

University of Arkansas, Fayetteville

ScholarWorks@UARK

Graduate Theses and Dissertations

12-2023

Exploring Success Factors of Women Senior Leaders in the United States Paper Manufacturing Operations Industry: A Phenomenological Study

Ericka Eggleston

University of Arkansas-Fayetteville

Follow this and additional works at: <https://scholarworks.uark.edu/etd>



Part of the [Leadership Commons](#), and the [Leadership Studies Commons](#)

Citation

Eggleston, E. (2023). Exploring Success Factors of Women Senior Leaders in the United States Paper Manufacturing Operations Industry: A Phenomenological Study. *Graduate Theses and Dissertations*. Retrieved from <https://scholarworks.uark.edu/etd/5177>

This Dissertation is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of ScholarWorks@UARK. For more information, please contact scholar@uark.edu.

Exploring Success Factors of Women Senior Leaders in the United States Paper Manufacturing
Operations Industry: A Phenomenological Study

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education in Adult and Lifelong Learning

by

Ericka Eggleston
University of Arkansas
Bachelor of Science in Business Administration, 1993
Belhaven University
Master of Business Administration, 1999
Strayer University
Master of Science in Accounting, 2010

December 2023
University of Arkansas

This dissertation is approved for recommendation to the Graduate Council.

Kit Kacirek, Ed.D.
Dissertation Director

Kevin Roessger, Ph.D.
Committee Member

Mandel G. Samuels, Ed.D.
Committee Member

Abstract

The purpose of this study is to understand how women describe their journey to becoming senior leaders within the operations sector of the Paper Manufacturing Industry. This study will provide insights about how women in the male-dominated Paper Manufacturing Industry (PMI) assumed leadership positions. This pre-registered study will offer the framework for this study to be carried out at the University of Arkansas. The researcher will apply a descriptive phenomenological approach that will use semi-structured questions to understand the strategies they used to navigate their career path. Snowball sampling will be used to select 5-15 participants who provide their perceptions and lived experiences to describe the obstacles to advancement faced in the United States PMI, and how they can be overcome. To examine how senior women leaders in the PMI navigate the socio-cultural landscape of a male-dominated field, the following research question will be examined: What strategies do women in the United States PMI use to advance to senior leadership positions within manufacturing operations?

©2023 Ericka Eggleston

Acknowledgments

First and foremost, I want to thank God for everything, for without my faith, this journey would not have been successful. I am forever grateful for the encouragement of my family and friends and their support during this journey to achieving my life-long dream of obtaining a doctoral degree. I thank my husband James, my support system and quasi-editorial team (Janice, Jennifer, and Darlene), and all my friends and colleagues for believing in me while reading my dissertation over and over. Their sacrifices of time and emotional support helped me to accomplish my goal of completing this program and becoming a first-generation doctoral graduate. I would like to thank my chair, Dr. Kit Kacirek, as well as my dissertation committee members, Dr. Kevin Roessger, and Dr. Mandel G. Samuels for what you have done to ensure my successful completion of the Doctor of Education degree program. Thank you for believing in me and for believing in the importance of this research.

Last, but most importantly, I dedicate this completed project in loving memory of my mom, Irma Pulphus Morehouse, my biggest and most consistent cheerleader and supporter. I am forever grateful for all the sacrifices she endured to ensure I had a quality education. Until we meet again.

Table of Contents

CHAPTER ONE	1
Introduction.....	1
Background.....	1
Paper Manufacturing Environment	1
PMI Organizational Structure.....	2
Women in PMI Senior Leadership	3
Cultural Norms of Male-Dominated Industries	4
Problem Statement.....	6
Purpose of the Study	6
Overview of Research Design	7
Overview of Theoretical Framework.....	8
Rationale and Significance	8
Researcher Perspectives & Assumptions.....	9
Definitions.....	10
Chapter Summary	11
CHAPTER TWO	13
Literature Review.....	13
Background Literature Overview.....	13
<i>Evolution of Women in the Workforce</i>	14
<i>Impact of Federal Laws</i>	15
<i>Wage Disparity and Leadership</i>	15
<i>Traditional and Emerging Views on Gender Disparity in the Workforce</i>	16
Barriers to Women Leadership.....	17
<i>Glass Ceiling</i>	17
<i>Glass Cliff Theory</i>	17
The glass cliff theory of w	17
<i>Sticky Floor Theory</i>	18
<i>Double-Bind Theory</i>	18
<i>Cascading Gender Bias</i>	19
<i>Gender Preferences in Occupational Choice</i>	20
<i>Manufacturing in the U.S.</i>	24

