created by assigning items in the industry scale listed above to be in either the services (items 1-8) or manufacturing industry (9-20). Items that were marked as a non-response or missing were not included in either category. The inclusion of this control dropped the total sample to 103 respondents.

**Munificence.** This refers to industry growth of the primary market wherein a firm resides. I included two items that were used to measure the overall market growth for the organizations' primary industry. The two items are measured using a five point-Likert scale wherein respondents were asked the extent to which they agreed or disagreed with the following statements: "the industry is constantly growing" and "compared to other industries, this industry has grown a lot in the last five years". While using self-reported items is less preferred than tracking down the actual information using the SIC code, using this measure is better than not having this information at all.

**Dynamism.** This refers to the volatility of sales in the industry wherein a firm resides. Similar to my measure on munificence, I have created a measure of dynamism using two items that are measured on a five point-Likert scale that assess the extent to which respondents agree/disagree to each item. These items include the statements, "the industry is volatile" and "compared to other industries, this industry has had a large number of layoffs."

In summary, this chapter outlined the methods used to conduct the research for this dissertation. It describes the sample that was used and the survey methodology employed to

create this sample. It also provides scale operationalization for the dependent, independent, and control variables.

## CHAPTER 7: ANALYSIS & RESULTS

In this chapter, I discuss the analysis and results of the research conducted for this dissertation. I start by presenting a table of the basic descriptive statistics, following tables of the regression analyses conducted with an explanation of how each table is used to assess the hypotheses established in earlier chapters. I end this chapter with a discussion of the exploratory post-hoc analyses that was conducted.

Table 1 organizes all of the hypotheses and lists whether they are supported or not in one place and figure 2 shows how each of the hypotheses fit into the model.

Table 2 presents the means, standard deviations and correlations of all variables. This includes variables, the dependent and independent variables, and controls. The VIF and tolerance of each variable studied was tested and found to be within acceptable levels.

When applicable, psychometric analyses were conducted for each scale. Results for each are included below in Table 3. These analyses included both factor analysis (Principal Components Analysis) and Cronbach's standardized alpha. With one exception, the factor analyses showed all of the expected sets of variables to be related to one factor. Specifically, all variables we expected to be related to one construct loaded on a single factor and achieve an eigenvalue 1.0 or greater. The exception was the high-performance work system (HPWS) set of items. This is not unusual, as a HPWS contains multiple practice categories that should be identifiable as a sub-construct. Further details on the HPWS scale will be discussed in greater detail in the limitations section in chapter 7.

The first hypothesis of this dissertation investigated the main effect of competition on the use of a HPWS. As can be seen in Table 4, hypothesis 1 was supported. Step 1 in Table 4 shows the model with just the controls. Consistent through all of the theorized hypotheses was the result

that the controls of organizational size and performance were significant factors in the model with the other controls not showing evidence of significance. Step 2 shows the model with the main effect of competition on HPWS, which is  $\beta = .21$ . This relationship is significant at the  $p = 0.03$  level. Table 1 further provides support for the hypothesized relationship where we see a significant correlation of  $r = .23$ .

Hypothesis 2a is represented in Table 5. This hypothesis predicted that market commonality would have an amplifying effect on the relationship between competition and HPWS. This hypothesis was not supported. The column labeled step 2 represents the direct effect of market commonality on organizations' use of a HPWS. Step 1 included only the control variables and this step is omitted from Table 5 but can be seen in Table 4. Step 2 reports the controls and main effect of market commonality on organizations' use of a HPWS, a relationship that is not statistically significant. Step 3 shows the results of the controls, competition, market commonality, and the interaction of competition and market commonality. Adding the cross-product interaction term (as well as the main effect, market commonality term) in the final hierarchical regression step did not result in a significant increase in explained variance. Accordingly, the  $\beta = .18$  is not statistically significant. The main effect of market commonality ( $\beta = -.12$ ) was also not significant. Only the controls of organizational size and performance are significant in step 3.

Hypothesis 2b results are presented in Table 6. This hypothesis predicted that resource similarity would have an amplifying effect on the relationship between competition and HPWS. This is measured by the cross-product interaction term ( $\beta = -.43$ ) added to the model on Step 3. Similar to hypothesis 2a, this hypothesis was not supported. The column labeled step 2 represents the direct effect of resource similarity on organizations' use of a HPWS. Step 1

included just the controls these are omitted from Table 6 and can be seen in Table 4. Step 2 reports the controls and the main effect of resource similarity and competition on organizations' use of a HPWS; Step 3 shows the results of the controls, competition, resource similarity, and the competition and resource similarity interaction term. Similar to the results for the interaction of competition and market commonality, only the controls of organizational size and performance are significant in step 3 while the rest of the factors in the model are non-significant.

The result for hypotheses 3a and 4a are presented in Table 7. Hypothesis 3a predicted that organizations using a cost-reduction business strategy will be less likely to use a HPWS compared to organizations that do not use this strategy. The test for this hypothesis is reported in step 2 regression results. Results did not support hypothesis 3a. Hypothesis 4a was that the use of a cost-reduction strategy would have a dampening effect on the relationship between competition and organizations' use of a HPWS. The cross-product term for the interaction term  $\beta = -0.67$ . This was also not supported at the 95% confidence level, but in the full-model in step 4, the direct effect of the cost-reduction strategy on the use of HPWS was significant with a  $p < 0.06$ . Competition was also significant, ( $p < 0.03$ ) along with the controls of organizational size and performance.

The results for hypotheses 3b and 4b are presented in Table 8. Hypothesis 3b predicted that the use of an innovation strategy is associated with increased use of a HPWS. This hypothesis is reflected in step 2, and was not supported and while it did have a p-value of 0.06, contrary to hypothesis 3b the standardized beta suggests that the use of an innovation strategy will actually reduce organizations' use of a HPWS. Hypothesis 4b stated that the use of an innovation strategy would have an amplifying effect on the relationship between competition and organizations' use of a HPWS. The results for the full-model that tested this relationship are

presented in step 4 of Table 4. This was not supported. As with prior regressions run, the controls of organizational size and performance were significant. Steps 1 is omitted from this Table and can be found in Table 4.

Hypotheses 3c and 4c results are presented in Table 9. Hypothesis 3c predicted that organizations that used a quality management strategy will be associated with increased use of a HPWS. The opposite of what was hypothesized was found, there is evidence to suggest that as the focus on quality management increases organizations are less likely to use a HPWS, the  $\beta = -.17$  in step 3 just barely missed being significant with 90% confidence with a p-value  $< 0.11$ . Hypothesis 4c stated that the use of a quality management strategy would have an amplifying effect on the relationship between competition and organizations' use of a HPWS. This was not supported. Step 1 can be found in Table 4.

### **Exploratory Post Hoc Analysis**

Now that the main analysis of the hypotheses has been conducted, exploratory analysis were conducted to see if there are any relationship of interest that were not theorized, and to identify possible avenues of future research. This exploratory analysis includes looking at the influence of firm reputation, attrition, and a closer look at the HPWS scale as potential alternative approaches are investigated.

The first factor that I tested in my exploratory analysis was firm reputation. Past research has shown that actions organizations take will be influenced by their reputation. Firm's with a good reputation will feel pressure to take actions that help them to maintain their reputation (Fombrun, 1996). It is unclear how this will influence organizations' use of a HPWS. It is possible that organizations with a good reputation will attract more employees and will therefore need to do more to maintain their relationship and will therefore increase their use of a HPWS in

an attempt to maintain their current level as a preferred employer. Conversely, organizations with a good reputation may feel less pressure to invest resources in HRM. It is also possible that organizations with a bad reputation will be motivated to implement a HPWS to increase the quality and skills of their workforce in an attempt to deliver a better product or service, in the process improve their performance and their reputation. The exact relationship is unclear, which is why exploratory research is being conducted.

The scale used for firm reputation was composed of four items on a five-point Likert scale. Respondents were asked to compare their firm with other firms in their primary industry on items such as “service quality”, “customer satisfaction”, “general reputation”, and as an “employer of choice”. The scale for firm reputation had a standardized Cronbach’s alpha of 0.81 and an eigenvalue of 2.50.

Table 10 includes the regression analysis for firm reputation and competition. The column labeled step 2 shows the direct effect of firm reputation on organizations’ use of a HPWS. Step 3 shows the interaction of competition and firm reputation on organizations’ use of a HPWS. Step 1 can be seen in Table 4. As can be seen in the Table below, neither the direct effect of firm reputation on organizations’ use of a HPWS, nor the interaction between competition and firm reputation were significant.

One of the potential limitations of the study is the HPWS scale. When the psychometric analyses of all the human resource items in the survey were analyzed, six possible subscales were identified. When the psychometric analyses were done on each of these subscales, only three were psychometrically sound (human resource information exchange, human resource

training, and human resource compensation). Each of these were developed to conduct exploratory analyses.

