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## How Supply Chain Managers Develop Agile Capability Strategies in the Workforce

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# Walden University

College of Management and Technology

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Bethany Iris Grace

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Abstract

How Supply Chain Managers Develop Agile Capability Strategies in the Workforce

by

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MBA, Saint Mary's University of Minnesota, 2010

BA, Saint Catherine University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

November 2021

## Abstract

Ineffective change management strategies lead to poor organizational performance. Higher levels of agile capabilities have been shown to improve success in managing change. The research problem was that supply chain managers do not have coherent strategies to develop agile capabilities in the workforce. The purpose of this qualitative, exploratory multiple case study was to investigate how supply chain managers develop strategies to build agile capabilities in the workforce. The conceptual framework that grounded this study includes resource-based view theory and leader-member exchange theory. The research question explored how supply chain managers develop strategies for building agile capabilities in the workforce. The participant pool included six supply chain managers who participated in semistructured interviews. Triangulation occurred through data analysis of archival data, nonconfidential internal organizational data, and participant interviews. Interview transcripts were coded and analyzed for themes. Findings showed that supply chain managers consider leadership practices, including leadership culture, alignment, and capabilities, and human resource management practices, including training, development, and recruitment capabilities, when developing strategies to build agile capabilities in the workforce. Insights from this research might contribute to positive social change through the positive benefits in organizational outcomes when elevated agile capabilities result in successful change initiatives and contribute to key performance indicators.

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## Dedication

I dedicate this doctoral study to my beloved grandfather, Ahmed Ismail. Thank you for the sacrifices you made so I may chart an unscripted path. Honoring your legacy gave me the courage to seek out my own potential.

## Acknowledgments

I would like to extend a gracious thank you to my Committee Chair, Dr. Sheryl Kristensen. Your support, guidance, and encouragement inspired me to conduct meaningful research and to develop my capabilities as a researcher. I am grateful for the opportunity I have had to grow through your guidance. I would also like to extend sincere gratitude to my Second Committee Member, Dr. Bob Nolley, and my URR, Dr. Hamid Kazeroony, for their constructive input that pushed me to elevate my academic capabilities during the process of completing my dissertation.

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## Chapter 1: Introduction to the Study

Adapting effectively to change remains a primary area of concern in organizations that operate in environments of rapid change (Gigliotti et al., 2019). Managing change is no longer a matter of planning around discrete, linear steps to create and implement new processes (Lawrence, 2015). Rapid advances in technology, transportation, communication, and shifting consumer patterns have resulted in more significant variability in marketplace demands (Harsch & Festing, 2020). As such, change management is evolving due to the complexities of managing through the considerable ambiguity that results from disruptive, transformational change (Braun et al., 2017). Supply chain managers must develop coherent change management strategies to account for this increase in complexity affecting change management functions in organizations. Responsibilities for managing change are functions of both human resource management practices (Harsch & Festing, 2020; Raeder & Bokova, 2019) and leadership practices (Hartge et al., 2019; Nold & Michel, 2016; Yue et al., 2019). As the role of managing change shifts from structured, linear planning to adapting to rapid, disruptive changes, understanding how human resource management practices are shifting and how leadership practices are shifting may inform how improvements can be made in change management practices.

One contributor to the struggles in adapting effectively to rapid market and technology changes is a lack of an agile workforce (Qin & Nembhard, 2015). Therefore, one strategy for building capabilities around managing change may be found in building agile capabilities in the organization (Nagel & Dove, 1991; Raeisi & Amirnejad, 2017).

Both human resource management practices (Garcia-Alcaraz et al., 2017; Ghasemi et al., 2016) and leadership practices (Muduli, 2017) impact agile capabilities in the workforce. Building an understanding of the roles of human resource management and leadership practices in developing agile capabilities in the workforce may improve change management capabilities in organizations that operate in complex change environments.

Chapter 1 provides a brief overview of my research, an introduction to critical concepts in the study, and the research problems, and then describes the general and specific management problems and research purpose. Chapter 1 continues with the research question, the conceptual framework, and a section dedicated to the nature of the study. The remainder of Chapter 1 covers definitions, assumptions, the scope and delimitations, the limitations, the significance, and a summary.

### **Background of the Study**

Business leaders must anticipate, strategically plan for, and respond to accelerated competition, rapidly changing customer demands, and technological advances (Marques, 2015). These changes in intensity and scope of competition, rates of change, and continuous threats of marketplace disruptors contribute to an intensifying need to lead change more effectively. Marques (2015) posited that as market pressures have increased rapidly, expectations of organizational leaders have shifted dramatically. A new capability expected in leadership is positioning organizations to adapt effectively to complex change (Uhl-Bien & Arena, 2018). The cost of not adapting effectively to change is high, with at least half of change initiatives failing to achieve identified initiative goals and timelines (Marques, 2015; Rogiest et al., 2015).



One area where the pressures of complex change are evident in the 21<sup>st</sup> Century is the supply chain (Garcia-Alcaraz et al., 2017). Supply chain leaders are under pressure to engage in complex change initiatives due to constant advances in technology, communication, transportation, and globalization (Sambartolo, 2015). As external pressures force supply chain leaders to grapple with managing rapid, complex change, the roles of human resource management (Teimouri et al., 2017) and leadership (Marques, 2015) are evolving rapidly within organizations. More than half of leaders surveyed in 2016 indicated they could not adapt to shifting strategies and goals within their organization (Braun et al., 2017). The role of leadership in managing change has focused on leaders' abilities to build readiness for change in followers and commitment to change in followers (Raeder & Bokova, 2019). While building readiness for change and commitment to change were identified as essential leadership skills in planned, managed change situations, research has not identified how leaders can effectively influence followers during complex change initiatives.

One way to adapt to continuous, complex change is by building agile capabilities (Brusset, 2016). Developing better organizational agile capabilities may position organizations to capitalize quickly on emerging market opportunities (Uhl-Bien & Arena, 2018). Building agile capabilities within the organizational structure may also position organizational leaders to successfully manage complex change (Nold & Michel, 2016).

Organizational agility can be achieved by building agile capabilities within the workforce (Braun et al., 2017; Sherehiy & Karwowski, 2014). Workforce agility contributes to profitability, market share, productivity, innovation, and competitiveness in

uncertain environments (Al-kasasbeh et al., 2016; Muduli, 2017). Workforce agility has been defined as the ability of workers to use their skills, experience, and intelligence to respond effectively to internal and external changes affecting the organization (Al-kasasbeh et al., 2016). Many researchers have investigated factors contributing to agile capabilities in the workplace (Ghasemi et al., 2016; Muduli, 2017; Sherehiy & Karwowski, 2014).

While building agile capabilities leads to competitive advantages, it comes at a cost that organizations must consider (Teece et al., 2016). Supply chain managers must determine how organizational resources will be directed toward building agile capabilities. Advancing research into how effective strategies can be designed for implementing agile capabilities in the workforce may support supply chain managers in managing costs associated with agile capability development. Supply chain managers that devise cost-effective strategies for building agile capabilities in their workforce may build competitive advantages for their organization through the elevation of the human capital capabilities in the organization.

Muduli (2017) posited that organizational practices, including learning, training, compensation, involvement, teamwork, and information systems, account for significant variance in workforce agility within organizations. These practices fall under the duties of both leaders and human resource management practitioners (Garcia-Alcaraz et al., 2017; Ghasemi et al., 2016; Muduli, 2017). Human resource management practices that support learning, training, employee involvement, and teamwork can impact the development of agility in the workforce (Muduli, 2017). While human resource

management practitioners are responsible for the processes in organizations related to capabilities development through learning and training functions, research has not clarified how leaders contribute to the development of agile capabilities in the workforce (Alavi et al., 2014). Supply chain managers may respond effectively to complex change by identifying practical ways to leverage human resource management practices and leadership practices in supply chain operations that support agile capabilities in the workforce.

Leroy et al. (2018) asserted that more qualitative research is needed to explore how leadership and human resource management practices function together in organizations. Research had not yet identified how supply chain managers build agile capabilities in the workforce. I investigated how supply chain managers develop strategies to build agile capabilities in the workforce. My aim was to identify any considerations for the role of human resource management practices, change leadership practices, or change management practices in how supply chain managers develop strategies to build agile capabilities in the workforce. Exploring the considerations given to human resource management practices, change leadership practices, and change management practices related to building agile capabilities in the workforce may improve how supply chain managers develop strategies to build agile capabilities in the workforce.

### **Problem Statement**

A study conducted at MIT found that organizations with strong agile capabilities increased revenue 37% faster and achieved 30% higher profits than non-agile

organizations (Dattero et al., 2017). Benefits of agile workforce capabilities in organizations include improved profitability, market share, productivity, innovation, and competitiveness in uncertain environments (Al-kasasbeh et al., 2016; Muduli, 2017). The general management problem is that organizational executives are experiencing increasingly complex challenges to manage change through the development of agile capabilities (Brusset, 2016; Uhl-Bien & Arena, 2018). The specific management problem is that supply chain managers do not have coherent strategies to develop agile capabilities in the workforce (Cai et al., 2018; Muduli, 2017).

### **Purpose of the Study**

The purpose of this qualitative, exploratory multiple case study was to explore how supply chain managers develop strategies to build agile capabilities in the workforce. Agile capabilities in the workforce are those things that position the workforce to adapt and respond effectively to continuous or complex change (Breu et al., 2001). Al-kasasbeh et al. (2016) described workforce agility as the ability of workers to use their skills, experience, and intelligence to respond to internal and external changes that affect the organization.

I expanded research on how supply chain managers develop strategies to advance agile capabilities in the workforce through this research study. Understanding how supply chain managers develop strategies to build agile capabilities in the workforce may help practitioners in continuous and complex change environments formulate cohesive strategies to build agile capabilities. The value of the information I gathered in my investigation into how supply chain managers develop strategies to build agile

capabilities in the workforce provides insights into how supply chain managers can advance human capital capabilities in their organization.

### **Research Question**

How do supply chain managers develop strategies for building agile capabilities in the workforce?

### **Conceptual Framework**

The conceptual framework that grounded this study included resource-based view theory and leader-member exchange theory. Resource-based view theory asserts that competitive advantages can be built by creating resources that are inimitable, valuable, un-substitutable, and rare (Wright & McMahan, 1992). These resources may include systems, processes, technology, human capital, or other resources. Investments into organizational resources that strategically build capabilities can be made to tailor an organization's abilities, leading to desired outputs. In this study, I focused on human capital resources in creating rare, inimitable, un-substitutable, and valuable resources. Leader-member exchange theory in this study informed how operational leaders who execute strategic change initiatives influence capability development in the workforce (Tariq et al., 2014).

The primary concepts of this research study were agile workforce capabilities, change leadership, human resource management, and supply chain. These concepts were examined in the context of managing change within an environment of complex and continuous change. The gap in literature I explored was how supply chain managers develop strategies to build agile capabilities in the workforce. Factors examined that may

influence the level of agile capabilities in the workforce included human resource management and change leadership. Figure 1 presents the conceptual framework involved in the literature gap I explored in this study.

**Figure 1**

*Conceptual Framework of Workforce Agility*



Note. Conceptual framework examining concepts linked to agile capabilities at the individual level identified in prior research. Framework is based on research of Alavi et

al. (2014), Muduli, (2017), Qin and Nembhard, (2015), and Sherehiy and Karwowski (2014).

### **Change Management**

Change in organizations may occur through extensive planning, implementation, and systems of controls, or change may occur through rapid responses to disruptors, pressures, or unexpected opportunities. Models of planned change include Lewin's model of unfreezing, changing, and refreezing (Lewin, 1946), Kotter's 8-step model (Kotter, 1995), and Hiatt's (2006) ADKAR model. The task of change management is evolving due to the complexities of managing through significant ambiguity during change (Braun et al., 2017). In complex or continuous change environments, these static models of change management may not suffice in achieving desired outcomes (Appelbaum et al., 2017). I aimed to understand the role change management models may play in how supply chain managers develop strategies to build agile capabilities in the workforce.

### **Agile Workforce Capabilities**

Qin and Nembhard (2015) posited that developing agile capabilities in the workforce may be a way to achieve desired outcomes in environments of complex or continuous change. I explored how supply chain managers develop strategies to build agile capabilities in the workforce. Alavi et al. (2014) defined agile workforce capabilities as the way employees manage and react to change through adaptive behaviors to changes (p. 6264). Both Alavi et al. (2014) and Sherehiy and Karwowski (2014) presented a model of agile workforce capabilities in which agile workforce capabilities is comprised of proactivity, adaptability, and resilience. This model of

workforce agility informed the research design of this study. Flexibility (Muduli, 2017) and responsiveness (Qin & Nembhard, 2015) are also components of workforce agility that inform this research study. The connections among the concepts contributing to workforce agility are seen in Figure 1. Data collection and analysis were informed by the components of workforce agility in this model.

### **Change Leadership**

Workforce agility is examined in consideration of the role of leadership in change management. Leadership is viewed as a tool in change management in this study, specifically as a factor influencing how workforce agility is developed as an organizational capability. Raeisi and Amirnejad (2017) identified leadership as “the ability to influence others to achieve organizational goals” (p. 1162). Organizations are experiencing rapid change and thus need to develop agile capabilities to keep pace with the rapidly changing environment. Alavi et al. (2014) identified leadership support as an antecedent to organizational agility. Abrell-Vogel and Rowold (2014) found that leader attitudes toward change and leader behaviors during change influence employees’ attitudes toward change.

### **Leader-Member Exchange Theory**

Leader-member exchange theory takes the influence of the relationship between leader and follower one step further, asserting that the attitude and behavior of the leader influence the attitude and the behavior of the follower. Leader-member exchange theory also posits a relationship between leader-employee interaction and performance (Arif et al., 2017). I anticipated both the attitude and the behavior of the change leader would



influence the attitude and the behavior of the follower, in line with Abrell-Vogel and Rowold's (2014) research findings and with leader-member exchange theory. Therefore, the collection and analysis of data in this study were informed by leader-member exchange theory.

### **Human Resource Management**

Human resource management practices is another factor that may influence the degree to which workforce agility is developed as an organizational capability. I explored human resource management through human capital theory and resource-based view theory. Research has found that human resource management practices have a role in agile capabilities in the workforce (Muduli, 2017). Supply chain managers informed data collection and analysis to human resource management practices in developing strategies to build agile capabilities in the workforce.

### **Organizational Agility**

Organizational agility has been identified as an ability to respond effectively to lasting change (Nold & Michel, 2016) impacting organizational performance (Baninam & Amirnejad, 2017). The adaptive capacity of organizations' teams, systems, and processes determines how much change a system or organization can process (Bushe, 2017). Building agile capabilities within the workforce is one way that supply chain managers may expand the amount of complex change their business system can adapt to in continuous or complex change environments. Braun et al. (2017) identified an agile workforce as an important component of an organization. The concepts of workforce agility, change management, change leadership, and human resource management within

an environment of complex and continuous change are explored further in Chapter 2. The specific environment of difficult and constant change for this study was the supply chain industry.

### **Nature of the Study**

I used a qualitative exploratory, multiple case study research design to examine how supply chain managers develop strategies to build agile capabilities in the workforce. Three study methods are available in academic research: qualitative, quantitative, and mixed-methods designs (Frankfort-Nachmias et al., 2016). Qualitative research is an appropriate method when exploring phenomena through the participants' perspective (Marshall & Rossman, 2016). This type of research is used when exploring how phenomena emerge and take shape. Quantitative research is appropriate when the research aimed to generate and analyze empirical data regarding relationships among or within phenomenon to explore cause and effect relationships (Barnham, 2015). Mixed methods research is used when the aim of the researcher is both to explore phenomenon as it occurs and to generate empirical data related to the research phenomenon.

For this study, qualitative research aligned with my investigation into how the phenomenon of workforce agility emerges and takes shape within organizations. Qualitative research allowed me to explore how supply chain managers develop strategies to build agile capabilities in the workforce. The research aimed to understand how supply chain managers develop strategies to achieve agile capability outcomes in continuous or complex change environments.

Case study design is appropriate in qualitative research when studying a phenomenon within a specific context (Marshall & Rossman, 2016). Yin (2018) asserted a multiple case study design is suitable when individual cases will be analyzed to identify points of intersection in the research findings and conclusions. A multiple case study design allowed for exploring how supply chain managers develop strategies to build agile workforce capabilities in continuous or complex change environments.

I collected data using semistructured interviews of supply chain managers in industries experiencing complex or continuous change. I used semistructured interviews to explore how supply chain managers develop strategies to develop agile capabilities in the workforce. Interview questions centered around how supply chain managers include tools, systems, and human capital resources in the development of strategies to build agile capabilities within the workforce, how supply chain managers perceive their contributions to building agile capabilities in the workforce, and additional factors that play a role in how supply chain managers develop strategies to build agile capabilities in the workforce. The strategies I used to collect data were completed in a manner that complied with the ethical expectations outlined in available directives that have been created to support proper research methods involving human participants.

### **Definitions**

Terms important to this study include adaptability, agility, flexibility, human resource management, leadership, organizational agility, proactivity, resilience, responsiveness, supply chain agility, supply chain, and workforce agility.

*Adaptability*: making adjustments to oneself or to one's behaviors to align with changes in the environment (Braun et al., 2017, p. 705).

*Agility*: The ability to engage in effective action within complex change (Wziątek-Staśko & Chabińska-Rossakowska, 2015). The ability to identify opportunities and initiate actions that position one to capitalize on identified opportunities, leveraging cognitive re-framing to think about obstacles and problem solve in new ways (Braun et al., 2017, p. 707).

*Change Leadership*: Change leadership for the purposes of this study is defined as the attitudes, skills, and behaviors of leaders responsible for leading and managing complex or continuous change in the workforce.

*Change Management*: “the process of continually renewing an organization's direction, structure, and capabilities to serve the ever-changing needs of external and internal customers,” (Moran & Brightman, 2000, p 66).

*Flexibility*: Strategies developed to implement in the event of alternative, projected outcomes (Qin & Nembhard, 2015).

*Human Resource Management*: The policies, systems, and management actions that produce human capital value through activities of recruiting, staffing, talent development, performance appraisal, compensation and incentives, training, and workplace culture development (Teimouri et al., 2017).

*Leadership*: The act of influencing, guiding, and directing followers to collaboratively achieve specific objectives (Gandolfi & Stone, 2016).

*Organizational agility*: The creation of competitive advantages through the establishment of collaborative, strategic organizational procedures that involve continuously creating and adapting practices in close alignment with the changing business environment (Brusset, 2016).

*Proactivity*: positive initiative within an environment experiencing change to successfully manage the change (Braun et al., 2017, p. 705).

*Resilience*: Organizational level: The ability of systems to maneuver through disruptions while preserving routines and processes that support continual adaptation to changes, uncertainty, and disruptors (van der Vegt et al., 2015).

*Resilience*: Individual level: transitioning emotionally and psychologically in stressful situations, including change (Braun et al., 2017, p. 707).

*Responsiveness*: identifying and planning for external changes, then reshaping strategy and taking swift action (Muduli, 2017, p. 50).

*Supply Chain Agility*: The ability to sense change, respond quickly, and respond flexibly (Eckstein et al., 2015).

*Supply Chain*: the process of moving a product through its lifecycle, from production to consumption (Garcia-Alcaraz et al., 2017, citing Blanchard, 2010).

*Workforce Agility/Agile Workforce Capabilities*: The ability of workers to use their skills, experience, and intelligence to appropriately respond to internal and external changes affecting the organization (Al-kasasbeh et al., 2016). An early definition in research literature identified workforce agility as responsiveness in environments that are turbulent and dynamic (Breu et al., 2001).

### **Assumptions**

Assumptions are the things a researcher assumes to be true in order for the researcher to investigate the research problem identified (Leedy & Ormrod, 2019). The assumptions include those things which the researcher may not be able to substantiate but are such fundamental factors that they can safely be assumed. Leedy and Ormrod (2019) explained that the assumptions identified should be those factors that contribute to the importance of the study.

For this qualitative multiple case study, I assumed organizational executives have a structured method for assigning responsibilities to supply chain manager for developing strategies to build agile capabilities in the workforce. I also assumed supply chain managers have the needed resources to develop strategies to build agile capabilities within the workforce. Further, I assumed some supply chain managers might consider change management practices, human resource management practices, and leadership practices when developing strategies to build agile capabilities in the workforce. The assumption that some supply chain managers might consider human resource management practices in developing strategies to build agile capabilities was informed by resource-based view theory. Resource-based view theory identifies human capital as a critical resource to developing competitive advantages (Wright & McMahan, 1992).

The assumption that some supply chain managers might consider leadership practices in developing strategies to build agile capabilities in the workforce was based on leader-member exchange theory. Leader-member exchange theory posits that the interaction between change leaders and followers influences change outcomes (Arif et al.,

2017). I assumed that organizations are motivated to build competitive advantages through supply chain change initiatives. These assumptions were reasonable as they were grounded in research and necessary to further build on research and extend knowledge to inform future practices related to building agile capabilities in the workforce.

Additionally, I assumed participants would be truthful and open in the semistructured interviews. I assumed I would have access to approximately six supply chain managers with experience developing strategies to build agile capabilities in the workforce. I also assumed participants would understand and respond to interview questions, for example, describing how they consider the role of human resource management practices in building agile capabilities in the workforce.

### **Scope and Delimitations**

Scope describes the concepts and ideas explored in the research study (Leedy & Ormrod, 2019). Leedy and Ormrod (2019) noted that delimitations refer to the things not included within the scope of the research study. The scope and delimitations are linked to the general and specific management problems of this study.

The scope of this study was to explore how supply chain managers develop strategies to build agile capabilities in the workforce. The scope included considerations related to connections between change leadership and the development of agile capabilities in the workforce and between human resource management practices and the development of agile capabilities. To investigate connections among human resource management practices, leadership practices, and agile capabilities in the workforce within

complex or continuous change environments, I explored these connections in an industry experiencing significant change: the supply chain industry.

Delimitations are the boundaries a researcher sets for a research study. A delimitation I set for this study was examining continuous or complex change initiatives. The scope of this investigation centered on managing change by building agile capabilities in the workforce in environments of continuous or complex change. Situations of limited, short-term change were not included in this research study to keep the study's boundaries within environments of constant or difficult change.

Participants selected for this study were limited to management responsibilities that include developing strategies to build agile capabilities in the workforce. All participants included in this study were 18 years or older. To capture the complexity of change, participants selected for this study were limited to individuals who have been responsible individually or as part of a team for developing agile capabilities in the workforce at least once. Participants selected for this study were also limited to individuals engaged in strategy development within the previous 3 years.

