

STRATEGIC HUMAN RESOURCE DEVELOPMENT IMPACT ON ORGANIZATIONAL
PERFORMANCE: DOES SHRD MATTER?

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ABSTRACT

In the United States today organizational leaders are concerned with skills gaps, or the limited availability of qualified workers to fill open positions. The reason for their concern is the impact of skills gaps on organizational performance in a number of areas including productivity, customer satisfaction, profitability, and the ability to expand. To address skills gaps, many leaders choose to employ workforce training and development. Strategic Human Resource Development (SHRD) is a growing field of research and practice that aims to integrate and align training and development approaches with organizational strategy to improve organizational performance. However, there is inconsistent empirical support for the claim that SHRD positively affects organizational performance.

The current study investigates this claim using structural equation modeling with scores from National Baldrige Award applicants. Organizations that apply to the National Baldrige Award utilize the Baldrige Framework for Performance Excellence (Baldrige Framework). The Baldrige Framework includes SHRD as part of a systematic approach to improving organizational performance. As such, organizations applying for the National Baldrige Award receive scores for the use of SHRD as well as organizational performance. The current study uses these scores to create a structural equation model that statistically illustrates organizational performance and SHRD's impact upon it.

The results of the current study clearly illustrate that organizational performance is a construct comprised of multiple types of organizational results and that SHRD positively affects the construct of organizational performance. The results provide a causal inference between an increase in the use of SHRD and improved organizational performance. Therefore, if organizational performance is important, SHRD matters.

DEDICATION

To my moms, dads, and Mike.

There was never a question in any of your minds that I could do anything I set out to do.

And look – I did!

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LIST OF ABBREVIATIONS

- Baldrige Criteria..... Baldrige Criteria for Performance Excellence. “[L]eading edge validated management practices” (Evans, 2010, p. 38) identified by the Baldrige Performance Excellence Program. The Baldrige Criteria include six categories of organizational practices and one category encompassing multiple types of organizational performance measures.
- Baldrige Framework Baldrige Framework for Performance Excellence. The underlying relational model of the Baldrige Criteria (Baldrige Performance Excellence Program, 2013).
- HRD Human Resource Development. The field of practice and academic discipline focused on planned activities designed to facilitate learning and development in the workplace to benefit both the learner and organization (Garavan, Costine, & Heraty, 1995; Lammintakanen, Kivinen, & Kinnunen, 2008; Sambrook, 2004).
- Baldrige Award..... Malcolm Baldrige National Quality Award. Recognition for the “use of an integrated approach to improve organizational performance practices, capabilities, and results,” (Burke and Hellwig, p. 302).
- SHRD Strategic Human Resource Development. The field of practice and academic discipline focused on improving organizational performance through strategic alignment and integration of multiple purposefully selected and proactively implemented methods for workforce training and development.

CHAPTER 1: INTRODUCTION

In the spring of 2015, the United States had millions of job openings, more than any time since 2000 (Gillespie, 2015). On the surface, this seems to be a sign of economic rebound from the economic collapse in 2008. There were 5.3 million open jobs in August 2015, versus 2.1 million open jobs at the height of the recession, April 2008 (Gillespie, 2015). While the number of available jobs is increasing, so is the time it takes to fill those jobs. A primary reason for this longer duration is the limited availability of qualified people to fill positions (ASTD, 2013). Many practitioners and scholars refer to this issue as the skills gaps, defined by ASTD as “significant gap[s] between an organization’s current capabilities and the skills it needs to achieve its goals” (ASTD, 2013, p. 4). To address skills gaps and hopefully achieve organizational goals, organizational leaders invest in workforce training and development.

Recent reports and surveys of organizational leaders indicate skills gaps are one of their top concerns due to their impact on organizational performance (Bersin, 2013; Corporate Learning Network, 2014; O’Leonard, 2014). For example, a report by CompTIA (2012) states that IT industry leaders see the skills gaps affecting at least one organizational performance area including customer service, staff productivity, and job security. Another report by AAR Corp (2013) found that skills gaps translate into higher on-the-job training costs, slower growth, and lost productivity, which may in turn limit the ability of organizations to compete and expand. A survey of organizational leaders conducted by ASTD (2012) cited the following organizational performance indicators being impacted by skills gaps: lower productivity, slower time-to-market, lower profitability, recruitment challenges, lower efficiencies, inability to expand or grow, limited new product development, and higher expenses. These examples illustrate the importance

of skills gaps and organizational leaders' perceptions of their impact on organizational performance.

To address skills gaps, many organizations use internal training and development. Today organizational leaders across the United States collectively invest approximately \$70 billion on training and development activities (O'Leonard, 2014). Some metrics in this compilation include training hours, costs associated with electronic training delivery, tuition reimbursement, HRD practitioner salaries, and training content development (ASTD, 2014; Corporate Learning Network, 2014; O'Leonard, 2014). Over the past three years, this amount has grown by double-digit percentages as organizations continue to address skills gaps internally (ASTD, 2014; Corporate Learning Network, 2014; O'Leonard, 2014). As training and development is such a resource intensive process, organizational leaders may hesitate to continue this investment without a clear picture of how it could affect organizational performance.

Human Resource Development (HRD) is an area of research and practice focused on training and development of employees. There are multiple perspectives in both research and practice about the nature of HRD, but for the purpose of this research, HRD is broadly defined as an organizational function incorporating planned activities designed to facilitate learning and development in the workplace to benefit both the learner and organization (Garavan, Costine, & Heraty, 1995; Lammintakanen, Kivinen, & Kinnunen, 2008; Sambrook, 2004). HRD therefore focuses in part on the impact of training and development on organizational performance.

Surveys of organizational leaders find that they believe investing in HRD will address skills gaps, which will in turn improve organizational performance. Some perceived organizational performance measures affected by HRD include positive affects on turnover, productivity, profitability, sales growth, service quality and product quality (Bae & Lawler,

2000; Collins & Clark, 2003; Davis & Daley, 2008; Huselid, 1995; Huselid, Jackson, & Schuler, 1997; Lam & White, 1998; Schneider & White, 2004). However, in practice, HRD is often relegated to an operational activity, responding to the immediate pressing needs of existing employees or current fad (Balderson, 2005), rather than strategically identifying ways to address organizational challenges, such as skills gaps, with HRD-related solutions that will impact organizational performance.

In the 1990s, much like today, record levels of unemployment and a shortage of qualified workers to fill those positions necessitated a greater investment in developing employee skills (Abernathy et al., 1999). An area of research and practice more focused on the link between HRD and organizational performance is Strategic Human Resource Development (SHRD). SHRD is the purposeful and proactive use of multiple approaches, aligned and integrated with organization strategy, to improve organizational performance. The key difference between HRD and SHRD is scope. HRD is broader than SHRD, incorporating scholarship and practice related to all training and development activities in the context of work. SHRD focuses almost exclusively on those activities that relate to organizational strategy and improving organizational performance (Garavan & Carbery 2012; Gilley & Maycunich Gilley 2003; Robinson & Robinson 2005; Swanson, 1994; Swanson & Holton, 2009; Torraco & Swanson, 1995).

SHRD is a growing field of study and practice based on early models that illustrated how HRD activities could improve organizational performance (see Garavan, 1991; Torraco & Swanson, 1995). The new models incorporated the word “strategic” in order to make an explicit distinction between earlier HRD models (Garavan 1991; Fredericks and Stewart 1996; Harrison 1997; Lee 1997; Sambrook, 2000). The need to illustrate a more business-focused approach to carrying out HRD activities predicated this distinction emphasizing the impact HRD activities

could have on organizational goals. Additionally, the emphasis on strategy illustrated how HRD could be impactful beyond simply training employees (Gilley & Maycunich Gilley, 2003).

Research does not clearly indicate how many organizations making this investment use SHRD, nor is it clear if there is a link between adopting an SHRD perspective and increased organizational performance. As Garavan and Carbery (2012) state, “some researchers and practitioners consider it something of a Holy Grail to establish a causal link between SHRD and performance at the level of the organization” (p. 25). While some studies using researcher-defined factors of organizational performance have found support for this claim (e.g., Garavan, Costine, & Heraty, 1995; Katou, 2009; Macky & Boxall, 2007), others have not (e.g., Combs, Liu, & Kitchen, 2006), and still others found unclear linkages (e.g., Bartlett, 2001; Torraco, 1999). These inconsistent results may be due to inconsistent definitions of what constitutes SHRD and organizational performance.

The basis for inconsistent definitions of what constitutes SHRD is different researchers compiling definitions from disparate sources. Across SHRD literature, there is consensus that it includes a variety of practices. Extant research provides several lists of what practices comprise SHRD (e.g., Garavan, 1991; McCracken & Wallace, 2000; Stewart & Sambrook, 2012; Torraco & Swanson, 1995). Since researchers identify practices, rather than the organizations practicing SHRD, researchers may miss or inaccurately represent practices used by organizations.

Inconsistencies in definitions of organizational performance may also lead to the same outcome of inaccurate or incomplete representation of the relationship between SHRD and organizational performance. Organizational performance is generally studied using a combination of researcher specified measures, the definition of which can vary greatly (e.g., Boyd, Gove, & Hitt, 2005; Kirby, 2005; March & Sutton, 1997; Richard, Devinney, Yip, &

Johnson, 2009). Boyd, et al. (2005) reviewed articles from leading management journals and found 228 different measures used to indicate organizational performance. The authors state that the variation in measures relates to the complexity of organizational performance as a construct and the relative importance of those measures between both researchers and the organizations being studied.

In order to study a group of organizations that clearly use an SHRD perspective based on consistent definitions of SHRD and organizational performance, this research focuses on those that applied for the Malcolm Baldrige National Quality Award (Baldrige Award) sponsored by the National Institute of Standards and Technology (NIST). Award recipients score highly against rigorous organizational practice requirements and achieve strong organizational performance. The requirements, the Baldrige Criteria for Performance Excellence (Baldrige Criteria), situate workforce training and development activities at a strategic level within a system designed to achieve improved organizational performance. This is consistent with the conceptual definition of SHRD. Thus, the Baldrige Criteria provide a model for studying the relationship of SHRD within an organization system in relation to the performance of that system.

One primary focus of researchers studying Baldrige Award applicants is the relationship between different categories of organizational practices, such as SHRD, and their impact on organizational performance. Many studies found significant relationships, with varying magnitudes, between individual categories and organizational performance (e.g., Badri et al., 2006; Flynn & Saladin, 2001; Ghosh et al., 2003; Goldstein & Schwikhart, 2002; Karimi et al., 2014; Kim & Oh, 2012; Lee, Lee & Olson, 2013; Meyer & Collier, 2001; Pannirselvam & Ferguson, 2001; Pannirselvam et al., 1998; Prybutok et al., 2010; Wilson & Collier, 2000).

However, the preponderance of this research uses surveys developed by researchers to examine the effects of requirements within the Baldrige Criteria (e.g., Flynn & Saladin, 2001; Goldstein & Schwikhart, 2002; Kim & Oh, 2012; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000). This research was therefore limited to researcher-defined constructs for the Baldrige Criteria, rather than using actual applicant score data.

In 2011, NIST released the score data of Baldrige Award applicants, allowing for exploration based on actual category scores, rather than researcher-defined constructs to represent those scores. To date, researchers have conducted few studies using this data (e.g., Evans & Mai, 2014; Karimi et al, 2014; Mai & Evans, 2014).). The studies reviewed illustrate how to longitudinally study categories of requirements (Evans & Mai, 2014) as well as the interrelated nature of the categories (Karimi et al, 2014; Mai & Evans, 2014). At this time, no reviewed studies focus specifically on the impact of SHRD and organizational performance.

Problem Statement

Organizations invest large amounts of time and money developing human resources, but there is inconsistent support that this investment yields a positive impact on organizational performance. A number of studies demonstrate a positive impact of SHRD activities on organizational performance (e.g., Garavan, Costine, & Heraty, 1995; Katou, 2009; Macky & Boxall, 2007). A smaller number of studies have found no link between SHRD and organizational performance (e.g., Combs, Liu, & Kitchen, 2006), or that there is an unclear link (e.g., Bartlett, 2001; Torraco, 1999). Each study reviewed included variations on what constitutes both SHRD and organizational performance.

Purpose of the Study

The purpose of this dissertation is to explore the impact of Strategic Human Resource Development (SHRD) on organizational performance. As such, it makes two distinct contributions. First, it will identify the types of organizational results that constitute organizational performance among applicants to the Baldrige Award. Second, it will analyze the impact SHRD may have on organizational performance. In order to make these contributions, this research situates SHRD within the organization system using Malcolm Baldrige National Quality Program (Baldrige Program) research. These contributions are unique in that they will be made using participant defined definitions of organizational results and SHRD activities following a consistent outline of requirements for each definition.

Research Questions

In order to illustrate the potential impact of SHRD on organizational performance, these research questions guide this study:

- Do organizational results, as operationalized by the Baldrige Framework for Performance Excellence, provide a measure of organizational performance?
- What impact does Strategic Human Resource Development have on the resulting organizational performance construct?

Definitions

Baldrige Criteria for Performance Excellence (Baldrige Criteria). “[L]eading edge validated management practices” (Evans, 2010, p. 38) identified by the Baldrige Performance Excellence Program. The Baldrige Criteria include six categories of organizational practices and one category encompassing multiple types of organizational performance measures.

Baldrige Framework for Performance Excellence (Baldrige Framework). The underlying relational model of the Baldrige Criteria (Baldrige Performance Excellence Program, 2013).

Human Resource Development (HRD). The field of practice and academic discipline focused on planned activities designed to facilitate learning and development in the workplace to benefit both the learner and organization (Garavan, Costine, & Heraty, 1995; Lammintakanen, Kivinen, & Kinnunen, 2008; Sambrook, 2004).

Malcolm Baldrige National Quality Award (Baldrige Award). Recognition for the “use of an integrated approach to improve organizational performance practices, capabilities, and results,” (Burke and Hellwig, p. 302).

Strategic Human Resource Development (SHRD). The field of practice and academic discipline focused on improving organizational performance through strategic alignment and integration of multiple purposefully selected and proactively implemented methods for workforce training and development.

Delimitations

Sample size is a limitation for this research. The sample includes only Baldrige Award applicant organizations. This means that the results may only be applicable to organizations using the Baldrige Framework for performance excellence. As such, the data set includes less than 500 organizations, which limits the ability to make generalizations about research results.

The use of previously collected data also poses a limitation. The data were collected and entered by the National Institute of Standards and Technology. As such, the researcher cannot impact data collection or entry based on guidance from extant research and literature.

Organization

Chapter 1 established a need for and guiding questions of this research. Leaders of organizations in the United States recognize skills gaps among existing and potential employees that impact organizational performance. To address these skills gaps, organizational leaders invest in Human Resource Development (HRD). A specific perspective of HRD, Strategic Human Resource Development (SHRD) focuses on the impact of strategic-level HRD activities on organizational performance. In order to study SHRD within an organization system, this research will use Baldrige Award applicant scores. Baldrige Award applicants receive scores on their performance against categories of requirements, two of which include SHRD and organizational performance. In doing so, this research seeks to explore the impact SHRD has on organizational performance.

This dissertation includes four subsequent chapters. Chapter 2, Literature Review, explains the theoretical and conceptual frameworks underlying this research. Chapter 3, Methodology, describes methodological considerations for this research including descriptions of its research design, measures, variables, and data analyses. Chapter 4, Results, includes data analysis results and interpretation. Chapter 5, Discussion, provides an overview of the research, discussion about research findings, as well as recommendations for practical application and future research.

CHAPTER 2: LITERATURE REVIEW

The purpose of this literature review is to establish the philosophical, theoretical, and conceptual frameworks used to frame this research. There are four sections in this review. The first section, philosophical framework, incorporates ideas from Human Resource Development (HRD) and operations research to inform selection of assumptions to guide the research. The second section outlines the theoretical framework that is based upon these assumptions. The third section, conceptual framework incorporates discussions about HRD, a strategic conceptualization of HRD and the Malcolm Baldrige Quality Award Program (Baldrige Program). The fourth section outlines inconsistencies within the SHRD research that can be addressed using Baldrige Program applicant data. This section ultimately describes how studying SHRD through the Baldrige lens could answer the question “does SHRD matter?”

Philosophical Framework

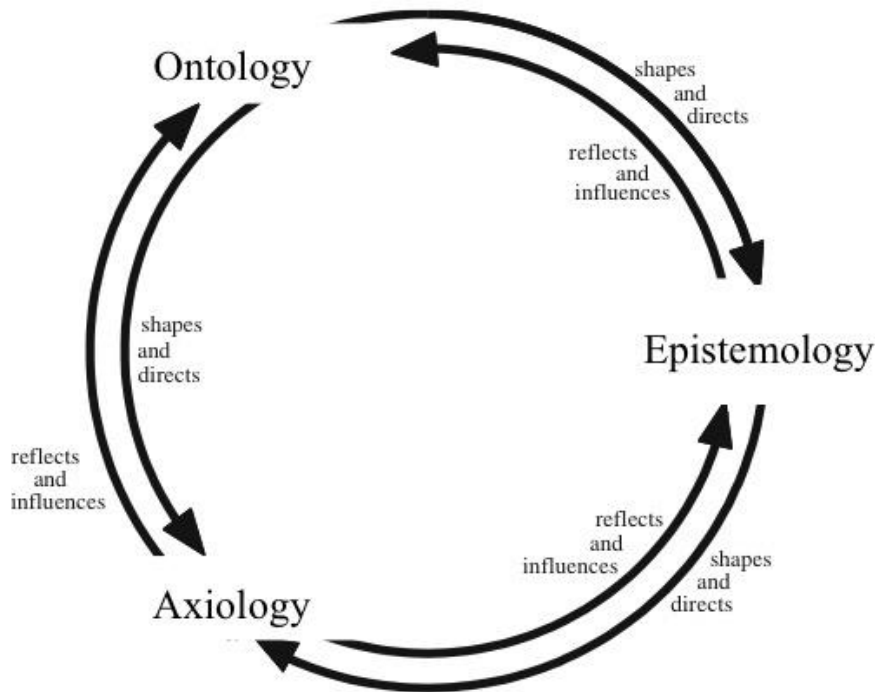
Human Resource Development (HRD), sociology, and operations research provide a foundation for identifying this research’s philosophical and theoretical framework. This section begins by stating the philosophical assumptions of this research using a framework for HRD research philosophy selection provided by Ruona and Lynham (2004). Next, these philosophical assumptions guide the selection of a sociological research paradigm using a framework developed by sociologists Burrell and Morgan (1979). Then, assumptions about the nature of organizations will be stated. The basis of this conceptualization is the ecological view of organizations as described by operations researchers Kast and Rozenzweig (1972). These combined elements comprise the philosophical framework for this research that guides theory selection.

Philosophical assumptions

Outcomes and results often drive HRD research and practice (Ruona & Lynham, 2004). However, underlying philosophical assumptions guide how we research and practice HRD (Ruona, 2000). Ruona and Lynham (2004) provide a framework used to clarify this research's philosophical framework. The authors propose this framework as a guide for identifying philosophical assumptions in both HRD practice and research. This framework contains three critical components of a philosophical framework: ontology, epistemology, and axiology. Ontology explains the nature of reality, whether or not it exists on its own, beyond the perceptions of individuals (Suanders, Saunders, Lewis, & Thornhill, 2009). Epistemology refers to acceptability of knowledge, primarily as the focus or aims of generating knowledge through research (Keat & Urry, 1975). Axiology is the study of values (Ruona & Lynham, 2004). These critical components provides and understanding of beliefs that guide this research.

Ruona and Lynham (2004) illustrate the interrelated nature of these philosophical components and explain them as “a dynamic, multi-virtuous and systemic way, together forming a guiding framework for a congruent and coherent system of thought and action” (p. 154). Using a simple, cyclical diagram (see Figure 2.1), the authors explain that ontology, or what we believe is real, shapes how we think about our perception of reality. Epistemology, or how we think about our perception of reality, guides how we act and the choices we make within that reality. The choices we make within reality, i.e. axiology, inform how we think about reality. This creates “continuous cycles of integrated beliefs, thoughts and practices” (Ruona & Lynham, 2004, p. 155), that helps us explore and makes sense of reality. In terms of the research process, ontology explains how the researcher thinks a about phenomenon. This informs epistemology, which describes how research should explore that phenomenon. This informs axiology, which

describes what knowledge is valuable or useful, meaning the type of results acceptable to the researcher and their scholarly community. This helps to guide methodological decision-making. Therefore, all three philosophical components are essential to guide the research process.



*Figure 2.1. Philosophical Framework. Adapted from “A philosophical framework for thought and practice in human resource development” by Ruona and Lynham, 2004, *Human Resource Development International*, 7(2), p. 155.*

Much social science research describes ontology as being objective or subjective (e.g., Blaiki, 1993; Jackson, 2000; Burrell & Morgan, 1979; Hatch & Cunliffe, 2006). Objective ontology states there is one objective reality that exists outside of an individual (Eriksson & Kovalainen, 2008). Conversely, subjective ontology postulates that reality is not objective, meaning there is not one true existence. Rather, group and/or individual consciousness determine existence. Ultimately objective, rather than subjective, ontology guide this research. Objective ontology is consistent with the goal of this research to provide a snapshot of a phenomenon using quantifiable observations, rather than perceptions of that phenomenon (Hatch & Cunliffe, 2006).

The assumption of reality as an external, objective phenomenon leads to questions about how to explore reality.

This research assumes a realist, opposed to a positivist, epistemology. Both realists and positivists assume an objective reality, or objective ontology, and explore phenomena in order to identify patterns or “well-established regularities” (Keat & Urry, 1975, p. 5). The distinction between these epistemologies lies in the reason for identifying patterns or regularities (Blaikie, 1993; Keat & Urry, 1975). Realists seek to explain relationships between structure or mechanisms and resulting phenomena, whereas positivists seek prediction of phenomena (Blaikie, 1993; Jackson, 2000; Keat & Urry, 1975; Hatch & Cunliff, 2006). Realists explain observable phenomenon in terms of its relationship to underlying structures or mechanisms. Positivists, on the other hand, focus on the ability of structures or mechanisms to cause a phenomenon. Realist epistemology is appropriate to the aims of this research, which include describing the relationship between HRD and organizational performance, understanding what structures and mechanisms comprise HRD, as well as the relationship between HRD and organizational performance. In other words, the goal of this research is to explain, rather than predict, organizational performance in terms of HRD structures and mechanisms. Assuming an objective reality explainable in terms of the relationships between structures or mechanisms that constitute it, leads to questions of how to study the relationships.