Human resource information exchange is a measure of how freely information is exchanged between employees and management. This scale included items that measured how much information is transferred from management to employees, such as “provided financial information”, and items that measured information being transferred from employees to management, such as “are involved in programs designed to elicit participation and employee input” and “actively manages relationship with departing employees”. The standardized Cronbach’s alpha for this scale was 0.79, with an eigenvalue of 2.99.

Human resource training is a measure of the training and employee development programs that each organization implements. It included items that measured the percentage of the work force that participated in organizational programs, such as “intensive/extensive training in company-specific skills”, “intensive/extensive training in generic skills”, “training in a variety of jobs or skills (“cross training”) and/or routinely performing more than one job (are “cross utilized”) and “employees participate in a job rotation program”. The standardized Cronbach’s alpha for this scale was 0.76, with an eigenvalue of 2.57.

Human resource compensation is the last of the three constructs and measures the compensation programs that the organizations use. This was a two-item scale that measured the percentage of employees that received “compensation partially contingent on group

performance” and “compensation partially contingent on organization-wide performance”. The standardized Cronbach’s alpha for these was 0.74, with an eigenvalue of 1.58.

Regression analyses were run for each of these to see if competition effected either of these HPWP subscales differently than the HPWS as a whole. The results are include below in Tables 11-13. The results were non-significant for all of these analyses.

Of interest is also the significance of the control variables in predicting the different subscales. For example, services vs. manufacturing industries was statistically significant for information exchange but not for human resource training nor human resource compensation. Similarly, organizational age, size, performance, and dynamism were all significant at  $p < 0.05$  in predicting the use of human resource compensation. More knowledge can be gathered by having explicit subscales to the composite HPWS scale. The three different subscales in this study are a great example of how different antecedents influence each subscale. I also tested the different items that I added to the Guthrie (2001) scale, but these added items did not hold together in any specific construct, or sub-construct of a HPWS like the human resource information exchange, training, and compensation scales.

The next exploratory test conducted investigated the direct effect of all hypothesized variables into one model. This tested the direct effect of competition, market commonality, resource similarity, cost-reduction strategy, innovation strategy, and the quality management strategy. When included all in one model, the main effect of quality management was the only factor that was statistically significant. It reported a  $\beta = -.28$  and was significant at a  $p$ -value  $< 0.01$ . Competition was significant with 90% confidence, and reported a  $\beta = .16$ .

The next model that was tested was the influence that organizational performance had on the relationship between competition and organizations’ use of a HPWS. This model was

included, because organizational performance as a control was significant in all of the models that were run to test the hypotheses of the dissertation. Since this data is cross-sectional, it is not possible to test the potential problems with endogeneity, but if significant could have been used as motivation to do further testing on this topic in future studies. The main effects of competition and organizational performance were found to be significant in Step 2. Competition reported a  $\beta = .21$  and was significant with a p-value  $< .03$ . Organizational performance reported a  $\beta = .30$  and was significant with a p-value  $< .00$ . When the cross-product interaction of competition and organizational performance was included in the model the significance of the main effect for competition and organizational performance went away.

The last model that was run in the exploratory research was to test the influence that organizational size had on the competition and HPWS relationship. In addition to organizational performance, organizational size when used as a control in the model was run to test if the hypotheses were significant. Step 2 tested solely the main effects of competition and organizational size. Organizational size was significant with a p-value  $< .02$  and competition was not significant with 95% confidence, but was at the 90% confidence level with a p-value  $< .09$ . When the cross-product was added in step 3, competition ( $\beta = .51$ ) and organizational size ( $\beta = .81$ ) were both significant with p-values  $< .02$ . The cross-product interaction of competition and organizational size was not significant at the 95% confidence level, but did report a  $\beta = -.74$  with a p-value  $< .08$ .

This chapter presented the statistical analysis that tested the hypotheses outlined in prior chapters. The main effect of competition on HPWS was tested and found to be statistically significant ( $p < 0.05$ ). The direct effect of quality management was also found to be significant ( $p < 0.05$ ) with the innovation strategy significant using a 90% confidence interval. Interestingly,

the findings for quality management and innovation were contrary to expectations with their presence decreasing organizations use of a HPWS as opposed to increasing it.

However, when the moderators of market commonality, resource similarity, innovation strategy, and quality management strategy were tested, the addition of these constructs and their interaction with competition resulted in a model where the included moderators were significant. The one exception to this was the inclusion of the cost-reduction strategy and its moderator. In this case, the main effect of competition on organizations' use of a HPWS was still significant ( $p < 0.05$ ). The direct effect of the moderator was significant ( $p < 0.10$ ); however, the interaction of competition and cost-reduction strategy on organizations' use of a HPWS was non-significant. Exploratory analyses were also conducted, with the most interesting aspect of this analysis being that the different human resource scales, human resource information exchange, human resource training, and human resource compensation had different controls that are significant when testing the influence of competition on the different scales. The goal of conducting exploratory analyses was to identify the optimal model with the existing data, however, the majority of constructs were not statistically significant therefore such a model was not identified.

## **CHAPTER 8: DISCUSSION & CONCLUSION**

I start this chapter with a discussion about the importance of understanding the antecedents to organizations' use of a high-performance work system (HPWS). I discuss some of the theoretical reasons of why the results were not as strong as expected. I then proceed to talk about some of the aspects of the results that are worth a deeper conversation. This is followed by a discussion of the limitations of this study and how these limitations can be overcome in future studies. I finish with a conclusion that looks to future research on HPWSs that should be studied going forward and possible future research directions.

### **Discussion**

When new phenomena are first studied in the social sciences, it is often to understand the effect that it could have on constructs that are already deemed important. In the case of a HPWS, the focus has been primarily on understanding how the use of these systems influence organizational outcomes, such as performance, productivity, and turnover (Combs et al., 2006; Huselid, 1995). These studies have expanded to understand how these practices influence constructs such as employees' job satisfaction, commitment, and organizational citizenship behaviors. Then as the science of the phenomena matures, studies shift their focus from the phenomena as an explanatory factor to investigate the antecedents that lead to the phenomena. This shift has started to take place in the studies of strategic human resource management (SHRM) and HPWSs; however, fewer than 20% of studies on SHRM take this approach (Jackson et al., 2014).

The purpose of this dissertation is to expand the knowledge of the antecedents to HPWSs by investigating the antecedent of competition. It also investigated the moderating effect of

market commonality, resource similarity, and three different types of strategy (cost-reduction, innovation, and quality management) on the direct effect of competition on organizations' use of a HPWS. As can be seen in the results, the findings for these moderators were rather weak, with only the cost-reduction strategy being found to have any effect.

**Competition.** The main effect of competition on the use of a HPWS was significant ( $p < 0.05$ ) when tested in isolation, but as moderators were added, competition was only significant ( $p < 0.05$ ) when the moderator of a cost-reduction strategy was tested. In this instance, the direct effect of a cost-reduction on strategy was also significant ( $p < 0.10$ ), but the moderation of competition and using a cost-reduction strategy was not. All of the other relationships hypothesized were non-significant. Potential limitations in the study that might have reduced the ability to get significant results are discussed in the limitations section below.

There are also important theoretical conditions to consider when discussing why the results of the influence of competition on organizations' use of a HPWS were weak. It is possible that the institutional forces present in organizations' environment constrain their behavior. For example, the presence of unions in Germany influenced the actions that German banks could take after deregulation of the financial markets in the US that led to upheaval in the banking industry worldwide (Keltner, 1995). The strong presence of unions in Germany constrained the organizational action that German banks could take, preventing them from being able to implement a cost-reduction strategy. This led to their adoption of the relationship-banking strategy, which included German banks increased adoption and use of a HPWS. While unions are on the decline, especially in the US, there are other factors that might be at play.

One of these factors is the increase in the professionalization of careers. There is an increase in the number of professional organizations that employees can be a part of.

Specifically in relation to employees focused on human resources, these employees can now get several human resource (HR) certifications that include options such as the professional in HR, the senior professional in HR, and the global HR certificate. The HR Certification Institute that offers these professional certifications has been in existence since 1976, and has more than 130,000 human resource professionals in over 100 countries are currently certified (Institute, 2014). Certifications in professional fields have been shown to act as regulatory bodies that standardize expectations and reduce innovation in their field (Polidoro Jr, 2013). It is possible that this standardization is taking place among HR professionals. If so, then this would lead to reduced variance in organizations' use of HR practices and reduce the statistical differences between HR practices that researchers find.

It is also possible that legal standards established by the government have increased the ubiquity of HR practices, such as compensation and selection. For example, organizations that fail to use equitable selection practices expose themselves to being sued for discrimination. In an effort to reduce exposure to these legal cases, it is likely that organizations are increasing the formalization of their search practices and increase their use of interview panels, structured behavioral interviews, and quantifiable tests, the uses of which are traditionally considered a key component in a HPWS. This would lead to decreased variance between organizations as all have established practices they use to maintain legal validity and legitimacy, which in turn makes it harder to identify the use of HPWS in the rest of the practices that organizations' employ.