<i>Women in Leadership in Male-Dominated Industries/Non-traditional Roles</i>	25
<i>Strategies Women Used to become Leaders in Other Industries</i>	26
<i>Mentoring</i>	29
Barriers and Obstacles.....	30
<i>Formal Recruitment and Employment Practices</i>	30
<i>Work-Family Balance Issues</i>	31
The Business Case for Women in Senior Leadership Positions	32
Theoretical Framework.....	34
Social Cognitive Theory (SCT).....	35
Chapter Summary	37
CHAPTER THREE	38
Introduction and Overview	38
Research Questions	38
Research Design and Rationale	38
Proposed Research Design.....	38
Qualitative Method.....	39
Population and Proposed Research Sample	39
Overview of Information Needed	40
Data Collection.....	40
Pilot/Field Study.....	42
Data Analysis Plan	42
Ethical Considerations	43
Data Management and Confidentiality	43
Trustworthiness.....	44
Credibility.....	45
Transferability	45
Dependability and Confirmability.....	45
Limitations and Delimitations.....	47
Chapter Summary	48
References.....	49
Appendix A.....	64
Appendix B	65

Appendix C67

Appendix D68

CHAPTER ONE

Introduction

This study will examine the experiences of women in the senior leadership ranks of the operating sector of the paper manufacturing industry (PMI). A qualitative case study will be used to explore the lived experiences of women who have succeeded in becoming leaders in PMI operations. Participants will be selected from senior-level women of five to ten paper manufacturing companies within the United States (U.S.). This chapter provides a background on the paper manufacturing industry and factors that might contribute to its underrepresentation of women in senior leadership roles. Chapter 1 also discusses the research problem, the purpose of the study and the research questions. The chapter discusses the rationale and significance of the study, its scope, its limitations, key terminology, and a summary.

Background

Paper Manufacturing Environment

Pulp and paper manufacturing is grouped together because they constitute a series of vertically connected processes. There are essentially three primary activities to convert pulp to paper. First, the manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. Then, the manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and include coating and laminating activities. Finally, industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products.

According to the 2022 BLS report, working with industrial machinery can be dangerous. The report (BLS, 2022) explains that workers in these occupations must follow mandated safety precautions and use protective equipment, be on call, work night or weekend shifts, and be

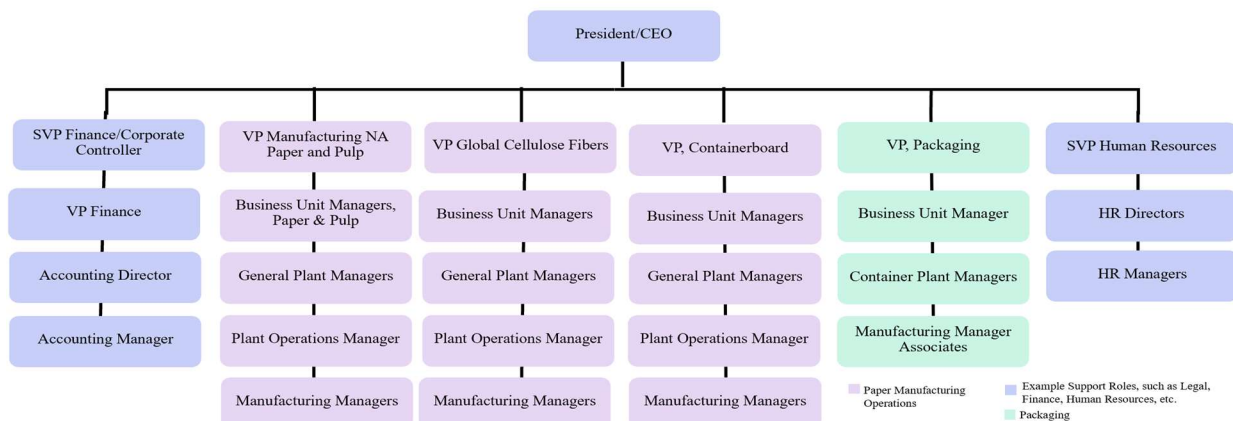
available for overtime. Additionally, the top companies in the manufacturing industry such as International Paper expect engineering job candidates to have a “desire to work in a heavy manufacturing setting, safety leadership focus, and willingness to move, live and work in mostly rural southeastern/southern U.S., and willingness to move to various locations throughout career” (International Paper, n.d.).