Axiology refers to the values that held by the researcher that guide the research process (Heron, 1996). Pragmatic axiology states that research should focus on developing knowledge in to meet desired ends (Mertens, 2010). From a pragmatic perspective, research is valued in terms of “what difference it makes” (Morgan, 2007, p. 68). This research holds a pragmatic axiology in that the research seeks to answer a question that has eluded other researchers and could greatly

benefit the study and practice of HRD. Pragmatic axiology is appropriate for this research “due to the applied nature of HRD” (Ruona & Lynham, 2004, p. 157). This means that HRD research is valued in terms of how it can inform practice and its application. By maintaining a pragmatic axiology and thus focusing on the value for practitioners, this research is consistent with a large portion of extant HRD research.

Research paradigm selection

Research paradigms and philosophical assumptions provide the basis for theory selection (Bhattacharjee, 2012; Saunders et al. 2009; Swanson & Holton, 2001). Systems theory refers not to a single theory; but a collection of theories designed to analyze phenomenon as a whole, rather than a “sum of elementary parts” (Mele, Pels, & Polese, 2010, p. 127). Identified ontological, epistemological, and axiological assumptions guide selection of the appropriate type of systems theory for this research. Before the 1970s, there was consensus among the systems theory practitioners and researchers about the nature of systems and how to study them (Jackson, 1991). Jackson (2000) refers to this as traditional systems theory. Generally, traditional systems theory holds that systems are observable, may be studied empirically, and may be manipulated. However, as criticism of traditional systems theory mounted and technology advanced making possible more sophisticated analyses, different perspectives of systems theory emerged.

Burrell and Morgan (1979) refer to the different perspectives of systems theory as existing in different sociological research paradigms. These paradigms are important as they situate theory selection in terms of larger sociological context (Jackson, 1991; Saunders, Lewis, & Thornhill, 2012). According to Burrell and Morgan’s (1979) framework, objective ontology indicates that reality is objective and can be studied using empirical methods to establish the existence of relationships and regularities within the system. The other aspect of Burrell and

Morgan's (1979) framework is the object of research, which can be either regulation or radical change. The realist epistemology of this research assumes that there is a status quo or routine operations within an organization. Therefore, it is concerned with the "sociology of regulation" (Burrell and Morgan, 1979, p. 22). Combining interest in exploring the existence of empirically researchable relationships leads to use of a functionalist paradigm.

Within Burrell and Morgan's (1979) framework, a functionalist paradigm focuses on the regulatory and objectivist research emphasis, as well as incorporating pragmatic axiology. The regulatory nature of this paradigm focuses on identifying rational explanations of organizational behavior, function, and operational relationships. The objective nature of this paradigm postulates that these explanations can be provided via quantifiable means. Additionally, this paradigm emphasizes the provision of "practical solutions to practical problems" (Burrell and Morgan, 1979, p. 26), which ties to the pragmatic axiology of this research. This paradigm assumes that it is possible to identify regularities within an organization system, that these regularities can be explored using statistical models, and the purpose of the research is to better understand these relationships to impact the organization's functioning (Jackson, 1991). Additionally, this paradigm assumes that recommendations can be made from the regularities and understandings identified by the research (Saunders, Lewis, & Thornhill, 2012). Essentially, the functionalist paradigm includes the ontological, epistemological, and axiological selections that frame this research.

According to McGuire et al. (2007), in the functionalist paradigm, the goal of HRD is to develop people in order to improve individual or organizational performance. Some refer to this as the strategic perspective (Garavan & Carbery, 2012). This is consistent with Gibb and Waight's (2005) perspective that the traditional goal of HRD to improve both human welfare and

economic value via business performance. Types of HRD research informed by this paradigm include strategic human resource development (Garavan & Carbery, 2012), evidence-based HRD (Hamlin, 2002), human capital HRD (McGuire, Cross & Murphy, 2007), and managerial perspectives of HRD (Maxwell & Watson, 2004). The functionalist paradigm is appropriate for this research in that it informs strategic HRD research. Additionally, this paradigm is appropriate for this research because it is consistent with a view of the organization as a system designed to convert inputs to outputs (McGuire et al., 2007). The functionalist paradigm incorporates HRD into this system as a subsystem, comprised of people working towards individual and organizational goal attainment.

Conceptual organization assumptions

In addition to philosophical assumptions and research paradigms, assumptions about the organization affect identification of an appropriate systems theory perspective for this research (Jackson, 1991). According to Morgan (1986) there are a myriad of ways to conceptualize an organization including: machines, brains, organisms, cultures, and even psychic prisons. Choosing a conceptualization of the organization is critical to organizational research because each conceptualization contains assumptions about the nature of organizations, including organizational processes, structures, and relationships (Atkinson, 1984; Jackson 2001; Morgan, 1986). This research assumes an ecological view of the organization.

In operations research, the ecological view indicates that organizations are systems that interact with external environments through permeable boundaries. Others refer to this perspective as the “organization as an organism” view (e.g., Kauffman, 1993; Morgan, 1997). This perspective is consistent with the functionalist paradigm that guides this research. The functionalist paradigm emphasizes economic value, where the basis of value is economic

exchanges with the external environment (McGuire et al., 2007). Additionally, the focus of HRD within this paradigm is achievement of organizational goals (McGuire et al., 2007). Often these goals reflect environmental conditions outside the system (Gibb & Waight, 2005), either as a way to change the external environment or in response to external environmental changes. This means using the functionalist paradigm necessitates the recognition of system boundaries and information exchanges with the external environment.

The ecological view is a prominent conceptualization in organization theory. According to Kast and Rosenzweig (1972), Scott (1961) popularized the ecological view by combining systems theory research from the natural sciences with research conducted by preeminent organization researchers of the time. Jackson (1991) augments Kast and Rosenzweig's (1972) assertion and builds on Scott's (1961) discussion by providing an overview of the organization as an organism. According to Jackson (1991), the organization organism is an open system that function via inter-dependent subsystems, which interacts with and adapts to its external environment. As an open system the organization exchanges feedback with its external environment. These exchanges may result in making changes within the system to ensure its survival. In terms of an organization, survival relates to meeting organizational objectives. Subsystems work both individually and collectively as inter-dependent organizational functions to meet the organizational objectives.

This and other HRD research, conceptualize HRD as a subsystem within organization systems. Multiple models of HRD illustrate HRD's relationship to other organizational subsystems (e.g., Garavan & Carbery, 2012; Gilley & Maycunich Gilley, 2003; Swanson & Holton, 2001). In these models, other operational functions integrate HRD while moving towards achievement of organizational goals. While the authors proposing these models do not explicitly

state they assume an ecological perspective of the organization, their illustration of HRD as a subsystem supports the ecological view of the organization and HRD's place within it.

HRD research focused on exploring the strategic nature of HRD, or strategic HRD (SHRD) also uses the ecological view of the organization. Several SHRD researchers discuss a dynamic external environment as a reason for adopting a strategic approach to HRD (e.g., Akinyemi, 2012; Alagaraja, 2013; Garavan, 1991; Higgs, 1989; McCracken & Wallace, 2000; Poojitha & Devi, 2012). Essentially, changes in the external environment that affect organizational strategy, should also affect the desired outcomes of HRD activities (Akinyemi, 2012; Garavan, 1991; Higgs, 1989; Poojitha & Devi, 2012). McCracken and Wallace (2000) go as far as to state, "continuous knowledge of the external environment... is vital for SHRD to flourish" (p. 283). This knowledge is vital because it allows for identification of HRD activities to address changing and/or future organizational needs (Gilley, Egglund, & Gilley, 2002; Marsick & Watkins, 1992; Desimone, Werner, & Harris, 2002). The emphasis on recognizing the importance of internal and external forces that impact SHRD within the organization system illustrates the use of an ecological view.

Theoretical Framework

The preceding philosophical framework included the philosophical assumptions, research paradigm, and organization conceptualization that guide this research. This framework leads to selection of General Systems Theory as an appropriate systems theory perspective for this research. Jackson's (1991) framework developed for operations research informed this selection by combining philosophical foundations with theoretical considerations.

Theory selection

Jackson (1991) provides a matrix of systems theory perspectives that allows for selection of an individual theory based on philosophical and conceptual assumptions with the research context (See figure 2.2). Jackson and Keys (1984) initially posed this idea and went through several modifications to be as comprehensive as possible. The purpose of this matrix is to help identify appropriate systems theory perspectives based on assumptions about organization systems and relationships within those systems.

	Unitary	Pluralist	Coercive
M e c h a n i c a l	Mechanical- Unitary	Mechanical- Pluralist	Mechanical- Coercive
	Hard Systems Theory	Soft Systems Thinking	Emancipatory Systems Thinking
S y s t e m i c	Systemic- Unitary	Systemic- Pluralist	Systemic- Coercive
	General Systems Theory	Soft Systems Thinking	Emancipatory Systems Thinking

Figure 2.2. Matrix of Systems Theories based on contextual assumptions from *Systems methodology for the management sciences* by Jackson, 1991, p. 29.

The two key aspects of Jackson's (1991) matrix are the nature of systems and the nature of relationships between participants within those systems. Jackson (1991) defines the nature of systems using Ackoff's (1974) distinctions of mechanical or systemic systems. *Mechanical* systems are relatively simple, whereas *systemic* systems are complex, containing multiple interrelated subsystems. The nature of relationships in the system can be unitary, pluralist, or coercive. In *unitary* relationships, participants share a common understanding of goals and generally agree with approaches to achieve those goals. In *pluralist* relationships, participants

have divergent values and beliefs that result in differing view of the context and how to achieve goals within that context. In pluralist relationships, participants can reach consensus about goals and how to achieve them. Coercive relationships are similar to pluralist relationships in that participants have differing values, beliefs, understanding of goals, and interest in goal achievement. However, in coercive relationships, agreement is not reached by consensus, rather, goals are achieved through overt or more furtive coercion of other participants.

Jackson's (1991) matrix illustrates the appropriateness of General Systems Theory (GST) for this research, based on the assumed ecological view. In the ecological view, the organization is an open system that is complex, meaning it is comprised of multiple subsystems. Additionally, the organization interacts with, and then adapts to its external environment. Jackson's (1991) matrix refers to this type of system as a systemic system. The ecological view also indicates the necessity of unitary participant relationships, which refers to genuine agreement among participants about goals, values, and beliefs. The assumption of this research is that the goals of participants within the organization are generally consistent with organizational goals. Jackson (1991) refers to this combined nature of the system and relationships of participants in this system as Systemic-Unitary. Per Jackson's (1991) matrix, this combination suggests that GST is an appropriate theoretical foundation for this research.

Extant HRD research cannot establish the appropriateness of GST as a theoretical framework for this research. Several authors contend that systems theory is one of the foundational theories guiding HRD research and practice (e.g., Ardichvili, 2008; Hartshorn, 1989; Iles & Yolles, 2003; Lee, 2003; McLagan, 1989; Swanson, 2001; Swanson & Holton, 2008). However, the phrase systems theory refers to a collection of theories that study systems, rather than an individual theory (Blaikie, 1993; Burrell & Morgan, 1979; Jackson, 2000;

Saunders, Lewis, & Thornhill, 2012). According to Yawson (2012), “the existing HRD literature does not appear to move beyond broad discussion of systems theory and into specifics” (p. 70). However, GST is a robust theoretical framework that provides language and a theoretical understanding of organizational functioning that guides this research.

General Systems Theory

The basis of GST is research from specialists in a number of fields including biology, economics, and engineering (Yoon & Kuchinke, 2005; Alter, 2007; Dubrovsky, 2004, Amagoh, 2008). Ludwig von Bertalanfy published the comprehensive foundation of GST in 1956. Von Bertalanfy’s (1956) premise is that systems contain interdependent subsystems, distinguished by boundaries that interact to monitor and control inputs to the system from the environment as well as outputs from the system to the environment. In response to von Bertalanfy’s work in the field of biology, Hitch (1960) found that GST provided a unique perspective and understanding about working in complex organizational environment by viewing organizations as systems. This work started a strain of research incorporating GST and the organization environment.

Hitch’s (1960) assertion came out of a body of scholarship beginning the 1950s focused on identifying “a body of systematic theoretical constructs which discuss the general relationships of the empirical world” (Boulding, 1956, p. 197). This scholarship investigated conditions and rules affecting how systems function and sustain performance. According to McLagan (1989), this scholarship provides Human Resource Development (HRD) practitioners and “organizational leaders with a rich and potent framework for understanding and influencing organization behavior and success” (p. 64). This framework provides a set of concepts and related processes that illustrate how organizations function as systems, what that means, and how HRD functions within that system.

Key General Systems Theory concepts. The most basic concept in GST is the system. A system is “an organized whole made up of components that interact in a way distinct from their interaction with other entities and which endures over some period of time” (Anderson, et al., 1999, p. 4). Even though HRD research rarely goes beyond a cursory discussion of systems theory, several authors emphasize the notion of organizations as systems (e.g., Dixon 1992; Jacobs 1989; Knowles 1985; Passmore 1997; Rummler & Brache 1995; Senge 1990; Sleezer 1993; Swanson 1994; Swanson & Holton, 2008; Vaill,1996). Key GST concepts include: parts, subsystems, wholes, boundaries, environment, goal-orientation, interdependence, and organization.

Parts are the lowest distinct unit within the system and comprise *subsystems*. According to Ackoff (1981), each part has an impact on the system’s functioning and is affected by at least one other part in the system. In a biological system, this could be cells or sub-atomic particles. In organization systems, individual employees in their roles are the parts in the system. Subsystems are individual parts that work together towards a common goal. Often complex systems are composed of several subsystems. In organization systems, researchers often characterize subsystems as distinct function units, such as departments or divisions (Cummings & Worley, 2005). This allows for illustration of boundaries between subsystems.

The *whole* is a collection of parts, organized to achieve goals. Another word for whole in this context is Gestalt, or an organized whole (Reiney Tolbert, 2004). The word *whole* is used instead of the word system, because a whole is defined based on the level of analysis (McLagan, 1989). In this context, whole could refer to a subsystem within the system, the system itself, or the system and elements of the external environment. Definition of the whole depends on probability that we can influence or understand the whole in order to accomplish goals with

practical exchange of resources. For example, an HRD practitioner addressing sales deficiency may choose to look at the subsystem of the sales department, the organization, or the organization and its relationship with customers in the external environment. At an even higher level of analysis, the whole could be defined as the sales industry or the U.S. economy.

Boundaries separate the system from the *environment*. Boundaries define systems and make them unique (Friedman & Neuman Allen, 2011). The environment consists of all objects that if changed will affect the system, and those objects that are changed by the system (Hall & Fagen, 1956). In less complex systems, the environment has limited impact on the system's functioning. As systems become more complex, they exchange resources and information with their environment at increasing rates with increasing complexity of exchanges. Systems have different levels of permeability, or ability to transfer information and resources through their boundaries. Closed systems have limited permeability and "are isolated from their environment" (von Bertalanffy, 1968, p. 39), whereas open systems allow for the exchange of information and resources. Organization systems also have different levels of permeability (Cummings & Worley, 2005). Organizations impacted strongly by environmental forces are more open and have greater permeability than organizations that are less influenced by the environment.

Systems are **organized**, which means that their functions purposeful. Each part within the system has a specific function and boundaries within which to perform that function (Ackhoff, 1981). In less complex systems, function generally relates specifically to the part's role within the system. As systems become more complex, parts complete additional functions that may go beyond the part's role within the system. Katz and Kahn (1966) established that in an organization system, people often perform multiple functions to achieve goals. This is

distinguished from less complex systems where functional organization may be more focused on reaction or response to the environment.

Interdependence states that behavior of parts impact behavior of other parts within the system as well as the system itself (Martinelli, 2001; Skyttner, 1996; Steele, 2003). The originator of GST, von Bertalanffy (1968), explained interdependence as the assumption that “the whole is more than the sum of its parts” (p. 18). In terms of an organization system, this means that individual parts or people within the system achieve higher performance working together rather than alone. Researchers such as Thompson (1967) and Katz and Kahn (1966), explain how interdependence operates in the workplace. These authors established that individual work should be organized and sustained via process, policies, and other structures in order for the organization to achieve its goals.

Goal-orientation refers to the need for organization systems to achieve some purpose. Katz and Kahn (1966) added goal-orientation as a key concept of GST, when they applied GST theory to operations science. Katz and Kahn (1966) state that organization systems exist to achieve goals and these goals provide the reason for parts and subsystems to work together. Goal identification happens in a number of ways. McLagan (1989) characterizes goals as imposed, reactionary, and voluntary. Some for in the external environment levies imposed goals against the system. The system internally develops reactionary goals in response to something in the external environment. Voluntary goals are also internally developed, but are freely chosen within the system. Regardless of the goal, parts and subsystems work interdependently to achieve them.

System Processes. All systems carry out processes. In addition to explaining system components and how they operate, GST provides a framework for explaining processes and patterns common to all systems (Bausch, 2002; Capps & Hazen, 2002). Literature about the use

of GST to study organization systems illustrates how system processes identified in biology translate for use in operations research (e.g., Amagoh, 2008; Kast & Rosenzweig, 1972; Mele, Pels, & Polese, 2010). Nine processes identified and discussed in the operations literature inform how this researcher understands the functions of organization systems. The processes are equilibrium maintenance, feedback, growth, conversion/production, knowledge exchange, equifinality, executive decisions, development, and interventions.

Equilibrium maintenance. All systems, either naturally occurring or organized by people, seek equilibrium (Kast & Rosenzweig, 1972; Martinelli, 2001; Steele, 2003). Equilibrium is a state of balance within the system or between the system and its environment (Friedman & Neuman Allen, 2011). Equilibrium maintenance, therefore, refers to the tendency of systems to move toward this state of balance. Systems adapt to information received from the environment that indicate the need for change to achieve equilibrium (von Bertalanffy, 1956). Within systems, subsystems or individuals adapt in a similar manner based on information received from other subsystems or individuals. In social systems like organizations, individuals or groups may create pseudo-equilibriums (McLagan, 1989). Pseudo-equilibriums occur when the individual or group creating it ignores information from the environment that suggests the need for adaptation. This results in the perception of equilibrium, even if equilibrium does not exist.

Feedback. Feedback also occurs in all systems and is a reaction to a stimulus (Kast & Rosenzweig, 1972). The stimulus is a behavior, action, or output. Feedback is the effect of that stimulus or cause. Feedback is information received from the environment that indicates how it is reacting to the system. Feedback can also occur within the system as subsystems or individuals react to actions taken by other subsystems or individuals. Essentially, this feedback indicates if

the behavior is acceptable or not. In organization systems, an organization successfully adapts to its environment when it recognizes and changes based on feedback received from the environment.

Growth. As systems become more complex, growth becomes increasingly important (Boulding, 1956). Growth refers to expanding the substance and/or size of a system using resources from the environment. Physical growth occurs when the system takes in something from the environment. This material may be returned to the environment as a more valuable product than its original form. Growth may be limited if it does not provide a net gain for the environment as well as shortages of resources and actions of other systems to achieve equilibrium (McLagan, 1989). Organization systems grow because of positive feedback. Generally, this relates to producing value for their stakeholders (Randolph & Blackburn, 1989; Montouri, 2000). If the organization does not produce this value, feedback from the stakeholders and/or other aspects of the environment will slow or even stop growth.

Conversion/production. All systems internally convert inputs from one state to another (von Bertalanffy, 1956). Even systems that have limited interaction with their environment engage in conversion or production. As systems become more complex, so to do the conversion or production processes and outputs.

Figure 2.3 illustrates a very general, basic model for the conversion process. In this diagram, outputs refer to what the system produces while working to achieve its goals. Inputs are the information, materials, and energy necessary for the process(es) to create the output. Process(es) refers to conversion or production, or the actions and direct responses that reorganize or transform inputs into outputs. Katz and Kahn (1966) were the first to introduce this concept to organizational environments (Amagoh, 2008; Capps & Hazen, 2002; Melcher, 1975). In

organization systems, inputs consist of resources such as people, energy, materials, and information. In organization systems, conversion or production processes are primary or key processes, such as production for a manufacturing organization. Organizations also engage in secondary or support processes that include responses and behaviors to support the production of outputs and goal achievement, such as training. Outputs consist of what the system transformed and returned to the environment, such as goods or services.

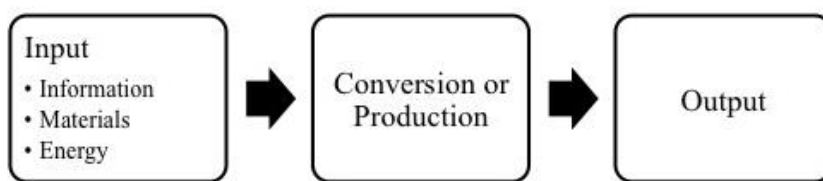


Figure 2.3. The basic conversion process

Knowledge exchange. Due to the interdependent nature of system parts and subsystem, the ability to exchange knowledge influences the efficiency and effectiveness of the system (McLagan, 1989). In more complex systems neither the environment nor the system is static. This means that parts and subsystems must take in knowledge and information in order to adapt to dynamic conditions. Additionally, in organization systems, knowledge and information is generated within, necessitating frequent exchange with other parts, subsystems, and the environment. The combined dynamic nature of environments and systems along with the internal generation of knowledge and information results in a large amount of information. Therefore, a major process of organization systems is recognizing appropriate information, and then converting it into knowledge that can be useful to the system. Once converted, the resulting knowledge can be exchanged within and without the system.

Equifinality. The principle of equifinality refers to reaching the same or similar end states starting from different beginning states, using different approaches (Jackson, 1991; Kast &

Rosenzweig, 1972; Katz & Kahn, 1978; Mele, 2010). In more simplified terms, there may not be a single path between the starting and ending points. In operations research, equifinality refers to different organizations being able to achieve the same or similar objectives using different resources and approaches (Kast & Rosenzweig, 1972). This is particularly applicable to HRD research in that there are multiple ways to achieve desired objectives relating to training, employee development, and organizational development.