The last theoretical constraint that I will point out is the overall conceptualization of what a HPWS is versus how this is operationalized. A HPWS is supposed to be the configuration of HR practices that are used to increase positive organizational outcomes. While there are a large number of practices that are considered high-performance work practices (HPWPs) and this

number seems to keep growing (Combs et al., 2006), the current operationalization fails to capture how HPWSs vary between organizations. Instead of understanding how a specific configuration might align with a specific strategy or desired outcome, the “more is better” approach is often used. This over simplification of a HPWS precludes researchers from being able to identify when organizations craft a hybrid program that neglects some HPWPs but still increases performance or attains the purpose of the implemented hybrid program. For example, if an organization had intensive selection practices that hired people with the specific skills needed to perform a role, or even several roles within their organization, they might offer only limited training. The reduced training required with such an approach would register as merely a moderate use of a HPWS since training would be reported as low. A HPWS scale that allows more latitude in researchers’ assessment and identification of hybrid HPWSs needs to be developed. I discuss this further in the conclusion when I talk about future research opportunities.

**Business Strategy.** The effect of three different business strategies (cost-reduction, innovation, and quality management) and their effect on organizations’ use of a HPWS were tested. The primary reason why these were included in this dissertation was to see how the different strategies moderated the relationship between competition and HPWSs, however; there was not any evidence that any of the strategies influenced this relationship. When included in the full-model, with the interaction between competition and cost-reduction the main effect of cost-reduction was almost significant with a p-value of 0.06. Interestingly, it was theorized that a cost-reduction strategy would lead to a decrease in organizations’ use of a HPWS, yet there is statistical evidence that shows that a cost-reduction strategy will increase organizations’ use of a HPWS.

Similar results were found when investigating the influence of the innovation and quality management strategies. In the theorized hypotheses for this study, these two strategies were separated to see if there was any significant difference between these two approaches to differentiation. This was done because of the recent review by Jackson et al. (2014) that pointed out a possible short-coming in the data by having these two strategies combined into one differentiation scale. This study found that innovation strategy was almost significant with a p-value  $< 0.06$  and quality management strategy was significant with a p-value  $< 0.00$ . When these two measures were combined into one differentiation scale, the differentiation scale was significant at a p-value of 0.03. Interestingly, these strategies were also found to have the opposite effect that was theorized. Instead of effecting a greater use of HPWSs when present, the presence of these strategies decreases organizations' use of a HPWS. It is possible, that organizations that implement these strategies have specific practices that they implement to support either an innovation or quality management strategy, and when implementing these practices reduce their use of any HPWPs that don't support their strategy. This provides support for the assertion that there are likely different HPWSs types that need to be identified and tested. An assertion that will be discussed in more detail later on in the conclusion.

**Controls.** The controls of organizational size and organizational performance were significant at varying levels of almost each model. One simple explanation for the positive correlation between organizational size and increased use of a HPWS is that the greater the size of the organization, the greater the need for management to rely on human resource practices to manage the workforce. A possible alternate explanation is that institutional forces dictate that

organizations that reach a given size are expected to adopt a specific HPWS to maintain their legitimacy (North, 1990).

Another interesting result from this research is that performance is significant across all models that were tested. Traditionally, scholarship in SHRM posits that the implementation of a HPWS will lead to an increase in performance (Combs et al., 2006; Huselid, 1995). It is also possible that the causal relationship between these two factors is reversed. Positive performance might lead to an increase in the use of a HPWS. Due to the cross-sectional nature of this dataset, it is impossible to clarify the direction of this relationship. Understanding the reverse causality of performance is important to gaining a better understanding of HPWSs, how they work and the outcomes they lead to.

**Exploratory analysis.** Exploratory analyses were conducted, however, this analysis only identified a few significant relationships. For example, Table 16 includes the regression output for testing to see if organizational size influenced organizations' use of a HPWS, or moderated the relationship between competition and use of a HPWS. In the full-model, competition and organizational size were significant ( $p$ -value  $< .02$ ), but the moderating effect of the cross-product interaction of organizational size and competition was only significant with 90% confidence ( $p$ -value  $< .08$ ). The majority of other exploratory analyses were not significant.

Of greatest interest in the exploratory analyses was the identification and test of some of the subscales that make up the aggregate HPWS scale. The same controls were used to study each human resource subscale, yet the significance of the influence that each control had on the adoption of each scale varied. For example, the HR compensation subscale showed that dynamism, age, size, and performance were significant. Alternately, the services vs. manufacturing control was significant in influencing organizations' use of the HR information

exchange construct. This finding suggests that different parts of the HPWS scale are influenced by different antecedents. A finding that could carry over into how organizations use different HR practices to achieve specific desired results. While stating that organizations will use different practices to address different needs is common sense, this approach has not been applied in identifying and understanding the different types of a HPWS that organizations use. For the most part, studies have conceptualized HPWSs as a “more is better” approach. Further discussion will be given on this topic in the conclusion later in this chapter as I discuss future directions of SHRM research.

### **Methodological Limitations**

**Common method bias.** There were several methodological limitations in this study. The first was problems with common method bias. The data collection process for this study was constrained as alumni departments within the alumni groups and HR association used in this study were not willing to give out personnel information about the people they sent the survey link. The participants in this study were anonymous. To attempt to overcome this problem, respondents were asked to send a link provided at the end of the survey to one of their co-workers. Collecting multiple survey responses from the same organizations would allow for the intraclass correlation coefficient to be calculated as has been done in prior studies (e.g. Datta et al., 2005; Messersmith et al., 2011).

Several scholars studying strategic human resource management (SHRM) have discussed the reliability of using survey data to assess organizations’ human resource system, or other metrics that are difficult or impossible to verify from an external source. (Datta et al., 2005; Gerhart, Wright, McMahan, & Snell, 2000). This concern evolves from prior studies in human resources using a survey methodology that relied on a single respondent in each organization to

evaluate organizations' human resource system. In recognition of this problem, I attempted to collect more than one response per organization so I could calculate the intraclass correlation coefficient (ICC) to check the reliability of the variables collected via survey methodology. The ICC is a "measure of the proportion of variance that is attributable to objects of measurements, often called targets" (McGraw & Wong, 1996: 30). In human resource studies, the ICC is conducted by evaluating the responses from multiple respondents at the same organization (e.g. Datta et al., 2005; Messersmith et al., 2011). This evaluation is an indicator of the level of human error involved in the survey responses.

Due to the anonymous nature of this survey, this was difficult to accomplish. Since I did not know the identity of the majority of the respondents, I was unable to identify the organization that respondents were a part of and therefore unable to identify multiple respondents for each organization. This made it difficult to calculate the ICC. To get around this, one of the final questions of the survey asked participants to send the link that was provided on the page to a co-worker. Each survey was given a random number associated with the link provided, enabling me to calculate the ICC between organizations. Only one of the 127 participants did this, so I was unable to calculate the ICC for this data set. In the future, I need to recognize that I can't rely on respondents to forward a link to their co-workers and need to use an alternate approach that collects my dependent and independent variables separately to overcome or avoid problems with common method bias.

**Response rate.** The next limitation that I will discuss the response rate, which was approximately 2.5% (127 of 5,000). When the response rate in a survey is low, concerns about the dependability, reliability, and validity of the data in a study arise (Baruch, 1999). In a recent study on response rate in survey data, Baruch and Holtom (2008) looked at 1607 studies

published between 2000 and 2005 in 17 different referred journals and found that the average response rate for survey studies that were conducted at the organizational-level was 35.7 percent with a standard deviation of 18.8. The response rate for my dissertation is an outlier being more than one standard deviation away from the average (2.5%).

The average response rate in academic research has been on the decline (Baruch & Holtom, 2008). A potential explanation for this is an increase in the use of surveys sent via email as opposed to standard mail. Mail surveys have been in practice for decades and have years of research to help guide methods that can improve the response rate. Sending surveys via email is a less-developed methodology and subsequently tends to have a lower response rate. For example, a recent study by Kaplowitz, Hadlock, and Levine (2004) tested the differences between mail and e-mail mediums for sending participants surveys and found a response rate of 31.5 percent in mail surveys and 20.7 percent in the use of surveys sent via email.

When response rates are low there is an increased concern regarding the representativeness of a sample, as respondents that self-select themselves out of a study diminish the representativeness of the sample as a whole. When this happens, the generalizability of the sample comes into question (Baruch, 1999; Baruch & Holtom, 2008). For example, if a participant felt that they had a competitive advantage as a result of using a HPWS in the face of competition, they might be less-inclined to participate in the survey for fear of exposing their competitive advantage. Whereas, organizations that do not see their HPWS as a source of a competitive advantage would be less concerned about filling out the survey. While this is one example of why a participant might choose not to respond, there are numerous reasons for non-participation unrelated to the purpose or intent of the survey. Other reason for non-response include respondents being inundated with too many surveys, they might forget to respond, or

simply not care to. All of these and other reasons can explain why potential respondents fail to participate in a survey.