With this study, I aimed to explore the practices associated with developing strategies to build agile capabilities described by supply chain managers. I did not intend to capture managers' perspectives outside of the supply chain involved in any processes related to building agile capabilities in the workforce. This focus on the described practices of supply chain managers implies only one perspective has been captured through this research. Additional research would need to be conducted to capture the described practices of managers outside of the supply chain in developing strategies to



build agile capabilities in the workforce in environments of continuous or complex change. The transferability of the results of this study were impacted by how well rich details of supply chain managers were captured in my documentation.

### **Limitations**

While delimitations note what is not covered within the scope of a research study due to researcher decisions, limitations are those things a researcher cannot mitigate but may impact the quality of the research study results (Leedy & Ormrod, 2019). A limitation of this study was the bias I brought through my personal experiences working in supply chain environments and any beliefs regarding the research concepts that shaped how I formulated my research questions, interpreted answers, or drew conclusions related to the research results. Hein and Austin (2001) shared that researchers are responsible for separating their prior knowledge, assumptions, and biases related to the research phenomenon from the study data. Hein and Austin asserted that this process starts by reflecting on the researcher's natural attitude about the world (pg. 6).

I bracketed my personal experiences and beliefs to identify the perspective I looked at the research through. Journaling potential biases helped me maintain awareness of and mitigate assumptions or biases that may impact how I applied meaning to the research data. This study was also limited by the lack of verification of the scope of strategy development experience of each participant related to the strategic development incidents each participant will draw from to answer the interview questions. I relied on each participant to accurately relay from memory the details of the strategic initiatives

they were involved in and the processes they followed to develop strategies for building agile capabilities in the workforce (Leedy & Ormrod, 2019).

Another limitation of this study was the lack of transferability to the general population through the case study design. In multiple case study research, participants are recruited through purposeful sampling (Leedy & Ormrod, 2019) rather than through random sampling. Case study investigation explores a unit of inquiry for a specific population that is expected to be experiencing the phenomenon being investigated, so individuals with that specific life experience are sought. Inquiry through purposeful sampling is limited to those believed to be experiencing the phenomenon of interest; therefore, the research results are not generalizable to the larger population (Palinkas et al., 2015). Additionally, limitations of this study included a small sample size. A small sample size also impacts the generalizability of the research presented. However, the sample size was appropriate for the research methodology and design.

### **Significance of the Study**

Supply chain performance within the organization may significantly impact overall organizational performance (Garcia-Alcaraz et al., 2017). Accelerated competition, rapidly changing customer demands, and technological advances are pushing supply chain leaders to anticipate, strategically plan for, and respond to complex change through agile practices (Brusset, 2016). Daryanto and Krämer (2016) identified the components of supply chain agility as responsiveness, competency, flexibility and adaptability, and quickness and speed. This study contributed to the current literature on supply chain agility by capturing how supply chain managers described developing

strategies for building agility in the workforce, shedding light on if and how supply chain managers described using human resource management practices to support their efforts to develop strategies to build agile capabilities in the workforce.

The findings of this study create awareness regarding the role human resource management practices, change leadership practices, and change management practices hold in aiding supply chain managers in developing strategies to build agile capabilities in the workforce. Understanding how supply chain managers involve considerations of human resource management practices to develop strategies to build agile capabilities in the workforce may improve how organizations design human resource management practices to support change management efforts. Understanding how supply chain managers involve considerations of change leadership practices to develop strategies to build agile capabilities in the workforce may improve how organizations design change leadership practices to support change management efforts. Understanding how supply chain managers involve considerations of change management practices to develop strategies to build agile capabilities in the workforce may improve how organizations design change management practices to support change management efforts.

### **Significance to Practice**

The findings from this study have provided an understanding of how supply chain managers may leverage human resource management practices in the development of strategies to build agile capabilities in the workforce. These insights can shed light on the effectiveness of supply chain management collaboration with human resource management. Understanding supply chain change management practices may inform how

organizations in supply chain environments can strengthen collaboration between supply chain managers and human resource managers to facilitate the development of agile capabilities in the workforce. In turn, this information may strengthen the support provided to change leaders in operations, which may improve the work experience for employees. Smollan (2017) noted the positive impact of leadership support when followers are in stressful situations. Because situations of complex or continuous change can be linked with increased stress (Braun et al., 2017), a better understanding of how to support the front-line change leaders in leading change may have a positive impact on available coping strategies for employees during times of stress.

Flöthmann et al. (2017) and John (2015) have indicated there is a shortage of leadership talent in supply chain. As the role of change leaders is rapidly evolving (Marques, 2015), finding insights into how managers include considerations of the role of change leaders in developing strategies to build workforce agility may have an impact on the work experience of operational leaders in supply chain. Findings may influence organizational practices that impact the work experience of operational leaders working in environments of complex or continuous change. Being able to leverage the right tools and resources to build efficacy in leadership roles may have a positive impact on the change leader work experience, helping to keep change leaders in their roles as a way of addressing the shortage of leadership talent in supply chain.

Having the right tools and resources may also help human resource managers in the recruitment of change leadership talent. Supporting current change leaders more effectively and recruiting quality talent can help human resource managers address the

leadership talent shortage in supply chains while also helping the organization to build workforce agility capabilities. Building agile capabilities in the workforce will contribute to overall organizational agility (Al-kasasbeh et al., 2016; Braun et al., 2017) and may have a positive impact on business outcomes (Dattero et al., 2017).

### **Significance to Theory**

A theory of organizational agility has not been developed. While organizational agility theory has not been developed, the benefits of building organizational agility as a capability have been highlighted in research (Baninam & Amirnejad, 2017; Ravichandran, 2018). Models of organizational agility approach the concept of organizational agility through perspectives of strategy, technology, operations, marketing, human resources, leadership, or other approaches (Brusset, 2016). Because the range of approaches to organizational agility is so broad, theoretical development on the concept of organizational agility is not in place. This study may shed light on the role of operations in the development of agile capabilities within the organization, which may then shed light on factors that contribute to the development of theory related to organizational agility.

Workforce agility theory has not been developed (Gligor et al., 2016). Different research studies construct workforce agility in different ways (Braun et al., 2017; Liu, et al., 2015; Tessarini & Saltorato, 2021). Some models of workforce agility include only proactivity, adaptability, and resilience (Cai et al., 2018). Other models of workforce agility include flexibility (Muduli, 2017) or responsiveness (Qin & Nembhard, 2015). With no singular model of workforce agility, a theory of workforce agility by the results

of this study, helping to close a gap in this area of research. Insights into the lived experience of supply chain leaders may contribute to the formulation of theory in this area.

### **Significance to Social Change**

Future supply chain leaders, as well as researchers in this area, may develop initiatives that result in effective strategies to deal with complex and continuous change based on the findings of this study. Improving organizational outcomes can stabilize the organization's position in the competitive marketplace, thereby creating job security for the workforce in turbulent industries. The results of this research may also contribute to social change through benefits that may be experienced by the change managers in operational environments that are responsible for implementing strategies devised by supply chain managers to build agile capabilities in the workforce. This is important with concerns reported of change leadership talent shortages. The results of this research may also contribute to social change through benefits that may be experienced by the workforce tasked with continually changing how they work. Significant change in the workplace can contribute to workplace stress that impacts the well-being of employees (Braun et al., 2017). Facilitating resilience as part of workforce agility may help the workforce build skills associated with reducing stress in high-change environments. Reducing workplace stress may help organizations provide an environment that supports employee wellbeing and minimizes costs associated with workplace stress, such as workplace accidents, absenteeism, and increased turnover (Braun et al., 2017).

### **Summary and Transition**

In the first chapter, I included a background on the role of change management and workforce agility in organizational agility and the changing nature of the role of leaders in organizations operating in high-change environments. Chapter 1 is also where the purpose of this study, the problem statement, research question, conceptual framework, nature of the study, study definitions, assumptions, the scope, delimitations, the limitations, and the significance of this study are located. I expand on the background of this study and the concepts that make up the framework of this study in Chapter 2.

## Chapter 2: Literature Review

The specific management problem investigated through this research study was that supply chain managers do not have coherent strategies for the development of agile capabilities in the workforce (Cai et al., 2018; Muduli, 2017). The purpose of this qualitative, exploratory multiple case study was to investigate how supply chain managers develop strategies to build agile capabilities in the workforce. Workforce agility has been identified as an important factor in overall organizational agility (Al-kasasbeh et al., 2016; Braun et al., 2017; Muduli, 2016). Organizational agility is a competency that may position managers to achieve better performance results for organizations (Dattero et al., 2017), especially in industries experiencing exponential rates of change (Raeisi & Amirnejad, 2017). Change leaders carry primary responsibilities related to managing change (Dumas & Beinecke, 2018). This responsibility includes helping lead the workforce through change (Stilwell et al., 2016).

One way the workforce may work through change effectively is by developing skills in resiliency, proactivity, adaptability (Alavi et al., 2014; Sherehiy & Karwowski, 2014), flexibility (Muduli, 2017), and responsiveness (Qin & Nembhard, 2015). These skills have been linked to workforce agility. This framework for workforce agility is seen in Figure 1. Both human resource management systems and leaders have functions related to talent development (Leroy et al., 2018). What was not clearly understood and is a gap in research is how supply chain managers develop strategies to build agile capabilities in the workforce. The purpose of this qualitative exploratory, multiple case study was to explore how supply chain managers develop strategies to build agile



capabilities in the workforce. This was explored through the descriptions provided by supply chain managers with responsibility for developing strategies to build agile capabilities in supply chain organizations.

In Chapter 2, I lay out the foundation of research upon which this study has been designed. I include the literature research strategy used to find articles this study extends from that provides merit for investigating the gaps in research noted in Chapter 1. I then present the conceptual framework that identifies the core concepts related to the research conducted. I close out Chapter 2 with a full literature review. This review of pertinent research includes seminal articles and research from the previous 5 years in the topics of organizational agility, change management, workforce agility, change leadership, human resource management, and supply chain.

### **Literature Search Strategy**

I used several different search strategies to identify recent research on the core concepts of my research study. I linked Google Scholar to my Walden University library account for most research searches. Key search terms used include *change management*, *supply chain leadership*, *workforce agility*, *organizational agility*, *change leadership*, *human resource management*, *talent development*, and *leadership*. I limited my searches to peer-reviewed publications from 2015-2020. With this strategy, I was able to find sources from databases including EBSCO, SAGE full text, Business Source Complete, ABI/INFORM Global, ProQuest Central, Deepdyve, and Emerald Management.

Additionally, I searched articles on the primary site of some journals, including the *Journal of Change Management* at Taylor & Francis Online and the *Journal of*

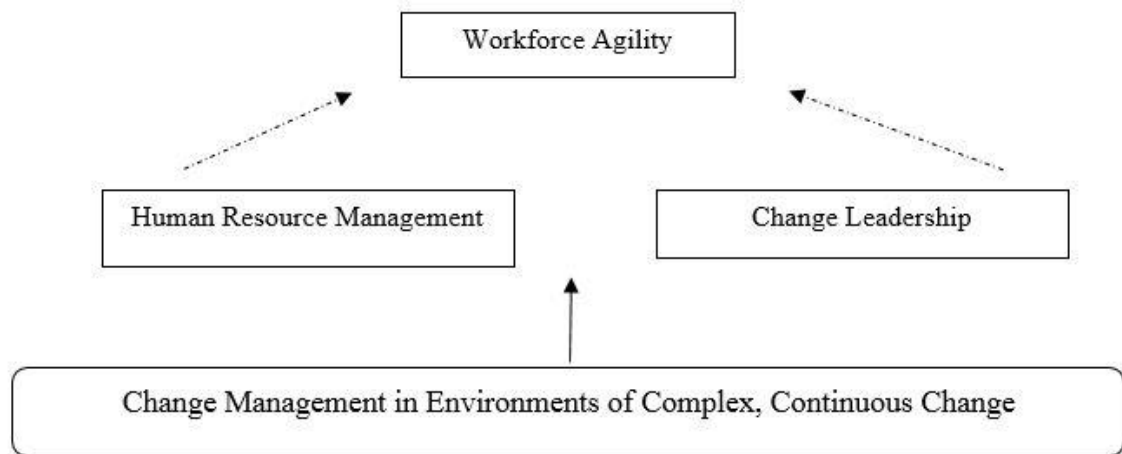
*Organizational Change Management* at Emerald Insight's website. Once I had primary sources related to my research topic, I continued my literature search by looking for articles by authors who had recent publications on my research topics. I also reviewed the references section of my primary articles and found related literature by topic and authors.

### **Conceptual Framework**

The conceptual framework of this study sets the boundaries and context of the research conducted. Leedy and Ormrod (2019) noted that the conceptual framework is a model of how concepts within a study are linked. The links among the concepts of this study are identified in Figure 2. I explored the described experience of supply chain managers developing strategies to build agile capabilities in the workforce within the framework of change management, workforce agility, change leadership, human resource management, and supply chain. However, the relationships among these concepts are complex, with additional relevant concepts within each that may further explain the nature of the links between these concepts. I expand upon each concept and the links among them in the literature review further in this chapter.

**Figure 2**

*Conceptual Framework of Considerations for Developing Strategies to Build Agile Capabilities in the Workforce*



*Note.* Conceptual framework of gap in literature exploring relationships among human resource management and change leadership in the development of strategies to build workforce agility capabilities, viewed within Resource-Based View theory in environments of complex, continuous change.

In industries experiencing complex change or continuous change, the practice of change management is a complex undertaking. Traditional models of change management involve strategic planning, collaboration, plan implementation, and establishing controls. Lewin's model of change management includes three phases: unfreezing current processes, implementing new processing, and refreezing to solidify the new process in place (Lewin, 1946). Kotter (1995) developed a more complex model of change that addresses the social dynamics that impact change implementation and

management. This eight-step model was also designed for use within situations where change involves linear steps that build upon one another, and where top-down controls can be developed and maintained. Hiatt (2006) built a change management model known as ADKAR. ADKAR stands for awareness, desire, knowledge, ability, and reinforcement.

Despite the development of multiple models of change management, organizational outcomes have often indicated target outcomes were not frequently obtained (Rogiest et al., 2015). It is unclear what aspects of change management models may be effective in environments of complex change (Pollack & Pollack, 2015). New considerations are needed for managing change in environments where change may be non-linear, complex, or has limited controls. One way of managing change in environments of complex change is through the development of agile capabilities in the organization.

Organizational agility is a desired capability, as it influences performance outcomes (Baninam & Amirnejad, 2017; Pulakos et al., 2019). Teece et al. (2016) described organizational agility as shaping the flow of value in organizations through the continuous redirecting of resources to quickly capture potential emerging marketplace value, while also engaging in activities that generate higher value throughout the organization. It is through this directing of the flow of value that organizations may influence performance outcomes. Achieving organizational agility is not a simple process. Brusset (2016) identified organizational agility as the creation of competitive advantages through the establishment of collaborative, strategic organizational

procedures that involve continuously creating and adapting practices in close alignment with the changing business environment. Although organizational agility may be a desired capability, organizations must be able to identify a path to achieving it.

Organizational agility encompasses the structure, procedures, culture, and processes of the organization. The structure, procedures, culture, and processes in an organization are affected by change leadership, human resource management, and workforce agility. The degree to which change leadership and human resource management structures, processes, and practices are agile influence the level of agility within the workforce (Ghasemi et al., 2016; Raeisi & Amirnejad, 2017), and in turn, the level of agility in the organization (Braun et al., (2017).

Teimouri et al. (2017) described a specific model of organizational agility that is comprised of accountability, proactivity, competency, flexibility, speed, participation, and focus on customers. Fayezi et al. (2017) listed quickness, proactiveness, responsiveness, adaptiveness, cooperation, flexibility, and information systems/technology as the components of organizational agility. Integrating agile concepts of flexibility, speed, proactivity, adaptability, and resiliency into the structure, procedures, culture, and processes of an organization may influence the degree to which that organization possesses agile capabilities. One specific component to organizational agility that is a focus of this study is workforce agility.

Workforce agility centers on the behaviors within the workforce that drive proactivity, resilience, and adaptability (Cai et al., 2018). The level of agility within the workforce may influence to what degree organizational agility is developed as a

capability (Braun et al., 2017). Muduli (2016) noted an opportunity for more research into how organizations can facilitate the development of agility skills in employees.

While there are multiple models of workforce agility, one model identified key behaviors in employees as proactivity, adaptivity, and resilience (Al-kasasbeh et al., 2016; Cai et al., 2018). Antecedents of agile workforce behaviors include collaboration, cooperation, positive work relationships, openness to new experiences, and resiliency (Braun et al., 2017). Employees who demonstrate collaborative, cooperative, resilient behaviors may engage more readily in processes that require greater agility. Employees who are open to new experiences and have built positive working relationships may also engage more readily in agile work processes.

Like the antecedents of agile workforce described by Braun et al. (2017), Qin and Nembhard (2015) asserted that attributes of workforce agility include responsiveness, quickness, competence, adaptability, and cooperativeness. These attributes of workforce agility are similar to the descriptions provided of organizational agility. The similarity in attributes of workforce agility and organizational agility shows how building workforce agility as a capability contributes to overall organizational agility. The responsiveness and adaptability in workforce agility described by Qin and Nembhard align with the responsiveness and adaptability in organizational agility, as described by Fayezi et al. (2017). Although there are similarities between the attributes of workforce agility and the attributes of organizational agility, a question remains regarding how the development of agile workforce capabilities is facilitated within the organization. Muduli (2016) found a strong relationship between agile workforce capabilities in organizations and core human

resource functions. This relationship may shed light on how organizations can facilitate the development of agile workforce capabilities.

Human capital can be a significant investment for organizations. Maximizing returns on the investment in the workforce is something organizations should be concerned with. One way to improve returns on workforce investments is by building employees' capabilities (Flöthmann et al., 2017). How organizations build employee capabilities is related to the structure of human resource management systems within the organization (Garcia-Alcaraz et al., 2017; Ghasemi et al., 2016; Teimouri et al., 2017). Employees' capabilities can be built through human resource functions such as development, training, and performance management. Efforts from human resource management systems to build employee capabilities may contribute to how the organization attains competitive advantages in the marketplace (Teimouri et al., 2017). Building competitive advantages through the workforce is how the organization can maximize the returns on their human capital investments.

In the case of this study, I am specifically concerned with how supply chain managers develop strategies to build agile capabilities in the workforce. Multiple researchers have asserted that how organizations build agility as a capability is related to the structure of human resource management systems within the organization (Garcia-Alcaraz et al., 2017; Ghasemi et al., 2016; Teimouri et al., 2017). Muduli (2016) listed organizational learning and training, reward system, involvement, teamwork, and information systems as primary tools of human resource management systems that may be leveraged in building agility in the workforce. Al-kasasbeh et al. (2016) identified

human resource management systems as recruitment, selection, compensation, training, performance appraisal, and communication.

Leaders are often the catalyst between the human resource management activities of training, rewards, and teamwork and the workforce. Černe et al. (2018) noted that researchers have yet to identify how leadership and human resources interact. Understanding how supply chain managers do or do not take human resource management practices into consideration in developing strategies to build agile capabilities in the workforce may help bring coherence to how these strategies are developed.

Stilwell et al. (2016) identified leadership as a contributor to change initiative outcomes. How leadership behaviors, styles, and characteristics contribute to change initiative success has been researched extensively (Chai et al., 2017; Dumas & Beinecke, 2018; Neil et al., 2016). Chai et al. (2017) asserted that employee behaviors are changed through the influence of leadership. Understanding that there is a connection between leadership and change initiative outcomes does not provide enough information to guide organizational practices toward improved change initiative results. Leader-member exchange theory provides a framework for understanding the nature of how leaders influence employee behaviors.

Leader-member exchange theory posits a positive relationship between the leader and follower is correlated with the organizational commitment, work efforts, and empowerment of followers (Arif et al., 2017). The central premise of this theory is the attitudes and behaviors of leaders can impact the attitudes and behaviors of followers.



The process of facilitating agile workforce capabilities in followers is conceptualized as change leadership behaviors. Understanding how supply chain managers do or do not take change leadership practices into consideration in developing strategies to build agile capabilities in the workforce may help bring coherence to how these strategies are developed.

The concepts described above are explored within the realm of supply chain. Supply chains in volatile marketplaces are experiencing complex, continuous change (Christopher, 2000). This has led to a shift in focus from short-term, short-range, controlled change strategies to a need to secure long-term capabilities for successfully operating in environments of high uncertainty and volatility (Christopher, 2000; Eckstein et al., 2015). Brusset (2016) and Villena et al. (2018) noted this had led supply chain to take a more prominent role in overall organizational strategy. The retail sector is one example where supply chain has experienced significant change. Volatility within the marketplace has led to multiple major retailers in the United States closing their doors or restructuring their business model under bankruptcy filings. Retailers that have closed since 2015 include Herberger's, Toys R Us, and Creative Kids Stuff. Supply chain sets the final boundary of this study as it represents the environment of complex, continuous change under which I explored the lived experience of supply chain managers facilitating the development of workforce agility capabilities in followers.

## **Literature Review**

Organizational agility, workforce agility, change leadership practices, human resource management practices, and change management practices are discussed in depth in the literature review.

### **Organizational Agility**

Agility in organizations is a concept that first arose in Holstein and Berry's (1972) research into flexible workforce structuring in manufacturing to improve workflow and efficiencies in work processes. Initial research related to organizational agility focused on the manufacturing sector (Christopher, 2000). The aim of agility, as described by Nagel and Dove (1991), was to build rapid response processes that positioned manufactures to manage through continuous change. While lean processes were researched heavily to help manufacturing organizations build competitive advantages through efficiency processes, agility research was conducted to identify how organizations could build competitive advantages through nimble practices (Christopher, 2000). The concept of building agility capabilities to manage change spread from the manufacturing industry into many industries (Breu et al., 2001).

Research into managing change focused on building processes to tackle change in a methodical, linear manner (Braun et al., 2017). Typical models of change management did not help organizations address disruptors or unexpected challenges as they arose when implementing change. Braun et al. (2017) asserted that organizations need to move beyond linear models of change management and need to focus on achieving agility to establish effective capabilities in responding to rapid change. Pursuing organizational

agility to build capabilities to adapt closely to the changing environment provided a different way to approach change. Felipe et al. (2016) explained that organizational agility involves both the reactive process of adaption and the proactive abilities associated with flexibility. Baninam and Amirnejad (2017) asserted that the specific competitive advantages in agility capabilities are quickness, flexibility, innovation, quality, and profitability.