Executive decisions. The purpose of less complex systems drives the organization of subsystems and parts, actions taken by the system, and how the system evolves. In systems that are more complex however, executive decisions drive these actions. In organization systems, people determine which goals to pursue, how to organize parts and subsystems, and how to interact with the environment. McLagan (1989) states that people within organization systems “make executive decisions to change their purposes, goals, and processes” (p. 73) in order to act more efficiently and effectively internally and with the environment. Only more complex systems, like organization systems, are capable of this type of decision-making. Executive decisions require thinking beyond the immediate system and its situation in time and place (McLagan, 1989). These decisions require foresight, thinking tangibly about the future, and the ability to test choices again various scenarios.

Development. In terms of GST, development refers to the formation of new capacity within a system. Development results in more efficiency and effectiveness within the system and its interactions with the environment. Another result of development is the ability to use resources more effectively.

Gharajedaghi (1985) provides an overview of the development process in organization systems. In this overview, development is an active process that involves creating and spreading

knowledge, learning from knowledge exchange in order to adapt, discovering new implications or perspectives, and then adopting or creating new paradigms. McLagan (1989) builds on this overview by identifying the personal nature of development and its implications for the organization system. On a personal level, development helps individuals better understand and expand their goals and purposes, better manage resources, as well as respond to complexity and change. Development also fulfills basic human needs as identified by theories such as Maslow's Hierarchy of Needs, Herzberg's two-factor theory, and Alderfer's ERG (Existence, Relatedness, Growth) theory. In organization systems, development is a critical process because it has virtually unlimited potential to impact individuals, subsystems, and the system. This impact is the result of developing a basic resource – knowledge – that cannot be depleted by time or use.

Interventions. Cummings and Worley (2005) define interventions as “a set of sequenced, planned actions or events intended to help an organization increase its effectiveness” (p. 134). Interventions are temporary, but deliberate actions taken to make major changes to system processes, structures, or goals. Interventions are designed to help parts and subsystems work together or successfully enact change. They are transition events, purposefully designed to counteract maintaining the status quo, or maintain equilibrium. Essentially, interventions are designed to upset the status quo to accelerate development that leads to positive change.

General Systems Theory limitations. The primary limitation of GST in Human Resource Development (HRD) research is the assumption of a linear systems model. The basis of a linear system is the “input-conversion-output” model (Illes & Yolles, 2003; Yawson, 2012). GST assumes that systems convert inputs, such as information, materials, and energy, into new or different outputs (Katz & Kahn, 1966). Some authors contend this model does not reflect the reality of HRD practice (Senge et al., 2010; Yawson, 2012). These authors contend that HRD

practice is rarely linear. Additionally, linear models present a barrier to understanding and working within organization systems. Jayanti (2011) contends that this linear model neglects the complexity of organization systems and the relationships among subsystems. In order to study such a complex concept, a non-linear model may be more appropriate.

The limited complexity of GST is also a limitation in HRD research. Organization systems operate in dynamic environments, often necessitating rapid changes within the system (Clippinger, 1999). GST does not provide insight into how to interact with this complexity. Additionally, some authors contend that in order for GST to be useful for HRD research, it must include a range of choices and velocity of change that impact organizational predictability and stability (Sullivan, 2004; Wang, 2004). According to these authors, the principle of equifinality, reaching similar end states using different approaches in different conditions, is insufficient to address the myriad of choices and environmental complexity facing organization systems.

Closely related to this limitation is the challenge of identifying organization system boundaries. According to GST, boundaries between the organization system and its environment are distinct and observable (Fioretti & Visser, 2004). However, Castells (1996) states that boundary differentiation may pose a challenge in complex organizations. This challenge is due to the multiple modes of communication and interaction the organization system with its external environment. Additionally, within HRD research, it may be challenging to differentiate between the HRD subsystem and other subsystems within the organization system. According to Gilley and Maycunich Gilley (2003), when strategically integrated within an organization system, the HRD function ceases to be an independent function or subsystem. Rather, HRD becomes a function within all organization subsystems.

Despite these limitations, GST is a good fit for the purpose of this research. GST provides models and vocabulary to describe the “complex environment in which HRD professionals operate” (Yawson, 2012, p. 72). This description includes definitions of the organization as a system, how HRD functions within that system, and the processes conducted within the system. Further, GST provides an understanding of HRD as a strategic function, meaning that it is aligned and integrated with other areas of the system. This provides an explanation for how SHRD may impact organizational performance to answer the question “does SHRD matter?”.

Conceptual Framework

This research uses General Systems Theory (GST) to explore relationships among Human Resource Development (HRD), Strategic Human Resource Development (SHRD), and Malcolm Baldrige National Quality Award (Baldrige Award). These concepts comprise the conceptual framework for this research. A conceptual framework is describes the key elements of the research as well as the relationships among them (Miles & Huberman, 1994). The concept of HRD refers to a function within an organization system focused on providing employee training and development. SHRD is a specific conceptualization of HRD that situates HRD as a subsystem within an organization system. This research uses the framework underlying the Baldrige Criteria for Performance Excellence (Baldrige Criteria) to show the relationship between SHRD and the organization system performance, by illustrating the organization as a system that includes SHRD. The purpose of the remaining literature review is to explore how HRD, SHRD, and Baldrige literature discuss the question “does SHRD matter?”.

Human Resource Development (HRD)

The concept of HRD can be traced back to the 1950s and 60s. During this period, there were significant changes to workforce demographics, the nature of work, and understanding of the role of training within organizations. In the 1950s, “population growth along was responsible for the growth of the labor force” (Toossi, 2002). This time period saw an unprecedented growth of the workforce. While white men comprised 70% of the workforce, previously underrepresented groups were also joining the workforce at rapid rates. Two examples of underrepresented groups are women and non-white men (Shaw, 1994). Even though authors report an increase in non-white men in the workforce during this time, the Bureau of Labor and Statistics did not collect statistics relating to participation of non-white men in the workforce until the 1980s (see Toossi, 2002).

During this post-war period, work became more complex as industry invested heavily in research and development of new processes and products. Efficiencies developed to meet wartime production demands were adapted for use during peacetime reconstruction (Shaw, 1994). This efficiency allowed for greater investment in research and development to create new products, processes, and technology. Larger investments into workforce training were required to continuously educate employees about these developments (Stubblefield and Keane, 1994). In 1958, Clark and Sloan exclaimed that corporate training programs “almost burst into existence during the past ten years” (p. 25). This means that organizations rapidly increased their spending on job-related, corporate sponsored training.

HRD emerged during this time of growth in industry, workforce, and training. Shaw (1994) states that HRD grew out of resistance to the demotivating approaches used to increase efficiency during wartime. Stead and Lee (1996) build on this statement by contending HRD

grew out of discussions about employee motivation and development by organization psychologists (e.g., Argyris, 1957; Herzberg, Mausner, & Snyderman, 1959; Likert, 1961; McGregor, 1960). Alternatively, French (1985) credits the introduction of Organization Development as the impetus for HRD. Stubblefield and Kean (1994) support this assertion and define Organization Development as “a process for understanding and changing human systems derived from the earlier developments of academic and corporate researchers in laboratory training, survey and action research, and feedback techniques” (p. 266). Regardless of inception point, these combined emphases of organization and employee development lay the foundation for modern Human Resource Development.

Human Resource Development defined. HRD is a function performed within the organization system that incorporates all activities associated with employee learning and development. HRD is broadly defined as planned activities designed to facilitate learning and development in the workplace to benefit both the learner and organization (Garavan, Costine, & Heraty, 1995; Lammintakanen, Kivinen, & Kinnunen, 2008; Sambrook, 2004). This definition illustrates the scope of HRD, which incorporates a variety of:

organizational practices that focus on learning; training, learning and development; workplace learning; career development and lifelong learning; organizational development; organizational knowledge and learning. (Mankin, 2009, p. 6)

The definition itself is intentionally broad to encompass a variety of perspectives within the field. Garavan (1991) put forth that the root of the definitional challenge is the wide variety of contexts and activities referred to as HRD. The reason for this variety is due in part to the “chaotic, random, blind, and serendipitous... emergence and spread of HRD” (Blake, 1995, p.

22). With such a tumultuous beginning and evolution, it would be inappropriate to create a more precise definition, as it would not allow for continued evolution of HRD.

Planned activities. Some authors define HRD in terms of the types of activities used by the HRD subsystem (e.g., Buckley & Caple, 1995; Harrison, 1997; Reed & Barrington, 1997). These authors outline practices relating to learning in the workplace, career development, and organization development. Moorby (1996) significantly expanded these definitions by incorporating activities related to job design, motivation, and evaluation. While the list of activities is broad, research is consistent that interventions should address a need within the organization system.

Activities planned at a tactical level are generally reactive to issues within subsystems. The tactical nature of HRD means that it focuses on performance at the individual and process levels (Holdaway & Saunders, 1992), with activities designed to meet current needs by addressing current issues (Jones, 1981; Banham, Frazer, & Heath, 1987). This means activities may or may not be “explicitly linked to corporate needs and future requirements” (Sambrook, 2000, p. 163). Additionally, HRD may or may not be involved in identifying current or future needs. Therefore, planning is important, but it generally focuses on the individual or process levels.

Facilitate learning and development. HRD literature consistently links activities to both learning and development. While there is a broad list of HRD-related activities, the focus of these activities consistently relates to learning and development at the individual level (e.g., Moorby, 1996; Stewart, 1998). This is particularly evident with HRD models that incorporate the areas of training, organization development, career development, motivation, and reward (Bontis & Fitzenz, 2002; Garavan, McGuire, & O’Donnell, 2004; Mathieu & Martineau, 1997; Mathieu,

1991). These models illustrate HRD's focus on developing the "whole person" as an individual within the organization system (Stewart & McGoldrick, 1996, p. 2). The purpose of training is to help an employee learn their job. Organization development relates to providing learning to help the employee understand relationships among subsystems to enhance organizational performance. Career development, motivation, and reward bring a more holistic view of the employee, incorporating both current and future performance within the organization. Each of these HRD areas provides a foundation or reason for "deliberate, purposive and active interventions on the natural learning process" (Stewart, 1998, p. 9). The HRD function incorporates all of these interventions.

Benefit the learner and the organization. HRD research emphasizes combined value for the learner and the organization. In early HRD research, this combined value is what differentiates HRD from training and development (Garavan, Costine, & Heraty, 1995; McLagan, 1989; Stewart & McGoldrick, 1996; Swanson, 1994). Stewart and McGoldrick (1996) saw this as a fundamental elevation of the training function, to a new function that "covers the whole organization and addresses the whole person" (p. 2). Later analyses of HRD research confirm the transition from an emphasis on individual learning via training to individual and organizational learning via HRD (e.g., Hamlin & Stewart, 2011; Lammintakanen, Kivinen, & Kinnunen, 2008; McGuire et al. 2007). Stewart and Sambrook's (2012) historical review of HRD literature illustrates the continued emphasis on value for both the learner and organization in HRD practice and scholarship. The authors refer to this combined value as a "holistic approach" to HRD, meaning that HRD incorporates learning at all levels of the organization to benefit learners, teams, and the organization.

At the individual level, researchers study HRD in terms of activities and benefits. Several authors provide definitions of HRD that include lists of activities carried out at the individual level (e.g., Moorby, 1996; Stewart, 1998). Analysis of HRD activities at the individual level emphasizes “the development of human potential and is focused towards aspects of learning, job satisfaction, career management and individual experience” (Garavan, McGuire, & O’Donnell, 2004, p. 3). The benefits derived from these activities include career satisfaction (Mathieu & Martineau, 1997), job satisfaction (Mathieu, 1991), as well as motivation and commitment (Bontis & Fitzenz, 2002). A hallmark of HRD research is combining these individual activities and value with benefits for the organization as well.

At the organizational level, researchers study HRD in terms of the types of benefits the organization receives for providing HRD activities. Some authors discuss benefits in terms of organizational goals (e.g., Lammintakanen, Kivinen, & Kinnunen, 2008; McGuire et al., 2007). Others focus on specific organizational results relating to “resource maximization, productivity enhancement and realizing the full potential of employees towards achieving organizational goals” (Garavan, McGuire, & O’Donnell, 2004, p. 5). Regardless of research emphasis, researcher argue that one of the primary challenges to HRD is demonstrating its impact on organizational performance (Ruona et al., 2002). This is due to the myriad factors that may affect organizational performance beyond HRD.

Strategic Human Resource Development (SHRD)

SHRD is a particular conceptualization of HRD (Sambrook, 2000; Garavan & Carbery, 2012). In General Systems Theory terms, SHRD is a subsystem within the organization system. HRD is the function of the SHRD subsystem. As such, the primary distinction between HRD and SHRD is scope. HRD has a larger scope, incorporating all activities associated with planned

learning in the workplace (Garavan, Costine, & Heraty, 1995; Lammintakanen, Kivinen, & Kinnunen, 2008; Sambrook, 2004). HRD scholarship studies learning at the all levels within an organization, whereas SHRD emphasizes activities at the strategic level. The strategic level includes organizational goals and objectives to improve organizational performance (Blazey, 2013; Wognum & Fond Lam, 2000). The difference lies in SHRD's particular focus on organization system level method selection, implementation, and measurement at the organization system level.

As with HRD, shifting workforce demographics was a precipitating factor a change in the conceptualization of HRD activities within an organization. During the 1980s and 1990s, the age of the workforce became a growing concern. Baby boomers, those people born between 1946 and 1964, started to retire and dramatic predictions about the impact of this generation's retirement began to increase (e.g., U.S. Department of Commerce, 1997). According to the U.S. Bureau of Labor Statistics (1999), this generation's retirement created, and will continue to create, a surplus of available jobs. Previously underrepresented groups started entering the workforce at increasing rates as more opportunities became available. Some of these groups included working mothers, people of Hispanic heritage, and immigrants from Africa, Asia, and the Middle East (Reitman & Williams, 2001). Participation of these groups increased workplace diversity.

While workforce demographics were changing, so too was the nature of work. During this time, there was a shift away from a production-based economy that emphasized manufacturing and industrial based jobs, to an information-based economy that necessitated workers with more technology-based skills. According to Judy (1999), "too many members of our present workforce – and too many young people entering the workforce – lack the attitudes,

knowledge, and skills to properly fill the jobs that our high-tech economy is offering in rapidly growing numbers” (p. 22). Reitman and Williams (2001) provide a list of impacts this shift caused in the HRD field, including: increased educational requirements; broader understanding and application of terms such as learning organization, intellectual capital, and knowledge worker; surge of executive level positions related to learning, such as Chief Knowledge Officer and Chief Learning Officer.

The changing demographics and nature of work necessitated a shift in the way organizational leaders conceptualized HRD. A popular training and development magazine at the time stated that “corporate training and education are enjoying increasing respect as low unemployment and a shortage of qualified workers make companies more aware of the need for ongoing training and retraining of the workforce” (Abernathy et al., 1999, p. 39). Additionally, in the 1990s, HRD activities gained greater legitimacy as U.S. Secretary of Labor, Robert Reich, established the Office of Work-Based Learning (Shaw, 1994). Learning was “heralded as the torch that lights the way toward a competitive advantage in the workplace” (Crutchfield, 2013, p. 32). It also became the basis for strategies to achieve and maintain high performance (Shaw, 1994). Essentially, many organizational leaders began to elevate the importance of HRD activities.

Even with increased need for and legitimacy of HRD activities, many organizations started reducing the amount of HRD available to employees. Growing global economic competition and decreased productivity in relation to international competitors resulting in closer scrutiny of expenditures, resulted in reduction of training in many organizations (Oakes, 2014). Early SHRD models illustrate how HRD activities could improve organizational performance (see Garavan, 1991; Torracco & Swanson, 1995). The models incorporated the word “strategic”

in order to make an explicit distinction between earlier HRD models (Garavan 1991; Fredericks and Stewart 1996; Harrison 1997; Lee 1997; Sambrook, 2000). This distinction was predicated by the need to illustrate a more business-focused approach to carrying out HRD activities; one that emphasized ROI and the impact HRD activities could have on organizational goals.

Additionally, the emphasis on strategy illustrated how HRD could be impactful beyond simply training employees (Gilley & Maycunich Gilley, 2003). Rather, using *strategic* HRD (SHRD), complete systems of HRD activities throughout the organization could be aligned with strategic goals to impact employee and organizational performance in both the present and future.

Conceptual definition of Strategic Human Resource Development. Individual definitions and models of SHRD are as varied as those of HRD (Lee, 1997). As the purpose of this research is to gain greater understanding of SHRD's impact on organizational performance, common themes from the literature were selected to provide a conceptual definition of SHRD that illustrates how it functions as part of an organization. For the purpose of this research, SHRD consists of improving organizational performance through strategic alignment and integration of multiple purposefully selected and proactively implemented methods for workforce training and development.

Improving organizational performance. Across definitions and models of SHRD, there is general agreement that SHRD focuses on improving organizational performance (Garavan & Carbery 2012; Gilley & Maycunich Gilley 2003; Robinson & Robinson 2005; Swanson, 1994; Swanson & Holton, 2009; Torraco & Swanson, 1995). Swanson and Torraco (1999) succinctly describe performance as “the way in which something or someone functions” (p. 1). Rummler and Brache (1992) conceptualized performance in terms of three levels: individual, process, and organizational. This model is important to SHRD because it provides a distinction between

training and development activities at the individual level and SHRD strategies used at the process and organizational levels. Training and development activities designed to improve individual performance may be part of an SHRD strategy. However, the strategy itself should focus on processes and organizational performance improvement. While individual performance may contribute to the strategy, it is not the ultimate goal. Rather individual performance is the means of goal achievement (Gilley & Maycunich Gilley, 2003; McCracken & Wallace, 2000; Swanson, 1994; Torraco & Swanson, 1995). This is integral to SHRD in that it illustrates how SHRD strategies can have an impact on organizational performance.

Alagaraja (2013) operationalized performance as a dependent variable of organizational operations that includes individual, work process, and organizational productivity outputs. Alagaraja (2013) also states that this definition is based largely on concepts originally explored in the management science literature. A brief review of this literature makes clear that while organizational performance is a dependent variable, its measurement varies widely from study to study (e.g., Boyd, Gove, & Hitt, 2005; Kirby, 2005; March & Sutton, 1997; Richard, Devinney, Yip, & Johnson, 2009). For example, a review of articles published in four top management journals found various authors used 228 distinct organizational performance measures (Boyd et al., 2005). This illustrates the complex nature of organizational performance comprised of multiple measures.

Aligned and integrated with organizational strategy. Garavan and Carbery (2012) state that adopting an aligned and integrated focus of workforce training and development strategies is the defining element of SHRD, in that it moves “HRD from an operational to a strategic activity” (p. 25). Operational activities happen at the lowest level work unit in the organization, such as at the department level. They are also accountable for specific processes and the results of those

processes. Strategic activities, on the other hand, do not have a central department or location. Rather these activities align across multiple department or units in order to achieve consistency of organizational efforts towards common goals (Blazey, 2013). Organizational efforts are defined as functions, plans, processes, resource decisions, results and analysis performed at all levels of the organization. Integration goes beyond alignment. It indicates a synergistic relationship between different organizational efforts within the organization system, which are aligned towards common goals (i.e., organizational strategy) and collaboratively work to achieve them (Blazey, 2013). In this context, organizational strategy refers to organizational goals and objectives used to achieve improved organizational performance (Blazey, 2013; Wognum & Fond Lam, 2000). Aligning and integrating HRD with this strategy effectively changes HRD into SHRD.

Garavan (2007) applied these concepts to SHRD by stating it is a “coherent, vertically aligned and horizontally integrated set of learning and development activities which contribute to the achievement of strategic goals” (p. 25). Vertical alignment of SHRD strategies allows for creation of organization-specific knowledge with a continuous focus on achievement of organizational strategy (Garavan, 2007; Garavan & Carbery, 2012; Hyland et al., 2005). Development of that organization-specific knowledge is done through horizontal integration, which is combining knowledge and efforts from across the organization (Davenport, Prusak & Wilson, 2003; Garavan, 2007; Hyland et al., 2005; Pfeffer, 1994). SHRD strategies therefore should be developed with a focus on organizational strategy (i.e., alignment) and implemented with an emphasis on collaboration among organizational efforts (i.e., integration).

Purposeful selection and proactive use of multiple methods. SHRD is the proactive implementation of workforce training and development. HRD literature explores a variety of

training and development approaches, purposes for using those approaches, and their ultimate impact (Mankin, 2009). The HRD literature also provides a variety of perspectives on what should trigger the implementation of an HRD approach (Garavan, Heraty, & Barnicle, 1999). Some HRD perspectives allow for “reactive, piecemeal interventions in response to specific problems” (Beer & Spector, 1989, p. 25). Alternatively, the SHRD literature is clear that planning and implementation of SHRD approaches should focus on achievement of organizational strategy. This conceptual shift from reactionary to proactive activities, situates SHRD as a leadership function that assists in the improvement of organizational performance (Garavan, 1991; Garavan & Carbery, 2012; McCracken & Wallace, 2000).

SHRD incorporates a variety of methods and practices. Garavan and Carbery (2012) refer to this as a “multiplicity of strategies” (p. 25). A number of studies identify SHRD strategies (e.g., Garavan, 1991; McCracken & Wallace, 2000; Stewart & Sambrook, 2012; Torraco & Swanson, 1995). Several authors have explored the efficacy of various SHRD strategies in terms of organizational performance and individual employee performance, with varying degrees of agreement about the impact of these strategies (e.g., Burke & Hellwig, 2011; Collins & Clark, 2003; Gowen, Mcfadden, Hoobler, & Tallon, 2006; Hyland, Di Milia, & Becker, 2005; Lammintakanen et al., 2010). With a vast array of strategies from which to choose, SHRD practitioners can select strategies that both align and integrate with organizational strategy to improve organizational performance.