There are several studies that posit that a low-response rate does not mean that there will be problems with response rate bias (Curtin, Presser, & Singer, 2000; Keeter, Miller, Kohut, Groves, & Presser, 2000; Merkle & Edelman, 2002). Groves (2006) points out that when response rates are low it does not guarantee that there is response bias present in the study. Rather, it means that there is an increased risk that response bias will be present in the sample. Groves argues that discrediting a study based on response rate is overly simplistic. Instead, he argues that researchers need to assess the context of their study. A possible approach to evaluating a sample for response bias is to look at the information available for the respondents who did respond.

In this study there are several variables that can be evaluated. The first of these is the industry that the organizations came from. Organizations came from a large variety of industries, the other services category is the highest category that respondents reported with 14.2% of the organizations being in this industry. The rest of the organizations provide reasonable representation from all industries. Likewise, the level of competition reported by organizations covers the full range of the scale, with 33% reporting on the middle to lower-end of the scale. As expected, this scale is skewed to the higher-end, but 33% in the lower end does provide some assurance that a large variety of cases are addressed. Similarly, the HPWS scale provides a normal distribution of responses from the organizations that did respond, which reduces potential worries that organizations' would report a high-level of HPWS use as a result of social desirability. While investigating these scales alleviates some of the concerns of response rate

bias, having a higher response rate would have been better, and measures to increase response rates in further studies should be taken.

Aside from changing mediums from email-to-mail, there are several things that could have been done differently to increase the overall response rate. First, in each case, I was not able to get the email for two of the alumni groups or the HR association. Had I had their email, I could have sent a follow-up email to remind those who had not yet filled out the survey to do so. While this is a common practice in survey methodology, the groups in the study were concerned with oversaturating their groups with too many emails and were resistant to my attempts to get them to send out a potentially valuable second wave. Taking the time to develop a better relationship with the groups that I am using to collect data, or finding a way to get ownership of the respondent list so I have more control of the collection process, would help to avoid this problem in future studies. A different approach could be to reach out to alumni, or other sources of respondents and get their agreement to participate in the study. The survey would then only be sent to those who have previously consented to participation in the study, thereby increasing the response rate of participants who are actually sent the survey and hence the overall response rate.

**Anonymity of respondents.** As mentioned above, the various groups that I worked with kept close ownership of the list of participants that were sent the survey. Only one of the three groups let us have any information about the respondents that was not collected directly from the respondent themselves. While this method was agreed upon to gain access to participants, it is less than ideal. One of the problems that can take place when using anonymous respondents is a threat to the representativeness of the sample. Having limited information about the respondents in the sample makes it difficult to know their ability to accurately assess their organizations competitive position and the HR practices that are in use across their organization. It is also

difficult to assess respondents' motivation and commitment to completing the survey. As respondent fatigue sets in, there is an increased potential for inattentiveness that could lead to errors in responses.

The problems associated with response rate and respondent anonymity are not uniquely applicable to this study but to survey research in general, especially in studies on HR where organizations take many precautions to keep this data confidential to protect their competitive position. For example, one of the respondents that I worked with to conduct my pilot study informed me that the legal department in his firm would not let him tell me the percentage of part-time to full-time employees, and specifics about the use of HR practices were definitely off-limits. Despite the commonality of these difficulties, the suggestions for improvement made above should be implemented in future studies using survey methodology.

**Survey scales.** The limitations addressed so far focused on difficulties that can arise in implementing a survey methodology but as of yet have not discussed the limitations of the survey scales. There were several potential problems with the scales used on the survey. These problems include using survey scales to identify industry/competitor information and the HPWS scale used in this study.

In addition to the problems listed above, the anonymity of the sample also made it difficult to collect information about the organizations, industry, and competitors in the sample. In many studies, the constructs of market commonality, resource similarity, munificence, and dynamism are often identified using publicly available data that is collected using a company's

10K filings, or SIC code. Since the organizations in the study were anonymous, scales were developed to test for them.

The nature of the respondents in the sample also made it difficult to collect this information. Publically traded companies are required by law to submit reports such as 10Ks that are an objective source for gathering information for the industry/competitor information. Approximately 40% of the organizations in this study reported as being publically traded. That means that the other 60% of the organizations in this study are not required to develop and disperse 10K reporting information that can be used to generate scales. The scales in this study were evaluated in the pilot study and were tested and found to be psychometrically sound. Despite this, it is possible that the traditional method of collecting this information through company reports will produce better (more accurate) results. A possible area of future research will be to develop methodologies for how to study organizations that do not generate these reports.

The last limitation I will revisit is the scale used to measure the use of a HPWS. The scale used in this dissertation is one of the commonly used measures of HPWS (Datta et al., 2005; Guthrie, 2001; Messersmith et al., 2011). While this scale does a good job of measuring a variety of HPWPs and their intensity of use, there is room for improvement. The common assumption underlying HPWS research is that more is better, so measures are designed to capture a variety of HPWP categories. However, the “more is better” approach might fall short of explaining organizations’ use of a HPWS (Kaufman, 2012). To date, this approach has worked when studying larger organizations, but it constrains researchers from being able to dig deeper to

understand more clearly the mechanisms at work and from gaining a better understanding of what influences the use of a HPWS and the various outcomes that come from its use.

Recommendations on how to address this limitation are provided below in the conclusion section.

### **Conceptual Limitations**

**Definition of HPWS.** One of the larger conceptual limitations in the field of HPWSs is the definition of a HPWS. Currently, HPWSs are defined by the expected outcome that managers hope to attain by implementing them. As discussed above, there have been several outcomes of focus that have included, high-involvement work practices, high-commitment, and as used in this dissertation, high-performance work practices. This approach has led to a lack of clarity in the theoretical and conceptual development of research in this area, as well as, methodological problems such as a lack of model specificity. As a result, there is a lack of consistency in the scales that are used to measure the HPWS that an organization uses, which makes it difficult to make comparisons across studies and for advancements in this research to take place.

Another area that is in need of greater conceptual development is to understand what makes a HPWP different than non-HPWPs. In this dissertation, I have defined HPWPs as practices that are used as a part of a HPWS where the implementation of these practices was done with the intent to increase alignment between employee behaviors and strategic needs. Currently, there is not a clear delineation in the existing literature between HPWPs, and traditional or routine HR. Understanding what HPWPs are not is an important step in gaining a

better understanding of what they are, and will increase researchers ability to make sound theoretical contributions.

### **Theoretical Limitations**

There have been many critiques that have accused the study of HPWSs as being too atheoretical, and while scholars have tried to respond to these concerns (i.e. Wright & McMahan, 1992) there is still room for more theoretical development. For example, the main underlying theory of HPWSs is the behavioral perspective that relies on the AMO model. This model stipulates that when employee ability, motivation, and opportunity to act are increased then they are more likely to have increased organizational commitment, exhibit a greater-level of organizational citizenship behaviors, and exert greater effort. This leads to organizations that are run more effectively, which leads to increased financial gains for the organization. While these are all great outcomes, clearly there is more that can be addressed.

**HPWPs.** One area that needs greater development is the discussion on HPWPs. Practices are aggregated into a system that are expected to work synergistically with each other to increase employees ability, motivation, and opportunity to act. The implicit assumption is that different practices will focus on different aspects of the AMO model, yet to date these assumptions have not been made explicitly. Another theoretical assumption is the “more is better” approach to developing a HPWS (Kaufman, 2012). This approach refers to the view that the greater the number of HPWPs added to a HPWS the better. However, there is evidence that this approach is short-sighted. For example, the current view of the field is that HPWSs improve financial performance as long as an organization is large enough to derive value greater than the increased labor costs associated with the implementation of a HPWS (Cappelli & Neumark, 2001). As a

result, small business enterprises are not big enough to derive value from the implementation of a HPWS (Way, 2002).

A possible solution to this problem is to develop stronger theoretical ties between the various HPWPs that are known and the outcomes that they drive. For example, one would expect compensation programs to lead to greater motivation, but what type of behaviors are these practices motivating. Different compensation practices will motivate different types of behaviors. For example, a gainsharing plan is likely to motivate employees to cut costs, because the savings of cost cutting gets passed onto them. Whereas, individual bonus plans will increase performance on employees' individual work tasks, but might be counter-productive to motivating organizational citizenship behaviors among employees as the goal alignment of an individual bonus plan rewards the success of the individual as opposed to the group or the organizational as a whole.

### **Conclusion & Future Research Directions**

The main purpose of this dissertation was to investigate the influence of competition on organizations' use of a HPWS. While it addressed these issues, it also raised additional questions that should be investigated in future studies. This conclusion will address some of the concepts that need to be addressed in the field of SHRM going forward.