Organizational agility began to be considered a necessary capability in the face of globalization due to its link to capabilities that lead to better performance outcomes (Baninam & Amirnejad, 2017). In an empirical examination of the variance between IT capabilities and organizational agility and between innovation capabilities and organizational agility, Ravichandran (2018) found a link between agility in organizations and performance outcomes related to market share, cost, productivity, profitability, and overall financial performance. Baninam and Amirnejad conducted an empirical investigation of 260 bank employees in Iran and found that organizational agility was positively related to employee performance outcomes from the Organizational Performance Questionnaire of Hersey and Goldsmith (1980). Braun et al. (2017) posited that traditional change management models that address linear, discrete change initiatives have not been as effective in navigating the increasing complexity of the business environment in industries experiencing transformative or continuous change. Building organizational agility has become a way to address complex change for improved performance outcomes where traditional change management models fall short (Braun et al., 2017). Baškarada and Koronios (2018) asserted that while research is uncovering a

relationship between organizational agility and performance outcomes, what is unclear is how organizational agility is operationalized as processes within work settings.

Baninam and Amirnejad (2017) asserted that agile organizations achieve their advantages through a strong understanding of principles of competition, effective utilization of resources, and astute responsiveness to changing consumer patterns and interests. Pulakos et al. (2019) found that organizations that have elevated agility and resiliency perform 150% to 500% better than organizations with low-level organizational agility and resiliency. Concepts associated with organizational agility include accountability, proactivity, competency, flexibility, speed, participation, quickness, responsiveness, adaptiveness, cooperation, and customer-focus (Fayezi, et al., 2017; Teimouri et al., 2017). Several studies have established that two important contributors to organizational agility are leadership (Raeisi & Amirnejad, 2017) and human resources (Ghasemi et al., 2016).

### ***Organizational Agility and Leadership***

Raeisi and Amirnejad (2017) investigated the relationship between organizational leadership and organizational agility through an empirical analysis of data from 100 senior executives from multiple Iranian drilling firms. Raeisi and Amirnejad found that organizational leadership has a positive impact on organizational agility. Raeisi and Amirnejad used a model of organizational agility developed by Zhang and Sharifi (2000), which is comprised of accountability, competence, flexibility, and speed. Accountability related to high awareness of change and timely responses to change. Competence related to how well the organization achieved its goals and objectives. Flexibility referred to how

well the organization was able to execute multiple processes simultaneously to achieve its goals. And speed related to timeliness of completing core work functions. The authors operationalized organizational leadership as a measure of task-oriented leadership scores and relationship-oriented leadership scores on a survey administered to participants. Statistical analysis was conducted, and the authors concluded that a strong positive relationship exists between organizational leadership and organizational agility when organizational agility is operationalized as accountability, competence, flexibility, and speed.

A limitation of the findings in Raeisi and Amirnejad's (2017) study is that measures of accountability, competence, flexibility, and speed in the organization are limited to employee perceptions as recorded from the questionnaire on organizational agility used in the study. Additionally, the researchers do not provide information on the survey used or how the instrument has been tested and verified as a qualified determinant of organizational agility. This makes it difficult to clarify if the perceptions of the participants actually measure aspects of organizational agility that may be measured and verified through other research methodology or instrumentation.

### ***Organizational Agility and Human Resource Management***

Ghasemi et al. (2016) also used Zhang and Sharifi's (2000) model of organizational agility in empirical research. This study of 217 staff in a Social Security organization in Iran explored the relationship between staff empowerment as a function of human resource management and organizational agility. Ghasemi et al. found that the empowerment of staff and building a sense of competence were linked to measures of

organizational agility. Ghasemi et al. identified organizational agility as flexibility within organizational structures and a workforce able to leverage multiple skills in their work. The aim of building workforce agility within an organization's supply chain is to elevate organizational agility (Al-kasasbeh et al., 2016).

### **Change Management**

As organizations face unprecedented rates of change, devising strategies to manage change as proactively as possible is important to achieving organizational goals. Three models of change management that may be used for planned, proactive, controlled changes include Lewin's model of change management (Lewin, 1946), Kotter's (1995) eight-step model of change that addresses the social dynamics that impact change implementation and management, and Hiatt's (2006) ADKAR model of change management.

Lewin's model of change breaks the change process into three stages (Lewin, 1946). In the first stage, things operating in the status quo are challenged and opened up to new paradigms of possibility. This phase is identified as unfreezing. In the second stage, identified changes needed are implemented, learning processes create new ways of operating as transformation occurs, and the old way of operating is left behind. This stage is identified as change. In the final stage, the changes are solidified. This stage is identified as refreezing.

Kotter's (1995) model of change involves eight steps Kotter developed in response to common barriers identified as organizations struggled to implement changes. The eight steps in Kotter's model are to create a sense of urgency, build a guiding

coalition, form strategic vision and initiatives, enlist a volunteer army, remove barriers to enable action, generate short-term wins, sustain acceleration, and institute the change (Kotter, 1995). These steps follow a sequence meant to address each barrier from planning to implementation to solidification of each stage of managing change and have a top-down structure in managing change. Pollack and Pollack (2015) conducted a case study analysis of Kotter's 8-step model and found that it did not fully account for the complexities of a major organizational change. Pollack and Pollack asserted that while this model of change management requires more research analysis, it remains a well-known model of change management. Exploring how this model or aspects of the change management model may be used by supply chain managers developing strategies for building agile capabilities in the workforce informs the framework of this study.

ADKAR is an acronym for awareness, desire, knowledge, ability, and reinforcement, a change management model developed by Hiatt (2006). Awareness relates to making stakeholders aware of the change needed and why the change is needed. Desire relates to the degree to which stakeholders support and are willing to work toward the change. Knowledge refers to stakeholders having the right information at the right time to execute their role in the change. Ability relates to the capabilities present for stakeholders to carry out their functions in the change. And reinforcement relates to efforts to ensure the change is sustained. In this change management model, vital considerations are present of the social impact key stakeholders have in the success of the change efforts. Hiatt (2006) posits that strategic planning for change requires reviewing the psychology that underlies leading people through change. In this sense, strategic

planning is only as effective as the considerations made toward how the plan will be implemented and received by stakeholders involved in and impacted by the change.

### **Change Leadership**

Leaders are considered an integral part of an organization's competitive differentiation in the marketplace (Neil et al., 2016). Leaders have a primary responsibility of directing and influencing employees to contribute to and align with organizational goals. Leadership has been studied through the lens of social sciences, education, theology, economics, and other academic fields (Gandolfi & Stone, 2016). Leadership has been studied as the characteristics, skills, and traits of leaders, as the behaviors of leaders, and as a set of functions executed in organizations to manage people. Although leadership is a topic of significant research, Gandolfi and Stone postulated that a single definition of leadership may be challenging to develop, as leadership is a phenomenon not well understood despite extensive research on this topic.

### ***Changing Leadership Expectations***

Leaders' expectations have changed as organizations' needs have shifted due to the changing demands of a global economy (Braun et al., 2017; Gandolfi & Stone, 2016; Shou & Wang, 2015). As leaders' expectations shift, organizations should provide the structure and support that position leaders to thrive. Leaders operating in an ever-changing global economy are expected to be able to lead change (Dumas & Beinecke, 2018), influence followers (Castelli, 2016), and build talent assets (Marques, 2015), while still driving bottom-line results.



Leaders have indicated they are experiencing struggles in adapting to new leadership challenges. Braun et al. (2017) shared the results of a survey from over 300 companies that showed only one-third of the thousands of leaders surveyed indicated they could adapt effectively to changes in their strategy and business goals. The increase in demands and the rapid pace of change may overwhelm leaders and reduce leadership effectiveness. This risk of disruption to effective leadership in complex or continuous change requires a better understanding of what effective change leaders do and how they do the key tasks that position them to lead their team through change successfully.

### ***Leadership and Change Management***

A critical way that leadership has transformed expectations is in leadership responsibilities related to leading change. In a review of change management of literature from 1990 to 1998, Armenakis and Bedeian (1999) asserted that research demonstrates that employees contribute heavily to change initiatives. This assertion has highlighted the importance of understanding how leaders can successfully manage change through their influence on followers. Northouse (2016) posited that leadership is a central factor in changing employee behaviors.

How leaders influence their teams is an area where organizations may experience competitive advantages. The competitive advantages gained through leader influence on followers may include higher success rates in change implementation (Stilwell et al., 2016), faster implementation of change initiatives, reduced time to target goal realization, and reduced cost (Sirén et al., 2016). Sirén, Patel, and Wincent explored relationships among change-oriented leadership in CEOs, the passion of CEOs, and firm performance

operationalized as sales and profit growth. Study results indicated change-oriented leadership has a positive relationship with firm performance, with the harmonious passion of leaders enhancing that relationship. Understanding how leaders shape employee behavior is essential in this study as it may shed light on how leaders may build agile workforce capabilities in their followers.

### ***Leader-Member Exchange Theory***

Leader-member exchange theory provides a framework for understanding the relationship between leaders and followers. Leader-member exchange theory was introduced to capture differences in the quality of relationships between leaders and their followers (Dansereau et al., 1975). Graen and Uhl-Bien (1995) shared that leader-member exchange theory focuses on the quality of the relationship between leaders and followers. Arif et al. (2017) stated that leader-member exchange theory provides the framework for understanding the link between the leader and follower interactions and performance. Factors such as the degree to which leaders give followers autonomy in their work, create an environment of resource-sharing, and implement strong communication may influence follower commitment, effort, and empowerment (Arif et al., 2017).

The level of follower commitment, effort, and empowerment contributes to performance outcomes, including successes or failures tied to change. Graen and Uhl-Bien (1995) asserted that the relationship-based approach of leader-member exchange theory applies in circumstances of continuous improvement. This framework fits the boundaries of this study, which includes investigating how leaders facilitate the

development of agile workforce capabilities in followers in environments of constant change. Leader-member exchange theory shifts the focus from leadership style and characteristics to leadership behaviors that facilitate quality relationships between leaders and followers.

Graen and Uhl-Bien (1995) described the shift in approach from leadership style to leadership behaviors, focusing on developing a partnership between leader and each of their followers. Graen and Uhl-Bien (1995) asserted that with a high-quality partnership, the quality of the relationship is improved for both leader and follower, as both parties contribute to the betterment of the other. The shift for leaders to create high-quality partnership across their full team creates greater equity as leadership resources are made available to all followers. Graen and Uhl-Bien (1995) asserted that the expansion of quality relationships to all followers and the partnership structure of the relationships lead to higher-quality interactions between leaders and followers. Stronger quality interactions between leaders and their followers result in higher commitment and greater effort from followers.

This shift in commitment and effort from followers is linked to stronger performance outcomes (Arif et al., 2017). Arif et al. (2017) asserted that followers in low-quality leader-member relationships are less engaged, operate with lower trust-levels, experience lower job satisfaction, and are more prone to leave their job. The impact of low-quality leader-member relationships can hinder a leader's ability to influence followers during critical change initiatives. The quality of the leader-follower

relationship may significantly impact a change leader's ability to facilitate the development of agile capabilities in followers.

### ***Transformational Leadership Theory***

The relationship between leader and follower has also been examined in research through transformational leadership theory. Transformational leadership theory explains the leader's influence on followers as either commitment-based through transformational leadership or compliance-based through transactional leadership (Bass, 1985; Burns, 1978). In transactional leadership, the leader seeks out exchanges with followers such as providing rewards for specific outcomes (Burns, 1978). In transformational leadership, the relationship between leader and follower is more symbiotic, with the leader inspiring and motivating followers through mutually beneficial relationships that positively impact followers' commitment to and engagement with the organization. Podsakoff et al. (1990) asserted that there are six tenants of transformational leadership; articulating a vision, acting as a role model, driving inclusivity, setting high standards of performance, supporting teams at the individual level, and engaging followers to think actively and innovatively on solving business problems. Leader-member exchange theory encompasses transactional leadership and transformational leadership (Graen & Uhl-Bien, 1995).

Transformational leadership style has become a heavily researched leadership style (Gandolfi & Stone, 2016). The relationship between leader and follower in change management situations has been measured and analyzed through followers' commitment to change (Shin et al., 2015) and through employee engagement levels (Wziątek-Staśko

& Chabińska-Rossakowska, 2015). Leaders influence employees' ability to adapt to change by building commitment to change in followers.

Morin et al. (2016) noted that a leader's ability to influence commitment to change in others contributes to employees' readiness for change. This readiness for change may be an important part of preparing the workforce for building agile capabilities in continuous change environments. Abrell-Vogel and Rowold (2014) investigated the relationship between transformational leadership style and followers' commitment to change. Abrell-Vogel and Rowold (2014) found that leaders' commitment to change was an important factor in followers' commitment to change. Abrell-Vogel and Rowold asserted that leaders modeling the change behaviors desired, demonstrating their own commitment to change, influenced followers' commitment to change. The individualized support leaders provided followers was also found to influence followers' commitment to change (Abrell-Vogel & Rowold, 2014). Based on the research findings of Abrell-Vogel and Rowold (2014) and Morin et al. (2016), understanding how leaders model change behaviors and how leaders provide individualized support to followers shaped the inquiry of this study. I utilized this information to shape specific questions used in the semi-structured interviews I conducted to explore how supply chain managers develop agile capabilities in the workforce.

Wziątek-Staśko and Chabińska-Rossakowska (2015) noted that leadership is believed to play a role in influencing employee engagement. Popli and Rizvi (2016) explained that employee engagement is one of the most important indicators of

organizational effectiveness. Popli and Rizvi posited that employee engagement had been linked to better financial, safety, quality, and retention outcomes, as well as lower absenteeism among employees. The engagement of employees during change initiatives is critical to the success of the change. Understanding how employee engagement is influenced by leadership style may inform the questions asked during the semi-structured interviews and how meaning is constructed from the descriptions provided by participants.

While organizational commitment and employee engagement are important components of organizational effectiveness (Popli & Rizvi, 2016), the investigation into the link between transformational leadership and performance has had mixed results. Neil et al. (2016) conducted a three-part study involving a government agency experiencing significant downsizing in the United Kingdom experiencing. The three-part study began with investigating relationships among transformational leadership behaviors, emotional intelligence, team cohesion, and team performance. The results of their quantitative investigation indicated positive relationships between transformational leadership and emotional intelligence, transformational leadership, and team cohesion. No significant relationship was found between transformational leadership and team performance during change. Neil et al. then conducted semi-structured interviews with eight different team leaders to explore their lived experience and perceptions of best practices they engaged in during the change initiative of the first study. The sample was categorized by those whose team results during study one achieved performance targets, did not achieve performance targets, and exceeded performance targets. Results of the qualitative

analysis contradicted the results of the quantitative analysis in the first study. Leaders' descriptions of transformational leadership behaviors were identified as the primary best practice in leading change.

### ***Change Leadership Behaviors***

In industries operating with continuous or complex change, change leadership skills are tantamount (Dumas & Beinecke, 2018). Change leadership skills are built through the experiences and behaviors of change leaders. A comprehensive discussion of change leadership behaviors first appeared in literature when Yukl et al. (2002) completed a taxonomy of leadership behaviors based on literature published up until that time. While change leadership has emerged in literature terminology, a definition of change leadership is lacking. Without a clear definition of change leadership, a description of what change leaders do can frame what is intended by the terminology. Without a clear definition of change leadership, a description of characteristics that change leaders possess may also clarify what this terminology intends.

Dumas and Beinecke (2018) described change leaders as resilient, carrying foresight, providing support, and positively approaching change. Stilwell et al. (2016) described research that indicated successful change leaders influence followers by shaping behaviors, framing change, and creating capacity. They do this through coaching, rewarding, and motivating followers through communication, team building, and engagement strategies. Giauque (2015) found that leaders influence follower behaviors in change through their behaviors and attitudes toward change.

### ***Change Leadership and Workforce Agility***

Another leadership style that has emerged in research that may be relevant to building an agile workforce is complexity leadership. Uhl-Bien and Arena (2017) described complexity leadership as an adaptive leadership style in which leaders transition between entrepreneurial, enabling, and operational leadership approaches to drive productive outcomes in situations where new ways of thinking and operating are needed to adapt to a complex environment. An entrepreneurial approach in complexity leadership involves bringing innovation into the workspace to facilitate an environment of collaboration and ideation (Uhl-Bien & Arena, 2017). An enabling approach involves actions that bridge the tension between the entrepreneurial activities and the formal structure within operations (Uhl-Bien & Arena, 2017). An operational approach involves how leadership engages organizational structures to drive efficiencies, while also identifying ways emerging ideas from entrepreneurial activities may be brought into the current operating structure (Uhl-Bien & Arena, 2017). According to Uhl-Bien and Arena (2017) entrepreneurial leadership, enabling leadership, and operational leadership together provide a description of how leaders operating in high-change environments may thrive amid the challenge of continuous uncertainty and change. Uhl-Bien and Arena posited that this transition between entrepreneurial, enabling, and operational leadership approaches creates organizational agility.

### ***Change Leadership and Human Resources***

Understanding the interplay between human resource management systems and change leaders can help identify to what degree each contributes to the development of an



agile workforce. Černe, et al. (2018) asserted that the interaction between leadership and human resources had not been a focus of research to-date. Leadership and human resource management functions within organizations have a shared goal of influencing workforce behaviors to achieve organizational goals.

Human resource management supports organizational goals by influencing the workforce through processes, policies, and systems (Leroy et al., 2018). Leadership contributes to organizational goals through management practices that implement these processes, policies, and systems designed by human resources. Leaders also contribute to organizational goals by directing tactical and operational processes through the workforce to facilitate the delivery of a service or good to consumers. Leroy et al. asserted that research should focus on understanding what effect this intersection of leadership and human resource management has on organizational performance. This is the secondary gap in research I explore in this study.

Gandolfi and Stone (2016) asserted that elucidating what effective leadership methods are is a pressing priority. Many studies have investigated the skills, competencies, and characteristics in leaders that are linked to more successful performance outcomes during change. Ready and Mulally (2017) asserted that change leadership requires skills in motivating through storytelling, build a culture of cross-functional resource-sharing, facilitate innovation, reinforce attainment of specific goals, and are heavily involved in building a pipeline of talent to support the organization's future needs. While it is beneficial to know what change leaders need to do, additional understanding of what constitutes effective change leadership can be found by

investigating *how* leaders build the competencies that help them achieve success. Gaining clarity from leaders directly on how they facilitate and develop workforce agility skills may provide insights to organizations on how to assist leaders in developing change leadership capabilities. As leaders support followers in managing through change effectively, the findings of such research can inform organizations on how to support leaders in obtaining the specific change leadership abilities needed to facilitate and build and agile workforce in their teams.

### **Human Resource Management**

Human resource management involves the policies, systems, and management actions that produce human capital value through activities of recruiting, staffing, talent development, performance appraisal, compensation, and incentives, learning and training, and workplace culture development (Teimouri et al., 2017). Teimouri et al. noted that traditionally, human resources focused on administrative tasks related to these activities. This focus has shifted and is seen in efforts to closely align human resource management activities to the overall organizational strategy. Organizations must leverage human capital to achieve organizational goals and build competitive advantages to thrive in markets of intense competition. Giauque (2015) asserted that the main function of human resource management practices is to empower the workforce to engage in behaviors that help the organization achieve its goals. Giauque's assertion is reflective of this shift in focus on the role of human resources in organizations.

Human resource management contributes to the creation of competitive advantages through work to develop and implement systems, policies, and procedures

that position organizations to capitalize on the organization's investment in human capital. A primary way for organizations to achieve a return on human capital investment is to leverage human capital efficiently and effectively. This study is grounded in the resource-based view theory of human resource management. The resource-based view (RBV) of human resource management provides a theoretical framework in which competitive value is created by generating inimitable resources within the organization (Barney, 1991; Wright & McMahan, 1992). Barney (1991) noted that the resource-based view theory is concerned with the relationship between organizational strategy and how key resources are capitalized on. The framework focuses on the degree to which organizational outputs are rare, are valuable, can be imitated, and can be substituted with a similar product or service (Barney, 1991). When organizations align resource use with deriving outputs that are rare, hold value, cannot be imitated, and cannot be easily substituted, the organization is generating competitive advantages.

One of the resources organizations have that cannot be directly duplicated by competitors is their human capital. Organizations can develop strategies related to how their human capital is used to achieve strategic goals and to create value. Rather than seeing human capital as a line-item expense to minimize, with the resource-based view, the organization views human capital as an asset to be invested in to build value. As the abilities of the human capital held by an organization cannot be directly duplicated by competitors, growing the abilities of the human capital held by the organization may build competitive advantages. Human resource management plays a central role in how

human capital resources are developed and utilized within the organization (Teimouri et al., 2017).

This view aligns with the shift in the human resources function from the execution of remedial personnel tasks into higher-level partnership in the strategic direction of the organization (Teimouri et al., 2017). Leroy et al. (2018) noted that the processes and structure designed by human resources aim to support the achievement of organizational goals. This shift means human resource management must be strategic in what resources are available within the organization and how those resources are delivered and used. Resources available within human resource management to build up human capital capabilities may include tools, training, systems, incentives, and talent development support (Teimouri et al., 2017).

Teimouri et al. (2017) investigated the relationships between human resource management effectiveness and organizational agility in multiple human resource management functions. These human resource management functions included performance evaluation, compensation, selection, and recruitment. Teimouri et al. indicated that the effectiveness of training systems and performance evaluations were linked to organizational agility. The same link was found for selection and recruitment systems and for compensation systems in relation to organizational agility. Teimouri et al.'s research indicated an important connection between human resource management and organizational agility. This link is identified in Figure 1.

### ***Human Resource Management and Workforce Agility***

Organizational structure may contribute to building agile capabilities in the workforce in multiple ways. One important contributor to building an agile workforce is human resources (Ghasemi et al., 2016). In researching organizational characteristics conducive to agility, Muduli (2016) posited that organizational practices related to functions of human resource management were critical to building an agile workforce. Maximizing the role of human resources has become tantamount for organizations striving to attain a level of agile workforce that could lead to competitive advantages and expedites achieving organizational performance goals.