PMI Organizational Structure

Like most organizations, the PMI has the typical departments of Human Resources, Sales, Legal, Finance and Accounting along with the core operating function. These departments are considered women-friendly whereby women tend to be promoted to senior-level positions at the same pace as men. The PMI’s core business starts with paper mill locations. In the PMI, the general manager is the highest-ranking position for each mill location. The general manager positions are key leadership pipeline positions. The promotion trajectory for the general plant manager is typically to a corporate senior-level position of vice president or above. Individuals are promoted to general manager from the ranks of incumbent industrial machinery, maintenance employees, or engineers hired externally to supervise these individuals, see Figure 1 below.

Figure 1

Sample Organizational Chart



Note: Example of a standard paper manufacturing organization chart (sample).

Women in PMI Senior Leadership

According to the Current Population Survey (CPS), a monthly sample survey of 60,000 eligible households, women are underrepresented in the paper manufacturing workplace. As of 2020, women accounted for approximately 46,000 of 147 million (0.0313%) workers in the PMI (BLS, 2020). Historically, senior PMI leaders have been promoted from occupations in fields such as engineering, forest conservation, and logging. Table 1 below illustrates the paucity of women in these fields. Despite the low participation rate of women in the industry, women have been able to integrate into this male-dominated industry and prove themselves as capable of doing the same jobs as men (Lekchiri & Kamm, 2020).

A study by Flabbi et al. (2019) found that companies with a substantial presence of women would likely benefit from having more women in leadership positions; however, new data suggests that gender preferences could play a key role in determining occupational choice (Corrêa Varella et al., 2016; Su & Rounds, 2015; Su et al. 2009; Lippa et al., 2014).

Table 1

Labor Force Statistics from the Current Population Survey by Occupation

HOUSEHOLD DATA ANNUAL AVERAGES 18. Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity [Numbers in thousands]						
Industry	2020					
	Percent of total employed					
	Total employed	Women	White	Black or African American	Asian	Hispanic or Latino
Total, 16 years and over	147,795	46.8	78.0	12.1	6.4	17.6
Paper manufacturing and printing	801	28.1	83.4	10.8	2.7	16.3
Pulp, paper, and paperboard mills	193	17.5	84.9	12.9	0.0	14.2
Paperboard container manufacturing	91	23.4	81.7	11.9	3.5	16.4
Miscellaneous paper and pulp products	98	36.1	76.7	16.9	1.2	11.1
Printing and related support activities	419	32.1	84.6	8.1	4.1	18.4

Note: Population survey of labor information by occupation from Bureau of Labor Statistics

Because the researcher was unable to identify the number of women in senior leadership within the PMI, I conducted a website search of the top five manufacturing companies in the United

States to review the gender demographic data for their leadership teams. Not only are there only 24 women executives out of the 77 total, additionally only six served in a senior level capacity of manufacturing operations, the target population of my study (see Table 2 below), while most women served in legal, human resources, or sales departments.