**Antecedents.** Chapter 3 and 4 provided a discussion on the antecedents to HPWSs and introduced the construct of competition. This review of the antecedents to HPWSs highlighted the lack of knowledge that there is in relation to what influences organizations' adoption and intensity of use of a HPWS. While there have been some studies that have investigated the antecedents to HPWSs, there is still much that is not known. For example, as discussed above, it is not clear how the HR professional certification has influenced HR in organizations. Similarly,

as union presence in the US has decreased, how has the legalistic environment changed in relation to organizations and how they manage their workforce? How does the legalistic environment influence organizations' adoption and use of a HPWS?

It is likely that there are many antecedents that have yet to be discussed. What are they and how do they influence organizations' human resource practices? For example, there have been many articles about millennials and how their expectations (demands) differ from those of prior generations. How will organizations' use of SHRM change as millennials increasingly comprise a greater percentage of the workforce? As they become the decision-makers in organizations?

Currently, the main theoretical paradigms used to build the logic used to study antecedents in SHRM is contingency theory. How can the other core theories of organizational studies be used to investigate the antecedents of SHRM. Finally, what are the antecedents that have been used to understand organizational action in other fields?

**HPWS scales.** As discussed earlier in this discussion section, the scales used to analyze HPWSs need to improve. There are several ways that this can take place. First, there needs to be a more distinct use of the HPWP categories developed by Posthuma et al. (2013). One potential approach to doing this is to create a scale for each HPWP category that can then be used to make an aggregate HPWS scale (e.g., Chadwick, Super, & Kwon, 2014). Each subscale can then be psychometrically analyzed prior to aggregating to a HPWS scale. I recognize that this can create problems with the amount of space that the HPWS items take up in a survey, but it must be done for meaningful contributions to be made in this area. If there are major concerns about the space constraints in the survey being conducted then it is possible to reduce the number of items by

focusing on the context of the study, and the expected contribution to theory, this is especially applicable if one is focusing on a HPWS type, which is discussed below.

A different approach that can be used when moving beyond the “more is better” approach to a HPWS is to more closely align the scales with existing theory. For example, one of the dominant theories in SHRM is the ability-motivation-opportunity (AMO) model (Kaifeng et al., 2012). This model posits that a HPWS will increase organizational performance, because it increases employees’ ability, motivation, and opportunity. Currently, there has been little delineation as to which practices influence which outcome (for exception see Kaifeng et al., 2012). Does a HPWS have to touch on all three elements of the AMO to be a HPWS? Do practices touch primarily on just one element? Understanding how these elements come together will be beneficial towards progress in understanding which HPWP needs to be included in a HPWS. It is also important for scholars to have a better understanding of which practices influence the fit and flexibility of an organization.

**HPWS types.** In part, one of the advances that needs to take place that will help with the development of better scales and overall advancement of the field is the need to develop a deeper understanding of how HPWSs are used. The current approach to studying and analyzing HPWSs is the “more is better” approach. One way that the field can advance is to identify the different HPWS configurations. This study provides evidence that suggests that there might be different HPWSs for the different categories. This has been touched on indirectly as researchers have conducted studies that focus primarily on commitment, involvement, or performance, but the “more is better” approach has been used and, in general, HPWSs generate all three of these outcomes. There needs to be a shift from the outcomes that focus on employee-level attitudes and behaviors to organizational-level outcomes. For example, is there a HPWS type that focuses

more on flexibility as opposed to fit? Is there a specific HPWS that is designed specifically for growth as opposed to stability? Currently, there is no research that has looked at this question; however, this seems to be one direction where the field should go.

**Small business HPWS.** In addition to looking at the specific outcome that the HPWS is trying to attain, there needs to be more work done on HPWSs in small businesses. Work is mixed on the benefits of using a HPWS in small businesses. For example, Way (2002) found that the costs associated with the adoption of a HPWS can outpace the productivity gains attained from the implementation of such a system. Alternately, there have been other studies that have found that despite their size, small businesses can benefit from the implementation of a HPWS (Guthrie, 2001; Huselid, 1995). They have even identified some of the antecedents that influence the adoption of a HPWS. For example, HPWSs are more likely to be adopted in small businesses when capital intensity, presence of a differentiation strategy, or industry characteristics such as the level of dynamism and munificence are high (Chadwick, Way, Kerr, & Thacker, 2013). It is likely that the “more is better” approach commonly prescribed in HPWS research will constrain the insights that can be gained in relation to HPWSs in small businesses. As different HPWS types are identified, applicable theory can be developed and greater insights as to how HPWSs are and can be implemented in small businesses will be expanded.

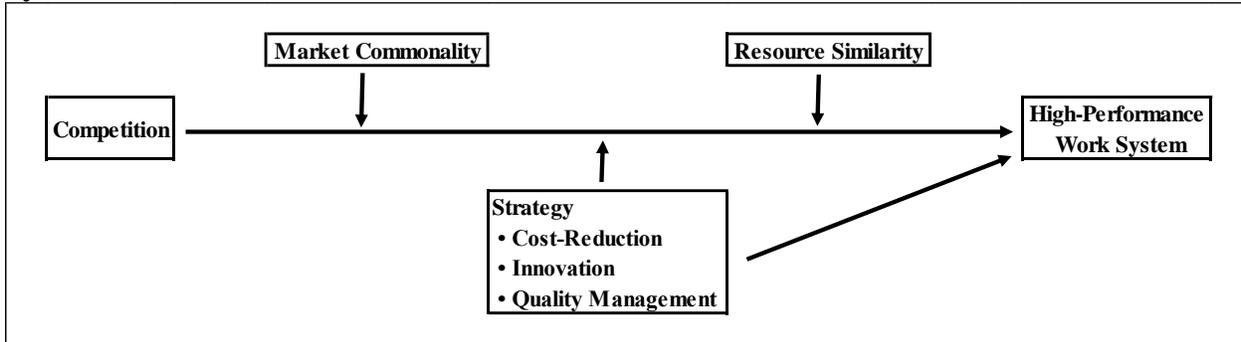
**HPWS and organizational behavior.** The research on HPWS has focused primarily on organizational-level outcomes. There is still a lot of room for gaining a better understanding of how HPWSs influence employees at the individual-level. For example, the HPWP of compensation has been shown to influence employees’ evaluations of fairness (Dulebohn & Martocchio, 1998a; Dulebohn & Martocchio, 1998b). A similar finding was found in relation to the selection practices that organizations use (Martocchio & Whitener, 1992). While these

examples all deal with topics in organizational justice, it is likely that there are other topics within the different fields of organizational behavior where the link between an organizational behavior topic and HPWS has yet to be studied.

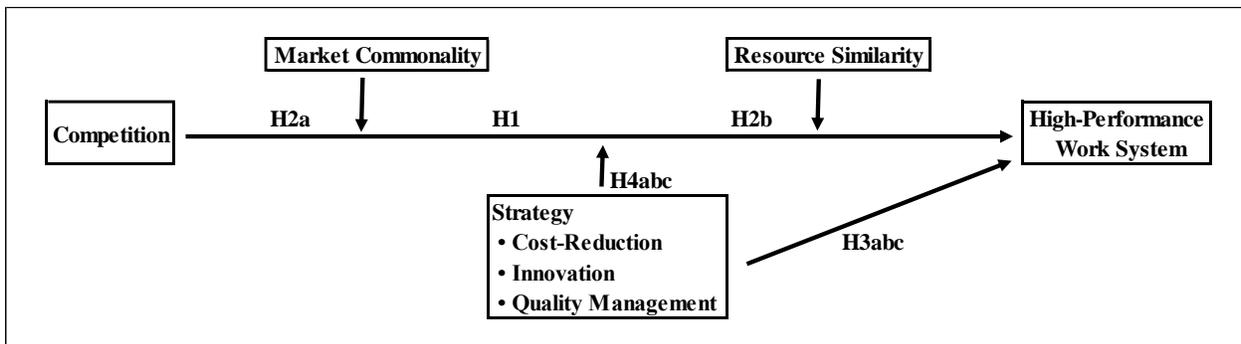
In summary, this chapter provided a discussion of what this dissertation found. While the purpose of this dissertation was to add the antecedent of competition to explain the adoption and organizations' use of a HPWS, the results of which were mixed, the main contribution of this dissertation is the research agenda that it has uncovered for areas in which the field can improve. While there has been some discussion of the need for more research on understanding the antecedents of HPWSs, there is clearly more work that needs to be done in this area. To do this, a better scale for understanding HPWSs is needed. The more novel idea of this dissertation is the identification for the need to study the types of HPWSs that organizations use. While this dissertation doesn't identify any type, the exploratory analysis that it conducted does highlight the possibility that there are different types. The identification of such types would greatly advance research in the field of SHRM. A possible context for conducting research to identify these types is in the study of small businesses. The constraints that small businesses face increase the likelihood that the businesses being studied have a focused HR strategy that is concentrated on a specific type as opposed to a "more is better" approach.