Strategic Human Resource Development and the Criteria for Performance Excellence

The relationship between Strategic Human Resource Development (SHRD) and organizational performance can now be studied empirically using applicant scores from the Malcolm Baldrige National Quality Award Baldrige Program. The Baldrige Program was

selected specifically because it situates workforce training and development at a strategic level in a model focused on improving organizational performance. To explain how SHRD can be studied using the Baldrige Program applicant scores, this section provides an overview of the Baldrige Program, the Baldrige Criteria for Performance Excellence (Baldrige Criteria) upon which applicants to the program receive scores, the proposed interrelated nature of the Baldrige Criteria and how researchers explore the Baldrige Criteria relationships.

The Malcolm Baldrige National Quality Award Program. The Malcolm Baldrige National Quality Award (Baldrige Award) was implemented on August 20, 1987 with the creation of Public Law 100-107 (Montoya, 2011). As with SHRD, the Baldrige Program was developed as a direct result of decreased U.S. productivity and increased global competition. Originally, the award was designed to encourage continuous quality improvement in the manufacturing sector and has expanded into other industries including healthcare, education, small business, and non-profit (Evans, 2010; Lee, Lee, & Olson, 2013; Nobles McDonough, 2012). The Baldrige Award is given annually to organizations within these industries that demonstrate application of “leading edge validated management practices” (Evans, 2010, p. 38) outlined in the Baldrige Criteria.

Burke and Hellwig (2011) succinctly summarize the Baldrige as recognition for the “use of an integrated approach to improve organizational performance practices, capabilities, and results,” (p. 302). The power of this summary is its succinct statement of concepts that are similarly, but more complicatedly stated by a myriad of other authors (e.g., Brown, 2004; Kaye & Anderson, 1999; Unger, 2013). The Burke and Hellwig (2012) summary illustrates the key elements of the Baldrige Criteria: performance improvement, integrated approach, and organizational practices.

Use of the Baldrige Criteria has been shown to encourage performance improvement and positively affect organizational performance. According to the Baldrige Program (2013), performance refers to outcomes or outputs of processes. This performance is reviewed over time and compared with those of competitors and/or other organizations providing similar services or products. The goal of implementing the Baldrige Criteria is to achieve performance excellence. According to Baldrige Program (2013), organizations that reach this level of organizational performance demonstrate

an integrated approach to organizational performance management that results in (1) delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability; (2) improvement of overall organizational effectiveness and capabilities; and (3) organizational and personal learning. (p. 48)

This means that the purpose of Criteria implementation is creation of an integrated approach to performance management that leads to performance excellence.

The impact of the Baldrige Criteria on organizational performance has been studied by a number of authors. Several studies have found a positive correlation between use of the Criteria and improved overall financial performance (Eriksson & Hansson, 2003; Handfield, Ghosh, & Fawcett, 1998; Jacob, Madu & Tang, 2004) and performance in financial markets (Tai & Przasnyski, 1999). Beyond financial performance, research has been conducted using other researcher-defined measures of organizational performance, such as customer satisfaction (e.g., Claver & Tari, 2007) and shareholder value (e.g., Ramasesh, 1998; Balasubramanian, Mathur & Thakur, 2005). Case studies also illustrate a positive impact on several different aspects of organizational performance recognized by Baldrige Award winners (e.g., Burke & Hellwig, 2011; Cazzel & Ulmer, 2009; Lee & Kaplan, 2007; Moss Kanter & Klein, 1996; Oliva, Quinn &

Keating, 2004). Other studies compare the Baldrige Program to other award programs around the world in terms of impact on organizational performance (e.g., Bohoris, 1995; Ghobadian & Woo, 1994; MacDonald, Zairi & Idris; Talwar, 2011; Rao Tummala & Tang, 1996; Tan, 1996; Vokuraka, Stading, Brazeal, 2000). All research reviewed illustrates a consensus that implementing the Baldrige Criteria will positively impact organizational performance.

The organizational performance improvement and excellence demonstrated by Baldrige Award winners has resulted in its widespread acceptance as a model for continuous organizational improvement (Mai & Evans, 2014). A number of researchers in a variety of industries have studied positive impacts of the Criteria and Framework for Performance Excellence (Baldrige Framework) on organizational performance (e.g., DeBaylo, 1999; DeCarlo & Sterett, 1990; Frank, 1996; Frank, 1997; Frank & Chapman, 1995; Goldstein & Schweikhart, 2002; Hodgetts, 1994; Kelley, 2002; Mai & Evans, 2014; Meyer, 1998; Nesbitt, 2006; Rayner, 1992; Townsend & Gephardt, 1996; Ugwueke, 2001; Unger, 2013). This positive impact led to widespread acceptance of the Baldrige Criteria and Baldrige Framework across the U.S. as well as other countries. In the U.S., the Baldrige Program has been adapted for state-level programs based on the Baldrige Criteria and Baldrige Framework. Currently, there are 16 state-level programs and 13 regional programs that serve all but two states (Alliance for Performance Excellence, 2014). Additionally, many other countries have benchmarked the Baldrige when developing their own national quality awards (Kim & Oh, 2012).

The Criteria and multiple Frameworks for Performance Excellence. The Framework for Performance Excellence (Baldrige Framework) is the underlying relational model for the Malcolm Baldrige National Quality Award (Baldrige Award), similar state-level programs, and used within organizations regardless of their intent to apply for either level of award. The

Framework illustrates the relationships among the Baldrige Criteria for Performance Excellence (Baldrige Criteria) and organizational performance. The Baldrige Criteria are comprised of seven interrelated categories designed to “define the processes and results of quality management” (Mai & Evans, 2014, p. 4). The categories in the most current iteration of the Baldrige Criteria include: Leadership, Strategic Planning; Customer Focus; Measurement, Analysis, & Knowledge Management; Workforce Focus; Operations Focus; and Results (Baldrige Performance Excellence Program [Baldrige], 2013). Each category is broken into items that contain factors that successful organizations emphasize in order to operate successfully in competitive, dynamic business environments (Baldrige, 2013; Blazey, 2013; Evans & Mai, 2014; Mai & Evans, 2014). These factors are called requirements. Please see the Appendix A for a description of the categories and items in the current criteria.

Currently, the Baldrige Criteria evolve bi-annually in order to address relevant and emergent issues in dynamic operating environments (Evans, 2010; Lee et al., 2013). Generally, the scheduled changes to the Baldrige Criteria focus on refinements to the requirements within the Baldrige Criteria. Evans & Mai (2014) provide an overview of Baldrige Criteria changes over time. In addition to regularly scheduled smaller-scale changes to the Baldrige Criteria, there were more sweeping changes made in 1992, 1997, 2003, and 2008. Souza and Sequeira (2012) describe these changes in detail. Examples of these changes include re-naming of Criteria categories, conceptual shifts in the relationships among the categories. The current Baldrige Criteria categories have remained largely unchanged since 2008.

There are two commonly cited models for the Baldrige Framework for Performance Excellence (Baldrige Framework). Academic literature most commonly cites versions of the model published by the Baldrige Performance Excellence Program (2013). Practitioners

frequently use and refer to an alternative model by Blazey (2013) (B. Lassiter, personal communication, October 19, 2014). In this context, practitioners are people who use the Baldrige Criteria in their daily work. Evaluators are those who use the Baldrige Criteria to evaluate the maturity of organizations applying to the Baldrige Award or similar programs.

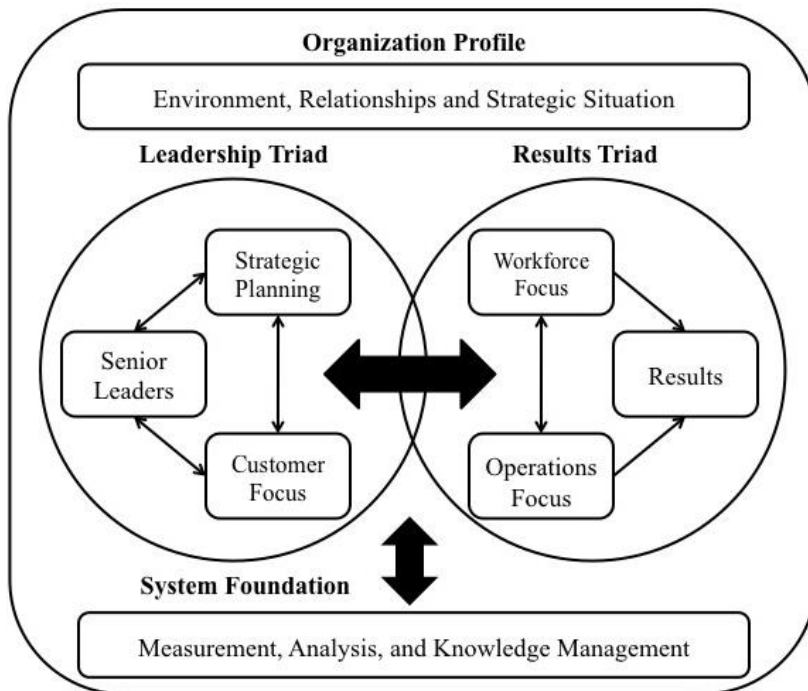


Figure 2.4. From *Healthcare Criteria for Performance Excellence*, by National Institute of Standards and Technology Administration, United States Department of Commerce, 2013.

The model published by the Baldrige Performance Excellence Program (2013) is illustrated in Figure 2.4. This model is comprised of the Organization Profile, Leadership Triad, Results Triad, and the System Foundation. The *Organization Profile* is a description of the organization that outlines the organizational context and how the organization operates. The six categories in the model's center describe the organization's processes and the results they are designed to achieve. The *Leadership Triad* is comprised of the three categories on the left: Leadership, Strategic Planning, and Customer Focus. This triad illustrates the importance of the

organization's leadership maintaining a focus on customers and strategy. The Leadership Triad designs and manages the work done in the *Results Triad*, comprised of the three categories on the right: Workforce Focus, Operations Focus, and Results. These categories describe the key organizational workforce and operations processes as well as the results they are designed to achieve. The *System Foundation* is comprised of the Measurement, Analysis, and Knowledge Management category. This category is the foundation of the system to illustrate the importance of fact-based decision-making to drive the leadership and work of the organization. The two-headed arrows in the model illustrate the importance of feedback between the respective categories and triads. The one-headed arrows illustrate that all work done throughout the system should be designed to impact key results described in the Results category.

Mark L. Blazey adapted the Baldrige Framework to create a similar relational model, also called the Framework for Performance Excellence, which is frequently used during practitioner and Evaluator trainings (B. Lassiter, personal communication, October 19, 2014). For clarity, this model will be referred to as the Blazey Framework and is illustrated in Figure 2.5. It is described in detail by Blazey (2013).

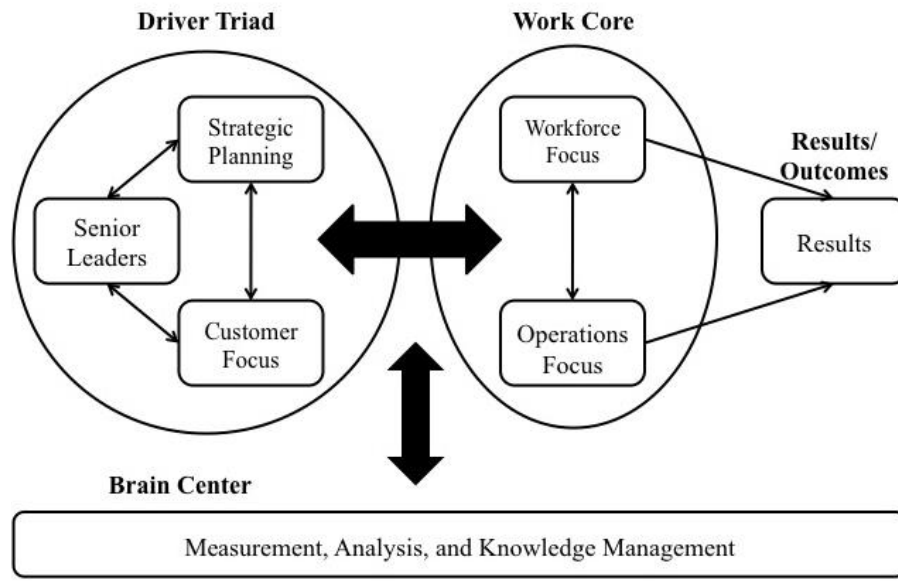


Figure 2.5. Diagram adapted from *Insights to Performance Excellence 2013-2014* by M. Blazey, 2013.

The Blazey Framework is comprised of the Driver Triad, Work Core, Results/Outcomes, and Brain Center. Like the previously discussed model, the *Driver Triad* contains the Leadership Strategic Planning and Customer Focus categories. Again, this illustrates the importance of leaders setting direction for the organization through strategy to meet the needs of its customers. Also this triad drives the work performed in the work core. The *Work Core* includes the Workforce Focus and Operations Focus categories that describe how the work of the organization is achieved. The activities and processes described in the driver triad and work core lead to the *Results/Outcomes*. This element of the model refers to the Results category, which illustrates the key measures leaders use to manage the work of the organization. Two-headed arrows between these three elements of the model indicate the importance of feedback between the elements. All three elements - driver triad, work core, and results/outcomes - are supported by the *Brain Center*, which is described by the Measurement, Analysis and Knowledge Management category. This category describes processes used to “capture, store, analyze, and

retrieve information and data critical to the effective management of the organization” (Blazey, 2013, p. 64). Collectively, these elements work together in order to improve organizational performance.

In addition to the two Frameworks described above, academics use a variety of other models to statistically study the relationships among the categories. Often these are path models based on the Framework for Performance Excellence provided by Baldrige Program (2013) (e.g., Flynn & Saladin, 2001; Karimi, et al. 2014; Kim & Oh, 2012). The practitioner- and academic-models provide different insights into the relationships among the Baldrige Criteria. These models also illustrate different relationships between the Baldrige Criteria and organizational performance. Even though models of relationships differ, there is consensus between practitioners and academics alike that that the Baldrige Criteria are related and they impact organizational performance.

Criteria relationships. The relationships between individual categories within the Baldrige Criteria have been empirically examined in a variety of industries and countries. Initially, the preponderance of these studies was conducted in the manufacturing industry (e.g., Flynn & Saladin, 2001; Lee, Rho, & Lee, 2003; Wilson & Collier, 2000). As the Baldrige Criteria evolved to meet the needs of other industries, additional studies were conducted in healthcare (e.g., Goldstein & Schwikhart, 2002; Kim & Oh, 2012; Lee et al., 2013; Meyer & Collier, 2001), education (e.g., Badri et al., 2006), and government (Prybutok, Zhang, & Peak, 2011). Also, these studies have been conducted in a number of countries. Many have been done in the U.S. where the Baldrige Program was initially adopted (e.g., Flynn & Saladin, 2001; Goldstein & Schwikhart, 2002; Meyer & Collier, 2001). As other countries began developing their own quality award programs, researchers studied relationships among the Baldrige Criteria

with organizations in their countries to determine the applicability of the Baldrige Criteria as a foundation for their national quality award programs (e.g., Kim & Oh, 2012; Lee et al., 2003; Lee et al., 2013).

The relationships among the Baldrige Criteria have also been studied using a variety of data sets and statistical analysis techniques. The majority of these studies used questionnaires developed by researchers to examine the effects of requirements within the Baldrige Criteria (e.g., Flynn & Saladin, 2001; Goldstein & Schwikhart, 2002; Kim & Oh, 2012; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000). Some techniques used to explore results of these questionnaires and determine causal relationships among the Baldrige Criteria categories include: structural equation modeling (e.g., Handfield & Ghosh, 1995; Ghosh, et al, 2003; Lee, et al., 2003; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000), confirmatory factor analysis (e.g., Kim & Oh, 2012; Pannirselvam, Siferd, & Ruch, 1998), confirmatory structural equation modeling (e.g., Badri et al., 2006; Meyer & Collier, 2001); path analysis (e.g., Flynn & Saladin, 2001; Pannirselvam & Ferguson, 2001), and principle component analysis (e.g., Goldstein & Scwikhart, 2002). While these techniques have several differences, a similarity across them is that they all provide insight into the existence and magnitude of relationships among the Baldrige Criteria categories. Additionally, they can be used to explore the existence and magnitude of relationships between the categories and organizational performance via the relationships with results.

The extent literature establishes a clear link between improved organizational performance and a simultaneous emphasis on all categories. Many studies found significant relationships, with varying magnitudes, between individual categories and organizational performance (e.g., Badri et al., 2006; Flynn & Saladin, 2001; Ghosh et al., 2003; Goldstein &

Schwikhart, 2002; Karimi et al., 2014; Kim & Oh, 2012; Lee, Lee & Olson, 2013; Meyer & Collier, 2001; Pannirselvam & Ferguson, 2001; Pannirselvam et al., 1998; Prybutok et al., 2010; Wilson & Collier, 2000). However, it has been found that the power of the Baldrige Criteria lies in all of the categories working together to achieve improved organizational performance (Badri et al., 2006; Flynn & Saladin, 2001; Goldstein & Schweikhart, 2002; Pannirselvam et al., 1998). This means that in order to achieve organizational excellence, organizations need to focus on all categories simultaneously, rather than choosing to focus on selected categories.

While it is important to maintain focus on all the categories, performance in some categories had a more significant impact on organizational results. Categories tend to have one of two relationships to organizational results: direct or indirect. A direct impact indicates a statistically significant relationship to the results. An indirect impact indicates the category does not have a direct relationship to the results, but it does have statistically significant relationship with the other categories that have significant relationships with results. Some studies also looked at the categories' relationships with specific types of results. Three categories seem to be the most discussed because they have the highest magnitude of impact on the other categories and results. However, there is not always consensus across studies which type of relationship each category has with the results.

One category that is consistently found to have a direct impact on organizational results is the category emphasizing organizational processes and process improvement (Kim & Oh, 2012; Lee et al., 2013; Meyer & Collier, 2001). Additionally, two studies found in the healthcare industry, this category also had a significant positive impact on patient satisfaction results specifically (Lee et al., 2013; Meyer & Collier, 2001). It does not appear that the direct impact

on organizational performance affected by industry or methodology as these studies were conducted across industries, using different methodologies with distinct data sets.

Some studies found the leadership category to have an indirect impact on organizational performance, while other studies found it had a direct impact as well. There is general agreement that the leadership category indirectly impacts organizational performance by driving efforts in all other categories (Badri et al., 2006; Flynn & Saladin, 2001; Ghosh et al., 2003; Goldstein & Schwikhart, 2002; Karimi et al., 2014; Kim & Oh, 2012; Lee et al., 2013; Meyer & Collier, 2001; Pannirselvam & Ferguson, 2001; Pannirselvam et al., 1998; Prybutok et al., 2011; Wilson & Collier, 2000). In addition to the indirect impact, some studies found that the leadership category had a direct impact on organizational performance as well (Badri et al., 2006; Flynn & Saladin, 2001; Ghosh et al., 2003; Meyer & Collier, 2001; Pannirselvam & Ferguson, 2001). However, two studies found while there was an indirect impact, the leadership category did not have a direct impact on organizational performance (Kim & Oh, 2012; Wilson & Collier, 2000). This difference could be attributed to a number of factors including the way the constructs were defined in questionnaires used by researchers and the type of analyses performed with the data. However, it does not appear that this finding was tied to a specific industry or country as studies supporting the different findings were conducted in a variety of industries and countries.

While there is disagreement about the type of impact leadership has on organizational performance, studies focusing specifically on the impact of measurement, analysis and knowledge management, found this category to have both a direct and indirect impact on organizational performance. Meyer and Collier (2001) conducted a study in the healthcare industry that found that the measurement, analysis and knowledge management category had a significant, direct impact on organizational results. This was similar to results found by Wilson

(1997) and Wilson and Collier (2000) in the manufacturing industry. Meyer and Collier (2001) also found that the measurement, analysis and knowledge management category had a significant, indirect affect on organizational performance as a supporting force for the other categories. This is consistent with findings from a number of studies from a number of industries and countries (e.g., Goldstein & Schweikhart, 2002; Handfield & Ghosh, 1995; Raja, Deshmukh & Wadhwa, 2007; Wilson & Collier, 2000).

Overall, this review of studies examining the statistical significance of relationships among the Baldrige Criteria categories as well as their impact on organizational performance make clear two pertinent observations. First, all of the categories play an important role in positively impacting organizational performance and this impact is based on a simultaneous focus on all categories. While the magnitude of impact may vary, all categories are important. Second, each category affects organizational performance differently. Some categories have a direct impact, while others have an impact indirectly when used in conjunction with the other categories. Also, the magnitude of the relationships varies.

Addressing Inconsistencies in SHRD Research

The Strategic Human Resource Development (SHRD) literature provides a strong conceptual understanding of SHRD and its role within the organization. A review of SHRD models illustrates that SHRD is the purposeful selection and proactive use of multiple methods of workforce training and development that are integrated and aligned with organizational strategy to improve organizational performance. This conceptual definition provides a foundation upon which to build a framework for studying the impact of SHRD on organizational performance. While the conceptual definitions are consistent, there are inconsistencies within

SHRD research. This section reviews these inconsistencies and describes how they may be addressed using the Baldrige Framework for Performance Excellence (Baldrige Framework).

SHRD research inconsistencies

While the conceptual definition of SHRD is consistent, there are at least three inconsistencies among the extent SHRD literature. The first, most glaring limitation of the SHRD literature is inconsistent support for the claim that workforce training and development improves organizational performance. As Garavan and Carbery (2012) state, “some researchers and practitioners consider it something of a Holy Grail to establish a causal link between SHRD and performance at the level of the organization” (p. 25). This is because organizations invest heavily in SHRD (i.e. workforce training and development, aligned and integrated with organizational strategy to improve organizational performance). While some studies using researcher-defined factors of organizational performance have found support for this claim (e.g., Garavan, Costine, & Heraty, 1995; Katou, 2009; Macky & Boxall, 2007), others have not (e.g., Combs, Liu, & Kitchen, 2006), and still others found unclear linkages (e.g., Bartlett, 2001; Torraco, 1999).