Muduli (2016) asserted that human resources can support the development of an agile workforce through human resource management's primary functions. Muduli identified these human resource management functions as learning and training, rewards and recognition, and performance. Human resource management can align training and learning programs, incentive programs, and performance programs to build capabilities that support future strategic initiatives. Cai et al. (2018) echoed Muduli's assertion on the role of learning, noting that agile employees leverage an orientation toward continuous learning in their work. Muduli's research highlights the impact and importance of the approach human resources takes in aligning key functions toward building agile workforce.

Ghasemi et al. (2016) found that leveraging human resource tools to empower employees also contributes to workforce agility. In another study, Muduli (2017) asserted that agile thinking and agile behaviors are influenced by an employee's empowerment specific to their intrinsic motivation and to their sense of competence. Muduli asserted

that proactivity behaviors, flexibility behaviors, and resiliency behaviors are shaped by an employee's level of empowerment. One way of achieving empowerment is by giving employees autonomy in decision-making and through power-sharing practices. Muduli found that the organizational practices including learning and training, compensation, involvement, teamwork, and information systems accounted for 38% of the variance in workforce agility in a study of 524 executives and non-executives working the public and the private manufacturing sector in India.

As it is common for leadership to be involved in the implementation of the systems and processes developed by human resources (Leroy et al., 2018), research on the relationship between workforce agility and human resource functions informs the conceptual framework of this study. Muduli's (2016) mixed-methods study on workforce agility found that 38% of the variance in workforce agility was tied to organizational human resource practices including organizational learning, training, and reward systems. Muduli's (2017) quantitative research on the relationship between psychological empowerment and workforce agility and between organizational practices and workforce agility highlights the importance of the interaction between human resources and leadership. Muduli (2017) designed research involving 534 employees in the manufacturing sector in India and found the human resource functions of organizational learning and reward systems had a positive relationship with workforce agility. Muduli also found that teamwork, empowerment, and impact were managerial practices that had a statistically significant relationship with workforce agility.

The approach leadership takes in this relationship exchange can reinforce or undermine the alignment needed to leverage human resource management tools, systems, and resources in the development of workforce agility. Human resource management and leadership can align to design programs that incentivize the development of agility skills. Human resource management and leadership can align to create and implement performance management systems geared toward building an agile workforce. And human resource management and leadership can align to build and implement learning and training programs that facilitate the development of an agile workforce. Through this alignment between human resource management and leadership, organizations can leverage human resource functions, together with leadership, to build human capital capabilities and effectiveness.

### ***Human Resource Management in Supply Chain***

The relationship between human resources effectiveness and supply chain agility can be explored through an investigation into how supply chain leaders leverage resources from human resource management systems to build an agile workforce. Gligor et al. (2016) asserted that the resource-based view theory indicates that inimitable resources can also be garnered through the integration of different organizational resources to achieve business goals. Resource-based view theory provides insight into how the integration of human resource management resources and leadership resources in supply chain may generate inimitable competitive advantages for retailers. Performance outcomes may be impacted by the integration of change leader practices and human resource management systems.

## **Workforce Agility**

One way that organizations may invest in human capital is by building agile capabilities within their workforce. Agile workforce capabilities may be one of the inimitable resources Barney (1991) described as important to building competitive advantages. Alavi et al. (2014) defined workforce agility as the way employees manage and react to change through adaptive behaviors to changes (p. 6264). Qin and Nembhard (2015) asserted that attributes of workforce agility include responsiveness, quickness, competence, adaptability, and cooperativeness. Al-kasasbeh et al. (2016) and Cai et al. (2018) each conducted research using Sherehiy et al.'s (2007) model of agile workforce capabilities that is comprised of proactivity, adaptability, and resilience.

Cai et al. (2018) noted that proactivity involves acting in anticipation of environmental changes to move through change in a positive manner. Proactive behaviors specific to workforce agility identified in research include anticipating roadblocks before changes occur, taking steps to work around those roadblocks, and engaging in behaviors that will contribute to continuous improvements (Muduli, 2017). Proactivity can position organizations to avoid unnecessary costs and can reduce the likelihood of change initiatives being delayed or derailing.

Adaptability is the second component of Sherehiy et al.'s (2007) model of workforce capabilities. Cai et al. (2018) noted that adaptability is related to changing one's own actions to align more closely with the changing needs driven by environmental changes. Adaptive behaviors specific to workforce agility include being able to assume multiple responsibilities, transitioning among roles, and participating in cross-functional



teamwork (Muduli, 2017). Adaptability can position organizations to generate greater efficiencies in their workforce.

Cai et al. (2018) noted that resilience centers on behaviors that position one to remain effective in situations of stress. Sherehiy et al. (2007) posited that resiliency is a characteristic of workforce agility where employees generate effective behaviors within stressful conditions associated with environments of continuous change. Resiliency behaviors specific to an agile workforce include demonstrating positivity in situations of innovation or change, the ability to handle high levels of ambiguity in work processes or situations, openness to differences in thinking, perspective, or ideas from others, and the ability to work effectively in high-stress conditions (Muduli, 2017).

Resiliency in the workforce can help organizations move through changes and generate greater returns on investments in human capital. Al-kasasbeh et al. (2016) noted that resilient employees handle ambiguity well. Ambiguity is a common factor associated with change, so navigating ambiguity well can aid employees in managing stress effectively. Al-kasasbeh et al. (2016) also asserted that carrying a positive attitude towards change, generating novel ideas, and being able to work effectively while holding differing opinions or engaging in different work methods describe resilient employees.

If the workforce can act in anticipation of change (proactivity), adjust behaviors as change occurs (adaptability), and remain effective in work tasks in situations of stress (resilience), the workforce is engaging in agile skills. A workforce that can demonstrate proactivity, adaptability, and resiliency may have competitive advantages over organizations lacking those skills in their workforce in conditions where continuous or

disruptive change is common. This elevation in human capital effectiveness, in turn, contributes to the level of organizational agility contributing to the organization's operational performance (Baninam & Amirnejad., 2017).

Braun et al. (2017) created and tested an instrument to measure employee agility and employee resilience. The premise of Braun et al.'s research was that changes in the marketplace have made models of planned change ineffective for the key needs of organizations. The authors wanted to better understand the roles of agility, resilience, and stress in high-change environments. Braun et al. designed a measurement scale based on antecedents and correlates of agile workforce capabilities. In their research, Braun et al. found that employee agility can increase stress, but employee resilience can help employees work effectively through the stressors that may come with change. While the results demonstrate value to employee agility and employee resilience skills in change, the authors assert that additional research is needed to understand how to develop employee resilience.

Qin and Nembhard (2015) reviewed research to identify employee behaviors linked to agile workforce capabilities. The attributes identified related to agile workforce capabilities were responsiveness, quickness, competence, adaptability, and cooperativeness. Responsiveness in Qin and Nembhard's model of workforce agility related to carrying positivity into situations of unexpected change, having a strategic orientation toward the future, and possessing an ability to remain prepared for change. Quickness was described in literature as having less time to completion and reduced recovery time. Competence was identified as delivering cost-effective solutions to work

problems and elevated capabilities resulting in greater productivity. Adaptability was noted as being able to produce greater variety, bringing more flexibility into work situations, and being able to tolerate ambiguity. Finally, cooperativeness was identified as openness in collaborative efforts, demonstrating cooperation, and being efficient and effective when collaborating. Pulling together the research on workforce agility informs our descriptive view of what workforce agility should look like in the organization. This still leaves the question of how leaders facilitate these specific behaviors to elevate agility in the workforce.

Qin and Nembhard (2015) propose a multi-tiered approach to achieving greater agility in the workforce. The model presented has key roles that fall within the role of human resource management and within the realm of leadership. The responsibilities of human resource management include workforce selection, building capabilities, training, and incentivizing performance outcomes. The recommendations that fall within the responsibility of leadership include workload assignments, facilitating team collaboration, supporting cross-training, empowering followers, decentralizing decision-making, and building dynamic teams. Together, human resources and leadership can build teams with aggregate capabilities that elevate workforce agility, contributing to organizational agility and building competitive advantages for the organization.

### **Supply Chain**

Core functions in supply chain have shifted in response to shifts in consumer spending patterns over the previous three decades. Carter et al. (2015) defined a supply chain as a network of operations that process and move product, information, and

resources across stakeholders in any given industry. The four primary functions of a supply chain are product development, procurement, manufacturing, and logistics (Daryanto & Krämer, 2016). Garcia-Alcaraz et al. (2017) posited that the role of supply chain in organizations is to follow the lifecycle of products from inception to design to production to consumer acquisition. Many aspects of supply chain within organizations have been impacted by globalization. Christopher (2000) attributed advances in technology, communication, and transportation to the shift in complexity in supply chain management. Christopher posited that these advances in technology, communication, and transportation capabilities have shifted the focus from managing inventory to managing responsiveness to marketplace demands. As organizations shift focus their focus from the simpler task of managing inventory to the more complex activities related to responding to marketplace demands, consumer patterns are shaping supply chain rather than inventory availability dictating what consumer options are.

### ***Supply Chain History***

One of the first shifts in supply chain during the last 30 years was an effort to break down silos across stakeholders operating within a supply chain. Brusset (2016) noted that the focus of the supply chain industry in the 1990s was to drive efficiencies and synergy by aligning interests and expanding communication of key stakeholders across the supply chain. At that time, supply chain was a simple process of making what was possible and presenting it to the marketplace. Consumers evaluated what was available, then made purchasing decisions based on what had been manufactured (Christopher, 2000). Stevens and Johnson (2016) noted that the focus in supply chain

management during the 1980s and 1990s was to control internal processes, such as building better inventory management capabilities and finding better ways to manage production planning. Supply chain leaders focused on efficiency methodologies such total quality management (TQM) and Six Sigma to achieve goals of improved inventory management capabilities and production management planning.

As efficiencies were being driven in supply chain, a shift in how consumers purchased goods arose. Advances in technology, communication, and transportation positioned consumers to have greater influence over what should be made available in the marketplace and the timeframe it should be available within. Market competition intensified in line with changing consumer power, forcing supply chain managers to look for more than just alignment across stakeholders to generate the needed competitive advantages. Stevens and Johnson (2016) noted that supply chain managers moved from making independent efforts to adjust and respond to changes in consumer influence to collaborating along the supply chain. The pressures and risks within supply chain could not be managed effectively with independent efforts.

### ***Complexity in Supply Chain***

Multiple factors may contribute to the increasing complexity supply chain managers are facing (Ekinici & Baykasoğlu, 2019). Daryanto and Krämer (2016) identified key challenges in supply chain as shortened product lifecycles, global economic pressures, volatile markets, and increased uncertainty. Globalization has expanded platforms for information sharing, while creating advances in technology, transportation, and communication that supply chains must keep pace with. These rapid

advances from globalization have contributed to the increasing complexity experienced within supply chain activities (Daryanto & Krämer, 2016; Eckstein et al., 2015). Specific challenges for supply chain managers to address include rapid swings in consumer demand, reduced reliability of supplier performance, and overall increased uncertainty throughout the supply chain (Sauer & Seuring, 2018). While there are multiple factors contributing to complexity in supply chain, there is no clear direction for how supply chain leaders may effectively manage the increasing complexity in supply chain.

With the increase in complexity comes greater risk of failure, as seen with retailers that have closed or restructured under bankruptcy proceedings, including Toys R Us, Kmart, Sears, and Herberger's. Supply chain management strategies must be developed to build competitive advantages that address the risks that arise from increasing complexity and support management efforts to change the organizational design in response to the new risks and opportunities (Roh et al., 2017). After a strong focus on lean strategies and operational efficiencies, supply chain strategy shifted to building agility capabilities and greater customization into the supply chain network to address the rapid advancement of complexity issues (Christopher & Towill, 2000).

### ***Agility in Supply Chain***

Elevating the importance of supply chain within the organization is an imperative response to the increasing complexities in supply chain management. Villena et al. (2018) noted that the position of supply chain within the organization has been elevated and integrated into the overall corporate strategy. A key capability needed to support a more long-term strategy for operating in environments of complex, continuous change is agility

(Brusset, 2016). As organizations work to generate competitive advantages, building agility into the supply chain may help establish those competitive advantages. However, research has not established a clear direction that outlines how organizations may identify the supply chain capabilities that drive the competitive advantages specifically related to supply chain agility (Gligor et al., 2016). This shift in focus to building agile practices and capabilities into the supply chain represents a paradigm shift from making business decisions based on short-term impact to incorporating supply chain into long-term organizational strategy (Eckstein et al., 2015). Greater alignment between corporate strategy and supply chain strategy could aid in facilitating the creation of agile capabilities in supply chain to support the long-term organizational strategy.

The expansion of agility in supply chain may come through operations, strategic positioning, technology, information management, marketing, or human resources. Brusset (2016) asserted that the central components to agility in supply chain are market sensitivity, information sharing across stakeholders, flexibility in using strengths across the supply chain, and synergy across stakeholders' processes. Eckstein et al. (2015) posited that the key to building agility into the supply chain is to manage all the areas of operations, strategic positioning, technology, information management, marketing, and human resources in a way that expedites the flow of product from production to consumption and in a way that exceeds the speed and cost capabilities of competitors.

The challenge for organizations is determining how to manage operations, strategic planning, technology, information, marketing, and human resources in a manner that helps to build and sustain the central components of supply chain agility. Expediting

the flow of products from production to consumption more quickly and efficiently than competitors requires new supply chain management capabilities to overcome the challenges of increasing complexity. Supply chain leaders must determine how resources are used within a more dynamic, complex business environment to influence the operational capabilities of the organization (Brusset, 2016). It is important to understand the responsibilities and roles of supply chain leaders in building agile capabilities within operations, strategic planning, technology, information, marketing, and human resources. This study explores the challenges that supply chain leaders face within operations management.

### ***Supply Chain Leadership***

Supply chain leaders play a crucial role in the integration of supply chain operations with the rest of the organization to support the development of agility. Supply chain leaders are responsible for overcoming key strategic and operational challenges while capitalizing on market opportunities (Roh et al., 2017). To overcome key strategic and operational challenges, supply chain leaders must build an environment conducive to facilitating workforce agility. Garcia-Alcaraz et al. (2017) asserted that human resource management has a significant role in facilitating supply chain agility. What is not known is what role supply chain leaders have in bringing human resource management functions into the operational environment. Understanding how supply chain leaders leverage human resource management resources and tools in building workforce agility may shed light on how supply chain leaders are building agility in the workforce to overcome key strategic and operational challenges in environments of continuous or complex change.



### ***Benefits of Agile Capabilities in Supply Chain***

The steps supply chain leaders take to build agile capabilities into the supply chain may result in multiple benefits for the organization. Eckstein et al. (2015) identified the benefits of building agile capabilities in the supply chain as cost-effectiveness, accuracy of service, lead times, and customer service. Eckstein et al. also examined the concept of supply chain adaptability and concluded that, together, supply chain agility and adaptability position organizations to fluidly reorganize supply chain resources in response to changing market demands. The ability to quickly reconfigure resources may generate competitive advantages in industries with rapidly changing product lifecycles, swings in consumer needs, or other factors that create an environment of continuous change.

The improved capabilities associated with an agile supply chain may help organizations with financial performance. Garcia-Alcaraz et al. (2017) surveyed 64 managers in winery supply chain to investigate relationships among human resource skills, agility, flexibility, and the economic performance of supply chains. The researchers found that supply chain agility in a winery supply chain has a positive impact on supply chain economic performance. The concept of supply chain agility was operationalized as response time to customers and the level of product customization. Supply chain economic performance was measured as increases in sales and cash flow (Garcia-Alcaraz et al., 2017). The higher the product customization and the tighter the response time to customers, the greater the increase in sales and the better the cash flow of the organization. These variables are outcomes to adjustments the workforce must

make to external pressures on the organization. Leaders in organizations can build strong internal capabilities by improving responsiveness to consumer behaviors, thereby creating competitive advantages in the marketplace that lead to better financial performance. Agility might play an important role in achieving these outcomes of increased responsiveness and improved financial performance.

Garcia-Alcaraz et al. (2017) did not include measures of supply chain agility acknowledged in other research studies. In Garcia et al.'s study, flexibility and adaptation measures were linked to supply chain flexibility as a concept separate from supply chain agility. If the boundaries of supply chain agility include the factors of flexibility and adaptation as incorporated into other models of agility, the positive impact might be even more extensive than what is captured in Garcia-Alcaraz et al.'s research.

While building agile capabilities into the supply chain can provide benefits to the organization, Eckstein et al. (2015) cautioned that supply chain leaders must clearly understand the impact of internal and environmental factors and the substantial investment of resources that go into building such capabilities. Teece et al. (2016) asserted that organizations must consider the opportunity costs associated with investing resources into building agile capabilities rather than investing those resources into other capabilities. Ultimately, organizations are striving to manage through higher levels of uncertainty and complexity as advances in technology, communication, and transportation continue. Organizations must make strategic decisions within their financial capabilities, managing through uncertainty and risk as they do so.

While organizations must respond to higher levels of uncertainty and complexity, it is important to respond with strategic decisions that are within the financial capabilities of the organization. A fiscally appropriate response to uncertainty and complexity may include making active decisions about how to invest in building agile capabilities, how much to invest in building agile capabilities, and how long to invest in building agile capabilities. The more that becomes known about how to effectively build agile capabilities in the workforce within supply chain, the greater the likelihood that organizations can identify fiscally responsible ways for undertaking such an endeavor. This study directly addressed the gap in research related to *how* agility capabilities are built in the workforce through an exploration of how supply change managers develop strategies to build agile capabilities in the workforce.

### **Summary and Conclusions**

Chapter 2 described methods for identifying relevant seminal and current literature on the key concepts of this study. I have presented an in-depth conceptual framework of the study concepts of change management, change leadership, agile workforce capabilities, human resource management, and supply chain. I then presented a full literature review of the key concepts related to this study, identifying connection points across each of the study concepts. Relationships across the key concepts of the study were provided in alignment with the conceptual framework model presented in Figure 2.

The in-depth analysis of change management, organizational agility, change leadership, agile workforce capabilities, human resource management, and supply chain

in Chapter 2 clarified that research has identified agile workforce capabilities as an important contributor to organizational agility. The research has shown that organizational agility, in turn, contributes to important competitive advantages in turbulent markets. I have presented a summary of research that provides a descriptive overview of the contributors to and importance of agile workforce capabilities in organizations operating in continuous or complex change environments, including in supply chain.

The primary gap in literature relating to how supply chain managers develop strategies to build agile workforce capabilities has been discussed. I have also discussed the secondary gap of considerations supply chain managers make regarding the use of human resource management practices, change leadership practices, and change management practices in developing strategies build agile capabilities in the workforce. My research was a multiple, exploratory case study exploring how supply chain managers develop strategies to build agile capabilities in the workforce. This research was conducted to add knowledge in both the primary and secondary gaps in literature. Chapter 3, details plan for how these gaps in literature can be investigated in the current study, including details the study methodology, design, the role of the researcher, the data analysis plan, and how I addressed issues of trustworthiness.

### Chapter 3: Research Method

The purpose of this qualitative, exploratory multiple case study was to explore how supply chain managers develop strategies to build agile capabilities in the workforce. Supply chain managers may use human resource management practices to facilitate the development of agile workforce capabilities (Garcia-Alcaraz et al., 2017; Ghasemi et al., 2016; Teimouri et al., 2017). The described practices of supply chain managers using human resource management practices, change leadership practices, and change management practices to develop strategies to build agile capabilities in the workforce has not been explored in previous research.

In Chapter 3, I explain the research design used and my rationale for the research design selected. I explain the role I play as the researcher and describe the methodology of this study. The methodology I discuss includes participant selection, instrumentation, recruitment strategies, plans for data collection, and my plan for data analysis. I close Chapter 3 with a discussion on issues of trustworthiness, reviewing how I built credibility, dependability, transferability, confirmability, and ethical practices into the design of this study.

#### **Research Design and Rationale**

The research design of this qualitative study is an exploratory, multiple case study. A qualitative research method is employed when a researcher aims to explore universal human experiences. This is different from quantitative research design which seeks to identify the presence or absence of links between research variables through empirical analysis (Frankfort-Nachmias et al., 2016). While quantitative research seeks

out empirical knowledge related to the world around us, qualitative research aims to establish what is true about a phenomenon through the lens of those experiencing the phenomenon being studied (Maxwell, 2013). One way to look at the phenomenon of something examined through the lens of those experiencing it is through case study research design.

Researchers can investigate a phenomenon in the totality of influencing factors to see it through multiple perspectives while it is occurring through a case study research methodology (Baxter & Jack, 2008). The various viewpoints are captured through each unit of study in the case study design. I designed this study to capture and communicate the strategies supply chain managers described when developing strategies to build agile capabilities in the workforce. I investigated supply chain managers' descriptions of how they develop strategies to build agile capabilities in the workforce to manage change in complex or continuous change environments successfully.

Yin (2018) opined that case study methodology is appropriate when research is focused on “how” or “why” questions about real-life events. The case study design intends to examine a phenomenon such as an experience, event, organization, or role in depth. The qualitative investigation case study method explores how phenomena occur within a specific space and time (Frankfort-Nachmias et al., 2016).

Baxter and Jack (2008) posited that the researcher must identify a single case in the research design based upon the research question and bounded context of the case study. The inquiry of this study is an inquiry into of how supply chain managers develop strategies to build agile capabilities in the workforce. I used the multiple-case study

approach to capture descriptive information, with each participant representing a single case exploring how supply chain managers are advancing human capital capabilities in their organization by developing strategies to build agile capabilities in the workforce. This inquiry process was bounded by strategy development activities occurring in supply chain environments of continuous or complex change within the previous 3 years that supply chain managers were responsible for developing agile capability strategies (from February of 2018 to March of 2021). Because the focus of inquiry was on supply chain managers and was not bounded by industry or organization, partner organizations were not sought for this inquiry.

Yin (2018) posited that a multiple-case study design might be selected when the evaluation of cases treats each case as its own “experiment” (p. 55). A multiple-case study design was employed to establish that each participant interview was not being treated as an additional instance of data within a single, aggregate analysis of the phenomenon of study, such as may occur with a survey design. Each participant represented one complete case in this study, as each participant represented one “experiment” within the study, providing one comprehensive set of complete data on research phenomenon.

A multiple case study structure is used in qualitative research design when the researcher wants to examine various layers of a single phenomenon or find contrast and similarities between multiple instances of a phenomenon (Yin, 2018). To explore this study’s research question, finding differences and similarities between multiple examples of the phenomenon of developing strategies to build agile capabilities in the workforce in

the supply chain was sought. Each case for this study was examined in contrast to the other cases of this study to identify differences and similarities across cases. This supported using an exploratory, multiple case study research design for this study.