Table 2

Gender Demographic Data for the Top Five Paper Manufacturing Companies in North America

Company*	# Of Employees	# Of Women at SVP/Chief	# Operations**
International Paper	61,500	1 of 8	0
Westrock	50,000	5 of 15	0
Georgia Pacific	30,000	3 of 12	0
Resolute Forest	7100	2 of 9	0
Proctor & Gamble	100,000	13 of 33	6

Note: Gender demographic data of top five manufacturing companies in North America from Source: internationalpaper.com, westrock.com, gp.com, resolutefp.com, and us.pg.com.

***In a male-dominated role, i.e., not women-friendly Sales, Legal, Human Resources, etc.*

Cultural Norms of Male-Dominated Industries

A study by Haggerty (2013) identified that in the automotive manufacturing industry, the number of women in these careers has decreased, dropping from 32 percent of the industry's employees in the 1990s to 27 percent at the time of the study. Additionally, women began to enter what many historians refer to as "male public space" in the twentieth century when they began to become gainfully employed in the automotive manufacturing industry (Autolife, 2004). By the end of the twentieth century, the cultural values, beliefs, and attitudes toward women in the workplace became more of a central focus of the industry (Autolife, 2004). Chin and Trimble (2014) also found that corporate leadership faced challenges associated with the advent of the internet, computer technologies, diversity in the workforce, outsourcing, and expansions into global markets.

A common theme in the literature about women in the workplace points to male-dominated industries as being hostile and resistant to women in the workplace compared to other industries such as academia, service, or nursing (Ward, 2008). This hostile environment leads to women being underrepresented in managerial and leadership positions (Gedro, 2010). Dainty et al. (2000) stated that women find it very difficult to obtain leadership positions in their organization for two primary reasons. The first is men's intentional social isolation, e.g., in the study, they found that senior male managers supported by middle managers controlled the workplace cultures whereby women had been excluded from social circles that men acknowledged were essential in their career development (Dainty et al., 2000). The second reason is their downplaying of women's contributions to maintaining their own positions in the construction industry. This challenged women in the construction industry with obstacles of moving up the hierarchical ladder (Dainty et al., 2000).

There is additional research that offers a counterpoint to the notion that women are underrepresented in male-dominated fields due to historical male cultures. This research suggests that gender preferences can contribute to men and women being underrepresented in certain occupations, a phenomenon called "occupational gender segregation" (Alonso-Villar, Del Rio, & Gradin, 2012; Mintz & Krymkowski, 2011). The causes of this segregation are complex and multifaceted. Factors studied by social scientists include: the influence of gender socialization, gender roles, and gender stereotypes; social policies that make it difficult for women to easily combine work and family roles; differences in the educational backgrounds and human capital of men and women; sex differences in interests, values, motivation, and abilities; and sex-linked genetic and hormonal influences (Bystydzienski, 2009; Ceci & Williams, 2007; Kaufman, 2010). In recent years, researchers have focused particular attention

on sex segregation in STEM (science, technology, engineering, and math) fields, which offer strong employment opportunities, good pay, and high status, but which simultaneously suffer from strong gender imbalances favoring men (Ceci & Williams, 2007; Ceci & Williams, 2010; Ferriman et al., 2009). While women continue to be underrepresented in many male-dominated fields, the purpose of this study is not to identify the factors that contribute to underrepresentation. The purpose of this study is to identify how women in a male-dominated field of PMI operations navigated their way to senior leadership positions.

Problem Statement

Women represent a vast talent pool, perhaps the manufacturing industry's largest pool of untapped talent. While women represent nearly half (47 percent) of the total labor force in the United States, they comprise less than a nearly a third (27 percent) of the manufacturing workforce (U.S. Bureau of Labor Statistics, 2020). Consistent with the 2010 and 2013 Global Manufacturing Competitiveness Index studies, manufacturers rank talent as the most critical driver of global manufacturing competitiveness (Deloitte, 2016). Many studies have explored the challenges of women in the manufacturing sector in general. However, there is scant research about women who achieve leadership roles in paper manufacturing. Understanding the lived experiences of the women who succeeded can inform the literature about how women leaders navigated the path to senior leadership despite having few examples of their own gender.