A second inconsistency is what constitutes workforce training and development within the SHRD literature. There is agreement within the literature that there is a need for a multiplicity of strategies for workforce training and development (Garavan & Carbery, 2012), but inconsistent definitions of what constitutes those strategies. Existing studies provide lists of workforce training and development activities that constitute SHRD (e.g., Garavan, 1991; McCracken & Wallace, 2000; Stewart & Sambrook, 2012; Torraco & Swanson, 1995). But in these studies, the researchers define the workforce training and development activities they are

studying. This may leave out additional activities occurring within organizations that constitute workforce training and development.

A third inconsistency is the definition of organizational performance used to study SHRD's impact upon it. In all reviewed studies, the researchers, not the organizations studied, identified the measures of organizational performance (e.g., Garavan, Costine, & Heraty, 1995; Katou, 2009; Macky & Boxall, 2007). Organizational performance is complex construct comprised of a myriad of measures. Further, not every organization uses the same measures to judge its performance. This means that individual organizations, not independent researchers, must define the measures of organizational performance that are meaningful in their industry and operating environment.

Addressing inconsistencies with Baldrige

A recent strain of literature using data obtained from the Baldrige National Quality Program provides guidance on how to address this limitation in at least four ways. First, the Baldrige Criteria for Performance Excellence (Baldrige Criteria) situates workforce training and development activities within a system designed to achieve improved organizational performance. This is consistent with the conceptual definition of SHRD. Thus, the Baldrige Criteria provide a model for studying the relationship of workforce training and development activities with the rest of the organization system as well as performance of that system.

Second, the data set used in these studies could provide insight into the impact of workforce training and development activities on organizational performance. The data set is the scores of applicant organizations to the Malcolm Baldrige National Quality Award (Baldrige Award). The scores indicate how well applicants meet the Baldrige Criteria requirements with internally defined activities. One type of activity scored is workforce training and development.

Additionally, the scores include organizational performance using organization-defined measures of organizational performance in five categories: Process, Customer-Focused, Workforce-Focused, Leadership and Governance, and Financial and Market. This allows for statistical exploration of organization-defined workforce training and development activities and organizational performance results.

Third, one study by Evans and Mai (2014) shows how this data set can be used to explore individual concepts within the data set. The Baldrige Criteria are comprised of seven categories. The categories are comprised of concepts, one of which is workforce training and development. Over time the concepts within the Baldrige Criteria have been renumbered. In order to explore individual concepts within the Baldrige Criteria over time, Evans and Mai (2014) conducted a thorough analysis of the Baldrige Criteria changes to identify which item number correlates with individual concepts.

Fourth, two other studies conducted with this data set illustrate how to explore relationships among the concepts within the data set (Karimi et al, 2014; Mai & Evans, 2014). These studies used statistical procedures to empirically explore the relationships among the Criteria categories as well as the individual categories' impact on organizational performance in the five areas defined by the Criteria: Process, Customer-Focused, Workforce-Focused, Leadership and Governance, and Financial and Market. Neither of these studies explored the concepts defined by Evans and Mai (2014). However, they illustrate how to study statistical relationships within the data set. This means, as of yet, there has not been a study conducted using this data set to examine the impact of workforce training and development on organizational performance.

Conclusion

This literature review ultimately illustrates how Strategic Human Resource Development (SHRD) could be viewed through the lens of the Malcolm Baldrige National Quality Award Criteria (Baldrige Criteria) in order to examine the impact of SHRD on organizational performance. The SHRD literature makes clear several themes including the use of multiple training and development strategies, aligning and integrating those strategies with organizational strategy to improve organizational performance. However, that literature fell short with limited empirical support for the claim SHRD improves organizational performance.

The Baldrige Criteria situates workforce training and development within a performance management model designed to improve organizational performance. The body of literature examining the empirical relationships among the Criteria established that the interrelated Criteria do, in fact, relate to improved performance. A growing body of literature using actual applicant scoring data illustrates how specific elements within the Criteria are starting to be studied. In summation, this iterative review concludes that studying SHRD through the Baldrige lens can provide empirical support for claims that SHRD impacts organizational performance. In other words, it could answer the question “Does SHRD matter?”

CHAPTER 3: METHODOLOGY

The goal of this research is to explore the impact Strategic Human Resource Development (SHRD) has on organizational performance. SHRD is defined as improving organizational performance through strategic alignment and integration of multiple purposefully selected and proactively implemented methods for HRD. The Baldrige Criteria for Performance Excellence (Baldrige Criteria) situates SHRD as a strategically aligned and integrated part of an organization system. In 2011, the Baldrige Program released scores from Baldrige Award applicants. These scores illustrate performance on each aspect of the organization system, including SHRD and organizational performance. By exploring how scores on SHRD and organizational performance interact, this research seeks to understand if SHRD impacts organizational performance.

Research Design

A simple model cannot easily explain organizational performance. According to the Baldrige Model of Performance Excellence, organizational performance comprises five distinct measures: Process Results, Customer-Focused Results, Workforce-Focused Results, Leadership and Governance Results, Financial and Market Results. The Baldrige Model also asserts that six functional categories affect organizational performance. Of particular interest in this research is the category containing the item that includes Human Resource Development (HRD). The Baldrige Model uses a strategic conceptualization of HRD as it integrated and aligned component contributing to organizational performance improvement via purposefully selected methods. The Baldrige Model provides measurement of the organizational results and Strategic Human Resource Development (SHRD) constructs that theoretically impact organizational performance.

This study looks at the interaction of SHRD and organizational performance using a structural equation modeling (SEM) approach. SEM allows for the analysis of a structural relationship between latent variables (constructs or factors) and observable variables. SEM is a multivariate statistical analysis technique that combines factor analysis and multiple regression. This type of analysis is appropriate as the research uses a single multidimensional variable and all variables are continuous. Using an approach outlined by Schumacker and Lomax (2010), this study incorporates five distinct steps (see figure 3.1).

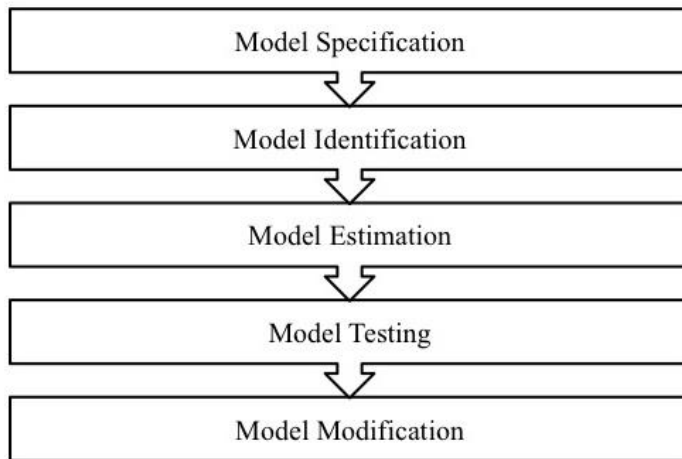


Figure 3.1. Shumacker and Lomax (2010) outlined this approach to SEM.

A section of the Baldrige Model including measures for SHRD and the five measures of organizational performance will be analyzed using two models of analysis: measurement model and structural model. First, the measurement model will be estimated to illustrate the relationship between the theoretical constructs. This model will include structural coefficients between constructs (or latent variables) estimated using input from correlations or covariance matrix between constructs (or factors). Confirmatory Factor Analysis will test how well the variables represent the theoretical constructs. In this analysis, the researcher specifies the number of factors and the measured variables that comprise specific latent constructs. Second, the structural

model will be defined to illustrate the causal and correlational relationships between the variables. Path analysis will be used to estimate the structural model's parameters. SPSS software will be used to produce descriptive statistics as appropriate. AMOS software will be used to create the measurement and structural model.

Participant Organizations

This research uses data from Baldrige Program applicants between 1999 and 2006. Several authors recommend using data from applicants in these years due to similarities among the Baldrige Criteria and its underlying theoretical model during this timeframe (Evans & Mai, 2014; Flynn & Saladin, 2001; Souza & Sequeira, 2012). This sample includes 463 applicants from 6 industries. Table 3.1 illustrates the number of applicants per industry per year. The applicant list will be screened and records will be removed for non-response.

Table 3.1

Number of applicants per industry per year

Industry	1999	2000	2001	2002	2003	2004	2005	2006	Total
Manufacture	4	14	7	8	10	8	1	3	55
Service	11	5	4	3	8	5	6	4	46
Sm. Business	1	1	8	1	12	8	8	8	77
Education	16	11	10	10	19	17	16	15	114
Healthcare	9	8	8	17	19	22	33	45	161
Nonprofit								10	10
Total	51	49	37	49	68	60	64	85	463

While organizations that apply for the Baldrige Award are diverse, research indicates that they share three common characteristics. First, Baldrige Award winning organizations are committed to customers. As such, they experience high levels of customer satisfaction and retention, due to unwavering commitments to meeting customer needs (Allvin, Ulmer, & Ollison, 2008; Oakland, 1999; West Engelkemeyr & Seiders, 2003). Second, these organizations

demonstrate strong commitment to their employees, evidenced by multiple approaches to employee empowerment, training, development, motivation, and rewards (Allvin, Ulmer, & Ollison, 2008; Gowen, McFadden, Hoobler, & Tallon, 2006). Third, Baldrige Award award winning organizations commit to driving organizational performance results via a systematic approach to managing their organizations (Burke & Hellwig, 2011; Souza & Sequeira, 2012; West Engelkemeyr & Seiders, 2003). This approach generally results in higher quality services and/or products, greater customer satisfaction, higher levels of employee satisfaction and engagement, and increased organizational performance (DeBaylo, 1999; DeCarlo & Sterett, 1990; Frank, 1996; Frank, 1997; Frank & Chapman, 1995; Goldstein & Schweikhart, 2002; Hodgetts, 1994; Kelley, 2002; Mai & Evans, 2014; Meyer, 1998; Nesbitt, 2006; Rayner, 1992; Townsend & Gephardt, 1996; Ugwueke, 2001; Unger, 2013). Collectively, these three commitments illustrate common characteristics of Baldrige Award winning organizations.

Data Set and Model Specification

This research uses a retrospective technique to explore an existing dataset provided by the National Institute of Standards and Technology that oversees the Malcolm Baldrige National Quality Award Program (Baldrige Program). In 2011, the Baldrige Program released a set of blinded applicant data “in response to many requests and to facilitate further analysis by interested researchers” (Evans & Mai, 2014, p. 46). The data set is publicly available and accessible via the Baldrige Program website. These data provide both category and item level scores of all Baldrige Program applicants between 1990 and 2006.

The scores indicate how well applicants meet the Criteria requirements with internally defined activities. These requirements are grouped as items and then by category. The number of available points in each item and category vary during the years studied. Thus scores will be

normalized into percentages of the applicant score and total points available in the Baldrige Criteria for the given year. Normalized scores for individual items will be used as exogenous variables in this study.

The scores represent organizational performance using organization-defined measures of organizational performance in five categories: Process, Customer-Focused, Workforce-Focused, Leadership and Governance, and Financial and Market. Additionally, one type of activity scored is Human Resource Development (HRD). As the Baldrige Criteria situate HRD in a strategic context focused on improving organizational performance, this score represents Strategic Human Resource Development (SHRD). This allows for statistical exploration of the relationship between organization-defined organizational performance results and SHRD. A review of Baldrige Criteria booklets from 1999-2006 resulted in the following descriptions of each item that comprise the model.

Process results item

This item includes requirements focused on internal results relating to key processes within the organization (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). Required results illustrate how the organization measures process effectiveness and attainment of organizational goals. From 1999-2002, this item also included requirements related to organizational citizenship, which became part of a separate results item in 2003 (Baldrige, 2003).

Customer-focused results item

This item includes requirements to examine customer satisfaction as it relates to building loyalty and positive recommendation of the organization (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). This item also includes results about how well the organization provides products and/or services to its customers (Baldrige, 1999, 2000, 2001, 2002, 2003,

2004, 2005, 2006). In 2003, requirements about product/service provision became its own Baldrige Criteria item, separate from the continued Customer-Focused Results Item (Baldrige, 2003). For the purpose of this study, results from both items will be combined for subjects between 2003 and 2006.

Workforce-focused results item

This item includes requirements to demonstrate the organization's ability to create and maintain a caring, positive, and productive, work environment for all employees within the organization (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). Additionally, this item includes results relating to employee learning and development (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006).

Leadership and governance results item

This was added as a separate item to the criteria in 2003 (Baldrige, 2003). Prior to 2003, the requirements in this item were found in multiple items. The requirements include results related to how leaders exhibit and promote ethical organizational behavior within the organization (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). Additional requirements relate to the organization's fulfillment of societal responsibilities and being a good community citizen (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006).

Financial and market results item

This item requires financial and market results to illustrate the organization's financial health as well as its understanding of challenges and opportunities in the marketplace (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). The 2005 Baldrige Criteria began the inclusion of financial sustainability as a requirement in this item (Baldrige, 2005).

SHRD item

The SHRD item includes requirements relating to workforce “education design and delivery; and motivation and career development” (Evans & Mai, 2014, p. 52). The Baldrige Criteria situates workforce training and development activities at a strategic level within a system designed to achieve improved organizational performance, which is consistent with the conceptual definition of SHRD. Thus, the Baldrige Criteria provide a model for studying the relationship of SHRD with the rest of the organization system as well as performance of that system.

The title of this item changed over the years; as such SHRD is used as a consistent title for this item. The Baldrige Criteria in this item during the years examined in this research remained largely unchanged (Baldrige Performance Excellence Program [Baldrige], 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). The only noticeable change was the addition of requirements related to employee motivation and career development in 2003, which remained throughout the rest of the years included in this research (Baldrige, 2003, 2004, 2005, 2006). The Baldrige Criteria requirements for this item are included in Appendix B as an example of the types of requirements included in the items and how they change over time.

Data Analysis

Individual construct definition

The latent variable or construct of organizational performance is defined by performance in the individual observable variables of Process Results (PROC), Customer-Focused Results (CUST), Workforce-Focused Results (WORK), Leadership and Governance Results (LEAD), Financial and Market Results (FINL). As the latent variable cannot be observed or measured

directly, it is represented by the five listed observable variables. These scores serve as indicators of the latent variable or construct they presumably represent.

Screening and cleaning data

The data set will be screened for errors. Each variable was checked to ensure recorded measures were included and within range. If errors were found, they were corrected or the applicant record was deleted. After data was cleaned and coded, descriptive statistics were conducted to ensure valid records for analysis.

Model Identification - Assessing the Measurement Model Validity

The model to be tested postulates *a priori* that organizational performance is a five variable construct composed of process results, customer-focused results, workforce-focused results, leadership & governance results, and financial & market results. Additionally, this model asserts a directional relationship between SHRD and this construct. The hypothesized five variable Structural Equation Model is presented in figure 3.2.



Figure 3.2. Diagram illustrates the Structural Equation Model proposed for this study.

Model Estimation

The relationship between the observed variables consisting of scores on Baldrige Criteria items relating to different types of organizational results and the construct of organizational performance were explored using factor loadings. These loadings provide information needed to determine if and to what extent a relationship exists between the observed variables and latent variable or construct. The model was confirmed based on meeting model fit criteria and chi-square statistical test of significance. AMOS software conducts all relevant analyses to provide statistics needed to assess the model's significance based on fit, comparison, and parsimony.

Model Testing and Modification

AMOS software provided modification indices and expected parameter change values to guide modifying the model. If the fit of the model is good based on Model Estimation, the sample data support the model. If the fit of the model is not good, the sample data do not support it. If this is the case, the model will be modified to reach a better fit. The modification will start with a specification search to identify a better fitting model. There are several procedures available for conducting this search and the appropriate procedure will be selected based on results of fit tests.

This research will use a data-driven, rather than theory-driven, approach to model modification. Extant SEM research provides arguments for both approaches (e.g., Cliff, 1983; MacCallum, Roznowski, & Necowitz, 1992; Preacher, 2006). SEM starts with a theoretical model that is modified based on statistical analyses and theory. One distinction between these approaches lies in how the model is modified. A data-driven approach to SEM uses statistical analyses to identify ways to change the model to better fit the data. Conversely, a theory-driven

approach identifies ways to change the model based on existing theory, using statistics to support the changes.

A more specific example of a data- versus theory-driven decision is when to stop modifying a model. Both approaches modify a model until it provides “a good approximation of real-world phenomena, as represented in an observed set of data” (MacCallum, Roznowski, & Necowitz, 1992, p. 490). The theory-driven approach stops when the model meets thresholds for good fit. This allows for a more parsimonious model, i.e., a model with the fewest parameters necessary to describe a theoretical model with good fit (Preacher, 2006). The data-driven approach will continue modifying the model beyond the lowest threshold if modification indices suggest a better model fit, thus continuing to increase the goodness of fit. While this adds parameters in the model, it can also provide a more detailed explanation of the underlying phenomena the model is trying to illustrate as each parameter must be substantively justified (Joreskog & Sorbom, 1993; Long, 1983; MacCallum, 1986; Schumacker & Lomax, 2010; Sorbom, 1989). Therefore the model may be less parsimonious, but it is also more comprehensive.

The philosophical framework identified in Chapter 2 relates more strongly to the data driven approach to SEM. First, this research assumes an objective ontology, using quantifiable observations rather than subjective perceptions (Hatch & Culiffe, 2006). This provides a rationale for using statistical approaches for describing the phenomena. Second, this research assumes a realist epistemology. The goal of this research is to understand and explain relationships in an underlying model, rather than to predict outcomes of the model’s application (Blaikie, 1993; Jackson, 2000; Keat & Urry, 1975; Hatch & Cunliff, 2006). Thus, the goal is to find a model that fits, or best explains, the given data set. Third, this research is pragmatic in that

decisions will be made to reach its desired ends. As the desired end is to explain the relationships among constructs within the data set, a data driven approach is appropriate. While theory will be used to support changes to the model, that theory will be defined once modifications are made based on statistical analyses.

Statistical Assumptions

Schumacker and Lomax (2010) outline the following assumptions of SEM.

Data. SEM necessitates the use of interval or ratio level data. The properties of these types of data allow for the calculation of means and standard deviations, which are used with variance-covariance (correlation) matrices in SEM. (2010)

Non-spurious relationship. Spuriousness refers to the causal nature of a relationship between two variables. A spurious relationship exists when a third variables causes the association between two other variables. This results in a specification error, meaning that incorrect independent variables are identified. A non-spurious relationship exists when that third variable cannot be defined. This means that the appropriate variables can be and are specified by the researcher. (2010)

Sample size. In SEM sample size affects model specification, model estimation, and level of significance. During model specification, sample size affects the researcher's ability to correctly estimate the model and identify specification error. The sample size must also be large enough to reduce the impact of sampling error during model estimation. This allows for sufficient statistical precision, or ability to detect changes within the data. Throughout the analyses, the sample size also needs to be sufficient to achieve the desired level of statistical significance. Therefore sample size should be based on a ration of cases to parameters, as each parameter requires analysis. (2010)

Outliers. Outliers skew results, which may affect model significance. As such, data cleaning to remove outliers before analysis is critical. (2010)

Multivariate normal distribution. Departures from multivariate normality significantly impact the χ^2 goodness-of-fit test. Slight changes to multivariate normality may lead to significant differences in the χ^2 test. SEM uses and assumes the maximum likelihood method to determine multivariate normal distribution. (2010)

Linearity. In SEM, latent variables must differentiate between exogenous and endogenous variables. Exogenous or independent variables will cause changes to values of latent variables in the model. SEM does not explain changes to the values of these variables. Other factors external to the model create these changes. Endogenous or dependent variables are influenced either indirectly or directly by exogenous variables in the model. Thus, SEM assumes a linear relationship between exogenous and endogenous variables. (2010)

Multicollinearity. Multicollinearity exists when two or more exogenous variables are moderately or highly correlated. Moderate to high correlations between exogenous variables may lead to unstable or unreliable estimates about the relationships between variables. (2010)

Uncorrelated error terms. Initially, SEM assumes variable error terms are uncorrelated with other variable error terms. Correlated error terms could imply an additional variable that is not specified within the model.

CHAPTER 4: RESULTS

This research seeks to understand the impact of Strategic Human Resource Development on organizational performance. The first step in answering these questions is to establish what constitutes organizational performance. In order to do so, organizational results, as operationalized by the Baldrige Framework for Performance Excellence, were analyzed to determine if they provide a measure of organizational performance. Once the construct of organizational performance was established, a variable for SHRD was added to the model in order to determine its impact on that construct. Statistical analyses of this model illustrate the relationship between SHRD and organizational performance.

Chapter 4 explains the statistical analyses performed and interpretations of results. First, the data set was prepared by screening for missing values and outliers resulting in a sufficient sample size for the subsequent statistical tests. Next, analyses confirmed multivariate assumptions of normality, linearity, and multicollinearity within the data set. Then Structural Equation Modeling (SEM) was conducted.

SEM is a procedure used to analyze, modify, and interpret measurement and structural models that represent a data set. The measurement model statistically represents the level to which observed variables relate to latent factors, whereas the structural model statistically represents the recursive and non-recursive relationships between latent factors. Schumacker and Lomax (2010) outline the steps of SEM as a five-step procedure illustrated in figure 4.1.

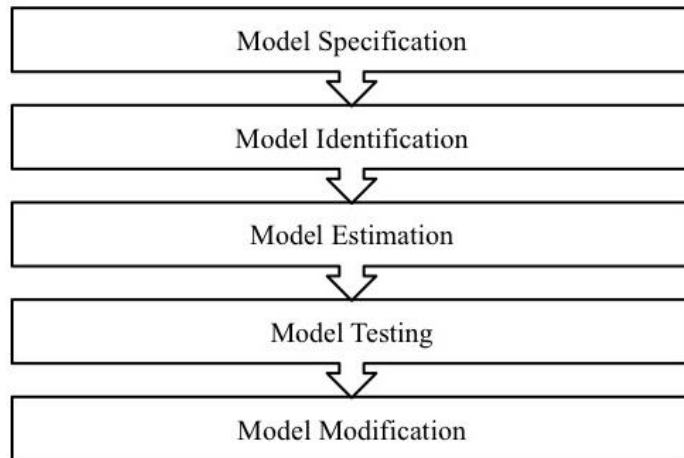


Figure 4.1. Shumacker and Lomax (2010) outlined this approach to SEM.