**TABLES AND FIGURES**

**Figure 1. Competition and Business Strategy as Antecedents to High-Performance Work Systems**



**Figure 2. Competition and Business Strategy as Antecedents to High-Performance Work Systems with Hypotheses**



**Table 1. Hypotheses Results Summary**

Dissertation Hypotheses	Supported
<b>H1:</b> As competition increases, organizations will increase their use of a HPWS.	Yes
<b>H2a:</b> Market commonality will have an amplifying effect on the relationship between competition and HPWSs. As market commonality increases and organizational action is constrained, organizations' will increase their use of a HPWS at an even greater rate.	No
<b>H2b:</b> Resource similarity will have an amplifying effect on the relationship between competition and HPWSs. As resource similarity increases and organizational action is constrained, organizations' will increase their use of a HPWS at an even greater rate.	No
<b>H3a:</b> Organizations that implement a cost-reduction strategy will report using lower levels of a HPWS than organizations that do not.	No
<b>H3b:</b> Organizations that implement an innovation strategy will report using higher levels of a HPWS than those using a cost-reduction strategy or no specific strategy at all.	No
<b>H3c:</b> Organizations that implement a quality management strategy will report using higher levels of a HPWS than those using a cost-reduction strategy or no specific strategy at all.	No
<b>H4a:</b> The intensity with which organizations implement a HPWS in the face of competition will be diminished when firms use a cost-reduction strategy.	No
<b>H4b:</b> The intensity with which organizations implement a HPWS in the face of competition will be increased when firms use an innovation strategy.	No
<b>H4c:</b> The intensity with which organizations implement a HPWS in the face of competition will be increased when firms use a quality management strategy.	No

**Table 2. Descriptive Statistics and Correlations of All Variables**

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. HPWS	48.75	18.4	1											
2. Competition	3.44	0.96	.23** (.00)	1										
3. Market Commonality	3.49	1.03	.07 (-.44)	.24** (.00)	1									
4. Resource Similarity	3.51	0.99	.03 (-.75)	.25** (-.01)	.60** (.00)	1								
5. Low-Cost Strategy	3.5	0.95	.14 (-.11)	.00 (-.99)	-.13 (-.14)	-.10 (-.28)	1							
6. Innovation Strategy	2.79	0.9	-.24** (-.01)	-0.10 (-.28)	0.13 (-.14)	-0.11 (-.22)	-.30** (.00)	1						
7. Quality Mangt. Strategy	2.16	0.99	-.26** (.00)	.25 (-.78)	.17 (-.06)	.13 (-.15)	-.23* (-.01)	.46** (.00)	1					
8. Firm Performance	3.4	0.77	.36** (.00)	.01 (-.95)	.04 (-.67)	.04 (-.66)	.11 (-.23)	-.38** (.00)	-.27** (.00)	1				
9. Organizational Age	64.8	45.31	.05 (-.61)	-.02 (-.87)	-.08 (-.40)	-.17 (-.06)	.03 (-.70)	.04 (-.66)	.11 (-.24)	.02 (-.79)	1			
10. Organizational Size	7.01	3.25	.28** (.00)	.30** (.00)	-.03 (-.78)	-.04 (-.70)	.07 (-.47)	.08 (-.38)	.16 (-.08)	.21* (-.02)	.35** (.00)	1		
11. Service vs. Manufacturing	1.74	0.44	-.18 (-.07)	-.07 (-.49)	.00 (-.98)	-.09 (-.38)	.04 (-.67)	-.11 (-.28)	-.12 (-.23)	-.14 (-.15)	-.14 (-.17)	-.31** (.00)	1	
12. Munificence	3.26	0.96	.19* (-.03)	.11 (-.22)	-.06 (-.51)	-.03 (-.74)	-.03 (-.71)	-.16 (-.08)	-.04 (-.67)	.20* (-.02)	-.18* (-.04)	.11 (-.24)	.07 (-.46)	1
13. Dynamism	2.67	0.94	-.11 (-.24)	-.07 (-.44)	.00 (-.96)	-.01 (-.89)	-.09 (-.28)	-.10 (-.28)	-.22* (-.01)	-.25** (-.01)	-.28** (.00)	-.28** (.00)	.11 (-.26)	.04 (-.65)

Notes: Pearson correlation coefficients and the standard error term are presented. \*p < .05 & \*\*p < .01

**Table 3. Psychometrics**

<b>Scales:</b>	<b>Cronbach's Alpha (Standardized)</b>	<b>Eigenvalues</b>
HPWS	.84	5.13
Competition	.89	3.45
Market Commonality	.82	1.69
Resource Similarity	.80	1.66
Red Queen Combined	.84	2.69
Firm Performance	.77	2.07
Cost-Reduction Strategy	.78	1.64
Innovation Strategy	.71	1.56
Quality Strategy	.80	1.67
Munificence	.81	2.16
Dynamism	.53	1.70

**Table 4. Regression Results for Competition on Use of a HPWS**

Variable	<u>Step 1</u>			<u>Step 2</u>		
	Std. Beta	t	Sig.Level	Std. Beta	t	Sig.Level
Organizational Age	-.11	-1.11	.27	-.09	-.92	.36
Organizational Size	.28	2.72	.01	.22	2.06	.04
Organizational Performance	.27	2.83	.01	.30	3.13	.00
Services Vs. Manufacturing	-.08	-.78	.44	-.08	-.79	.43
Munificence	.06	.58	.56	.04	.43	.67
Dynamism	.04	.38	.71	.05	.48	.63
Competition				.21	2.18	.03
Adjusted R-Squared		.15			.19	
Model F		4.10			4.33	
df		96			95	
Model Significance		.00			.00	

**Table 5. Regression Results, Test of Moderating Effect of Market Commonality on the Competition - HPWS Relationship**

Variable	Step 2			Step 3		
	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level
Organizational Age	-.09	-.91	.36	-.09	-.92	.36
Organizational Size	.22	2.05	.04	.22	2.07	.04
Organizational Performance	.30	3.11	.00	.30	3.09	.00
Services Vs. Manufacturing	-.08	-.79	.43	-.07	-.73	.47
Munificence	.04	.43	.67	.05	.51	.61
Dynamism	.05	.48	.63	.05	.48	.63
Competition	.20	2.12	.04	.10	.36	.72
Market Commonality	.04	.04	.97	-.12	-.38	.71
Competition X Market Commonality				.18	.40	.69
Adjusted R-Squared		.18			.17	
Model F		3.75			3.32	
df		94			93	
Model Significance		0			0	

**Table 6. Regression Results, Test of Moderating Effect of Resource Similarity on the Competition - HPWS Relationship**

Variable	Step 2			Step 3		
	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level
Organizational Age	-.09	-.94	.30	-.09	-.90	.37
Organizational Size	.22	2.04	.04	.21	1.92	.06
Organizational Performance	.27	2.81	.01	.30	3.18	.00
Services Vs. Manufacturing	-.08	-.80	.42	-.10	-.99	.32
Munificence	.04	.41	.68	.03	.34	.73
Dynamism	.05	.47	.64	.05	.54	.59
Competition	.21	2.16	.03	.48	1.44	.15
Resource Similarity	-.02	-.21	.83	.25	.76	.45
Competition X Resource Similarity				-.43	-.85	.40
Adjusted R-Squared		.18			.18	
Model F		3.76			3.41	
df		94			93	
Model Significance		0			0	

**Table 7. Regression Results, Test of Moderating Effect of Cost-Reduction Strategy on the Competition - HPWS Relationship**

Variable	Step 2			Step 3			Step 4		
	Std. Beta	t	Sig.Level	Std. Beta	t	Sig.Level	Std. Beta	t	Sig.Level
Organizational Age	-.12	-1.14	.26	-.09	-.95	.34	-.09	-.90	.37
Organizational Size	.28	2.67	.01	.21	1.99	.05	.19	1.83	.07
Organizational Performance	.26	2.73	.01	.29	3.04	.00	.30	3.18	.00
Services Vs. Manufacturing	-.08	-.86	.39	-.84	-.89	.38	-.07	-.75	.46
Munificence	.06	.64	.53	.05	.49	.62	.00	.03	.97
Dynamism	.03	.35	.73	.04	.46	.65	.06	.67	.51
Competition				.22	2.29	.02	.73	2.17	.03
Cost-Reduction Strategy	.10	1.28	.21	.12	1.34	.18	.58	1.92	.06
Competition X Cost-Reduction Strategy							-.67	-1.6	.12
Adjusted R-Squared		.16			.19			.21	
Model F		3.71			4.04			3.94	
df		95			94			93	
Model Significance		0			0			0	