Because supply chain is an organizational process within many industries, completing a single case study would limit data collection to participant experiences within a single industry. Conducting a single case study would prevent gaining knowledge on any similarities or contrasts of supply chain planning processes across industries. I used a multiple case study methodology. Each participant represented a single case study to allow the opportunity to reach participants in supply chains across sectors experiencing continuous or complex change. This allowed for the emergence of data across industries to develop strategies to build agile capabilities in the workforce.

Frankfort-Nachmias et al. (2016) asserted that an essential distinction in case study research is grounding the study in clear boundaries of space and time. This case study was bound by requiring participants to describe their experiences of developing strategies to build agile capabilities in the workforce where strategy development has occurred within the previous 3 years. This case study is also bound by time in that the period of this case study began with the first participant's interview and was completed with the final follow-up interview. This case study was bound in space through the designation of participants having recent or current experience developing strategies to build agile capabilities in the workforce within the supply chain division of their organization. These boundaries identify how this study design addresses the study's research question and differentiates this study from other research designs.



Data triangulation was achieved by seeking information and case study interviews to find relevant information that corroborated or challenged data from participant interviews. Archival data for organizations participants have been or are affiliated with was investigated following each interview. Data was sought to corroborate instances of continuous or complex change described, such as mergers, acquisitions, or geographic expansions or reductions, to support discussions around building agile capabilities as a change management strategy. Triangulation also occurred through requests for participants to provide internal documentation relevant to the interview topic of developing strategies to build agile capabilities in the workforce. Candidates were notified of meeting eligibility criteria after review of credentials. This notification included a request to provide any nonproprietary, nonconfidential documentation that would support their responses to the interview questions as part of their participation. Suggested materials included training documentation, workforce development protocol, or other documentation that identified how the participant develops strategies to build agile capabilities in the workforce.

Triangulation occurred in each separate case by reviewing available archival data related to their affiliated organization and available internal documentation provided by the participant to the researcher right before or directly following each interview. Data were reviewed about human resource practices, leadership practices, and change management practices in developing human capital capabilities. Data were examined to identify organizational changes occurring during periods described by participants. This information was also analyzed in connection with themes and trends that emerged during

coding, synthesizing, and thematic analysis of the interview data for each participant, with each case study being treated as a unique study.

### **Research Question**

How do supply chain managers develop strategies for building agile capabilities in the workforce?

Central concepts in this study were change management, leadership, agile workforce capabilities, human resource management, and supply chain. Change management is how organizational leaders plan, implement, and control change initiatives within the organization. Change leadership was examined as the attitudes, skills, and behaviors of leaders responsible for leading and managing change in the workforce. Agile workforce capability is the ability of a workforce to respond with flexibility, adaptability, proactivity, and resiliency in situations of continuous or complex change. Human resource management is the combination of policies, procedures, and systems designed to organize how human capital is used effectively to achieve organizational goals (Teimouri et al., 2017). Human resource management activities include talent acquisition, talent development, and talent management. The supply chain involves product movement activities from product development through product consumption (Garcia-Alcaraz et al., 2017, citing Blanchard, 2010).

### **Other Qualitative Research Methods**

Other qualitative research methods include ethnography, grounded theory, and phenomenology. Ethnography is a research method for observing and interacting with participants within a social construct in which the phenomenon of interest occurs (Ross et

al., 2016). Things explored through ethnography include cultural norms and social norms within small or large systems. Ross et al. explained that researchers attempt to immerse themselves into the setting of a phenomenon naturally to observe participants first-hand, without disrupting or influencing what is occurring for participants within the setting. As I aimed to explore how supply chain managers develop strategies to build agile capabilities in the workforce through the verbalization of their experience, observing participants in the setting of a continuous change or complex change environment was outside the scope of my research. Because the scope of this study did not include observation of the phenomenon, ethnography as a methodology was not appropriate.

Grounded theory research is a qualitative method that aims to generate theory from data obtained in academic research (Noble & Mitchell, 2016). Researchers using grounded theory expand upon what is understood about social phenomenon by “working backward... from data into theory” (Marshall & Rossman, 2016, pg. 18). Marshall and Rossman explain that constructivist grounded theory is a process in which the researcher constructs theory through the interaction with and interpretation of the topic of the study. The intent of this study did not include involvement of the researcher in the process of developing strategies to build agile capabilities in the workforce or analyzing data to generate theories. Grounded theory is a methodology that was excluded from the design of this study.

A final option for the methodology of this research study is phenomenology. The phenomenology research design involves exploring how a population ascribes meaning to a phenomenon. Reiners (2012) explained that phenomenology takes an inductive

approach in research, focusing on capturing qualitative information on a phenomenon that positions a researcher to explore the lived experience of participants in qualitative research. Phenomenology explores how meaning is ascribed through perceptions, experiences, and judgments of individuals experiencing a specific phenomenon (Starks & Brown Trinidad, 2007). Starks and Brown Trinidad explained that this close inspection of an individual experience can capture the essence of an experience or event. As this study aimed to understand how supply chain managers develop strategies to build agile capabilities in the workforce, phenomenology was not an appropriate design for this study.

### **Role of the Researcher**

My role as the researcher was to be the primary instrument of the research. I acted as the primary instrument of the study by conducting semi-structured, one-on-one interviews with participants who had volunteered to participate in this study. I was not a participant in this study. I did have more than 15 years of experience working in logistics and retail supply chains. I did not have professional experience developing strategies to build agile capabilities in the workforce. While my professional profile was available to participants through LinkedIn, I did not share my specific experiences about management work in the supply chain with research participants; I wanted to ensure I was not influencing anything a participant might be comfortable sharing during interviews. As the researcher, I collected and transcribed the data. I analyzed the data and reported the findings of the data analysis.

I had no current or previous working relationships with any participants in this study. This study was not conducted within my workplace, so no conflicts of interest or power differentials were present between myself and any study participants. My role was to act as an observer of participants during their semi-structured interviews. My observations entailed making written notes in a journal on the non-verbal behaviors of the study participants during each interview. Making written notes on non-verbal behaviors added richness to the data collected, as non-verbal communication may clarify the intended meaning of what a participant has stated. Audio-recorded interviews were transcribed and provided to participants following the interview to confirm the intended responses provided and explain any perceived discrepancies between what was recorded and what the participant intended to convey.

I may have some biases that can influence how I interact with a study participant because I have worked as a supply chain leader for more than 15 years. To prepare for the interviewing stage of this research study, I recorded my pre-existing expectations surrounding the research concepts as a method to bracket any assumptions or biases I have related to the research phenomenon. To address my familiarity with the research concepts through my own life experiences, I made journal entries in a separate journal to capture my reactions during the interview to review those reactions after each interview to look for any possible biases. My journal entries helped me identify how I am interpreting what is communicated to me and use this awareness to guide any follow-up communication with participants when the interview transcript was sent to each participant.

## **Methodology**

Qualitative research aims to explore phenomenon in-depth, grounded in a conceptual or theoretical framework that guides and informs the methodology of data collection and analysis (Marshall & Rossman, 2016). Participant sampling strategy, participant sample size, recruitment strategy, instrumentation, data collection strategy, data analysis planning, and data triangulation are all essential considerations for developing research methodology. Methodology must align with the nature of the research and the research purpose (Marshall & Rossman, 2016).

### **Participant Selection Logic**

When investigating a specific phenomenon in qualitative research, an important step is to define the population relevant to the investigation (Frankfort-Nachmias et al., 2016). The population identified from which participants were drawn should correspond to the research problem, purpose, and questions. Therefore, this study focused on how supply chain managers develop strategies to build agile capabilities in the workforce. Supply chain managers with experience developing strategies to build agile capabilities in the workforce in complex or continuous change environments were the subjects of this research study. Purposeful sampling was used to identify managers who fit this description. Purposeful sampling is used when the importance of having samples representative of the phenomenon investigated outweighs the importance of achieving generalizability in a study (Palinkas et al., 2015). Purposeful sampling is different from probability sampling.

## **Probability Sampling**

Probability sampling is a technique used where anyone in the general population has an equal likelihood of being selected as a participant in the study (Maxwell, 2013). Maxwell noted that probability sampling is appropriate in research design when the intent was to investigate phenomena to capture what is happening with those phenomena in the general population. Generalizability is considered an essential tenant of quality in research design. Probability sampling is typical in quantitative research design.

Maxwell (2013) stated that probability sampling creates a greater likelihood of random variability that is not ideal for research design that includes a small sample size. In the case of this study, random sampling may have led to a participant pool that does not include individuals with experience working as supply chain managers. This study would not have been designed to explore the research question if the participant pool did not include individuals with experience working in the supply chain with responsibilities for developing agile capabilities in the workforce. This led to the conclusion that probability sampling did not fit the design of this study. Therefore, purposeful sampling was the sampling strategy used for this study.

Another sampling method that was considered for this study is snowball sampling. Snowball sampling may be used if attempts at securing an adequate number of study participants do not result in the needed participants. Using snowball sampling to have participants identify additional candidates for the study can assist a researcher in achieving the desired number of appropriate participants for case study research (Patton, 2015).

The specific criterion for study participants included management work experience in the supply chain. The management work experience required included experience developing strategies to build agile capabilities in the workforce in a continuous or complex change environment within the previous 3 years. I verified the prior professional experience of participants through requested resumes or a review of professional profiles on social media sites such as LinkedIn.

### **Participant Sample Size**

An essential goal in qualitative research is gathering a rich description of a phenomenon through the in-depth collection of data (O'Reilly & Parker, 2013). Gaining an exhaustive description of the experience participants attribute to a phenomenon is not guaranteed by a specific sample size (O'Reilly & Parker, 2013). The purpose and context informed the sample size for this study. The purpose of this qualitative, exploratory multiple case study was to investigate how supply chain managers develop strategies to build agile capabilities in the workforce. The context of this study included the roles of human resource management practices, change management practices, and leadership practices in developing strategies to build agile capabilities in the workforce. Therefore, the participant sample size was dictated by the need to obtain rich data of how supply chain managers develop strategies to build agile capabilities in the workforce.

Yin (2018) asserted that an essential consideration for sample size with case study design is to avoid attempting to use replication logic such as would be used in surveys or design structured to capture the totality of an experience. The intent of this study design was not to capture a broad spectrum of understanding related to the study purpose, but



rather an in-depth analysis. Yin (2018) suggested that a researcher use discretionary judgment in identifying the appropriate sample size for a study. To assist in using reasonable judgment regarding sample size, I reviewed other multiple case studies that used sampling logic aimed at a rich, in-depth exploration of their research phenomenon. Löfgren et al. (2018) conducted a multiple case study with six participants selected from three urban regional areas of Sweden and three rural regional areas of Sweden. The central focus of the study was on strategic planning in developing transportation infrastructure in Sweden. Vedel et al. (2020) conducted a multiple case study with six participants selected from health-services non-profit organizations to investigate how healthy living is promoted through social media channels by non-profits. Using these studies as a guide, I aimed to secure a sample size of six cases for this multiple case study. The final number of participants secured was guided by the purpose of securing a detailed description of how supply chain managers develop strategies to build agile capabilities in the workforce.

### **Instrumentation**

As the researcher in this case study, I was the primary instrumentation of this study. I collected data in semi-structured, one-on-one interviews with open-ended questions. I collected data on observation sheets and through audio recordings of the interviews conducted. My primary data collection tools were my research questions, my ears that captured what I was hearing, and my eyes that captured what I was seeing (Maxwell, 2013). I also collected data through searches on archival data on organizations and industries participants were from and through the collection of supporting documents

provided by participants. The initial interview questions were open-ended to support open communication and reflection for study participants as they described the considerations involved as they develop strategies to build agile capabilities in the workforce. The interview questions and probing questions are listed in Table 1.

**Table 1**

*Participant Interview Questions*

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Question number	Interview Question
IQ1	Can you briefly describe your work experience related to change management in the previous 3 years? ( <i>warmup question</i> )
IQ2	Can you describe the processes involved in developing strategies for building agile capabilities in your workforce? <ul style="list-style-type: none"> <li>• Who is involved in strategy development?</li> <li>• What timeframes are typical in the development of agile capabilities strategies?</li> </ul>
IQ3	What resources do you consider as you develop strategies to build agile capabilities in the workforce? <ul style="list-style-type: none"> <li>• What resources do you feel have been most effective in developing strategies for building agile capabilities in the workforce?</li> </ul>
IQ4	What challenges have you faced when developing strategies for building agile capabilities in your workforce? <ul style="list-style-type: none"> <li>• How frequently have you experienced these challenges?</li> <li>• How have you responded to these challenges?</li> </ul>
IQ5	What role do human resource practices play in developing strategies to build agile capabilities in the workforce? <ul style="list-style-type: none"> <li>• How frequently are human resources practices considered in strategy development?</li> </ul>
IQ6	What role do leadership practices play in developing strategies to build agile capabilities in the workforce? <ul style="list-style-type: none"> <li>• How frequently are leadership practices considered in strategy development?</li> </ul>
IQ7	What role do change management practices in the organization play in developing strategies to build agile capabilities in the workforce? <ul style="list-style-type: none"> <li>• How frequently are change management practices considered in strategy development?</li> </ul>
IQ8	How do you measure the success of strategies developed to build agile capabilities in the workforce? <ul style="list-style-type: none"> <li>• How are agile capabilities in the workforce measured?</li> </ul>
IQ9	In what ways have you contributed to the development of agile capabilities for organizations where you have worked? <ul style="list-style-type: none"> <li>• What benefits have your organization and your workforce experienced through strategies you developed to build agile capabilities?</li> </ul>

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Member checking was conducted following the online or telephone interviews. Member checking allowed participants to confirm that my interpretations of what was communicated in the initial interview aligned with the intended meaning the participant attended to convey (Marshall & Rossman, 2016). Approximately one to three days

following each interview, I sent each participant a copy of their interview questions and responses for them to review. Participants were invited to email me any follow-up questions, responses they would like to alter, or additional information they would like to share within 72 hours. I reached out to any participant who has not responded to my member checking efforts within 72 hours after my initial communication. I again attempted to determine if each participant had any follow-up questions, responses they would like to alter, or additional information they would like to share. Member-checking aided in verifying that the meaning I was interpreting from participant responses aligned with what each participant intended to communicate.

### **Procedures for Recruitment, Participation, and Data Collection**

I recruited participants through seven professional networking supply chain groups on LinkedIn. I networked through the LinkedIn professional groups Supply Chain Management Group, Inbound Logistics, Distribution and Logistics Professionals, and Operations/Distribution Manager group. I first reached out to the Owner for each LinkedIn professional group to request the Group Owner's permission to post a request for study participants on their group page. Once permission was obtained from each Group Owner, I posted a request for study participation on their group page. The recruiting post included a link to a website I created that described my research study, <http://bethanygraceresearch.com>. The website I created replicated all information from the participant consent form, including the research purpose, voluntary nature of participation, some interview questions, and how to contact the researcher. I communicated with participant candidates through email, social media messaging, or

telephone, depending on the contact preferences identified by participant candidates who reached out to me.

I did not reach out directly to any organizations related to supply chain, as supply chain functions happen in many organizations across a multitude of industries, including transportation, energy, retail, healthcare, agriculture, telecommunications, et cetera. Reaching out to a single organization may have introduced bias into the study due to being unable to reach out to all organizations with supply chain functions. Limiting my initial recruiting to social media channels defined my potential participant pool to supply chain managers currently active on professional social media channels. To restrict the inherent bias this recruiting strategy presented, I allowed potential participants to recommend others within their network who may be interested in participating in this research. Obtaining referrals of potential participants may help expand my reach beyond only those active on professional social media sites.

I collected data through in-depth, semi-structured interviews with participants. Interviews were structured with open-ended questions developed to capture supply chain leaders' behaviors, feelings, perceptions, values, and opinions. (Rosenthal, 2016). Each interview was conducted online or by phone, based on the preferences of each participant. Each interview was scheduled to be one hour in duration at a time selected by the participant. Data were collected through written notes and an audio recording of the interview that was used for post-interview transcription. Each interview was followed by an opportunity for participants to clarify what they have communicated during their

initial interview. Follow-up email recaps were sent to each participant within 72 hours of their interview.

I sent each participant a written recap of their interview questions and responses approximately three days following their initial interview. This gave the participant time to reflect on the interview. Following interviews, I coded the data, pull themes, and put the experience into the sociological framework of the participant. I am the only person who completed the transcription of interviews for participant confidentiality.

If I could not recruit the number of participants I wanted for this study, interviews were planned to proceed with the participants available. Purposeful sampling was supplemented with a snowballing recruitment technique. Rosenthal (2016) shared that snowballing recruitment is a strategy of asking participants for candidates they may be aware of who meet the participant requirements. Each candidate who reached out regarding my study was asked to share my study information with any professional colleagues they thought might be interested in participating in my study. Snowballing did not result in any additional participants in my research.

The debriefing process involved member-checking with each participant to verify the data I collected represents their behaviors, feelings, perceptions, values, and opinions as described in my notes and the audio recording transcripts from their in-depth interview. Participants were notified that participation in the follow-up member-checking was voluntary. Participants received a copy of their responses to the interview questions within two days following their initial interview via email. Participants were asked to respond within approximately 72 hours with any clarifying questions, alterations, or

additional details they would like included. I reached out to participants in the manner they preferred, by phone or email, for the follow-up details they wanted to share. I closed out the member-checking process thanking each participant for their voluntary participation in this research. After the study, participants will receive a study summary and can obtain a copy of the final dissertation.

To obtain data for appropriate triangulation, I searched public information on any organizations identified by participants related to their shared lived experiences developing agile strategies for their workforce. I collected data on the industry the organization was operating in, any changes the organization has been through such as restructuring, mergers, or acquisitions, the geographic footprint of the organization, and other data to validate that these organizations have experienced continuous or complex change. I also requested supporting documentation from participants that could substantiate their work on change initiatives related to developing agile capabilities in the workforce for their organization. Additional information on the process for data collection and analysis of internal documents is provided in the data analysis plan section.

### **Data Analysis Plan**

My plan for data analysis for the initial interviews was to read my observation notes, listen to audio recordings, and transcribe audio recordings verbatim through MAXQDA software. The interview questions initially organized the data. After reviewing the raw data, I categorized observation notes and transcripts through coding, synthesizing, and grouping by themes. Saldaña (2016) defined coding as assigning a word or concise phrase to summarily represent a unit of meaning for data collected

through surveys, journals, interviews, or other research methods. Saldaña made a distinction between decoding and encoding in data analysis, noting that decoding detects the true meaning of what has been communicated, while encoding is when that meaning has been assigned to a code determined by the researcher. Decoding was guided by the conceptual framework and the information outlined in the literature review of Chapter 2.

Castleberry and Nolen (2018) suggested that coding planning can occur before coding data collected if the planning is grounded in concepts or theory identified in the literature review. Castleberry and Nolen provide questions that can be asked to help establish possible coding strategies. These questions are outlined in Table 2.

**Table 2**

*Coding Strategy Questions*

Coding Questions	Category
1 What is happening in the text?	Actions
2 Who are the actors and what are their roles?	Roles
3 When is it happening? (before, during, after, event, etc.)	Timing
4 Where is it happening?	Place
5 What are the explicit and implicit reasons why it is happening?	Attributed Meaning
6 How is it happening? (process or strategy)	Process

*Note.* Adapted from Castleberry and Nolen (2018)

The questions in Table 2 helped guide me to examining what stands out about the way supply chain managers assign meaning to or understand their experiences related to facilitating the development of agile capabilities in the workforce in continuous or complex change environments. This coding framework gave me a starting pointing to identify a coding strategy appropriate to my research.



I used MAXQDA coding software to assist with my data analysis. MAXQDA software has capabilities for transcribing and storing data, indexing information, sorting data in multiple ways, and coding data. I leveraged MAXQDA for all these functions. Once I established codes using my analysis, I analyzed the coding for themes related to the interview and research question. I reviewed transcripts and coding information across interviews for similarities, differences, frequency, and sequence patterns. I then identified ways to group, organize, and connect the data. I tied the information I had organized back to the research question. Saldaña (2016) noted that coding occurs through multiple phases of analysis. I interacted multiple times with the transcripts, the coding groups, the sub-coding groups, and the categories to see what stood out until I had all themes present from the interviews. I then tied the final themes back to the research questions. Discrepant data was included in the data analysis and noted in the study results.

An essential step in coding was to account for possible points of researcher bias in assigning meaning to the data. I reviewed my reflexive journal entries during coding and thematic analysis that I completed following each semi-structured interview. I examined my writing to ensure I was bracketing any biases out of my analysis. Saldaña (2016) asserted that it is important to ask reflective questions throughout coding cycles to identify how a researcher's beliefs, values, and expectations create a lens to the data analysis process. Saldaña recommended reflective questions about what the research found surprising, intriguing, or disturbing in the data being coded. I asked myself these reflective questions and recorded them in my reflective journal to bracket out my own beliefs, values, and expectations during the data analysis process.

### **Data Triangulation**

Yin (2018) described triangulation of data as a “convergence of evidence,” (pg. 129). The quality of a study is strengthened when multiple sources of evidence are sought to explore and understand a phenomenon. While interviews may provide a rich source of data, additional relevant data may support the findings of a study. Other sources of data for this study included archival data and internal documentation provided by participants. Archival data was in the form of public records about organizations or industries that participants have been involved in developing strategies to build agile capabilities in the workforce. This included public information released by the organization related to strategic plans, organizational restructuring, and other general information. This archival data helped establish the organization’s change environment each participant had been involved in. Archival data that supports whether the environment has been continuous or complex change helped to triangulate the data obtained from interviews.

Internal documentation provided by participants or representatives of their organization included information on professional development initiatives, training plans, and agile models and change management models that participants used to develop agile capabilities in the workforce. Internal documentation obtained was subject to the strictest confidentiality, with no identifying information specific to any organizations being included in this dissertation’s data analysis process or publication. Any internal documentation included in the study was information that is not proprietary or confidential to the organization. I requested internal documentation from study participants in the consent form, noting that information shared should include items that

are not proprietary or confidential. Internal documentation of organizations that participants are affiliated with also helped to triangulate the data obtained through participant interviews.