The model was specified according to this process in Chapter 3. There are two types of variables in this model. The center of the model is organizational performance (ORGPERF), which is a latent, endogenous variable. As a latent variable, ORGPERF is not directly observed, rather it is a construct comprised of five observed variables in the model. This is also an endogenous variable because its value is determined by the observed variables in the model (Schumacker & Lomax, 2010). The variables that comprise ORGPERF are observed, exogenous variables. These variables, representing different types of results as operationalized by the Baldrige Criteria, are observed in that they are measurements of observed phenomena. They are exogenous in that the observed measure changes and that change is not a result of other variables within the model (Schumacker & Lomax, 2010). The final variable in the model representing SHRD is also an observed, exogenous variable. Further analyses of this specified model illustrate if the organizational performance results variables comprise organizational performance and if SHRD impacts organizational results.

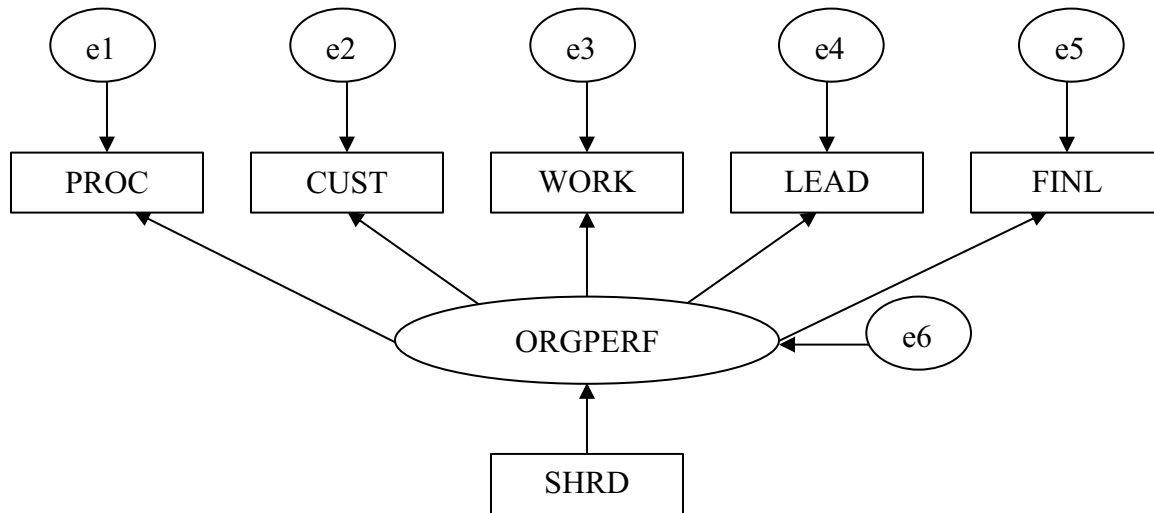


Figure 4.2. Diagram illustrates the Structural Equation Model proposed for this study.

Analyses of this model followed the process outlined by Shumacker and Lomax (2010) and illustrated in figure 4.2. It was identified by analyzing its validity and reliability. Then, the model was estimated to analyze the relationships between the variables. Next, the model was modified to include additional relationships. Finally, the model was tested to analyze its fit and the relationships among variables within it. Each statistical analysis is explained and its results interpreted in this chapter.

Data Preparation

As described in Chapter 3, the data set for this study includes the item level scores for applicants to the Baldrige Program between 1999 and 2006. The scores represent how well applicants respond to the Baldrige Criteria for Performance Excellence (Baldrige Criteria). For each item, applicant received a number of points. The score represents the percentage of those points out of the total available points for that item. Percentages were used because the total number of points available for each item changed over the time period reviewed.

The data were screened for missing data and outliers. There was no data missing.

Multivariate Assumptions

Prior to conducting structural equation model (SEM) analyses, multivariate assumptions were analyzed. Multivariate assumptions are criteria that the variables must meet in order for the results of the analyses to be trustworthy, or free of error (Schumacker & Lomax, 2010). SEM multivariate assumptions outlined by Schumacker and Lomax (2010) were described in Chapter 3. This section outlines the results of analyses performed to determine if the sample data meets these assumptions.

Data

SEM analysis requires the use of interval or ratio data to allow for analysis of means and standard deviations (Schumacker & Lomax, 2010). The data used in these analyses are ratio data with a distinct zero point and equal intervals between the data points.

Sample size

Multiple researchers discuss appropriate sample size for SEM studies. Ding, Velicer, and Harlow (1995) reviewed a variety of SEM studies and found a minimum satisfactory sample size for this type of research is 100 to 150 participants. Schumacker and Lomax's (2010) review of SEM studies found the preponderance to use 250 to 500 participants.

The minimum sample size for this research was calculated using effect size, power level, error rate, and number of variables in the study. These values were determined using conventions supplied by Soper (2015). The minimum anticipated effect size, or the level to which sample size will effect the statistical results, is $d = .1$. The desired statistical power level of .8 indicates there is an 80% or greater probability that statistically significant differences will be identified. The desired error rate for this research is $\alpha = .05$. There is one latent and six observed variables in the identified model. Based on these conventions, the minimum acceptable sample size to determine

effect in this research is .08 (Soper, 2015). With $\alpha = .05$ and 7 *df*, a sample of 463 participants yields .08 effect size and 92.48% power. According to research reviewed and analyses performed the sample of 463 is sufficient for this research.

Outliers

Outliers are extreme data points, statistically defined as values that fall outside three standard deviations from the mean (Steinberg, 2011). These values can impact multivariate statistical analyses by impacting the mean, standard deviations, and correlation coefficients (Schumacker & Lomax, 2010), which are the basis for SEM. In order to identify outliers, z scores were computed for all measurements. A z score represents how many standard deviations the measurement is from the mean. According to Tabachnick and Fidell (2007), measurements with z scores above the absolute value of 3.29 are outliers. No measurements in the data set met this criterion, so none were removed as outliers.

Multivariate normal distribution

Multivariate normal distribution or normality refers to how the data are distributed and inferential statistics, such as those used in SEM, rely on normally distributed data (Schumacker & Lomax, 2010). Distribution was evaluated by analyzing skewness and kurtosis of scores (see table 4.1). The distribution is approximately symmetric meaning none of the items were skewed, as skewness values were less than the absolute value of .5 (Bulmer, 1979). The distribution is platykurtic, meaning that it is relatively flat and broad with shorter and thinner tails. This is due to kurtosis values of less than 3 (Balanda & MacGillivray, 1988). Based on these observations the data is suitable for further analysis.

Table 4.1

Skewness and kurtosis of observed variables

	SHRD	PROC	CUST	WORK	LEAD	FINL
Skewness	-0.3506	0.0557	0.1369	-0.0463	0.0023	0.1117
Kurtosis	0.0938	-0.6198	-0.5038	-0.4162	-0.5450	-0.1192

Linearity

SEM assumes that variables are linearly related (Schumacker & Lomax, 2010). A linear relationship, or linearity, assumes that as the value of one variable goes up, so too does the value of another variable (Steinberg, 2011). The converse is also true, as a value goes down, so does the other value. A number of possible relationships among the variables were analyzed. A linear relationship best describes the data set with a significant F value of 500.842, which is the highest F value of all relationships examined (see table 4.2).

Table 4.2

Model summary and parameter estimates

Dependent Variable: ORGPERF

Equation	R Square	F	Sig.
Linear	.521	500.842	.000
Logarithmic	.475	417.241	.000
Inverse	.350	247.241	.000
Quadratic	.523	252.038	.000
Cubic	.523	167.915	.000
Compound	.499	457.518	.000
Power	.500	460.082	.000
S	.417	330.120	.000
Exponential	.499	458.518	.000
Logistic	.499	458.518	.000

Multicollinearity

SEM also relies on a lack of multicollinearity. Multicollinearity occurs when two or more observed variables in a hypothesized model are highly or moderately correlated. According to

Kutner, Nachtsheim, & Neter (2004), values above 10.0 indicate high multicollinearity. Five separate regression analyses were conducted to test for multicollinearity, where each of the five predictor variables were set as the dependent variable in turn. The resulting collinearity statistics, called Variance Inflation Factor (VIF) ranged between 2.3 and 3.2 (see table 4.3). Therefore, low multicollinearity exists in this data set.

Table 4.3

Collinearity statistics (VIF)

Variable	Dependent Variable				
	PROC	CUST	WORK	LEAD	FINL
PROC	Constant	2.567	3.031	3.082	3.209
CUST	2.500	Constant	3.128	3.095	2.833
WORK	2.638	2.757	Constant	2.490	2.655
LEAD	2.684	2.785	2.491	Constant	2.672
FINL	2.514	2.310	2.390	2.404	Constant

Unidimensionality is the degree to which items “represent one and only one underlying latent variable ”(Garver & Mentzer, 1999, p. 35). This is established by analyzing eigenvalues. According to Kaiser (1970), the correct number of factors should have an eigenvalue greater than 1.0. The eigenvalue for a one factor solution with this data set is 3.82 and eigenvalues for solutions with more than one factor are greater than 1.0, Therefore this model demonstrates sufficient unidimensionality.

Uncorrelated error terms

The initial model was tested with uncorrelated error terms, meaning that there is no relationship between the error that affect individual variables. Analyses may later indicate correlation between error terms, which must be explained by the research

SEM Analysis Procedures

The statistical procedures for SEM Analysis include identifying the measurement model with factor analysis and evaluating the structural model with Goodness-of-Fit statistics. The measurement model statistically represents the level to which observed variables relate to latent factors. First, exploratory factor analysis (EFA) was used to identify the number of latent factors in the data set, which identified the measurement model. Next, the measurement model was analyzed using confirmatory factor analysis (Albright & Hun, 2008). The structural model statistically represents the recursive and non-recursive relationships between latent factors. It was analyzed using path coefficients. Analyses were conducted SPSS and AMOS.

Measurement model

The specified model shows the observed variable, Strategic Human Resource Development (SHRD), impacting organizational performance (ORGPREF), which is an latent variable comprised of five observed variables (see figure 4.1). A latent variable cannot be directly measured, so the measures of observed variables are used to define the latent variable. The observed variables in the identified model are organizational performance results identified by the Baldrige Criteria for Performance Excellence: process results (PROC), customer-focused results (CUST), workforce-focused results (WORK), leadership & governance results (LEAD), and financial & market results (FINL). During model estimation and testing no variables were removed.

Adequacy of the data was analyzed using Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), Bartlett's Test of Sphericity, and total variance explained. These statistics were obtained using exploratory factor analysis (EFA) to determine if the results variables identified in the data are sufficiently related to comprise the latent factor organizational

performance. The KMO statistic for the hypothesized model is .887. KMO statistics range from 0 to 1, where .5 or greater is adequate (Kaiser, 1974). In order for data to be adequate, the p value identified using the Bartlett's Test of Sphericity should be less than .05 (Bartlett, 1950). The p value for this research is not significant ($p < .000$) with an approximate Chi-Square of 1671.917 and 10 degrees of freedom. In social science research, total variance explained values as low as 50% are acceptable, with 70-90% being the recommended threshold for acceptance (Beavers, et al., 2013; Pett, et al., 2003). Total variance explained by the data is 70.510%. All statistics indicate the results variables are adequately related to each other warranting further analysis.

Convergent validity. Convergent validity is the extent to which the observed variables represent the latent variable. This is analyzed using factor loadings and percent of variance explained. Factor loadings were computed by SPSS and analyzed for statistical significance. According to Costello and Osborne (2005), factor loadings above .50 indicate that the observed variable strongly loads on the latent variable. Review of the communalities matrix found all variables have values ranging between .652 and .748 (see table 4.4). Percent of variance explained indicates how much of the variation in the model is accounted for by the included variables. Garver and Mentzer (1999) recommend that this value be above 50% to indicate convergent validity. The percent of variance explained in this model is 70.51% (see table 4.5). As both conditions for convergent validity are met, this model sufficiently demonstrated convergent validity.

Table 4.4

Communalities matrix

Item	Initial	Extraction
PROC	.690	.748
CUST	.683	.733
WORK	.644	.695
LEAD	.644	.698
FINL	.604	.652

Extraction method: Maximum likelihood

Table 4.5

Total variance explained

Factor	Initial Eigenvalues			Extraction Sum of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.820	76.399	76.399	3.525	70.510	70.510
2	.363	7.259	83.658			
3	.343	6.853	90.510			
4	.268	5.358	95.869			
5	.207	4.131	100.000			

Extraction method: Maximum likelihood

Discriminant validity. Discriminant validity occurs when each observed variable only loads on one factor. This means that the latent factor, organizational performance, accounts for more of the observed variables' variance than measurement error or other constructs.

Discriminant validity is identified with the lack of cross-loadings. Cross-loadings exist when variables load higher than .32 on more than one factor (Tabachnick & Fidell, 2001). No cross-loadings were identified.

Reliability. Reliability is the extent to which the variables will consistently create one factor. It indicates if the latent variable explained is stable and can be replicate. This is measured with Cronbach's Alpha statistic. To be considered reliable, the Cronbach's Alpha value should

be greater than .7 (Gaskin, 2015). The organizational performance latent factor's reliability was identified by Cronbach's Alpha of .922 with five items. Therefore, this factor is reliable.

Structural model

Once analysis indicated the organizational results variables comprise organizational performance, the Strategic Human Resource Development (SHRD) variable was added create a structural model illustrating the relationship between SHRD and the Organizational Performance latent variable. Measurement error was also added to the model. As the structural model specifies relationships between variables, measurement error can be the result of the variable measuring some other latent variable or unreliability (Schumacker & Lomax, 2010). This addition increased the number of parameters in the model. A parameter indicates a relationship between two variables and its analysis shows how well the data fit that hypothesized relationship (Schumacker & Lomax, 2010). The accuracy of the model to describe the data was analyzed using goodness-of-fit statistics and parameter estimates. Next, the modification indices were reviewed to identify any modifications that would make the model a better representation of the data.

Goodness-of-fit statistics. Goodness-of-fit statistics indicate how well the structural model describes a set of data. If the fit statistic is below a certain threshold, it indicates that the model is a good representation of the observations in the data set (Schumacker & Lomax, 2010). Five goodness-of-fit tests were analyzed for the estimated model. All statistics indicated that the model is a good fit with the observations in the data set.

Chi-square (χ^2 or CMIN) and normed chi-square (CMIN/DF). SEM analysis uses a variance-covariance matrix to illustrate unstandardized correlations between variables. Chi-square is an analysis of the difference between the observed and implied variance-covariance

matrices (Schumacker & Lomax, 2010). According to Schumacker and Lomax (2010), a significant chi-square suggests the probability that the difference is the result of sampling variation; whereas a non-significant value indicates that “the model significantly reproduces the sample variance-covariance relationships in the matrix” (p. 85). This means that the model illustrates the correlations between the variables according to the sample data.

The test of the estimated model yielded a chi-square (χ^2) value of 56.1 with 9 degrees of freedom and probability of .000. As this statistic is sensitive to sample size, the chi-square was divided by the degrees of freedom to produce a normed chi-square (CMIN/DF) value. According to Bollen (1989) values between 2.0 and 3.0 indicate a good fit. This model produces a CMIN/DF value of 6.238.

Model comparison statistics (CFI, SRMR, RMSEA, GFI, and AGFI). Five comparison statistics are generally reviewed as the basis for comparison between models using the same data set. When these statistics reach a certain threshold, they indicate that a model sufficiently represents the data and no further modification is required. However, researchers may choose further modifications based on parameter estimates and/or modification indices.

Extant literature provides thresholds for goodness of fit. A Comparative Fit Index (CFI) value above .95 indicates a good fit (Bentler, 1990). The Standardized Root Mean Square Residual (SRMR) values less than .08 indicate good model fit (Schumacker & Lomax, 2010). According to Hu and Bentler (1999), RMSEA less than .06 indicates a close approximate fit. The Goodness of Fit (GFI) values greater than .90 indicate a good fit (Schumacker & Lomax, 2010). The Adjusted Goodness of Fit (AGFI) adjusts the GFI based on the number of degrees of freedom within the model. AGFI values above .90 indicate a good fit (Schumacker & Lomax, 2010). If analyses indicate the model does not meet these thresholds modifications are needed to

create a better fit. The goodness-of-fit and comparison statistics for the estimated model are in table 4.6.

Table 4.6

Goodness of fit statistics for specified model

Model	df	sig.	CMIN	CMIN/DF	CFI	SRMR	RMSEA	GFI	AGFI
Good Fit				2.0 to 3.0	≥.95	<.05	<.06	>.90	>.90
Model	9	.000	56.138	6.238	.976	.025	.106	.960	.907

Table based on one presented in Schumacker & Lomax (2010) on p. 76

Note. df = degrees of freedom; sig. = p-value or significance level; CMIN = chi square; CMIN/DF = normed chi square; CFI = comparative fit index; SRMR = standardized root-mean square residual; RMSEA = root-mean-square error of approximation; GFI = goodness of fit; AGFI = adjusted goodness of fit.

Parameter estimates. Parameter estimates are standardized linear regression weights that may indicate a causal linkage between variables. Parameters were calculated in AMOS for each arrow, or path, between variables. AMOS refers to these values as “standardized regression weights,” but they are also known as beta (β) coefficient values. Standardized parameter estimates for the estimated model are illustrated in figure 4.3.

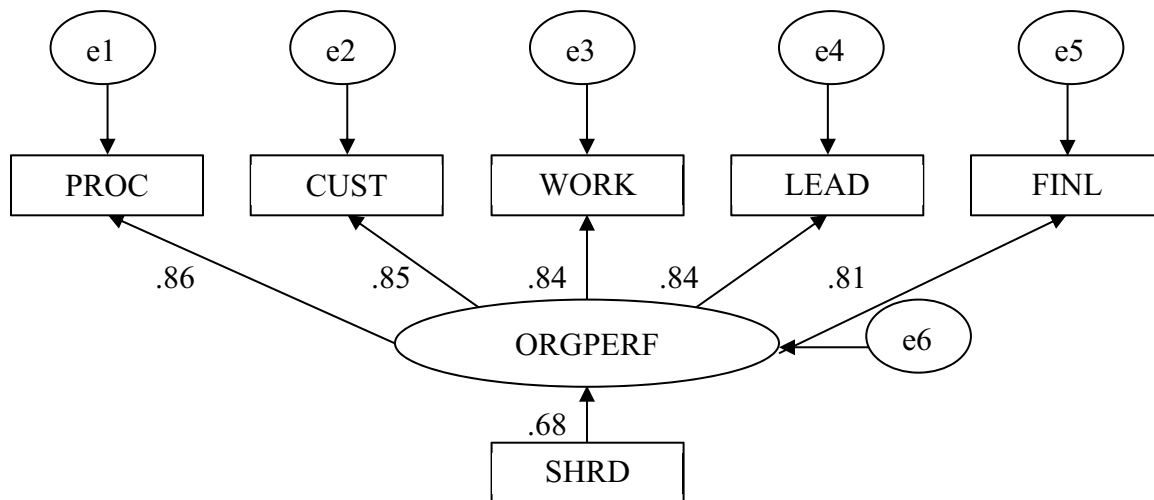


Figure 4.3. Standardized parameter estimates for the estimated model.

According to Schumacker and Lomax (2010), parameter estimates should be reviewed for three considerations. First, the values should be different than zero as higher values indicate stronger support for the hypothesized linkage between variables. For example, a value of .6 means that the observed variable explains more than 60% of the latent variable's variation. Second, the sign of the estimate should be consistent with the expected relationship specified in the model. This means that if an increase in one value should theoretically cause an increase in another variable, the sign of the parameter estimate should be positive. Third, the value of the estimate should fall within an expected value range allowing for meaningful interpretation. Therefore, all the parameter estimates should have the expected sign, be different from zero, and be meaningfully interpreted.

Modification indices. Modification indices suggest ways to alter the model parameters to create a better fit between the model and the data (Joreskog & Sorbom, 1988). These are reported for all parameters that are not correlated with other parameters. The existence of modification indices suggest that if an additional parameter were added to the model, it would decrease the degrees of freedom, thus improving the chi-square goodness-of-fit statistic. Two modification indices for the estimated model suggest modifications to improve fit. These were made sequentially in order to compare goodness-of-fit statistics between the estimated model and the first modified model, then between the first and second modified models.

Modified model 1

The first modification index indicated a stronger model fit with the addition of a covariance between the error terms for the variables representing organizational performance results related to process (PROC) and customer services (CUST). Covariance between error terms indicates that there is something that affects the error on the two variables that does not

affect the error on the other variables. The modified model and its standardized regression weights are illustrated in figure 4.4.

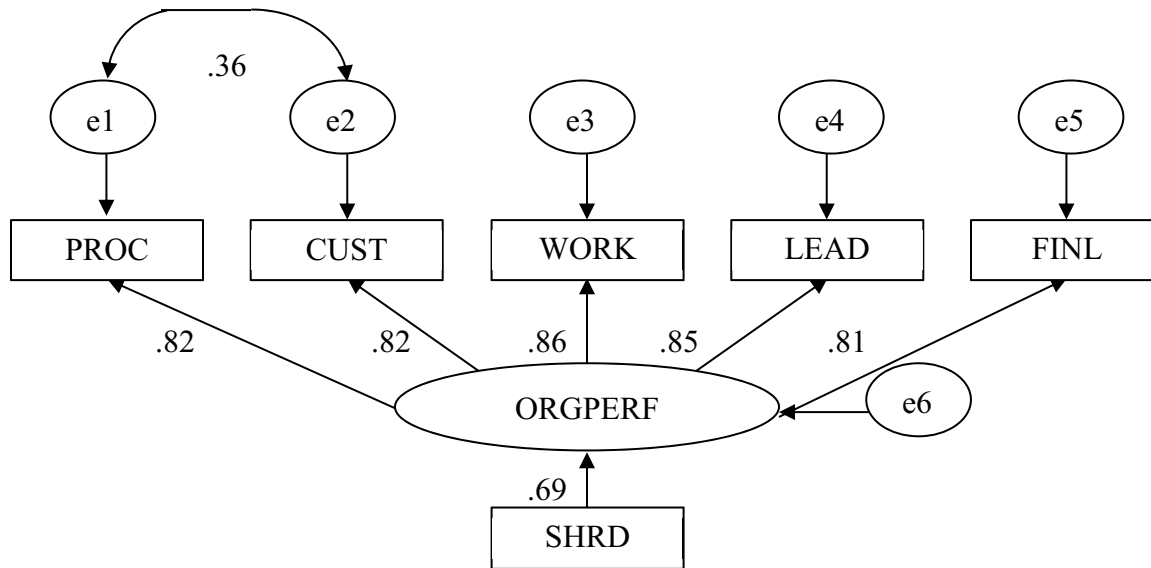


Figure 4.4. Standardized parameter estimates for the first modified model.