**Table 8. Regression Results, Test of Moderating Effect of Innovation Strategy on the Competition - HPWS Relationship**

Variable	Step 2			Step 3			Step 4		
	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level
Organizational Age	-.12	-1.24	.22	-.10	-1.02	.30	-.10	-1.02	.31
Organizational Size	.32	3.07	.00	.26	2.4	.02	.26	2.36	.02
Organizational Performance	.19	1.79	.08	.22	2.13	.04	.22	2.12	.04
Services Vs. Manufacturing	-.10	-.99	.32	-.09	-.97	.34	-.09	-.94	.35
Munificence	.05	.48	.63	.03	.36	.72	.03	.35	.73
Dynamism	.02	.16	.87	.03	.28	.78	.03	.29	.77
Competition				.18	1.92	.06	.14	.53	.60
Innovation Strategy	-.20	-1.92	.06	-.17	-1.63	.11	-.21	-.67	.51
Competition X Innovation Strategy							.06	.15	.88
Adjusted R-Squared		.18			.20			.19	
Model F		4.14			4.19			3.69	
df		95			94			93	
Model Significance		0			0			0	

**Table 9. Regression Results, Test of Moderating Effect of Quality Management Strategy on the Competition - HPWS Relationship**

Variable	Step 2			Step 3			Step 4		
	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level
Organizational Age	-.09	-.97	.34	-.08	-.81	.42	-.07	-.77	.44
Organizational Size	.34	3.42	.00	.29	2.76	.01	.28	2.63	.01
Organizational Performance	.15	1.5	.14	.18	1.8	.07	-.10	-1.10	.28
Services Vs. Manufacturing	-.11	-1.18	.24	-.11	-1.17	.25	-0.1	-1.10	.28
Munificence	.08	.83	.41	.06	.69	.50	.06	.67	.5
Dynamism	.02	.16	.87	.02	.26	.79	.03	.30	.76
Competition				.18	1.95	.05	.06	.29	.78
Quality Management Strategy	-.32	-3.31	.00	-.30	-3.15	.00	-.49	-1.41	.16
Competition XQuality Management Strategy							.23	.58	.57
Adjusted R-Squared		.23			.26			.25	
Model F		5.45			5.38			4.79	
df		96			94			93	
Model Significance		5.45			0			0	

**Table 10. Exploratory Analysis Regression Results, Test of Moderating Effect of Firm Reputation on the Competition - HPWS Relationship**

Variable	Std. Beta	Step 2		Std. Beta	Step 3	
		t	Sig.Level		t	Sig.Level
		-				
Organizational Age	-.11	1.09	.28	-.08	-.78	.44
Organizational Size	.32	3.04	.00	.25	2.26	.03
Organizational Performance	.18	.00	.11	.20	1.82	.07
Services Vs. Manufacturing	-.06	-.56	.58	-.05	-.55	.59
Munificence	.03	.32	.75	.01	.12	.91
Dynamism	.03	.35	.72	.05	.51	.61
Competition				.55	1.03	.30
Firm Reputation	.18	1.62	.11	.40	1.15	.25
Competition X Firm Reputation				-.38	-.65	.52
Adjusted R-Squared		.17			.20	
Model F		3.95			3.79	
df		95			93	
Model Significance		.00			.00	

**Table 11. Regression Results for Competition on the Use of HR Information Exchange**

Variable	Std. Beta	Step 1		Std. Beta	Step 2	
		t	Sig.Level		t	Sig.Level
Organizational Age	-.06	-.57	.57	-.05	-.43	.40
Organizational Size	.12	1.10	.28	.08	.65	.67
Organizational Performance	.19	1.82	.07	.21	2.01	.52
Services Vs. Manufacturing	-.13	-1.20	.23	-.12	-1.21	.05
Munificence	.02	.20	.85	.01	.09	.23
Dynamism	.70	.67	.51	.08	.74	.93
Competition				.15	1.48	.14
Adjusted R-Squared		.03			.04	
Model F		1.51			1.63	
df		96			95	
Model Significance		.18			.14	

**Table 12. Regression Results for Competition on the Use of HR Training**

Variable	Std. Beta	Step 1		Std. Beta	Step 2	
		t	Sig.Level		t	Sig.Level
Organizational Age	-.03	-.32	.75	-.22	-.21	.83
Organizational Size	.06	.51	.61	.02	.19	.85
Organizational Performance	.36	3.65	.00	.37	3.76	.00
Services Vs. Manufacturing	.07	.73	.47	.07	.73	.47
Munificence	.10	1.02	.31	.09	.94	.35
Dynamism	-.03	-.32	.75	-.30	-.27	.79
Competition				.11	1.10	.28
Adjusted R-Squared		.11			.12	
Model F		3.18			2.91	
df		96			95	
Model Significance		.01			.01	

**Table 13. Regression Results for Competition on the Use of HR Compensation**

Variable	Std. Beta	Step 1		Std. Beta	Step 2	
		t	Sig.Level		t	Sig.Level
Organizational Age	-.22	-2.24	.03	-.21	-2.13	.04
Organizational Size	.28	2.73	.01	.25	2.33	.02
Organizational Performance	.22	2.37	.02	.24	2.49	.01
Services Vs. Manufacturing	-.14	-1.52	.13	-.14	-1.51	.13
Munificence	.04	.37	.71	.03	.29	.77
Dynamism	.22	2.33	.02	.22	2.38	.02
Competition				.10	1.09	.28
Adjusted R-Squared		.19			.19	
Model F		4.86			4.34	
df		96			95	
Model Significance		.00			.00	

**Table 14. Regression Results, Test of Direct Effects of Hypothesized Factors**

Variable	Step 2		
	Std. Beta	t	Sig. Level
Organizational Age	-.08	-.84	.40
Organizational Size	.30	2.80	.01
Organizational Performance	.14	1.31	.19
Services Vs. Manufacturing	-.12	-1.27	.21
Munificence	.07	.75	.45
Dynamism	.02	.17	.87
Competition	.16	1.64	.10
Market Commonality	.08	.74	.46
Resource Similarity	-.01	-.12	.90
Cost-Reduction Strategy	.06	.69	.49
Innovation Strategy	-.09	-.80	.43
Quality Management Strategy	-.28	-2.7	.01
Adjusted R-Squared		.24	
Model F		3.65	
df		90	
Model Significance		.00	

**Table 15. Regression Results, Test of Moderating Effect of Organizational Performance on the Competition - HPWS Relationship**

Variable	Step 2			Step 3		
	Std. Beta	t	Sig. Level	Std. Beta	t	Sig. Level
Organizational Age	-.90	-.92	.36	-.09	-.89	.38
Organizational Size	.22	2.06	.04	.21	1.99	.05
Services Vs. Manufacturing	-.08	-.79	.43	-.08	-.80	.43
Munificence	.04	.43	.67	.04	.42	.68
Dynamism	.05	.48	.63	.05	.48	.63
Competition	.21	2.18	.03	.37	.85	.40
Organizational Performance	.30	3.13	.00	.42	1.29	.20
Competition X Org. Performance				-.20	-.39	.70
Adjusted R-Squared		.19			.18	
Model F		4.33			3.77	
df		95			94	
Model Significance		.00			.00	

**Table 16. Regression Results, Test of Moderating Effect of Organizational Size on the Competition - HPWS Relationship**

Variable	Std. Beta	<u>Step 2</u>		Std. Beta	<u>Step 3</u>	
		t	Sig. Level		t	Sig. Level
Organizational Age	-.11	-1.08	.29	-.10	-1.00	.32
Services Vs. Manufacturing	.10	1.05	.30	-.13	-1.30	.20
Munificence	.10	1.05	.30	.10	.99	.33
Dynamism	.01	.10	.92	.02	.19	.85
Competition	.17	1.73	.09	.51	2.35	.02
Organizational Size	.27	2.42	.02	.81	2.46	.02
Competition X Org. Size				-.74	-1.75	.08
Adjusted R-Squared		.11			.13	
Model F		3.13			3.18	
df		96			95	
Model Significance		.01			.01	

**APPENDIX A. EMAIL USED TO ENLIST PARTICIPANTS**

Subject: Help [REDACTED], get a 5\$ Amazon Gift Card

Dear [REDACTED] Alumni:

By way of this note, I am asking you to help a fellow [REDACTED] — by participating in a research study which aims to: 1) understand how competition informs Human Resources practices within a firm; and 2) how a firm's business strategy moderates the relationship between competition and Human Resource practices. This study is being conducted by Nicholas Prince, a PhD Candidate and [REDACTED] who studies Human Resources at the University of Illinois at Urbana-Champaign.

To participate, please fill out all of the questions! Blank answers often mean we can't use any of your responses.

What are you a being asking to do?

- 1) Complete a 10-15 minute survey that is accessed using the link provided below.
- 2) If possible, email the link provided at the end of the survey to one of your fellow employees.
- 3) The last question of the Human Resources survey will provide you with a link that will take you to a different survey that will ask you if you have completed (answered all the questions) of the Human Resources survey and the email you would like to have your gift card sent to. Gift cards will be sent to all participants who have completed the survey.

[https://uiuc.qualtrics.com/SE/?SID=SV\\_b2Bz7SW1vN5Mqk5](https://uiuc.qualtrics.com/SE/?SID=SV_b2Bz7SW1vN5Mqk5)

Participation in the study is voluntary and completely confidential.