The triangulation process occurred by first gathering the sources of the internal information at the interview from the participant and, following the interview, gathering archival data on the organization or organizations the participant identified working for when developing strategies to build agile capabilities in the workforce. I repeated this process for each case in this multiple case study. Once I gathered the internal and archival data, I analyzed that data for information regarding the roles of human resource practices, leadership practices, and change management practices related to building agile capabilities in the workforce and information about the organization experiencing continuous or complex change. I analyzed the themes and trends that emerged from the interview data to develop a comprehensive data set within each case in this multiple case study.

### **Issues of Trustworthiness**

Marshall and Rossman (2016) asserted that qualitative research must address issues of trustworthiness and ethics, including credibility, dependability, and transferability. Confirmability and ethical procedures are also discussed in this section.

#### **Credibility**

Establishing credibility involves implementing measures that help establish how the concept investigated has been captured by the instrument used to collect data in a research study (Frankfort-Nachmias et al., 2016). Frankfort-Nachmias et al. noted that if

the instrumentation accurately captures data of the concept investigated, analysis of the data will link to the study's research questions. As I was the primary instrument used to collect data in this study, I structured my data collection to best ensure the data I collected captured the concepts I was investigating. I had multiple sources of data captured through multiple semi-structured interviews. I used a reflective journal to capture my initial reactions after each interview. I then reviewed these entries to identify any possible biases that may have detracted from capturing credible data.

### **Transferability**

Transferability in qualitative research concerns how a study is valuable to others in comparable circumstances or others who want to research issues related to the current study's issues (Marshall & Rossman, 2016). The transferability of this research was established through procedures of participant selection described here. The participant pool was established through professional supply chain leadership associations. An overview of the study was provided to recruit participants. The participant pool was then evaluated to identify candidates that meet the study requirements.

Participants were selected based on strategy development responsibilities within a continuous change environment or during complex change initiatives. Participants were selected based on having direct responsibilities for developing strategies to build agile capabilities in the workforce. Participants were selected based on having direct responsibilities for developing strategies to build agile capabilities in the workforce in a continuous change or complex change environment within the previous 3 years. In addition, participants had to be comfortable communicating in English during the

interviews, as a translator was not present during interviews. Participants were also required to be 18 years old or older.

In addition to providing clear information on the population, Marshall and Rossman (2016) asserted that clear information should be provided on the research setting and how the research is conducted. The setting of each interview conducted for this research was at the discretion of each participant. All interviews were conducted via telephone or online conference call. The participant selected the date and time of the interview based on their availability. I was in a private office free of background noise or disturbances for each interview. I did not enable video capabilities for interviews conducted via online conference call through applications including Zoom, Skype, and Microsoft Office Teams. The research was conducted through interviews, with questions outlined in Table 1 that future researchers may reference for transferability.

Marshall and Rossman (2016) posited that the researcher must consider how the sample of the study reflects variations of the phenomenon and those involved in the phenomenon in the general population. Because supply chain functions in organizations can be global in scope, I aimed to secure a sample with a broad geographic region, not limited to small geographic area. Because supply chain functions experience continuous or complex change in a range of industries, I aimed to secure a sample with a broad range of industries. This strategy allowed for the collection of rich descriptions of experiences that may better represent the possible populations involved in the phenomenon than limiting the sample to a single geographic area or industry.

## **Dependability**

Dependability measures how accurate the instrument is that is generating data for the study (Leedy & Ormrod, 2019). As the primary instrumentation of the study, dependability was a result of how thorough and accurate I was in investigating the described strategies of supply chain managers striving to build agile capabilities in the workforce. Marshall and Rossman (2016) asserted that research intentions must include possible changes as the research occurs due to the researcher expanding their understanding of the phenomenon investigated or the phenomenon itself not being in a static state. Dependability in this study was a product of my consistency, transparency, clear documentation, and auditing of my work throughout the process of preparing to conduct research, conducting the research, analyzing the data, and reporting out the study results.

Consistency was achieved through clear organization of research methods, including the use of study instruments, data collection, conducting semi-structured interviews, communication with participants, and documentation of the research process. Leedy and Ormrod (2019) noted that consistency must be achieved by conducting each interview with the same structure for every participant. I implemented a structured outline, following each question in the same order for each participant. The only variability across the interviews was the use of probing questions generated within each interview based on participant responses and any possible differences in the dynamic between me and each participant.

Transparency was achieved by documenting researcher biases, experiences with the phenomenon in the study, and assumptions held by the researcher. Transparency also occurred through clear documentation of the study design, methodology, data collection strategies, and data analysis process. Auditing established generalizability as it is a verification process that research steps were completed accurately, and that researcher biases and assumptions were bracketed appropriately not to influence the study outcomes. In addition to the steps outlined for consistency, transparency, documentation, and auditing, I recorded all interviews and transcribed them word for word, I aligned the semi-structured interview questions with the research questions and conceptual frameworks, and I validated the meaning of participant transcripts through member-checking following interviews.

### **Confirmability**

Confirmability was established in this study through member-checking following the initial interviews. After transcribing the initial interview, I followed up with each participant by email to confirm the meaning I was drawing from their interview responses aligns with the meaning they intended to convey. Member-checking helped clarify any miscommunication and remove any research bias. I also established confirmability using reflexive journaling through the interviewing process. Marshall and Rossman (2016) noted it is important to establish objectivity within the study. Reflexive journaling helped facilitate recognition of any unintended biases I may have included as I gave meaning to the participants' responses during interviews. This allowed me to maintain objectivity in analyzing the data.

**Ethical Procedures**

It is essential to design research to prevent harm to participants (Leedy & Ormrod, 2019). Participants of this study were not expected to be more vulnerable to harm than the general population. Active participation in this study was not expected to create a risk of physical, emotional, psychological, or other harm different from normal daily living activities. Participants were not expected to incur any financial costs. Participants did not include minors. I made every attempt to keep participants free from harm in the research process. Through networking in supply chain professional associations, recruitment occurred, including electronic communication, messaging on professional social media, and email messaging. No potential participants were pressured or coerced into participation.

All communication with any potential participants was transparent, with no misrepresentation of the intent of the recruitment or the study. Recruiting did not occur within my place of employment, or with current or previous co-workers, to prevent any possible conflicts of interest. Potential participants were notified that there is no compensation for participating in this study. Standard methods to keep participants free from harm were followed in communicating and interacting with participants and following the close of the research study. This study did not explore participants' the psychological or health conditions of participants, so no conditions were created that may create psychological or physical coercion for participants. Participants were treated with civility and respect. Participants were not recruited until IRB approval was attained. The IRB approval number for this study is 10-23-20-0433702.



Leedy and Ormrod (2019) asserted that ethical standards in research include taking measures to ensure participants involved in a research study are aware that their participation is voluntary and can act on this at any point in the study. All participants were informed that their participation was voluntary. All participants were made aware that they could withdraw from the study at any point, with no negative consequences or pressure to continue. Any participants that chose to leave the study early were able to do so with no adverse effects. Participants were informed that their participation involves an interview where they would be asked open-ended questions related to leadership during change initiatives. I disclosed the purpose and significance of the study to the participants.

I provided a notice of complete confidentiality listed in Appendix A to participants to be aware their participation was confidential. What they shared would be described in a manner that does not reveal their identity. Leedy and Ormrod (2019) posited that researchers should take specific steps to secure the privacy of each participant. I informed each participant of the steps I took to ensure their privacy.

The first step I took to ensure participant privacy was that each participant was given an identifying number used in all documentation. Only I, the research committee, and the IRB had access to the key that notes which participant correlates to each participant number. This information is stored electronically only, in a locked computer that only I have access to and is password protected. The second step I took to ensure participant privacy is that the names of any organizations or specific geographic areas are not disclosed in the study. I also notified each participant of my contact information if

they had questions or wished to discuss anything pertinent to their participation in the study.

Data was confidential and protected. Participants were identified through a numbering system, with actual names not being used in transcribing interviews. Participants were identified as “Participant 1,” “Participant 2,” and so on. Electronic data is stored in secured cloud storage, Dropbox, that only I, the researcher, can access. Hard data is stored in a locked fire-proof cabinet in my home. Data should be stored according to the requirements of the publishing institution (O’Keeffe et al., 2016). Data will be destroyed per Walden University’s Internal Review Board requirement of 5 years. Finally, this study was submitted to the Institutional Review Board for a full review before any steps were taken to contact potential participants or start collecting of data. I included actual study documents in the Institutional Review Board (IRB) application.

### **Summary**

Chapter 3 provided an overview of the study design, methodology, and trustworthiness issues important in qualitative research studies. I made a case for selecting a case study design to explore the strategies supply chain managers use in facilitating the development of agile capabilities in the workforce over other qualitative research methods. The case study design aligns with the research question in addressing the research gap of understanding how supply chain leaders approach facilitating the development of agile capabilities in the workforce in environments of complex change.

I served as the primary research instrument through data collection with semi-structured interviews. Interview questions and probing sub-questions were identified in

Table 1 in alignment with their corresponding research question. Issues of trustworthiness discussed include credibility, transferability, dependability, confirmability, and ethical procedures. Detailed study design and methodology information have been provided so results can be understood within the context of the research setting and the study can be replicated for multiple case study research utilizing purposeful sampling as the primary recruitment strategy. This study has been designed to comply with all Walden University and IRB requirements to protect participants from harm, maintaining confidentiality, voluntary participation, and data storage. Chapter 4 provides information on the research setting, data collection, and an analysis of the data collected, including coding and theme details.

## Chapter 4: Results

The purpose of this qualitative, exploratory, multiple case study was to investigate how supply chain managers develop strategies to build agile capabilities in the workforce. The purpose of Chapter 4 is to present the data results of the interviews completed. In Chapter 4, I review the analysis of the support documents provided by study participants for triangulation of the data created through participant interviews. Chapter 4 includes the research question, research settings, participant demographics, data collection procedure, data analysis, evidence of trustworthiness, and final study results for the research question from the analysis completed.

### **Research Question**

The research question for this study was: How do supply chain managers develop strategies for building agile capabilities in the workforce?

### **Research Setting**

The setting for the participants in this research study was each participant's location of choice for participating in a one-on-one, audio-recorded interview. Participants communicated via phone, Skype, or Zoom during their scheduled interviews to address differences in the geographic location of the interviewer and participant. Participants selected meeting times for interviews to accommodate their specific needs for time-zone differences. Audio-recorded interviews were conducted with supply chain managers from North America, Central America, Africa, and Asia. Participants worked for various industries in the supply chain, including transportation, food manufacturing, technology, and third-party logistics.

### **Demographics**

Participants' demographic information was not collected for this study to ensure confidentiality. Participants worked in roles including vice president of supply chain, director of operations, international business and product development director, senior supply chain manager, and strategic development manager. One participant had the job title business development executive and described their position as a dynamic role in a start-up organization, with responsibilities including change management and developing strategies to build agile capabilities in the workforce. Three managers held responsibilities within a district or region of a single country. Two managers were responsible for supply chain activities within a full country. One manager was responsible for operations in multiple countries. Five participants were affiliated with organizations with many years of experiences. One participant was affiliated with a start-up organization.

### **Data Collection**

Nine candidates for participation responded to recruitment efforts. Three candidates then chose not to participate in the study. Six participants completed audio-recorded, one-on-one interviews for this research study. Recruitment and interviews were completed over 3 months. Each participant participated in one audio interview via phone, Skype, or Zoom, which lasted approximately 1 hour. An audio recording device with a USB port was used to record each interview, then the audio file was transferred to MAXQDA software on my computer. The audio recording device is kept in a locked, fire-proof safe in my home. The audio recordings of interviews were transcribed in

MAXQDA software within 48 hours of the interview. Transcripts were sent to each participant within 72 hours of their audio interview for member-checking. All participants responded to confirm receipt of their transcript and responded regarding any changes or updates to make to their interview transcript before coding and analysis began.

Each participant was also allowed to provide any supporting documentation that would shed additional insights into what was discussed their audio interview. Four of six participants provided supporting documentation. The remaining two participants provided only the organization's name, citing concerns of not sharing proprietary information. Supporting documentation included links to websites, diagrams of change management models, diagrams of strategic planning models, and commentary reinforcing certain aspects of their interview comments.

### **Data Analysis**

Nine interview questions were used to answer the research question: How do supply chain managers develop strategies for building agile capabilities in the workforce? Six case studies were conducted with supply chain managers responsible for developing strategies to build agile capabilities in the workforce. Transcripts of audio-recorded interviews were created in MAXQDA. Once transcription was complete, member-checking was completed with each study participant to verify intended meaning was captured in the transcript. Once member-checking was complete, the transcript was reviewed. Each case study was examined independently for categories and themes.

I followed the initial six questions regarding coding listed in Table 2, *Coding Strategy Questions from Castleberry and Nolen (2018)*. I maintained a neutral position during the data analysis phase by objective evaluation of the text, and asked myself: who is involved, how are they involved, when things are happening, how things are happening, and identified the explicit and implicit reasons provided for why it is happening. Then, I began to look for repeated commentary. When reviewing repeated comments in transcripts, I created initial codes that included leadership practices, human resource management practices, and change management practices.

I reviewed each transcript again, looking for terms or concepts that emerged that did not directly lead-in from the interview questions. New codes began to emerge. These codes included talent capabilities, collaboration, integration, emotional intelligence, and buy-in. As new codes appeared in a case study, previously coded case studies were examined again to see if the same codes were present in the transcript but not coded on the initial review. This iterative review of the transcripts allowed coding across cases. All cases had three or more full reviews.

I then organized codes into emerging categories. Key categories from the analysis of interview transcripts included leadership practices, integration, talent capabilities, human resources practices, and change management practices. Table 3 provides a sample of information that emerged during reviews of the interview transcripts.

**Table 3***Aggregate Categories Across Case Studies*

Categories	Participant quote
Leadership	
Leadership was identified as a high priority to achieving agility in multiple studies.	"What I mean by that, at least in my personal view. everything revolves around leadership. In order to have an agile environment, agile culture, agile, ah, execution, you need agile leadership. You need leadership that revolves around agile leadership principles." (Participant 4)
	"The processes start with leadership... The leadership system, it determines how you set your goals, how you deploy it, how you measure it, how you recognize your system, and then how do you learn and how do you share." (Participant 2)
Talent capabilities	
Multiple managers described a need to have the right talent through recruiting or through ongoing development.	"You need to teach people in order to be great competitors... Developing new skillsets, always making sure that you give your people and the leaders the best tools to work with is always going to be a success for the company." (Participant 1)
Integration	
Integration was raised in multiple studies, referring to internal integration across teams, as well integration within supply chain.	"That doesn't become our problem if you don't have trailers... We have to work together about, what do we do about this thing? What alternatives do we have? In the past it was just kind of throw it over the wall and let somebody else pick up the mess." (Participant 6)
Resources	
Multiple studies raised the issue of time, financial, and talent resources.	"And, of course, skills. Skills of those pulling the jobs off, the operations personnel. How, agile, how, how efficient, and effective are they at pulling something off. I mean, like, to successfully create a job. All those things determine how we are able progress." (Participant 3)
Change management practices	
How change is managed was identified as playing a role in building agile capabilities in multiple studies.	" So, to set up for future change, I want to make sure that the processes we are putting in place are well-documented, and they are as simple and straight forward as they can be. And that allows us to, when we need to make changes later, understand what it is we are changing and anticipate the downstream effects of the changes." (Participant 5)



Within the category of leadership, multiple themes emerged. Leadership themes that emerged during the analysis of interview transcripts included leadership culture, leadership alignment, and leadership capabilities. These themes and supporting quotes can be seen in Table 4. A leadership culture was discussed as the example leaders set, the role leaders have in building culture, and leaders creating a culture of teamwork and engagement. Leadership alignment was discussed as alignment across leadership teams to streamline efforts and resources toward agility goals. Leadership capabilities covered a range of specific skills and abilities, which may reflect the range of industries participants were from and the range of positions they occupied. Looking past specific skills, participants brought up the importance of the effectiveness of leaders in their roles, including having the right talent in the right places.

**Table 4***Leadership Themes: Rich Descriptive Analysis*

Leadership Categories	Participant quote
Leadership culture	
Within discussions on the role of leadership in building agile capabilities, participants independently raise the role leadership plays in building culture.	"Working together to develop a culture where people are engaged... I am going back to my opening statement about building a foundation. A foundation where people are respected, supported, rewarded, given opportunity for their individualized contribution. They are developed. And then, introducing, you know, for instance, cross-training. Cross-training is one of the key pillars in the operation for agility." (Participant 4)
	"So, leadership is, is a lot. It is actually service. It is not just occupying a position. It means, you have much to do, because you have to be exemplary... You can't afford to not be putting your best forward and expect others to do likewise. So first it is being exemplary, it is motivating team members, it is looking out for one another. You know, it is getting to know those you work with. And those you work for." (Participant 3)
Leadership alignment	
Within discussions on the role of leadership in building agile capabilities, participants independently raise the role of alignment within leadership.	"Leadership drives everything ... If the leader or leaders are not sold into, how can you, if you have a good idea or a good innovation or very agile robust processes, if your leaders are not even sold to it, I can't imagine how that will happen. That is not going to happen. So, leadership, the leader must be the number one innovator. And he drives everything. Like my former boss, he would push me so I could push my people down the line to be more agile." (Participant 2)
	"And so, you end up with resource-constraints because people are working on XYZ, when I thought organizationally, we suggested that ABC were the things that we were going to work on. So, I think that is one of the key places in terms of trying to develop that strategy and achieve that alignment." (Participant 6)
Leadership capabilities	
Within discussions on the role of leadership in building agile capabilities, participants independently raise the role of capabilities within leadership.	"Well, leadership capabilities I think in every mode of transportation in the supply chain, um, has to be from the top-down and it has to be consistent... Leadership plays a tremendous role in developing the talent... I believe mentoring is something that is kind of a lost art. When you are a leader, you need to be a good mentor." (Participant 1)

## **Individual Case Studies**

Case Study 1, Participant 1. Case study 1 was completed with a manager with multiple decades of experience in supply chain and change management in North America and Central America. Participant 1's background including career progression of leading small teams to leading teams of over 5,000, across an entire country. Participant 1 raised topics of bringing on the right talent, training, leadership mentoring, change management strategy, and integration between departments when discussing their efforts to develop strategies to build agile capabilities in the workforce. "You can't sell what you don't know what your operations are, and you can't operate well what you know you are not selling, so there has to be a true buy in from both sides and excellent communication as to what types of accounts you want to try and hit." (Participant 1)

Case Study 2, Participant 2. Case study 2 involved a manager with multiple decades of experience in supply chain and change management in Asia. Participant 2 raised topics that included models of excellence (Malcom Bridge Criteria for Performance Excellence, Kaizen), leadership alignment, emerging technologies, employee involvement in change, clear vision, mission, and goals, and integration of leadership processes and human resources processes. "Number one is that you have to have a leader and a leadership team and leadership process. Very important. And that leadership process must be tied into your HR process. It is almost the same." (Participant 2)

Case Study 3, Participant 3. Case study 3 included a manager in a business development role in a small Third-Party Logistics (3PL) company in Africa. Participant 3

raised topics that included the critical role of supply chain in multiple industries, the role of resources in determining how agile capabilities can be developed, with resources including time, finances, and talent capabilities, on-going development and training, fostering innovation, and building flexibility and adaptability skills at the individual level. “So, one should be able to, should be flexible. Flexibility is key. Flexibility is key. Adaptability is also key. Being able to adapt to, to changes, to positive changes. And being able to discern what changes should be brought into your organization.”

(Participant 3)

Case Study 4, Participant 4. Case study 4 involved a manager responsible for supporting supply chain operations in Canada and United States. Participant 4 raised topics of emotional intelligence and changing mindsets toward embracing change, decentralized and centralized leadership structure, integration, SWOT analysis, and relentlessly sharing the vision with the workforce. Participant 4 asserted that to secure an agile culture, an agile environment, and agile execution capabilities, leadership revolve around agile leadership principles. Leadership revolving around agile leadership principles was described as “being a servant leader, developing a network, having participative management, distributive leadership. If you don’t have these, any initiative to have an agile environment will not set its roots.” (Participant 4).

Case Study 5, Participant 5. Case study 5 included a manager in an IT management role in the supply chain in North America, leading projects with international scope, including in Southeast Asia. Participant 5 raised topics that included being savvy to the skillsets you need to hire for diversity in capabilities, understanding

the process to building buy-in when leading change, keeping processes simple to facilitate knowledge sharing, alignment between leadership and human resources, and being aware of resource constraints such as funding and technical capabilities.

Case Study 6, Participant 6. Case study 6 involved a manager in the food supply chain in North America. Participant 6 raised topics that included working across functional boundaries throughout the supply chain through integration, engaging employees in the purpose, the process, and the payoff of changes to strengthen change management capabilities, keeping a clear vision and attainable goals in front of the team, establishing feedback channels for employee input, engaging the workforce continually, and constantly measuring how swiftly you can move, your costs and output, and employee engagement.

### **Supporting Documentation Analysis**

A range of supporting documentation was provided, with one participant including resources for successful talent recruitment, documentation on change management models, leadership models, and quality models utilized to develop agile capabilities in the organization. One participant included the job description and Curriculum Vitae to support documentation of their work in developing agile strategies to build agile capabilities in the workforce. Another participant provided an overview of an organizational model they developed to restructure divisions within their organization. One participant provided supporting documentation on human resources practices, leadership practices, and SWOT analysis models. Two participants did not provide supporting documentation outside of their LinkedIn profile that identified their position

and companies they worked for currently or previously. Supporting documentation provided by participants substantiated their positions within their organizations, which showed alignment with requirements to participate in this research study. Participants' additional documentation provided substantiated familiarity with the change management practices, human resource management practices, and leadership practices participants described as necessary to the development of strategies to build agile capabilities in the workforce.