Purpose of the Study

The purpose of this study is to understand how women describe their journey to senior leadership within the male dominated paper manufacturing environment. This study will examine the insights and strategies that senior PMI leaders describe as facilitating their rise within the industry.

Research Questions

To examine how senior women leaders in PMI operations navigate the landscape of a male-dominated field, the following research questions are presented:

RQ1. What are the lived experiences of women in United States PMI operations regarding their advancement to senior leadership positions?

SQ1. What metaphors/language do women use to describe their journey to promotion?

SQ2. What are the perceived attributes of successful women in the journey to promotion?

SQ3. How are women prepared for senior leadership roles?

SQ4. What sustains women on their journey to promotion?

Overview of Research Design

This qualitative study will use a phenomenological approach to examine the experiences and perceptions of twelve senior-level women in PMI operations. Phenomenologists assume that there is some commonality in human experience and seek to understand this commonality (Bloomberg & Volpe, 2019). This approach is an analysis that “proceeds from a central assumption that there is an ‘essence’ to an experience that is shared with others who have had a similar experience” (Bloomberg & Volpe, 2019, p. 54). Through individual interviews, it is expected that participants will describe their experiences and the meaning of those experiences. Through this dialogue, the researcher will identify how the participants interpret elements of their professional journey. The researcher plans to study the lived experiences of women who have succeeded in becoming leaders in the PMI; women with titles such as Vice President, Vice President of Manufacturing, Business Unit Manager-Manufacturing, etc., will be included in this study. From their own words and stories, the researcher will develop clusters/themes (i.e., essence) representing commonalities of their experiences.

Overview of Theoretical Framework

For this study, change will involve implementing interventions that best support women as they aspire to attain PMI leadership positions. This study will utilize Social Cognitive Theory (SCT) as the theoretical framework to explore the success factors of women senior leaders in the PMI with hopes to also identify any actions and behaviors that supported them. This framework focuses on interactions among behavior, personal factors, and the external environment as modulated by self-regulation (Bandura, 1977). The theory's inter-directional and dynamic nature can provide a model for assessing internal beliefs through interactions among the external environment, personal factors, and behavior. SCT will provide a model for determining how PMI and the manufacturing environment impact women's promotion to senior leadership, including the decision to continue in the PMI. Additionally, the theory will provide a context that will be applied to examine if gender bias in the PMI impacts women's behavior and role in the PMI environment. The methodology the researcher will use for this study will be qualitative and designed to understand senior level women's experiences and obtain their unique perspectives (Merriam & Tisdell, 2016). This qualitative design will utilize interviews to answer the research questions. The research conducted for this project will be a comprehensive qualitative case study that leverages triangulation to increase internal validity.

Rationale and Significance

A woman who aspires to be a senior leader in PMI operations or other male-dominated fields such as construction and engineering could benefit from understanding the lived experiences of the women participants in this research. Also, identifying possible methods and practices that human resources professionals implement may provide a potential avenue for success and persistence for women in PMI and other male-dominated industries. Doing so helps

improve their job satisfaction, engagement, and retention (Buchanan et al., 2014). Women in PMI operations, particularly in leadership, continue to be understudied in the organizational literature, and their experiences in the workplace are predominantly negative. The research will seek to offer organizational leaders an understanding of how women have succeeded and aid in developing strategies that will aid other women's success.

The researcher hopes to uncover new knowledge so organizational leaders can create new strategies for finding and eliminating barriers, attracting and retaining women, and developing mentorship and leadership programs that will enable women to obtain promotional opportunities that match their skills, educational attainment, and contributions (Taylor & Nivens, 2012). The world is vastly diverse, and all aspects of business should reflect this reality (Chin & Trimble, 2014). Taylor and Nivens (2012) concluded that when women have a clear and concise understanding of the organization's promotional process, they progress more effectively. Organizations improve women's career advancement rates when they provide access to resources and provide the necessary support for their most talented personnel (Taylor & Nivens, 2012). The researcher believes this study is significant because it can provide insight for incoming emerging women leaders, and data for organizational leaders in PMI, by highlighting the strategies used to support their success and providing context for structural changes that could be implemented industry wide.