I greatly appreciate your time and willingness to help out! If you have any questions please email Nick at: [prince4@illinois.edu](mailto:prince4@illinois.edu).

Regards,

Nick Prince

[REDACTED]  
PhD Candidate – OB/HR  
University of Illinois Urbana-Champaign

**APPENDIX B. HUMAN RESOURCE MANAGEMENT, STRATEGY & COMPETITION  
QUESTIONNAIRE**

## The Effect of Competition on the Use of Human Resource Practices

You are invited to participate in a research study on how a firm's competitive environment affects its use of human resource management practices. This study is conducted by Nicholas Prince alumnus of Kansas State, and PhD Candidate in the College of Business in Organizational Behavior at the University of Illinois Urbana-Champaign.

This study will take approximately 15 minutes of your time. You will be asked to complete an online survey about the industry your business is in, its competitiveness, your firm and the human resource practices that your firm uses.

Your decision to participate or decline participation in this study is completely voluntary and you have the right to terminate your participation at any time without penalty. You may skip any questions you do not wish to answer. If you do not wish to complete this survey just close your browser.

Your participation in this research will be completely confidential and data will be averaged and reported in aggregate. Possible outlets of dissemination may be a dissertation, academic journals, and academic conferences. Although your participation in this research may not benefit you personally, it will help us understand how competition that firms face influences the choices they make about their use of human resource practices.

There are no risks to individuals participating in this survey beyond those that exist in daily life.

If you have questions about this project, you may contact Nicholas Prince at prince4@illinois.edu or at 801-628-1749. If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois

Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at [irb@illinois.edu](mailto:irb@illinois.edu).

Please print a copy of this consent form for your records, if you so desire.

I have read and understand the above consent form, I certify that I am 18 years old or older and, by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

To get the gift card please do the following: Complete the entire HR survey, the last question of the HR survey will provide you with a link to click that will take you to a different survey that will ask you if you have completed the HR survey and the email address you would like the gift certificate sent to. People who complete the survey and give us an email address will receive a \$5.00 dollar gift certificate to Amazon after all data is collected.

Please click on the circle next to the statement below to show that you consent to participate in this survey.

I consent to participation in this survey

Which of the following best represents your role within your firm?

- Human Resource Manager
- Business Manager or owner responsible for HR functions
- Business Manager or non-managerial employee

What year was your firm founded?

Does the founder still manage the firm?

- Yes
- No

Which of the following best describes your firm?

- privately owned
- publicly traded
- not for profit
- government

Is it managed by a private equity firm?

- Yes
- No

What country is your office located?

What is the zip/postal code where your primary offices are?

How many employees (part and full-time) work at your firm?

Please estimate the percentage of employees at your firm who are ...

\_\_\_\_\_ full-time

Please estimate the percentage increase or decrease in the number of full-time employees in your firm over that last five years.

\_\_\_\_\_ from 5 years ago to today.

Please estimate the percentage of full-time employees who leave your firms for the following reasons. The total should add up to 100%.

- \_\_\_\_\_ Go to work for a competitor
- \_\_\_\_\_ Go to work in an unrelated business
- \_\_\_\_\_ Go to school
- \_\_\_\_\_ Retire

Please use the sliding scales to estimate the percentage (0-100%) of full-time employees in your firm covered by the HR practices described below. Simply click on the bar and pull it to the correct percentage.

- \_\_\_\_\_ One or more employment tests are administered prior to hiring.
- \_\_\_\_\_ Hold non-entry level jobs as a result of internal promotions.
- \_\_\_\_\_ Promotions are primarily based upon merit or performance as opposed to seniority.
- \_\_\_\_\_ Hired following intensive/extensive recruiting.
- \_\_\_\_\_ Are routinely administered attitude surveys to identify and correct employee morale problems.
- \_\_\_\_\_ Are involved in programs designed to elicit participation and employee input (e.g., quality circles, problem-solving or similar groups).
- \_\_\_\_\_ Access to a formal grievance and/or complaint resolution system.
- \_\_\_\_\_ Provided business operating performance information.
- \_\_\_\_\_ Provided financial performance information.
- \_\_\_\_\_ Actively manages relationship with departing employees (i.e. exit interview, maintain contact information).

Please use the sliding scales to estimate the percentage (0-100%) of full-time employees covered in your firm by the HR practices described below. Simply click on the bar and pull it to the correct percentage.

- \_\_\_\_\_ Provided information on strategic plans.
- \_\_\_\_\_ Receive formal performance appraisal and feedback on a routine basis.
- \_\_\_\_\_ Formal performance feedback from more than one source (i.e. from several individuals such as supervisors, peers, etc.).
- \_\_\_\_\_ Compensation partially contingent on group performance (e.g. profit sharing, stock or share schemes etc).
- \_\_\_\_\_ Compensation partially contingent on organization-wide performance (e.g. profit sharing, stock or share schemes, etc).
- \_\_\_\_\_ Pay is based on skill or knowledge-based systems (versus a job-based system); i.e., pay is primarily determined by a person's skill or knowledge level as opposed to the particular job that they hold.

- \_\_\_\_\_ Intensive/extensive training in company-specific skills (i.e., task or firm-specific training).
- \_\_\_\_\_ Intensive/extensive training in generic skills (e.g. problem-solving, communication skills, etc).
- \_\_\_\_\_ Training in a variety of jobs or skills (“cross training”) and/or routinely performing more than one job (are “cross utilized”).
- \_\_\_\_\_ Are organized in self-directed teams in performing a major part of their work roles.
- \_\_\_\_\_ Employees participate in a job rotation program.

Which of the following best describe the industry that your firm is in?

- Agriculture, Forestry, Fishing and Hunting
- Mining, Quarrying, and Oil and Gas Extraction
- Utilities
- Construction
- Manufacturing
- Wholesale Trade
- Retail Trade
- Transportation and Warehousing
- Information
- Finance and Insurance
- Real Estate and Rental and Leasing
- Professional, Scientific, and Technical Services
- Management of Companies and Enterprises
- Administrative and Support and Waste Management and Remediation Services
- Educational Services
- Health Care and Social Assistance
- Arts, Entertainment, and Recreation
- Accommodation and Food Services
- Public Administration
- Other Services

Please rate the extent that you agree with the following statements about the industry that your firm is in.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
In this industry it is difficult to predict sales.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In this industry it is difficult to predict staffing needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This industry is constantly growing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This industry is constantly attracting new customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to other industries this industry has grown a lot in the last five years.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compared to other industries this industry has had a large number of layoffs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My firm faces a high-level of competition in this industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many direct competitors does your company have?

- 0-4
- 5-9
- 10-14
- 15-19
- 20+

Please rate the extent that you agree with the following statements about the competitors with which your firm competes.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
We compete in exactly the same product/service markets.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They have access to the same resources that my firm has.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They sell the same products/services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We use relatively the same resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the extent that you agree with the following statements about the competition that your firm faces.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Your company faces a high degree of price competition for products/services.	<input type="radio"/>				
There is a high degree of market competition in the new product/service development faced by your company.	<input type="radio"/>				
There is a high degree of market competition in marketing and distribution faced by your company.	<input type="radio"/>				
Your company faces a high degree of market competition in gaining market share.	<input type="radio"/>				
Behaviors that competing companies take are a great threat to your company.	<input type="radio"/>				

Please rate the extent that you agree with the following statements about your firm's actual actions.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
This company pursues market leadership by being a low-cost producer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company introduces more new products than its competitors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company stresses being a high quality producer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company differentiates itself through innovation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company stresses charging the lowest price in the market.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This company competes primarily on quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rank the following criteria from most important to least important in relation to their importance to the firm when making strategic decisions.

- \_\_\_\_\_ Impact on the ability of the firm to keep costs down.  
 \_\_\_\_\_ Impact on firm's ability to innovate.  
 \_\_\_\_\_ Impact on the quality of the products/services of the firm.

Compared to other firms in your primary industry, how would you rate the performance of your firm in relation to the following?

	Poor or at the low end of the industry	Below average	Average or equal to competitors	Better than average	Superior
Service quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Profitability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stock market performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operational efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General reputation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer of choice reputation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please send the following survey link to another employee who works at your firm: [https://uiuc.qualtrics.com/SE/?SID=SV\\_b2Bz7SW1vN5Mqk5&random=\\$](https://uiuc.qualtrics.com/SE/?SID=SV_b2Bz7SW1vN5Mqk5&random=$)

Please click on the following link to sign-up for the \$5.00 amazon gift card. All gift cards will be sent in a couple of weeks after the data collection is completed.

Please use this URL if the link above does not work:  
[https://uiuc.qualtrics.com/SE/?SID=SV\\_2cydVP6WRAp82gZ](https://uiuc.qualtrics.com/SE/?SID=SV_2cydVP6WRAp82gZ)

Thank you for your participation!

Please submit responses by clicking on the blue button to the right one last time.

Please send inquiries about this study to [prince4@illinois.edu](mailto:prince4@illinois.edu)

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