**Table 5**

<i>Conceptual Framework Connection Supporting Documents</i>	
<u>Conceptual Framework Component</u>	<u>Supporting Document Connection</u>
Leadership Practices	
Case Study 1	Guidance on leadership development, the role of emotional intelligence in leadership, prioritizing creating a growth mindset, and working successfully in uncertainty.
Case Study 3	Leadership Excellence Model, Integration of Human and Leadership Workforce Systems Model, understanding and building Leadership Brand
Case Study 4	Collaborative Leadership
Human Resources Practices	
Case Study 1	Guidance on recruitment strategies, how to interview effectively, and training.
Case Study 3	Align employees with Vision, Mission, and Values of organization, recognize and reward, and unique diversity.
Case Study 4	Functional people and process development, organization-wide learning, and growth.
Change Management Practices	
Case Study 1	SWOT Analysis model and cross-training strategy.
Case Study 3	Strategic Planning System Model, Malcolm Baldwin Criteria for Performance Excellence, Measurement and Management System Alignment Model, internal Agility Model
Case Study 4	Blended Centralized and Decentralized Models

### **Case Study Differences**

A unique factor in case study 3 was that the participant's organization was very new within the supply chain industry. Participant 3 noted a specific challenge from being

a new organization in the industry was how resources were used and how agile strategies were developed. Participant 3 indicated a priority for the organization was establishing credibility across the supply chain while working to build the client base. This stands in contrast to experiences described by participants in the other five case studies where the focus and priorities around upstream and downstream stakeholder concerns centered on the integration of priorities, goals, and capabilities rather than establishing credibility. This focus of the discrepant case study may indicate factors a very new organization experiences lead to different focus areas, priorities, and abilities for building agile capabilities in the workforce. As this study is purely qualitative, no quantitative measures were analyzed for differences between organizations.

### **Evidence of Trustworthiness**

This section has addressed key issues of trustworthiness and ethical procedures for this study. Yin (2016) asserted that establishing trustworthiness in a study occurs through the methods used to generate data. In this section, I review how I built credibility, transferability, dependability, and confirmability in my research to establish trustworthiness in the data.

### **Credibility**

Steps I took to establish credibility in the data collected included consistent structure for interviews, consistent opportunity for participants to review their interview transcript, and consistent opportunity to provide supporting documentation regarding participants' work experiences. I structured my data collection to ensure the data I collected captured the concepts I was investigating. Multiple sources of data were



generated by having each semi-structured interview represent one case study. After each interview, I conducted member-checking, emailing a transcript of each participants' interview within 72 hours. All participants confirmed that their perspective was accurately represented in their interview transcript. Member-checking established that data collected through interviews was representative of participants' perspectives on how they develop strategies to build agile capabilities in the workforce.

### **Transferability**

The transferability of this research was planned through structured procedures of participant selection. The participant pool was established through the initial plan of networking efforts within professional supply chain leadership associations on social media. There was not a need to expand recruiting toward human resource management professional associations or professional leadership associations. I evaluated the participant pool to identify candidates that meet the study requirements. One participant candidate never responded to initial communication. A second candidate declined to answer questions regarding participation eligibility and opted out of the study. A third candidate's relevant experience had not occurred within the previous 3 years. Six of nine candidates were identified as meeting the study eligibility requirements after answering the eligibility questions via written communication with me. I then verified eligibility by reviewing candidates' professional work profiles on the social media site LinkedIn.

### **Dependability**

As the primary instrumentation of the study, dependability for this study was a result of how thorough and accurate I was in investigating the described strategies of

supply chain managers striving to build agile capabilities in the workforce. Marshall and Rossman (2016) asserted that research intentions must include possible changes as the research occurs due to the researcher expanding their understanding of the phenomenon investigated or the phenomenon itself not being in a static state. I did not experience any changes in my understanding of the phenomenon being investigated in this study during the data collection or data analysis phase of the research. Dependability in this study was a product of my consistency, transparency, clear documentation, member-checking with participants, and auditing of my work throughout preparing to conduct research, conducting the research, analyzing the data, and reporting out the study results.

Consistency was achieved through clear organization of research design, including instruments, data collection, communication with participants, and documentation. Leedy and Ormrod (2019) noted that consistency must be achieved by conducting each interview with the same structure for every participant. I implemented a structured outline, following each question in the same order for each participant. The only variability across the interviews was the probing questions generated within each interview based on participant responses and any possible differences in the dynamic between me and each participant. One interview experienced technological barriers during the semi-structured interview due to the interviewer and participant being on different continents. The call dropped and had to be re-connected to continue the interview. During another interview, the participant was contacted by their manager halfway through the interview. The interviewer then continued the interview after the

exchange with their manager. Four of the six interviews did not experience any disruptions.

Transparency was established with documentation of researcher biases, experiences with the phenomenon in the study, and assumptions held by the researcher. Transparency was also achieved by documenting the study design, methodology, data collection strategies, and data analysis process. Auditing was completed to establish the completeness of the research steps. Auditing was also done to review researcher biases and assumptions. Auditing further mitigated for research biases to ensure they did not influence how data was analyzed. In addition to the steps outlined for consistency, transparency, documentation, and auditing, I recorded all interviews and transcribed them word for word. The semi-structured interview questions were closely aligned with the research question and conceptual framework for this study. Finally, transparency was attained by confirming the meaning of participant transcripts through member-checking following interviews.

### **Confirmability**

Confirmability was established in this study through member-checking. After transcribing each interview, I followed up with each participant by email to confirm the meaning I was drawing from their interview responses aligned with the meaning they intended to convey. Each participant received a transcript of their interview via email within 72 hours of their interview. Member-checking helped clarify any miscommunication and remove any research bias. Reflexive journaling during and directly following each interview also helped establish confirmability of this study.

Reflexive journaling helped facilitate recognizing any unintended biases I had included as I gave meaning to participants' responses during interviews. Reviewing my reflexive journal created a process for me to maintain objectivity in analyzing the data.

### **Study Results**

The first research question in this study was a warm-up question asking each participant to review their recent work history and work experience. This allowed me to get a sense of the participants' experience in the supply chain industry and their experience leading change and addressing needs for agile capabilities within their workforce. Research questions two through nine explored the research question of this study within the conceptual framework that informs this study. A rich description of all participant responses to each research question is provided here.

#### **Interview Question 1**

*Can you briefly describe your work experience related to change management in the previous 3 years?* Participant 2 described various roles, including Change Management Assistant Vice President. Participant 3 discussed working in a dynamic role with many responsibilities as a part of a start-up organization in supply chain aiming to carve out a space in a marketplace with room for expansion and growth. Participant 4 shared experiences implementing agile, lean, and total quality management projects in supply chain. Participant 4 described themselves as a servant leader with a participative management style and distributive leadership style. Participant 4 has been with their current organization for more than 3 years and when they joined their organization, annual revenues were approximately \$250 million. Participant 5 described working in

operational planning and operations management roles in North America and Southeast Asia in the supply chain within the IT industry. Participant 6 discussed their work in the supply chain in a food production organization.

### **Interview Question 2**

*Can you describe the processes involved in developing strategies for building agile capabilities in your workforce?* Participant 1 discussed using a Strengths, Weaknesses, Opportunities, Threats (SWOT) framework to understand your industry and your business to inform how strategies will develop needed agile capabilities. Key areas of focus included understanding the competition's capabilities, understanding your niche in the marketplace, and building strong alignment between different sectors of the organization, including strong alignment between operations and sales. "You can't sell what you don't know your operations are capable of ... so there has to be a true buy-in from both sides and excellent communication as to what types of accounts you want to try and hit. (Interview transcript Participant 1)

Participant 2 led with the role of leadership, examining leadership systems, and building a model of leadership excellence that was used in efforts to build agile capabilities in the workforce. "The leadership system, it determines how you set your goals, how you deploy it, how you measure it, how you recognize your system, and then how you do you learn and how do you share." (Interview transcript Participant 2). Participant 2 explained that the leadership system was used to drive leadership excellence and expanded on this by explaining the use of the Malcom Bridge Criteria for Performance Excellence.

Participant 3 described using many strategies as part of their dynamic as a newer organization within their geographic area. Strategies to build agile capabilities for their organization include pricing, sales strategies, and brand development. Participant 3 described actively using SCRUM, an important framework for building an agile mindset in their business activities. “SCRUM, it is not something in the clouds. It is something we actually practice.” (Interview transcript Participant 3).

Participant 4 discussed using an entrepreneurial approach that centers more on vision and purpose rather than having a formal strategic process for developing strategies to build agile capabilities in the workforce. Participant 4 shared that they use planning tool as needed, including Porter’s Five Forces analysis and an organizational maturity model. The discussion also included how Participant 4 leverages a SWOT analysis framework, similar to the description provided by Participant 1.

Participant 5 discussed the process of developing strategies to build agile capabilities in the workforce in terms of change management practices. References were made to keep change management strategies simple, keep stakeholders informed, and plan how changes beyond the current strategy will be impacted by what is currently being done. Participant 5 indicated that all senior managers are responsible for developing strategies to build agile capabilities in the workforce, but that support is available through a central program management office. Proactive planning was emphasized, with Participant 5 sharing that senior managers “are always looking at the strategies to take account of what is happening in the future and be ready for it,” (Interview transcript Participant 5).

Participant 6 discussed the process of solving recent challenges in transportation when asked to describe the process involved in developing strategies to build agile capabilities in the workforce. Participant 5 discussed how one bottleneck point in the supply chain process has ripple effects to production workers who may be moved into work stoppages. Staying closely connected to all areas that may negatively impact operations was identified as important to building agile capabilities in the workforce moving forward. Preventing workflow disruptions was also recognized as necessary to keeping efforts to build agile capabilities in the workforce moving forward.

### **Interview Question 3**

*What resources do you consider as you develop strategies to build agile capabilities in the workforce?* Participant 1 first discussed the role of talent capabilities as a resource needed to attain needed agility. The topic of talent capabilities was expanded on, with Participant 1 discussing influencing the level of talent capabilities through recruitment strategies to secure needed capabilities and training strategies to build upon capabilities present in the current workforce. Participant 2 led with a different response. “Well, I will say the most important element is your leader and your leadership team. That is the most important element. Because it is the leadership team that drives everything.” (Interview transcript Participant 2). Participant 2 then went on to echo a similar sentiment to what Participant 1 had presented, noting that people with the right capabilities was needed to deliver results. Participant 2 also identified technology as a critical resource to consider when developing strategies to build agile capabilities in the workforce in the supply chain.

Participant 3 described the importance of understanding what capacity was available within the available workforce as well as understanding the financial constraints to what could be done and understanding the resource of time and time constraints toward generating returns on efforts. Participant 4 shared that they saw the first priority in resources as “creating an environment where human resources can thrive and profoundly affect the organization within that agile environment,” (Interview transcript Participant 4). Participant 4 elaborated on setting up the workforce for success through communication structure, leadership practices, collaboration and information sharing culture.

Participant 5 discussed the importance of IT resources to maximize access to information. The discussion then focused on the importance of having a diverse workforce with needed skillsets to support building agile capabilities in the workforce. “And so, when you have that diversity, you can align your workforce and be able to adapt,” (Interview transcript Participant 5).

Participant 6 shared “I think collectively about what type of people-power do I need to have, what type of capital might I need to have. So, if you are going to try to build some level of a strategy, you need to make sure, do we have the people that are ready for this... change?” (Interview transcript Participant 6) Participant 6 also discussed capital funding for projects and maintaining flexibility points across the workforce for production flow throughout production and distribution of product as important resource considerations.



**Interview Question 4**

*What challenges have you faced when developing strategies for building agile capabilities in your workforce?* Participant 1 discussed the impact of a strong hierarchical structure, where driving alignment between top management and operators in the field can be a challenge. The ability to bridge the gap between conceptual ideas developed in high-level strategy and how strategies are implemented in the field an important skill for senior managers. “You have to pull executive management in in order for them to visualize, to see what you are telling them, so they can go out and get you the resources you are going to need for everybody to hit the benchmark.” (Interview transcript Participant 1).

Participant 2 indicated that challenges are largely company-specific in general, but the Covid-19 global pandemic was one challenge organizations are all facing that requires rapid adaptations. Participant 2 went on to assert that overcoming challenges requires first, rallying all employees around the organization’s mission and vision, especially regarding what you want to do and how agile you want to be. And second, overcoming challenges requires training and involvement at all levels. “I have seen very agile companies, when the workers themselves are involved, directly involved in improving their jobs, there are a lot of outstanding results. (Interview transcript Participant 2).

Participant 3 discussed the challenges of their lack of brand recognition as a start-up organization and the efforts that earn trust in the marketplace. Additionally, financial challenges were raised in response to the challenges faced when developing strategies to

build agile capabilities in the workforce. In reference to financial constraints, Participant 3 referenced the impact of the Covid-19 global pandemic, stating “We are talking about supply chain management. Costs have sky-rocketed.” (Interview transcript Participant 3).

Participant 4 described academic achievement among the leadership as a challenge to building agile capabilities in the workforce. “We have very few with bachelor’s degrees or master’s degrees or any professional designations. And I am not saying this to downplay their competencies and capabilities. I just refer to that as, you don't know what you don't know,” (Interview Participant 4). Participant 4 also identified alignment on responsibilities across leaders as an area of opportunity, noting that the vision of clear designation between operational duties and sales and customer service responsibilities requires effort to secure buy-in from their leaders throughout North America.

Participant 5 identified overcoming the status quo as a challenge to developing strategies to build agile capabilities in the workforce. Funding for strategic initiatives was also cited as a concern. Participant 5 discussed being very clear with what problems you are solving with stakeholders to generate support for moving away from the status quo and for gaining support on funding initiatives to implement needed changes.

Participant 6 discussed alignment on the vision and goals of the organization as a challenge to developing strategies to build agile capabilities. “[Y]ou start to take a look at what the strategy is, where are we going to head, what are some things we are working towards? Unfortunately, that list gets so big and so long, um, I have found that in all

cases that I can think of, we have always over-stated where we think we can go (Interview transcript Participant 6).

### **Interview Question 5**

*What role do human resource practices play in developing strategies to build agile capabilities in the workforce?* Participant 1 described human resources as a “vital function” (Participant 1). Participant 1 explained the importance of integration between human resources and operational leaders, describing a two-way relationship in which both sides must reach out to the other to build understanding of the needs and priorities of each other. Participant 2 described human resources practices as “very, very important.” (Interview transcript Participant 2). Participant 2 elaborated on critical functions of human resources practices including hiring, training, and rewards for building agile capabilities in the workforce. Participant 3 also discussed the role of training in human resources practices.

Participant 4 spoke on multiple roles human resources play in their organization since first becoming part of the organization in the last 2 years. The roles include building culture, performance management, leadership capabilities development, and training. “Cross-training is one of the key pillars in the operation for agility,” (Interview transcript Participant 4). Participant 4 also discussed the important role human resources plays “in recruiting and building an on-call labor pool so that we can flex labor in accordance with operational needs and business demand without having to resort fully to full-time, employee-based, and high-costs related to that level of employee base,” (Interview transcript Participant 4).

Participant 5 was brief in discussing the role of human resources in developing strategies to build agile capabilities in the workforce. The discussion centered on limitations present when human resources are not aligned with operations on staffing needs. Participating 5 did not elaborate on gaps within recruiting, development, performance management, or any other staffing responsibilities human resources might have. Participant 6 discussed the importance of the right players in the right roles, examining things through diverse perspectives, having an entrepreneurial spirit, and understanding what skillsets you need for what you are trying to accomplish.

### **Interview Question 6**

*What role do leadership practices play in developing strategies to build agile capabilities in the workforce?* Participant 1 discussed the importance of having good leaders throughout the organization and having consistency across levels of leadership. For specific leadership practices, Participant 1 emphasized hiring high-potential candidates, mentoring, continually developing your and your team's leadership skillset, and providing the best available tools to the team.

Participant 2 asserted that leadership buy-in is necessary to have agile processes. "If the leader isn't sold on the idea of agility, the company is not going to be sustainable." (Interview transcript Participant 2). Participant 2 also asserted that innovation starts with leadership and plays a role in developing agile capabilities. Participant 3 described the role of leadership practices pertaining to agility as being exemplary in every way. "Leadership, it is continuous self-development, motivating the team, it is providing resources. You know, providing direction for the rest of the team, providing resources to

make sure that you are able to achieve the long-term goals and objectives of the company.” (Interview transcript Participant 3).

Participant 4 asserted that leadership plays the most critical role in developing strategies to build agile capabilities in the workforce. “Everything starts with leadership. I don't want to repeat myself, but that was my opening statement. To have agility in the organization, you need engagement. You need culture. And leaders develop the culture,” (Interview transcript Participant 4). Participant 4 provided a full description of how they see leadership shaping and building an agile culture. The description referenced servant leadership, leading without authority, taking on the leadership role as an enabler of others’ abilities, deploying emotional intelligence, and providing resources necessary before bringing up the need to be agile. “So, ah, you need to be that servant leader who worries more about developing other people, giving them the opportunity to thrive, to be engaged, to enjoy what they do, to grow, to be looked after, not just related to business,” (Interview transcript Participant 4).

Participant 5 stated that the role of leadership practices in developing strategies to build agile capabilities is tremendous. Participant 5 focused on the importance effective communication, elaborating with an example from a recent meeting for senior managers where the message from the Vice President focused on effective communication, starting with seeking to understand the problem before attempting to solve it entirely. “You know, one of the biggest obstacles to making progress in an organization is you get in a meeting where everybody tries to go straight to the solution. You might not always understand the problem,” (Interview transcript Participant 5). Participant 6 described

leadership practices as important in building agile capabilities in the workforce. Practices brought up by Participant 6 included bringing a clear vision, helping others understand their role in the vision, open communication, and driving engagement and collaboration throughout the team.

### **Interview Question 7**

*What role do change management practices in the organization play in developing strategies to build agile capabilities in the workforce?* Participant 1 discussed developing common goals across segments of the organization that may have differing goals, such as sales and operations. Participant 1 described establishing common goals to work toward to engage employees throughout the organization in understanding how and where they add value to the processes they affect. Participant 2 discussed the Malcom Bridge Performance Criteria of Excellence, quality controls, and Kaizen processes as important change management practices that support efforts to build agile capabilities in the workforce. The discussion included assertions on the importance of aligning with mission and vision across the supply chain, including with suppliers and customers, to achieve an integrated system.

Participant 3 described change management considerations as necessary to how the organization makes effective decisions to avoid changes that will be too costly for the organization. “Being able to discern what changes should be brought into your organization...What effect will it have in the long run? What will it be? Is it going to eat deeper into the company’s pockets? Or is it going to give us a higher ROI in the long run?” (Interview transcript Participant 3). Change management practices that build

flexibility and adaptability were described as key in change management's role in developing strategies to build agile capabilities in the workforce.

Participant 4 discussed the importance of having a mindset that the constant that changes within the supply chain provide the ability to seize new opportunities. "So, the most critical aspect is to develop that mindset where people embrace change. Not as an enemy of your condition but an enabler of your growth and success. (Interview transcript Participant 4). Participant 4 also referenced leveraging a change management model, Kotter's 8-Step Change Management Model, similar to other participants. Participant 4 noted that "to be successful in change management, you have to have a certain methodology. And not necessarily to follow it rigidly, but more to remind yourself, am I hitting all these aspects in the methodology?" (Interview transcript Participant 4).

Participant 5 discussed the need for change management practices that include execution of changes and creating a positive response to the change. "If you are trying to come up with new ways of doing things, people have to see the need for it and then embrace it and say ok, maybe the solution being proposed isn't what I would do, but it is better than what we are doing, right?" (Interview transcript Participant 5). Participant 6 also addressed the need for support to implement and manage change successfully.

You are going to find a minority that are stuck in their old ways, right, and there is nothing that is going to change them. But I do believe that others are willing to change, if they understand the purpose, process, payoff. Right? What is the purpose of what we are doing? What is the process we are going to go through? And what is the payoff we are going to give organizationally to this change? Why

are we making this change? All too often we hear folks that don't know what is going on or why. And I don't believe that that fosters an engaged workforce. So, I think change management is critically important. (Interview transcript Participant 6)

### **Interview Question 8**

*How do you measure the success of strategies developed to build agile capabilities in the workforce?* Participant 1 discussed revenue, cost controls, marketplace growth, and net profit as measures of agility for the organization. Participant 2 shared that there are many ways to measure success in terms of agile capabilities specific to the organization and specific to projects and initiatives. Participant 2 asserted that measures could be reduced to the effectiveness and to the efficiency of inputs and to the effectiveness and the efficiency of outputs in any given system. Participant 3 described software that captures data specific to employee work tasks and organizational performance. Participant 2 also raised customer feedback obtained through feedback channels to measure success for strategies developed to build agile capabilities in the workforce. "We allow them to drop opinions or suggestions; or ask open-ended questions to know how we can perform better, what area needs to be fine-tuned to enable us to grow." (Interview transcript Participant 3).

Participant 4 referenced leveraging quantitative and qualitative measures to evaluate the success of strategies developed to build agile capabilities in the workforce. In reference to quantitative metrics, Participant 4 described general business outputs as indicators of success. "If you create an agile environment, ideally you will execute with



success. If you execute with success, that will show in your performance. You know, whether that is financial metrics or simple production metrics,” (Interview transcript Participant 4). Participant 4 went on to express a stronger inclination toward qualitative measures of success. “But what I like the most and what I focus on is the qualitative aspect. It is actually seeing the effects of your coaching, your mentoring, your leadership style in how people actually demonstrate agility,” (Interview transcript Participant 4).

Participant 5 did not identify how success is measured for agile strategies developed to build agile capabilities in the workforce. Participant 5 did bring up identifying when you are not successful, describing the challenges the organization faced with staffing shortages during the Covid-19 pandemic. Participant 5 attributed this to human resources practices not keeping pace with changing conditions in the workforce market, noting “they just kept doing the same hiring practices they have always done. Have a job fair, people show up, you hire them, right? Well, that doesn’t work in that type of situation. You have to be able to change,” (Interview transcript Participant 5).

Participant 6 discussed costs, outputs, and overall performance to measure the success of efforts to build agile capabilities into the workforce. Metrics discussed included measures of safety, productivity, quality, customer feedback, and employee engagement. Participant 6 also discussed examining metrics on a micro-and macro-basis, with some metrics being reviewed daily and weekly, and at the same time examining on a broader scope, quarterly or annually, to examine if the results align with the strategy.

**Interview Question 9**

*In what ways have you contributed to the development of agile capabilities for organizations where you have worked?* Prior to question 9, Participant 1 shared, “I’ve had many people be promoted over me that are in the industry today that work for the competition, that are key stakeholders and in vice president roles globally, so I am pretty proud of that.” (Interview transcript Participant 1). Participant 1 referenced the above statement they made earlier when asked about their contributions to the development of agile capabilities. In addition to talent contributions to the organization, Participant 1 described the experience of reporting to a senior vice president of the organization’s International Division and being given the responsibility of leading change in a country that was turning seven-figure losses annually. Participant 1 was able to generate a nine-figure gain for the organization and identified that as another important contribution they made to building agile capabilities within the organization.