All fit indices indicate a better fit within the modified model compared with the fit of the estimated model. These are reported in table 4.7. As all statistics represent a good fit, it would be unnecessary to make additional modifications. However, further analysis revealed a significant improvement with model fit when adding one additional parameter.

Table 4.7

Goodness of fit statistics for first modified model

Model	df	sig.	CMIN	CMIN/DF	CFI	SRMR	RMSEA	GFI	AGFI
Good Fit				2.0 to 3.0	$\geq .95$	$< .05$	$< .06$	$> .90$	$> .90$
Model	9	.000	56.138	6.238	.976	.025	.106	.960	.907
Model 1	8	.003	23.761	2.970	.992	.017	.065	.983	.956

Table based on one presented in Schumacker & Lomax (2010) on p. 76

Note. df = degrees of freedom; sig. = p-value or significance level; CMIN = chi square; CMIN/DF = normed chi square; CFI = comparative fit index; SRMR = standardized root-mean square residual; RMSEA = root-mean-square error of approximation; GFI = goodness of fit; AGFI = adjusted goodness of fit.

Modified model 2

The next modification index suggested increased model fit by co-varying the error terms for organizational performance results related to customer service (CUST) and financial/market results (FINL). The modified model and its standardized regression weights are illustrated in figure 4.5.

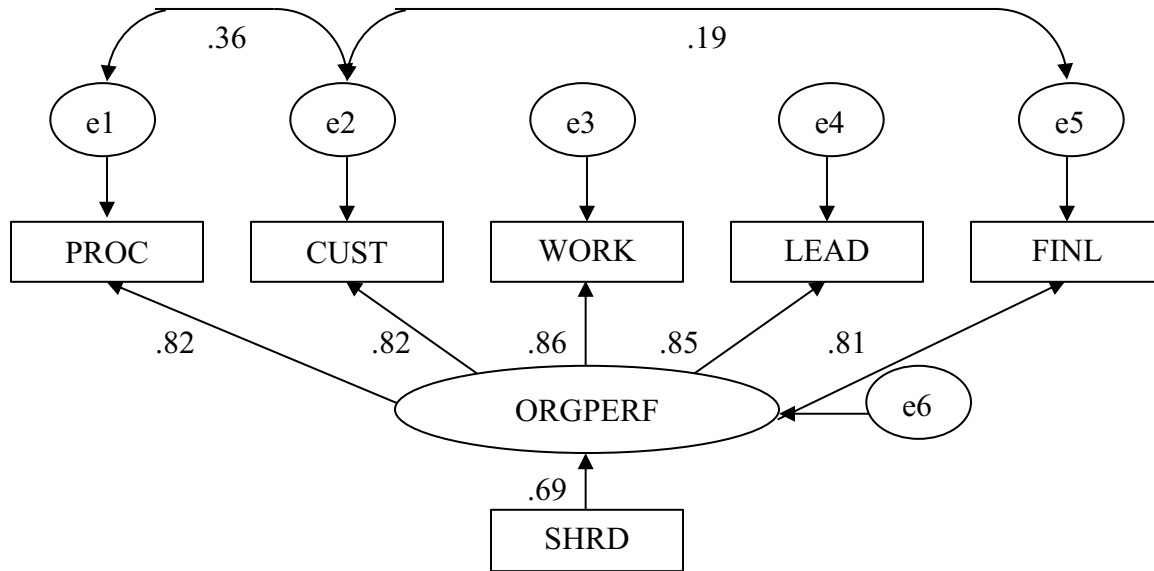


Figure 4.5. Standardized parameter estimates for the second modified model.

All fit indices indicate a better fit within the modified model compared with the fit of the estimated model and the first modified model. These are reported in table 4.8.

Table 4.8

Goodness of fit statistics for second modified model

Model	df	sig.	CMIN	CMIN/DF	CFI	SRMR	RMSEA	GFI	AGFI
Good Fit				2.0 to 3.0	$\geq .95$	$< .05$	$< .06$	$> .90$	$> .90$
Model	9	.000	56.138	6.238	.976	.025	.106	.960	.907
Model 1	8	.003	23.761	2.970	.992	.017	.065	.983	.956
Model 2	7	.232	9.298	1.328	.999	.011	.027	.993	.980

Table based on one presented in Schumacker & Lomax (2010) on p. 76

Note. df = degrees of freedom; sig. = p-value or significance level; CMIN = chi square; CMIN/DF = normed chi square; CFI = comparative fit index; SRMR = standardized root-mean square residual; RMSEA = root-mean-square error of approximation; GFI = goodness of fit; AGFI = adjusted goodness of fit.

Impact of SHRD on organizational performance

Parameter estimates of the final indicates that SHRD has a large, direct effect on Organizational Performance. The parameter estimate between SHRD and organizational performance is .69. This means that as a score for SHRD increases by one, the score for organizational performance will increase .69 (Schumacker & Lomax, 2010). According to Suhr (2006), values greater than .50 indicate a large effect. Additionally, this effect is direct, meaning there are no intervening variables affecting the relationship. This finding suggests that the use of SHRD strongly influences organizational performance.

Summary

Chapter 4 provided results of statistical analyses performed in order to answer the overarching question “does SHRD matter?” In this research, SHRD matters in terms of its impact on organizational performance. To answer this question, a structural equation model was identified. The model incorporated SHRD and five types of organizational results, as operationalized by the Baldrige Framework for Performance Excellence: process results, customer results, workforce results, leadership, and financial. Statistical analyses established that

the five types of organizational results are significantly correlated to provide a comprehensive construct of organizational performance. Two error terms were correlated as well. This means there is an association between what can create measurement error for two sets of organizational performance results that would not affect error of other results. There is an association between what could create error between process and customer results as well as customer and financial results. Statistical analyses also indicated that SHRD has a significant, direct effect on the construct organizational performance. These results collectively serve to provide the answer that yes, SHRD matters.

CHAPTER 5: DISCUSSION

The purpose of the current study was to explore the impact of Strategic Human Resource Development (SHRD) on organizational performance. The Baldrige Criteria for Performance Excellence (Baldrige Criteria) was used as a framework within which to explore this impact. Specifically, there were two research questions:

1. Do organizational results, as operationalized by the Baldrige Framework for Performance Excellence, provide a measure of organizational performance?
2. What impact does Strategic Human Resource Development have on the resulting organizational performance construct?

A hypothesized model incorporated SHRD and five types of organizational results to comprise organizational performance. This chapter provides a summary of the method as well as discussion of each research finding in terms of its impact on theory, practice, and research. This chapter ends with discussion of future research directions.

Method Summary

To explore the impact of Strategic Human Resource Development (SHRD) on organizational performance, this dissertation used Structural Equation Modeling (SEM). SEM allowed for the analysis of the hypothesized structural relationship between the measured variable, SHRD, and the latent construct, organizational performance. Organizational performance was comprised of five types of organizational results operationalized by the Baldrige Framework. These results included: process, customer-focused, workforce-focused, leadership and governance, and financial and market. The model incorporated a direct relationship between SHRD and organizational performance.

The model was analyzed as a measurement model and then as a structural model. The first step was to estimate the measurement model using scores from Baldrige Award applicant organizations. The model allowed for mapping measurements to theoretical constructs. Both exploratory and confirmatory factor analysis tested if the five types of organizational results comprise one latent construct, organizational performance. The second step used the covariance matrix resulting from the measurement model as input to estimate the structural coefficients within the structural model. Path analysis estimated the parameters of the structural model. The resulting parameter estimates illustrated how changing the value of observed constructs would affect the latent construct, organizational performance. Finally, model modifications improved the model's fit.

Research Findings

The model created in the current study represents the impact of Strategic Human Resource Development (SHRD) on organizational performance. Based on analysis of the final model, there were three primary findings. First, the types of organizational results, as operationalized by the Baldrige Framework, comprise one latent construct, organizational performance. Second, SHRD has a direct, positive impact on the organizational performance construct. Third, two error term correlations between organizational results indicate a connection between these organizational results and other variables within the model. Collectively, these research findings support and build upon extant theory and research as well as provide knowledge to support practice.

Research finding 1: Organizational performance construct

The Baldrige Framework for Performance Excellence (Baldrige Framework) operationalizes organizational performance using five groups of organizational results: process

results (PROC), customer-focused results (CUST), workforce-focused results (WORK), leadership & governance results (LEAD), and financial & market results (FINL). Referred to as items, these groups comprise one category of the Baldrige Criteria. Statistical analyses in the current study found these items combine to create a picture of one construct, organizational performance. This finding provides an affirmative response to the first research question, indicating that organizational results, as operationalized by the Baldrige Framework, provide a measure of organizational performance.

The concept of organizational performance is key to determining if SHRD matters. SHRD aligns and integrates training and development approaches with strategic objectives in order to improve organizational performance. In order to determine the impact of SHRD, it is necessary to define the organizational performance it is to impact. This finding provides a foundation upon which to further explore the impact of SHRD by creating a statistical model that comprehensively illustrates organizational performance.

In addition to providing a foundational element of this dissertation, this finding provides insight for practitioners and researchers using the Baldrige Criteria for Performance Excellence (Baldrige Criteria). According to the Baldrige Performance Excellence Program (2013), organizations employ the Baldrige Criteria to reach levels of organizational performance excellence, demonstrated by continuous organizational improvement. Researchers support this effort by validating and refining the Baldrige Criteria and its underlying theoretical framework. In order to measure organizational improvement, practitioners and researchers focus on five types of key organizational measures outlined in the Baldrige Criteria (e.g., DeBaylo, 1999; DeCarlo & Sterett, 1990; Frank, 1996; Frank, 1997; Frank & Chapman, 1995; Goldstein & Schweikhart, 2002; Hodgetts, 1994; Kelley, 2002; Mai & Evans, 2014; Meyer, 1998; Nesbitt,

2006; Rayner, 1992; Townsend & Gephardt, 1996; Ugwueke, 2001; Unger, 2013). The model used in the current study shows that all five types of results significantly affect organizational performance, meaning that no single type of measure can accurately encompass organizational performance. The resulting holistic view of organizational performance illustrates the types of results that can lead to performance excellence sought by using the Baldrige Criteria.

Implications for theory. This dissertation adds to a strain of research exploring the theoretical model supporting the Baldrige Criteria, known as the Baldrige Framework. Much of the reviewed research focused on relationships among all the categories within the Baldrige Framework (e.g., Handfield & Ghosh, 1995; Ghosh, et al, 2003; Lee, et al., 2003; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000). The reviewed research provides insight about the overall theoretical model of the Baldrige Criteria, but provides limited understanding about the items, or sub categories, within the Baldrige Criteria. Some research using factor analysis statistically illustrates correlations between these items within their respective categories (e.g., Jayamaha, Grigg, & Mann, 2011; Kim, & Oh, 2012; Mai & Evans, 2014). However, none of the studies reviewed used the impact of individual items other items within the model. By expanding analysis down to the item level, the model used in the current study provides a more comprehensive understanding about how they type of organizational results, as operationalized by the Baldrige Criteria, interact and comprise one factor, organizational performance.

Beyond Baldrige research, this finding expands the understanding of organizational performance by illustrating the interactions among different types of organizational performance measures, or results. Essentially, the model used in this study shows how different types of results work together to make organizational performance. Reviewed literature did not provide

other models of organizational performance that were as succinct, yet as comprehensive as that used in this study.

Implications for research. The data set used for this dissertation allowed for study of the constructs as defined by the Baldrige Framework, rather than constructs defined by the researcher. The preponderance of extant research relies on researcher-defined constructs for the Baldrige Criteria, usually in the form of surveys about how organizations use the Criteria (e.g., Handfield & Ghosh, 1995; Ghosh, et al, 2003; Lee, et al., 2003; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000). The Baldrige Program recently released a data set of actual scores for Baldrige Award applicants, not allowing time for multiple researchers to use it. While some research exists using applicant scores in state-level programs (e.g., Pannirselvam, & Ferguson, 2001; Pannirselvam, Siferd, & Ruch, 1998), there is little research available studying national level applicant scores (Karimi, Hashemi, & Kalantar, 2014; Evans & Mai, 2014; Mai & Evans, 2014). Therefore, the use of this data itself provides a unique contribution to research. It also provides a new way to explore other relationships within the Baldrige Framework.

Implications for practice. This finding reinforces the importance of focusing on multiple types of measures to determine organizational performance. The model used in the current study illustrates how each type of organizational performance result in the Baldrige Criteria has a significant impact on organizational performance. For practitioners interested in controlling organizational performance, the model illustrates the value of each type of organizational performance measures: process, customer-focused, workforce, leadership and governance, financial and market. Additionally, this finding suggests that in order to improve organizational performance, it is important to pay attention to a variety of measures, rather than only focusing on a few.

Practitioners looking for additional guidance about organizational performance measurement could use the organizational performance results category of Baldrige Criteria as an outline for which measures to review and how to evaluate them. This finding illustrates the significant impact each type of organizational performance measure impacts organizational performance. Even those not interested in applying for the Baldrige Award or using the entire Baldrige Criteria could use the guidance about organizational performance in order to inform their selection and use of organizational performance measures.

Research finding 2: SHRD impact on organizational performance

Using structural equation modeling to study SHRD, allowed for statistical representation and analysis of SHRD's impact on organizational performance. The Baldrige Award applicant score data used in this dissertation provides a score for SHRD. The score represents how well an applicant organization uses multiple approaches to workforce training and development activities that focus on improving organizational performance as well as align and integrate with organizational strategy (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006; Blazey, 2013). Therefore, the score meets the requirements set in the conceptual definition of SHRD.

The model in the current study shows that SHRD has a direct, positive, and large impact on organizational performance. The parameter estimate between SHRD and organizational performance is .68, which statistically represents SHRD's impact on organizational performance. The direct impact indicates that the model did not include any intervening variables that could affect the level of impact of SHRD on organizational performance. This means that the impact of SHRD on organizational performance in the model was due to SHRD alone. The positive impact indicates that a higher level of SHRD would yield a similarly higher level of organizational performance. The model also showed that SHRD accounts for almost 70% of the variation in

organizational performance. This is a statistically significant impact, meaning that SHRD has a relatively large impact on organizational performance.

This finding suggests that SHRD is a key factor in sustained organizational performance. The model shows that as SHRD increases, so too does organizational performance. Therefore, a continued increase in the application and refinement of SHRD can lead to a continued increase in organizational performance. Within the Baldrige Framework, “refine” refers to continuously improving approaches based on evaluation of their effectiveness as well as their integration and alignment with organizational strategy (Blazey, 2013). Refining SHRD means continuously improving the approaches to workforce training and development used as well as the approaches’ alignment and integration with organizational strategy. This refinement will lead to higher levels of SHRD the framework of this dissertation, yielding higher levels of organizational performance.

Implications for theory. Finding that SHRD’s positive impact on organizational performance is consistent current conceptual definitions of SHRD. Extant literature states that one of the major purposes of SHRD is to improve organizational performance (Garavan & Carbery 2012; Gilley & Maycunich Gilley 2003; Robinson & Robinson 2005; Swanson, 1994; Swanson & Holton, 2009; Torraco & Swanson, 1995). The empirical findings in this dissertation are consistent with previous research finding correlations between SHRD and organizational performance (e.g., Garavan, Costine, & Heraty, 1995; Katou, 2009; Macky & Boxall, 2007). While not the “holy grail,” which would be a causal link, called for by Garavan and Carbery (2012, p. 25), this research provides a causal inference for SHRD’s positive and direct impacts on organizational performance.

This dissertation builds on the current understanding of SHRD in the theoretical model supporting the Baldrige Framework. The preponderance Baldrige Framework research uses the entire category relating to the workforce in analysis (e.g., Handfield & Ghosh, 1995; Ghosh, et al, 2003; Lee, et al., 2003; Lee et al., 2013; Meyer & Collier, 2001; Wilson & Collier, 2000). However, the workforce category incorporates both SHRD and human resource management requirements. Examples of human resource management requirements include workforce recruitment, management, and compensation, whereas requirements in the SHRD item focus on career development, training, and succession planning (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006). Using Evans and Mai's (2014) guidance for studying specific topics areas within the Baldrige Criteria provided a more in depth look at the requirements specifically related to SHRD.

Implications for research. Using the Baldrige Framework to study SHRD provides a model for understanding the impact of SHRD on different areas of the organization. The Baldrige Framework situates workforce training and development at a strategic level. Within the Baldrige Framework, workforce training and development approaches are developed or selected for their alignment and integration with organizational strategy focused on improving performance (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006; Blazey, 2013). This is consistent with the conceptual definition of SHRD used in this dissertation and extant research. Therefore, the Baldrige Framework provides a theoretical model for studying the impact of SHRD on any other aspect of an organization measured by the Baldrige Criteria.

The method used in the current study provides a foundation for future SHRD research using structural equation modeling. The few SHRD research studies using structural equation modeling generally rely on surveys developed by researchers, where participant perceptions are

the focus of the analysis (e.g., Goldstein, 2003, Paul & Anantharaman, 2003; Yoo & Park, 2007). Rather than subjective participant perspectives, this dissertation used scores based on objective criteria. This dissertation therefore provides an alternative approach for studying SHRD.

Implications for practice. Results from the SEM analysis found that SHRD accounts for almost 70% of the variation of organizational performance. This finding provides justification for the importance of SHRD within an organization in terms of how it directly influences organizational performance. It is important to underscore the strategic aspect of SHRD in making arguments for its impact on organizational performance (Garavan 1991; Fredericks and Stewart 1996; Harrison 1997; Lee 1997; Sambrook, 2000). This dissertation focused solely on workforce training and development approaches aligned and integrated with organizational strategy as well as focused on improving organizational performance. Therefore the significant impact on organizational performance was predicated on the use of SHRD, not necessarily all workforce training and development activities. For practitioners, this definition provides a set of filters for to use when determining what types of workforce training and development approaches may have the greatest impact organizational performance.

Research finding 3: Correlated error terms

The model used in the current study included two sets of correlated error terms. While this finding does not relate to the research questions, it has meaningful implications for theory and research. Correlated error terms indicate something in common between the terms not accounted for in the model (Schumacker & Lomax, 2010). This means that something unique to the two terms causes part of their variation. Statistical analyses indicated two such correlations.

The first correlated error term is between customer-focused results and process results. Customer-focused results demonstrate how well an organization satisfies its customers. Typical

results include customer satisfaction, engagement, retention, and referrals. Process results show performance of key organizational processes, generally in the form of effectiveness or efficiency measures. This correlation indicates a connection unique to these types of these results that does not exist with the other types of results.

The second correlated error term is between customer-focused results and financial/market results. Financial/market results focus on how well the organization performs in the marketplace. Examples of financial results include revenues, profits, assets, and earnings per share. Some common market results are market position, market share, growth, new markets entered, and percentage of income from different programs. Again, this connection is unique and does not affect other variables in the model.

Implications for theory. The first correlated error, between customer and process results, is consistent with process design research and practice. According to the Baldrige Criteria, the purpose of processes is to create value for customers and stakeholders as well as improving operational performance (Baldrige, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006; Blazey, 2013). This customer focus to process design suggests the importance of the process outcomes to the customer. For example, K&N fast food restaurants, Baldrige Award winners in 2010, have process to deliver hot, fresh food to customers. Customer satisfaction directly relates to the outcome of those processes. Therefore, the finding that there is something unique between process results and customer results supports current theory and practice.

The second correlated error, between customer-focused and financial/market results, is also consistent with existing theory and practice. Conventional wisdom holds that customer satisfaction and engagement affect financial performance because customers are a primary source of revenue for most organizations. As such, organizational performance research and

popular press literature state the importance of customer satisfaction and financial performance (Yoo & Park, 2007). This finding supports the cited connection.

Implications for research. Surprisingly, none of the reviewed research exploring the Baldrige Framework with structural equation modeling reported correlated error terms (e.g., Goldstein, 2003; Paul & Anantharaman, 2003; Yoo & Park, 2007). While researchers could choose not to co-vary error terms for a number of reasons, this calls into question if covariance(s) could improve model fit. Findings in this dissertation suggest that researchers more closely review modification indices, changes in model fit, and extant literature to determine if models should in fact include co-varied error terms.

Additionally, this finding suggests the need for future research into the interactions between customer-focused, process, and financial/market results in the Baldrige Framework. While extant theory provides justification for these interactions, none of the research reviewed provided empirical support for them. The impact of these correlated error terms was large enough to yield a significant improvement in model fit with their inclusion. This means that the correlated error terms are having a significant impact on the underlying theoretical Baldrige Framework and necessitate further research.

The finding of two previously un-modeled correlated error terms emerges from data-driven rather than theory-driven approaches to structural equation modeling. The data-driven approach can provide a more detailed explanation of interactions among factors in the model by making modifications beyond the lowest goodness of fit thresholds used in theory-driven approaches (Joreskog & Sorbom, 1993; Long, 1983; MacCallum, 1986; Schumacker & Lomax, 2010; Sorbom, 1989). The trade off for the more detailed explanation is a greater number of parameters that must be substantially justified by existing theory, which can make the model

more complicated (Preacher, 2006). In short, using a data-driven approach to SEM uses statistical analyses to provide the justification for correlating the error terms. Additional theoretical justification is made following the inclusion of the correlated error terms.

This dissertation used a data-driven approach. The correlated error terms would not have been included had a theory-driven approach been utilized, as the initial model met the threshold for goodness of fit. However, the model's fit increased significantly when the error terms were included. This means that including the error terms increased the accuracy of the model's illustration of how different types of organizational performance results interact within the construct of organizational performance. Therefore, using a data-driven approach to structure equation modeling provided new insight to organizational performance that previous research did not find suggesting that this type of approach is superior to the other.