Participant 2 described revising the supply chain strategy of land and water transportation across an island country through the use of technology advances that transformed how product movement was tracked, how measures of success were evaluated, and what the organization could deliver for their customers that brought greater agile capabilities to their customers. Participant 3 responded to the question regarding their contributions to the organization’s agile capabilities, describing their efforts to elevate their own capabilities for the organization continually. Participant 3 then discussed contributions to marketplace expansion in a small start-up organization

and to contributions to work as a team player to improve the financial well-being of the organization and support efforts for positive returns on investments being made.

Participant 4 discussed the impact of restructuring the organization from a very decentralized structure to a modified structure with aspects that remained decentralized, but also included a centralized structure that aligned capabilities and responsibilities as a key contribution that have made to building agile capabilities within their organization. Participant 4 identified this structure as opening up collaboration, information sharing, and decision-making, resulting in an engaging, agile environment where diverse operational capabilities could be developed.

Participant 5 reviewed the delivery of a new customer-centered, capacity planning process they developed for their organization when asked in what ways they had contributed to the development of agile capabilities in their organization. “[B]efore I came here it was just kind of a guess. I think we need X capacity, because that is what we usually need,” (Interview transcript Participant 5.) With the capacity planning process Participant 5 developed, better forecasting of volumes can result in more accurate staffing planning. Participant 5 explained the impact of the capacity planning process “that will allow us to be more adaptable to changes in demand. We have some seasonality and service events. We think we can get ahead of that seasonality a little bit better with this process,” (Interview transcript Participant 5). Participant 6 described contributions made through communication and building engagement across the workforce.

## Summary

Responses to each interview question shed light on the research question: How do supply chain managers develop strategies to build agile capabilities in the workforce?

While a single, unified strategy across case studies did not emerge, participants responded readily to at least some aspects of the conceptual framework that informed the developed interview questions. When examining all six case studies together, the rich description of how supply chain managers develop strategies to build agile capabilities in the workforce that emerged aligned with the conceptual framework that included change management practices, human resource management practices, and leadership practices. Responses to interview questions did not elaborate on considerations made to build agile capability skills at the individual employee level.

Chapter 4 provided information on the research setting, demographics, and data collection methods. I covered how data was analyzed in the qualitative case study, summarized the results in relation to the research questions, and established evidence of trustworthiness in my research procedures. I then summarized findings from the case studies. Chapter 5 will provide interpretation of this study's findings, limitations, recommendations for future research, the implications, and concluding thoughts.

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to investigate how supply chain managers develop strategies to build agile capabilities in the workforce. The conceptual framework guiding this study was an exploration of the relationships among human resource management practices, change leadership practices, and change management practices involved in developing strategies to build agile capabilities in the workforce. An exploratory, multiple case study was conducted to explore the roles change management practices, leadership practices, and human resource management practices have in strategy build agile capabilities in the workforce.

Six individual case studies were conducted, each with a single participant in this multiple case study. All participants were allowed to discuss the roles change management practices, human resource management practices, and leadership practices play in participant's efforts to develop strategies to build agile capabilities in the workforce. While participants discussed these practices in different ways, participants readily discussed the roles change management practices, leadership practices, or human resource management practices have in how they each develop strategies to build agile capabilities in the workforce. Each case study presented unique results, but an examination of all case studies together revealed some similarities in priority considerations when supply chain managers develop strategies to build agile capabilities in the workforce.

## **Interpretation of Findings**

A review of the data collected in this multiple case study confirmed that managing change effectively through the development of agile capabilities in the workforce is a crucial concern in supply chain operations. Findings also confirmed prior research's findings that change management practices are shifting from static, control-oriented practices to more fluid practices (Appelbaum et al., 2017; Braun et al., 2017). Prior research findings regarding the importance of human resource practices in developing strategies to build agile capabilities in the workforce were also confirmed (Muduli, 2016, 2017). Lastly, a review of the data aligned with prior research findings regarding the importance of leadership practices in developing strategies to build agile capabilities in the workforce (Dumas & Beinecke, 2018; Stilwell et al., 2016).

### **Change Management Practices**

As the supply chain industry experiences rapid and continuous change, rigid models of change management may not provide the needed flexibility or speed organizations require to effectively respond to change and capitalize on opportunities in the marketplace (Appelbaum et al., 2017; Tarafdar & Qrunfleh, 2017). Pollack and Pollack (2015) posited that more understanding is needed of how change management models apply in instances of complex or continuous change. In this study, I explored how supply chain managers leverage change management practices to develop strategies to build agile capabilities in the workforce. When discussing how change management practices contribute to developing strategies to build agile capabilities in the workforce, multiple participants reported leveraging structured change management models as

guides to tracking progress, engaging stakeholders, or maintaining awareness of change initiatives in the organization. There was no singular model identified across case studies and no singular way change management models were used to develop strategies to build agile capabilities in the workforce. Participant 2, Participant 4, Participant 5, and Participant 6 indicated that change management practices are important in developing strategies to build agile capabilities in the workforce. Some participants referenced specific management models, including Kotter's 8-step change management model.

Participant 3 discussed the importance of flexibility and adaptability as strategies for working through change. This reference supports Braun et al.'s (2017) assertion that change management practices must evolve away from static models attempting to closely control all aspects of change in distinct phases. In other words, flexibility and adaptability in change management practices supports the shift toward fluid practices that enable movement through the increased complexity and ambiguity in the supply chain industry at the time of this study.

### **Human Resource Management Practices**

Data collected through semistructured interviews in this case study included specific human resource management practices. Participants raised practices including recruitment, training and development, incentives, and performance management. Participants' emphasis on the importance of human resource management practices in developing strategies to build agile capabilities in the workforce aligned with findings presented by Muduli (2016). Participant 1, Participant 2, Participant 5, and Participant 6 identified the role of human resources in recruiting the right talent as important to

building agile capabilities within the organization. Participant 6 explained, “it’s partnering up with human resources to make sure you understand what skillsets you need to have to be successful.” What was not clear in this commentary is whether it is operations informing human resources of what skill sets are needed, human resources informing operations what skill sets are needed, or a two-way conversation on what skill sets are needed. Participant 1 and Participant 5 discussed challenges when human resource practices do not align with strategies supply chain managers are trying to develop to build agile capabilities in the workforce. “[HR managers] also have their set ways of looking at staff and they will have their set ways of looking at that and that is not always what an agile team needs. And I think the HR profession could grow in that in general” (Participant 5). This insight highlights that what human resources does can be as important as what human resources does not do.

### **Leadership Practices**

How leaders move the workforce successfully through change initiatives has been examined in recent research. Dumas and Beinecke (2018) asserted that leadership behaviors could significantly guide employees successfully through change initiatives. The relationship between leader behaviors and follower behaviors informed how I derived meaning from the descriptions provided by participants. Leaders may influence bringing teams successfully through a change in four keyways: modeling change behaviors, providing individualized support, influencing employee engagement, and building readiness for change (Abrell-Vogel & Rowold, 2014; Morin et al., 2016). How these four leadership practices emerged in case study discussions is discussed.



***Modeling Change Behaviors***

Participant 1 discussed the leadership behavior of handling stress well in an environment of constant adaptations to change. If leaders are handling the stress of continual change appropriately, these stress-management behaviors may model how to move forward effectively in situations of complex or continuous change. Participant 3 asserted that leaders must be “exemplary in every way” to avoid holding a lower standard for your performance than you have for your team. Participant 4 described how leaders carry themselves as an important leadership practice consideration in developing strategies to build agile capabilities in the workforce.

***Providing Individualize Support***

Participant 1 raised the idea of leaders providing the right tools for their team as an important leadership practice for building agile capabilities in the workforce. Participant 3 discussed providing resources and providing direction to give proper support to followers. Providing the right tools, resources, and direction are examples of providing individualized support as part of building agile capabilities in the workforce.

***Employee Engagement***

Participant 2 discussed the importance of aligning the workforce to the vision and mission of the organization as part of how leadership practices contribute to the development of agile capabilities in the workforce. Participant 4 posited that driving engagement builds agility. Participant 6 asserted that leaders must provide a clear vision, have open and honest communication, listen actively, and gather meaningful input.

### ***Readiness for Change***

Participant 2 described the importance of leaders building agile mindsets in the workforce to maintain needed levels of responsiveness to achieve needed outcomes in change initiatives, supporting Raeder and Bokova's (2019) assertion regarding building readiness for change. Participant 3 raised the importance of leaders' ability to influence followers. "Basically, leadership is to motivate, to motivate the people that work with you, to bring them up." Participant 5 described securing follower buy-in as essential to successful change outcomes, supporting Raeder and Bokova's (2019) assertion on the role of commitment to change in successful change outcomes and Arif et al.'s (2017) assertion that leader-follower relationships are pertinent to operational outcomes.

Participants' responses demonstrated an awareness of the influential relationship between leaders and followers. These findings confirm leadership practices play an important role in developing strategies to build agile capabilities in the workforce.

### **Unanticipated Findings**

Topics that arose in interviews that were not specific to the interview questions included Diversity, Equity, & Inclusion (DEI), emotional intelligence, flexible staffing strategies, the COVID-19 pandemic and the role of human resource management practices and leadership practices in shaping culture. While these topics were outside the scope of this research, they do warrant discussion. How these topics arose and in what way there were presented in the case studies may shed light on emerging factors of importance in developing strategies to build agile capabilities in the workforce is supply chain.

### *Diversity*

Participant 3 raised the issue of workforce diversity when discussing the role of change management and leadership practices in developing strategies to build agile capabilities in the workforce. “What role does leadership play, like I said, is to be able to collect those, to keep pace with, with, um, diversity,” (Participant 3). Participants 5 and 6 also raised the topic of diversity during their interviews. Participant 2 provided supporting documentation of a model of Leadership Excellence that includes diversity and agility as factors of successful leadership practices.

### *Individual Agile Capabilities*

One unexpected finding of the study was the very minimal discussion of agile capabilities at the individual level. Flöthmann et al. (2017) asserted that building employees’ capabilities is a workforce investment that contributes to improved performance for organizations. Considerations of agile workforce capabilities at the individual level include adaptability, flexibility, resilience (Muduli, 2016). Participants in this multiple case study did not explicitly raise the consideration of agile capabilities at the personal level to build agile capabilities in the workforce.

Participant 4 did raise the importance of agile capabilities at an individual level, specifically when discussing leaders. Participant 4 stated, “I think when it comes to operations, the level of complexity, the number of variables, no two days are alike. And the best way to tackle that is, you know, having people that have the agile mindset and having the agile structure to operate within.” Participant 4 specified what the agile mindset at the individual level for leaders was, asserting “folks need to have the ability to

pivot, to respond, to challenge opportunities on a regular basis.” Muduli and Pandya (2018) described individual capabilities to learn, comfortability with change and new technologies, and capabilities in innovation as part of the personal characteristics necessary for workforce agility. Participant 4’s commentary on having individuals with an agile mindset was a close as any interview responses came to Muduli and Pandya’s description of workforce agility at the level of individual employees.

Participant 3 raised the importance of employees building general skills that position them for success in their roles to advance the organization’s capabilities. This topic of building skills at an individual was raised when discussing the part of human resource practices in developing strategies to build agile capabilities in the workforce. Developing skills at the individual level was discussed in a general manner and not explicitly focused on agile capabilities.

### **Limitations of the Study**

The first limitation in this qualitative multiple case study is the biases I hold as the researcher in this study. I journaled my perspectives and expectations to help mitigate my biases through my experience in supply chain roles. This helped me avoid making interpretations beyond the scope of the actual data.

A second limitation of this study is the impact of data available being dependent upon participants’ ability to recall specific details of their work on developing strategies to build agile capabilities in the workforce during our semi-structured interviews. The scope of this research did not include direct observations, so only the participants’ perceptions were available as data to analyze. Analysis of support documentation and

review of archival data on organizations that participants were affiliated helped ensure cohesion between what participants shared and documentation of challenges organizations faced.

A third limitation of this study is the lack of generalizability or transferability to the general population. The small sample size of six participants may not represent the full experiences or perspectives of all supply chain managers responsible for developing strategies to build agile capabilities in the workforce. Yin (2016) asserted that qualitative research focuses on the particular aspects of a phenomenon, seeking out understanding within specific contexts, rather than seeking out general transferability for study data. In the case of this study, I sought out particular data, the work experiences of supply chain managers responsible for developing strategies to build agile capabilities in the workforce, in a specific context, continuous or complex change environments in supply chain. To secure participants with that specific lived experience, I leverage a purposeful sampling strategy over a probability sampling strategy. The purposeful sampling strategy of recruiting participants for this multiple case study also precludes the general transferability of study findings.

A fourth limitation of this study is the disruptions to two of the case studies conducted. Participant 3's data was gathered through a semi-structured interview that experienced a technology disruption due to the interviewer and participant being on two different continents during the interview. The technology disruption may have disrupted Participant 3's initial train of thought when responding to interview questions. For Case Study 5, Participant 5 was interrupted by their manager halfway through the interview

and then had a time limit put on the rest of the time available to the participant to complete their interview. Participant 5 opted to continue the interview, but the imposition of a time restriction on the remainder of the interview may have impacted how they responded to the rest of the interview questions.

### **Recommendations**

Findings from this study confirmed that aspects of the conceptual model informing this study were identified as important considerations for supply chain managers responsible for developing strategies to build agile capabilities in the workforce. Future research can build on this study by expanding the scope beyond the small participant size of this study. Increasing the number of managers engaged regarding how strategies are developed to build agile capabilities in the workforce will provide more data to substantiate findings, identify discrepancies in results, and uncover emerging concepts that may not have been identified yet in research. This expanded focus could be structured to cross different supply chain sectors, as was done in this study. Future research should expand the scope of the study to include more participants to provide deeper insights and focus on industry-specific areas of the supply chain such as specific retail sectors, agriculture, or information technology. This recommended expansion of research would generate data for analysis to determine the applicability of the conceptual model in particular supply chain functions.

Future research may also be conducted outside of the supply chain in industries experiencing complex or continuous change. The supply chain is not the only industry impacted by globalization and advances in telecommunications, transportation, and

information technology that require agile capabilities for organizational success.

Understanding how managers develop strategies to build agile workforce capabilities in other industries may further solidify best practices that can bring cohesive strategies to organizations striving to develop agile capabilities.

Future research may focus on specific geographic regions. This study gave limited insights into the strategies of supply chain managers working in North America, Central America, Africa, and Asia. Focusing on a larger sample size within specific geographic regions and expanding beyond these geographic regions may better inform the validity of the conceptual framework that informed this research study.

Future research may look closely at how building agile capabilities at the individual level. This study did not uncover insights into how supply chain managers develop strategies to build agile capabilities in the workforce through considerations of influencing agile capabilities at the individual level. Park and Park (2020) asserted that organizations are responsible for supporting employees in developing agile capabilities. Munteanu et al. (2020) contended that organizations need to support the development of agile capabilities in the workforce. As this study did not find specific efforts by supply chain managers to consider capabilities at the individual level as part of developing strategies to build agile capabilities in the workforce, more information is needed. Future research may build on this study by designing research that probes specifically for information on how capabilities associated with agility such as adaptability, flexibility, and resilience are developed at the individual level.

This study examined the role of human resource practices in developing strategies to build agile capabilities in the workforce through the perspective of managers in operational roles. The future inquiry could include senior human resource managers. Expanding the scope of participants to include senior human resources managers may assist in identifying similarities and differences in how the role of human resource practices is perceived in efforts in the organization to build agile capabilities in the workforce. With the integration between human resource practices and operations being identified as important to developing strategies to build agile capabilities in multiple studies, further investigation here may inform how that integration can be achieved.

Another approach that can be taken in future qualitative research is to collect data through direct observation and collect data through semi-structured interviews of supply chain managers. Direct observations of strategy development as it occurs may provide additional data not available through semi-structured interviews in which available data is limited to what a participant may be able to recall. Direct observations would also allow for data to be collected that is not limited by the time constraints experienced in semi-structured interviews.

### **Implications**

This study is vital to supply chain organizations operating in complex or continuous change environments. This study provides information organizations can take under consideration when developing comprehensive strategies to build agile capabilities in the workforce as part of change management strategy. An agile workforce that can work effectively through complex or continuous change may improve outcomes on



change initiatives and overall organizational performance. Identifying change management practices, leadership practices, and human resource management practices as necessary to develop strategies to build agile capabilities in the workforce gives researchers and practitioners areas of focus to explore this conceptual framework further.

Braun et al. (2017) asserted that substantial change in the workplace can contribute to workplace stress that impacts the wellbeing of employees. Advancing how supply chain managers develop comprehensive strategies to build agile capabilities in the workforce may simplify how organizations respond to and manage through complex change. This in turn may help organizations provide work experiences with lower levels of stress for employees.

Another way this research might contribute to positive social change is through the positive benefits in organizational outcomes when elevated agile capabilities result in successful change initiatives and contribute to key performance indicators. The supply chain industry is positioned to continue to face complex, disruptive, and continuous change. Practitioners can leverage the information from this study to examine current practices within their organization and identify areas where improvements or adjustments may be beneficial to make.

### **Conclusions**

Leading through complex change and building agile capabilities in the workforce are at the forefront of supply chain managers' focus on advancing their organization's capabilities. The purpose of this qualitative, exploratory multiple case study was to explore how supply chain managers develop strategies to build agile capabilities in the

workforce. The specific management problem addressed in this research is that supply chain managers do not have coherent strategies to develop agile capabilities in the workforce. The research question asked how supply chain managers develop strategies for building agile capabilities in the workforce.

Building agile capabilities in the workforces was described as a change management strategy by multiple participants. The global COVID-19 pandemic was raised in multiple case studies as an example of how important it is for organizations to have capabilities for managing complex, disruptive change and building agile capabilities. Multiple participants in this study readily identified leadership practices and human resource management practices as critical factors when developing strategies to build agile capabilities in the workforce.

The strong message of leadership practices as a top focus area of study participants aligns with recent research that thousands of leaders indicated that adapting to the challenges of leading complex change is a significant challenge (Braun et al., 2017). Key practices identified by participants as important to developing strategies to build agile capabilities in the workforce include modeling change behaviors, providing individualized support, influencing employee engagement, and building readiness for change. Although there was no unified approach for how leadership practices were incorporated into strategic planning for building agile capabilities in the workforce, leadership practices were seen as integral to achieving agile capability outcomes.

Human resource management practices were also identified as important in considerations for developing strategies to build agile workforce capabilities. Specific

aspects of human resource management practices discussed in multiple case studies include recruitment, talent capabilities development, and training. A topic also raised in numerous case studies when discussing the role of human resource management practices was the importance of alignment between human resources and operations. This study's results might improve how supply chain managers develop cohesive strategies to build agile capabilities in the workforce.

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## Appendix A: Interview Protocol with Interview Questions

### **Overview**

The personal interviews will use semi-structured questions where each participant can provide their own perspectives. The participants will be reminded that the interview will be digitally recorded and asked if they are willing to proceed. Those choosing to not participate will be excused. A study overview will be provided prior to the interview. I will remind the participant of the digital recording before beginning the interview. I will close out the interview with an opportunity to provide closing comments or ask questions. I will then review next steps following the interview with the participant.

### **Welcome Statement**

Hi, I am Bethany. It is very nice to meet you. Do you feel comfortable in this space? I have a consent form for us to go over. Do you still want to participate in this study? If yes, please sign and date.

With signed consent in place, you will receive a privacy code. Your name will not be tied to your interview responses. Your name and numeric privacy code will be known only to you, me, my research committee overseeing my research, and the Walden University Internal Review Board overseeing my research. No one else will have direct knowledge of your participation in this study.

I would like to go over the purpose of this study, the research questions, and then go through the interview questions with you. When we begin the interview questions, I will audio-record our interview, identifying you by your assigned privacy code. Once we

complete the interview questions, you can make any closing comments or ask any questions you have. You may also ask questions throughout the interview and you may end the interview at any time if you no longer wish to continue the interview.

Are you ready to begin?

### **Purpose of the Study**

The purpose of this study is to investigate how supply chain managers develop strategies to build agile capabilities in the workforce.

### **Central Research Question**

How do supply chain managers develop strategies for building agile capabilities in the workforce?

This is the point where I will begin recording our interview. Is there anything you need before we get started? Please note, I will be taking notes during the interview in addition to the digital recording.

### **Interview Questions**

- IQ1 Can you briefly describe your work experience related to change management in the previous 3 years? (*warmup question*)
- IQ2 Can you describe the processes involved in developing strategies for building agile capabilities in your workforce?
- Who is involved in strategy development?
  - What timeframes are typical in the development of agile capabilities strategies?
- IQ3 What resources do you consider as you develop strategies to build agile capabilities in the workforce?
- What resources do you feel have been most effective in developing strategies for building agile capabilities in the workforce?
- IQ4 What challenges have you faced when developing strategies for building agile capabilities in your workforce?
- How frequently have you experienced these challenges?
  - How have you responded to these challenges?

- IQ5 What role do human resource practices play in developing strategies to build agile capabilities in the workforce?
- How frequently are human resources practices considered in strategy development?
- IQ6 What role do leadership practices play in developing strategies to build agile capabilities in the workforce?
- How frequently are leadership practices considered in strategy development?
- IQ7 What role do change management practices in the organization play in developing strategies to build agile capabilities in the workforce?
- How frequently are change management practices considered in strategy development?
- IQ8 How do you measure the success of strategies developed to build agile capabilities in the workforce?
- How are agile capabilities in the workforce measured?
- IQ9 In what ways have you contributed to the development of agile capabilities for organizations where you have worked?
- What benefits have your organization and your workforce experienced through strategies you developed to build agile capabilities?

### **Internal Document Review**

Are there internal documents you are able to share with me that support our conversation today regarding developing strategies to build agile capabilities in the workforce that are non-confidential and non-proprietary documents?

### **Closing comments**

Thank you for your participation in this research study. Are there any additional comments you would like to share or any questions you have at this time?

### **Next Steps Explanation**

I will be completing a written transcript of this interview. I will then email you the transcript to review to ensure what I have documented reflects the meaning you intended.

Please respond within 48 hours for any changes, omissions, or additions you would like made to your transcript. If you do not wish to make any changes, you do not need to reply to the follow up email I send. This completes our time together. Thank you again for your participation in this study. Once all research is complete, I will notify you. You will receive an electronic copy of a summary of this study upon completion.