Implications for practice. This finding illustrates that there are two elements not currently measured by the Baldrige Framework. One of these elements exclusively impacts customers and process results, the other exclusively impacts customers and financial/market results. The Baldrige Framework is a set of best practices that are identified by industry leaders, i.e., practitioners, which are then validated by researchers (Evans, 2010). Practitioners have the opportunity to greatly influence the future of the Baldrige Framework by identifying the elements that customers and process results exclusively as well as customer and financial/market results exclusively. In addition to impacting future Baldrige Framework and research, identifying these elements can impact organizational performance as well. Identifying, focusing, and improving practices that impact these missing elements should yield higher levels of customer, process, and financial/market results.

Directions for Future Research

This dissertation leads to additional questions to address in future research. First, SHRD clearly affect organizational performance, but how does SHRD affect different types of organizational results? Second, what impact does SHRD have on other areas of the organization, such as Leadership and Governance, Customer Service, and the Workforce? Third, what approaches are the applicant organizations using that constitute SHRD? The philosophical, theoretical, and conceptual frameworks used in this dissertation provide a foundation for these and future studies highlighting the importance of SHRD.

In the current context, SHRD was important in terms of organizational performance. It would be helpful to understand how SHRD affects the different types of organizational results operationalized by the Baldrige Framework. Analysis of SHRD's relationship to the different types of results that comprise organizational performance would provide additional insight into how SHRD affects organizational performance. This analysis would essentially provide a more comprehensive picture of the ways in which SHRD matters in terms of organizational performance results.

The Baldrige Criteria provides measures for many areas of the organization beyond SHRD and results. Analyzing how SHRD influences other areas of an organization could lead to insight about they systematic nature of SHRD.

Finally, a meta analysis of the actual applications of the applicant organizations could yield a comprehensive list of SHRD approaches. While extant literature provides lists of common approaches (e.g., Garavan, 1991; McCracken & Wallace, 2000; Stewart & Sambrook, 2012; Torraco & Swanson, 1995), this analysis could lead to the compilation of a more extensive list. Even though SHRD approaches need to be aligned and integrated with organizational

strategy, this analysis could provide SHRD practitioners with ideas for designing approaches appropriate for their individual organizations.

Conclusion

The purpose of this dissertation was to explore the impact of SHRD on organizational performance. It was proposed that in a time of record unemployment with increasing employee skills gaps, a focus on the strategic nature of workforce training and development could positively affect organizational performance. By focusing on SHRD, or the use of multiple approaches to employee training and development that integrate and align with organizational strategy, organizations should realize increased performance. The analyses conducted during the course of the current study make clear two pertinent ideas. First, organizational performance is a complex construct comprised of multiple types of interconnected results. Second, SHRD positively and directly influences this performance. In short, this dissertation affirms the statement that SHRD matters.

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APPENDIX A: 2013-2014 DESCRIPTION OF BALDRIGE CRITERIA FOR PERFORMANCE EXCELLENCE

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This appendix contained an excerpt of the “2013-2014 Description of Baldrige Criteria for Performance Excellence” published by the National Institute of Standards and Technology. It serves as an overview of the Baldrige Criteria Categories and Items.

Preface: Organizational Profile

Your Organizational Profile provides a framework for understanding your organization. It also helps you guide and prioritize the information you present in response to the Criteria items in categories 1–7.

The Organizational Profile provides your organization with critical insight into the key internal and external factors that shape your operating environment. These factors, such as your organization’s vision, values, mission, core competencies, competitive environment, and strategic challenges and advantages, impact the way your organization is run and the decisions you make. As such, the Organizational Profile helps your organization better understand the context in which it operates; the key requirements for current and future business success and organizational sustainability; and the needs, opportunities, and constraints placed on your organization’s management systems.

P.1 Organizational Description

This item addresses the key characteristics and relationships that shape your organizational environment. The aim is to set the context for your organization.

P.2 Organizational Situation

This item asks about the competitive environment in which your organization operates, including your key strategic challenges and advantages. It also asks how you approach performance improvement and learning. The aim is to help you understand your key organizational challenges and your system for establishing and preserving your competitive advantage.

Leadership (Category 1)

This category asks how senior leaders' personal actions and your governance system guide and sustain your organization.

1.1 Senior Leadership

This item asks about the key aspects of your senior leaders' responsibilities, with the aim of creating a sustainable organization.

1.2 Governance and Societal Responsibilities

This item asks about key aspects of your organization's governance system, including the improvement of leadership. It also asks how your organization ensures that everyone in the organization behaves legally and ethically, how it fulfills its societal responsibilities, and how it supports its key communities.

Strategic Planning (Category 2)

This category asks how your organization develops strategic objectives and action plans, implements them, changes them if circumstances require, and measures progress. The category

stresses that your organization's long-term organizational sustainability and competitive environment are key strategic issues that need to be integral parts of your overall planning. Making decisions about your organization's core competencies and work systems is an integral part of ensuring your organization's sustainability, and these decisions are therefore key strategic decisions.

While many organizations are increasingly adept at strategic planning, executing plans is still a significant challenge. This is especially true given market demands to be agile and be prepared for unexpected change, such as volatile economic conditions or disruptive technologies that can upset an otherwise fast-paced but more predictable marketplace. This category highlights the need to focus not only on developing your plans, but also on your capability to execute them.

2.1 Strategy Development

This item asks how your organization establishes a strategy to address its challenges and leverage its advantages and how it makes decisions about key work systems and core competencies. It also asks about your key strategic objectives and their related goals. The aim is to strengthen your overall performance, competitiveness, and future success.

2.2 Strategy Implementation

This item asks how your organization converts your strategic objectives into action plans to accomplish the objectives and how your organization assesses progress relative to these action plans. The aim is to ensure that you deploy your strategies successfully and achieve your goals.

Customer Focus (Category 3)

This category asks how your organization engages its customers for long-term marketplace success, including how your organization listens to the voice of the customer, builds

customer relationships, and uses customer information to improve and to identify opportunities for innovation. The category stresses customer engagement as an important outcome of an overall learning and performance excellence strategy. Your customer satisfaction and dissatisfaction results provide vital information for understanding your customers and the marketplace. In many cases, the voice of the customer provides meaningful information not only on your customers' views but also on their marketplace behaviors and on how these views and behaviors may contribute to your organization's sustainability in the marketplace.

3.1 Voice of the Customer

This item asks about your organization's processes for listening to your customers and determining their satisfaction and dissatisfaction. The aim is to capture meaningful information in order to exceed your customers' expectations.

3.2 Customer Engagement

This item asks about your organization's processes for determining and customizing product offerings that serve your customers and markets; for enabling customers to seek information and support; and for identifying customer groups and market segments. The item also asks how you build relationships with your customers and manage complaints. The aim of these efforts is to improve marketing, build a more customer-focused culture and enhance customer loyalty.

Measurement, Analysis, and Knowledge Management (Category 4)

This category is the main point within the Criteria for all key information about effectively measuring, analyzing, and improving performance and managing organizational knowledge to drive improvement, innovation, and organizational competitiveness. In the simplest terms, category 4 is the "brain center" for the alignment of your organization's

operations with its strategic objectives. Central to such use of data and information are their quality and availability. Furthermore, since information, analysis, and knowledge management might themselves be primary sources of competitive advantage and productivity growth, this category also includes such strategic considerations.

4.1 Measurement, Analysis, and Improvement of Organizational Performance

This item asks how your organization selects and uses data and information for performance measurement, analysis, and review in support of organizational planning and performance improvement. The item serves as a central collection and analysis point in an integrated performance measurement and management system that relies on financial and nonfinancial data and information. The aim of performance measurement, analysis, review, and improvement is to guide your organization's process management toward the achievement of key organizational results and strategic objectives, to anticipate and respond to rapid or unexpected organizational or external changes, and to identify best practices to share.

4.2 Knowledge Management, Information, and Information Technology

This item asks how your organization builds and manages its knowledge assets and how it ensures the quality and availability of data, information, software, and hardware, normally and in the event of an emergency. The aim of this item is to improve organizational efficiency and effectiveness and to stimulate innovation.

Workforce Focus (Category 5)

This category addresses key workforce practices—those directed toward creating and maintaining a high-performance work environment and toward engaging your workforce to enable it and your organization to adapt to change and to succeed. To reinforce the basic

alignment of workforce management with overall strategy, the Criteria also cover workforce planning as part of overall strategic planning in category 2.

5.1 Workforce Environment

This item asks about your workforce capability and capacity needs, how you meet those needs to accomplish your organization's work, and how you ensure a supportive work climate. The aim is to build an effective environment for accomplishing your work and supporting your workforce.

5.2 Workforce Engagement

This item asks about your organization's systems for managing workforce performance and developing your workforce members to enable and encourage all workforce members to contribute effectively and to the best of their ability. These systems are intended to foster high performance, to address your core competencies, and to help accomplish your action plans and ensure organizational sustainability.

Operations Focus (Category 6)

This category asks how your organization focuses on its work, product design and delivery, and operational effectiveness to achieve success and organizational sustainability.

6.1 Work Processes

This item asks about the management of your key products and work processes, with the aim of creating value for your customers and achieving organizational success and sustainability.

6.2 Operational Effectiveness

This item asks how you ensure effective operations in order to have a safe workplace environment and deliver customer value. Effective operations frequently depend on managing your supply chain effectively and innovating for the future.

Results (Category 7)

This category provides a systems focus that encompasses all results necessary to sustaining an enterprise: your key process and product results, your customer-focused results, your workforce results, your leadership and governance system results, and your overall financial and market performance.

Through this focus, the Criteria's purposes—superior value of offerings as viewed by your customers and the marketplace, superior organizational performance as reflected in your operational indicators, and organizational and personal learning—are maintained. Category 7 thus provides “real-time” information (measures of progress) for evaluation, improvement, and innovation of processes and products, in alignment with your overall organizational strategy. While category 7 asks about results broadly, your organization should place a premium on monitoring outcomes that are the consequence of its operational performance and serve as predictors of future performance.

7.1 Product and Process Results

This item asks about your organization's key product and operational performance results, which demonstrate product and service quality and value that lead to customer satisfaction and engagement.

7.2 Customer-Focused Results

This item asks about your organization's customer-focused performance results, which demonstrate how well your organization has been satisfying your customers and engaging them in loyalty-building relationships.

7.3 Workforce-Focused Results

This item asks about your organization's workforce-focused performance results, which demonstrate how well your organization has been creating and maintaining a productive, caring, engaging, and learning environment for all members of your workforce.

7.4 Leadership and Governance Results

This item asks about your key results in the areas of senior leadership and governance, which demonstrate the extent to which your organization is fiscally sound, ethical, and socially responsible.

7.5 Financial and Market Results

This item asks about your key financial and market results, which demonstrate your financial sustainability and your marketplace achievements.

APPENDIX B: MALCOLM BALDRIGE NATIONAL QUALITY AWARD CRITERIA

Item 5.2 from 2000-2006

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During the years of interest in this research, the item 5.2 of the Malcolm Baldrige National Quality Award Criteria (Baldrige Criteria) has consistently measured Strategic Human Resource Development (SHRD). It does so by using a multiplicity of approaches, aligned and integrated with organizational strategy, designed to improve organizational performance. This Appendix provides the exact verbiage used in Item 5.2 of the Baldrige Criteria for the years under reviews. The purpose of this Appendix is to illustrate the types of requirements included in this item and how they change over time.

Please note: Scores are assessed for applicants at the item level. Applicants do not receive scores for individual requirements within the item.

1999 Baldrige Criteria

5.2 Employee Education, Training, and Development

Describe how the organization's education and training support the accomplishment of key action plans and address business needs, including building knowledge, skills, and capabilities, and contributing to improved employee performance and development.

In your response, address the following Area:

a. Employee Development:

(1) how education and training support the organization's key action plans and address business needs needs, including development, learning, and career progression?;

(2) how employee education and training are designed to support the organization's work systems. Include how the school seeks input from employees and their supervisors/managers in education and training design;

(3) how education and training, including orientation of new employees, are delivered;

(4) how knowledge and skills are reinforced on the job; and

(5) how education and training are evaluated and improved, taking into account school performance, employee performance, personal development, and other factors, as appropriate.

2000 Baldrige Criteria

5.2 Employee Education, Training, and Development

Describe how your organization's education and training support the achievement of your business objectives, build employee knowledge, skills, and capabilities, and contribute to improved employee performance.

Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) How does your education and training approach balance short- and longer-term organizational and employee needs, including development, learning, and career progression?

(2) How do you design education and training to keep current with business and individual needs? Include how job and organizational performance are used in education and training design and evaluation.

(3) How do you seek and use input from employees and their supervisors/managers on education and training needs, expectations, and design?

(4) How do you deliver and evaluate education and training? Include formal and informal education, training, and learning, as appropriate.

(5) How do you address key developmental and training needs, including diversity training, management/leadership development, new employee orientation, and safety, as appropriate?

(6) How do you address performance excellence in your education and training? Include how employees learn to use performance measurements, performance standards, skill standards, performance improvement, quality control methods, and benchmarking, as appropriate.

(7) How do you reinforce knowledge and skills on the job?

2001 Baldrige Criteria

5.2 Employee Education, Training, and Development

Describe how your organization's education and training support the achievement of your overall objectives, including building employee knowledge, skills, and capabilities and contributing to high performance. Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) How do education and training contribute to the achievement of your action plans?

How does your education and training approach balance short- and longer-term organizational objectives and employee needs, including development, learning, and career progression?

(2) How do you seek and use input from employees and their supervisors/managers on education and training needs and delivery options?

(3) How do you address in your employee education, training, and development your key organizational needs associated with technological change, management/leadership development, new employee orientation, safety, performance measurement/improvement, and diversity?

(4) How do you deliver education and training? Include formal and informal delivery, including mentoring and other approaches, as appropriate. How do you evaluate the effectiveness of education and training, taking into account individual and organizational performance?

(5) How do you reinforce the use of knowledge and skills on the job?

2002 Baldrige Criteria

5.2 Employee Education, Training, and Development

Describe how your organization's education and training support the achievement of your overall objectives, including building employee knowledge, skills, and capabilities and contributing to high performance. Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) How do education and training contribute to the achievement of your action plans?

How does your education and training approach balance short- and longer-term organizational objectives and employee needs, including development, learning, and career progression?

(2) How do you seek and use input from employees and their supervisors/managers on education and training needs and delivery options?

(3) How do you address in your employee education, training, and development your key organizational needs associated with technological change, management/leadership development, new employee orientation, safety, performance measurement/improvement, and diversity?

(4) How do you deliver education and training? Include formal and informal delivery, including mentoring and other approaches, as appropriate. How do you evaluate the effectiveness of education and training, taking into account individual and organizational performance?

(5) How do you reinforce the use of knowledge and skills on the job?

2003 Baldrige Criteria

5.2 Employee Learning and Motivation

Describe HOW your organization's employee education, training, and career development support the achievement of your overall objectives and contribute to HIGH PERFORMANCE. Describe HOW your organization's education, training, and career development build employee knowledge, skills, and capabilities.

Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) HOW do employee education and training contribute to the achievement of your ACTION PLANS? HOW do your employee education, training, and development address your KEY needs associated with organizational PERFORMANCE measurement, PERFORMANCE improvement, and technological change? HOW does your education and training APPROACH balance short- and longer-term organizational objectives with employee needs for development, learning, and career progression?

(2) HOW do employee education, training, and development address your KEY organizational needs associated with new employee orientation, diversity, ethical business practices, and management and leadership development? HOW do employee education, training, and development address your KEY organizational needs associated with employee, workplace, and environmental safety?

(3) HOW do you seek and use input from employees and their supervisors and managers on education and training needs? HOW do you incorporate your organizational learning and KNOWLEDGE ASSETS into your education and training?

(4) HOW do you deliver education and training? HOW do you seek and use input from employees and their supervisors and managers on options for the delivery of education and training? HOW do you use both formal and informal delivery APPROACHES, including mentoring and other APPROACHES, as appropriate?

(5) HOW do you reinforce the use of new knowledge and skills on the job?

(6) HOW do you evaluate the effectiveness of education and training, taking into account individual and organizational PERFORMANCE?

b. Motivation and Career Development

HOW do you motivate employees to develop and utilize their full potential? HOW does your organization use formal and informal mechanisms to help employees attain job- and career-related development and learning objectives?

2004 Baldrige Criteria

5.2 Employee Learning and Motivation

Describe HOW your organization's employee education, training, and career development support the achievement of your overall objectives and contribute to HIGH PERFORMANCE. Describe HOW your organization's education, training, and career development build employee knowledge, skills, and capabilities. Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) HOW do employee education and training contribute to the achievement of your ACTION PLANS? HOW do your employee education, training, and development address your KEY needs associated with organizational PERFORMANCE measurement, PERFORMANCE improvement, and technological change? HOW does your education and training APPROACH

balance short- and longer-term organizational objectives with employee needs for development, LEARNING, and career progression?

(2) HOW do employee education, training, and development address your KEY organizational needs associated with new employee orientation, diversity, ethical business practices, and management and leadership development? HOW do employee education, training, and development address your KEY organizational needs associated with employee, workplace, and environmental safety?

(3) HOW do you seek and use input from employees and their supervisors and managers on education and training needs? HOW do you incorporate your organizational LEARNING and KNOWLEDGE ASSETS into your education and training?

(4) HOW do you deliver education and training? HOW do you seek and use input from employees and their supervisors and managers on options for the delivery of education and training? HOW do you use both formal and informal delivery APPROACHES, including mentoring and other APPROACHES, as appropriate?

(5) HOW do you reinforce the use of new knowledge and skills on the job?

(6) HOW do you evaluate the effectiveness of education and training, taking into account individual and organizational PERFORMANCE? b. Motivation and Career Development HOW do you motivate employees to develop and utilize their full potential? HOW does your organization use formal and informal mechanisms to help employees attain job- and career-related development and LEARNING objectives? HOW do managers and supervisors help employees attain job- and career-related development and LEARNING objectives?

2005 Baldrige Criteria

5.2 Employee Learning and Motivation

Describe HOW your organization's employee education, training, and career development support the achievement of your overall objectives and contribute to HIGH PERFORMANCE. Describe HOW your organization's education, training, and career development build employee knowledge, skills, and capabilities. Within your response, include answers to the following questions:

a. Employee Education, Training, and Development

(1) HOW do employee education and training contribute to the achievement of your ACTION PLANS? HOW do your employee education, training, and development address your KEY needs associated with organizational PERFORMANCE measurement, PERFORMANCE improvement, and technological change? HOW does your education and training APPROACH balance short- and longer-term organizational objectives with employee needs for development, ongoing LEARNING, and career progression?

(2) HOW do employee education, training, and development address your KEY organizational needs associated with new employee orientation, DIVERSITY, ethical business practices, and management and leadership development? HOW do employee education, training, and development address your KEY organizational needs associated with employee, workplace, and environmental safety?

(3) HOW do you seek and use input from employees and their supervisors and managers on education, training, and development needs? HOW do you incorporate your organizational LEARNING and KNOWLEDGE ASSETS into your education and training?

(4) HOW do you deliver education and training? HOW do you seek and use input from employees and their supervisors and managers in determining your delivery APPROACHES?

HOW do you use both formal and informal delivery APPROACHES, including mentoring and other APPROACHES, as appropriate?

(5) HOW do you reinforce the use of new knowledge and skills on the job and retain this knowledge for long-term organizational use? HOW do you SYSTEMATICALLY transfer knowledge from departing or retiring employees?

(6) HOW do you evaluate the effectiveness of education and training, taking into account individual and organizational PERFORMANCE?

b. Motivation and Career Development

HOW do you motivate employees to develop and utilize their full potential? HOW does your organization use formal and informal mechanisms to help employees attain job- and career-related development and LEARNING objectives? HOW do managers and supervisors help employees attain job- and career-related development and LEARNING objectives?

2006 Baldrige Criteria

5.2 Employee Learning and Motivation

Describe HOW your organization's EMPLOYEE education, training, and career development support the achievement of your overall objectives and contribute to HIGH PERFORMANCE. Describe HOW your organization's education, training, and career development build EMPLOYEE knowledge, skills, and capabilities. Within your response, include answers to the following questions:

a. EMPLOYEE Education, Training, and Development

(1) HOW do EMPLOYEE education and training contribute to the achievement of your ACTION PLANS? HOW do your EMPLOYEE education, training, and development address your KEY needs associated with organizational PERFORMANCE measurement,

PERFORMANCE improvement, and technological change? HOW does your education and training APPROACH balance short- and longer-term organizational objectives with EMPLOYEE needs for development, ongoing LEARNING, and career progression?

(2) HOW do EMPLOYEE education, training, and development address your KEY organizational needs associated with new EMPLOYEE orientation, DIVERSITY, ethical business practices, and management and leadership development? HOW do EMPLOYEE education, training, and development address your KEY organizational needs associated with EMPLOYEE, workplace, and environmental safety?

(3) HOW do you seek and use input from EMPLOYEES and their supervisors and managers on education, training, and development needs? HOW do you incorporate your organizational LEARNING and KNOWLEDGE ASSETS into your education and training?

(4) HOW do you deliver education and training? HOW do you seek and use input from EMPLOYEES and their supervisors and managers in determining your delivery APPROACHES? HOW do you use both formal and informal delivery APPROACHES, including mentoring and other APPROACHES, as appropriate?

(5) HOW do you reinforce the use of new knowledge and skills on the job and retain this knowledge for long-term organizational use? HOW do you SYSTEMATICALLY transfer knowledge from departing or retiring EMPLOYEES?

(6) HOW do you evaluate the EFFECTIVENESS of education and training, taking into account individual and organizational PERFORMANCE?

b. Motivation and Career Development

HOW do you motivate EMPLOYEES to develop and utilize their full potential? HOW does your organization use formal and informal mechanisms to help EMPLOYEES attain job-

and career-related development and LEARNING objectives? HOW do managers and supervisors help EMPLOYEES attain job- and career-related development and LEARNING objectives?