Researcher Perspectives & Assumptions

As a training and development professional in the paper industry, the researcher spent many hours listening to the career concerns of women employees. They expressed concern with the lack of other women in senior leadership positions and spoke of many obstacles that conflicted with women's career goals. Although many women did not advance to senior

leadership positions, some did. The researcher wants to know more about the determining success factors and motivation of the women who were successfully promoted within the PMI operations and what their journey was like?

One assumption is that the sample size will be representative of the population of which the inferences are made. Assumption two is that all participants who volunteer to be part of the study will keep their commitment to complete the proposed study. Assuming that all participants will be honest during the interviews was identified as assumption three. The fourth and final assumption is that participants who have dealt with several challenges achieving their senior leadership positions may be biased concerning the overall outcome of the research.

Definitions

The paper manufacturing and corporate business sectors often use terminology that is unfamiliar to outside stakeholders. The following definitions are provided for readers to gain an understanding of key concepts and terms discussed in this dissertation.

Barriers/Obstacles (used interchangeably in this study): Refers to something that prevents upward movement in responsibility (Chin, 2011; Servon & Visser, 2011).

Gender Wage Gap: A measure of what women are paid relative to men. (Gould et al., 2016). It is commonly calculated by dividing women's wages by men's wages, and the ratio is often expressed as a percent, or in dollar terms, which tells how much a woman is paid for each dollar paid to a man (Gould et al., 2016).

Glass Ceiling Phenomenon: Refers to a set of impediments and/or barriers to career advancement for women and people of color. (Baxter & Wright, 2000; Morrison et al. 1987; Morrison & Von Glinow, 1990).

Glass Cliff Theory: A theory that refers to leadership appointments for women in which they are assigned to problematic organizational circumstances and hence are more precarious situations (Ryan & Haslam, 2005).

Paper Manufacturing: A highly complex process that involves integrating many different specialties, including wood preparation, pulping, chemical recovery, bleaching, and papermaking to convert wood into a final product.

Senior-Level/Executive Leadership: High-level executives, generally Vice President or above responsible for the day-to-day supervision, administration, and planning of a corporation to meet the organization's goals (BLS, 2020).

Success Factors/Strategies: Considers all the different internal and external influences that can impact an employee's potential success.

Women/Female-Friendly/Male-Dominated: Fields of interest or industries amenable to or suitable for women or girls; designed with the needs or interests of women in mind, as opposed to the opposite in what is traditionally termed male-dominated. A nontraditional occupation, also known as a male-dominated industry, one in which women comprise 25% or less of total employment (BLS 2009).

Chapter Summary

Many studies exist on the disproportionate representation of women in senior-level positions within various industries throughout the United States; however, there is limited research on how senior women leaders describe their journey to success within PMI operations. While much is written about the barriers to women in male dominated fields, this study examines the experiences of women who were promoted into senior leadership positions. Chapter two follows with a background overview and analysis of the literature search sources, a detailed

review of the literature associated with this research by outline, and a thorough description of the theoretical framework from the research.

CHAPTER TWO

Literature Review

This phenomenological study aims to understand how women describe their journey to becoming senior leaders within the paper manufacturing industry (PMI). Specifically, the researcher will attempt to ascertain how these women navigate the socio-cultural landscape of a male-dominated field. The research questions for this phenomenological study are as follows:

RQ1: What are the lived experiences of women working in the United States PMI operations regarding their advancement to senior leadership positions?

SQ1: What metaphors/language do women use to describe their journey to promotion?

SQ2: What are the perceived attributes of successful women in the journey to promotion?

SQ3: How are women prepared for senior leadership roles?

SQ4: What sustains women on their journey to promotion?

Background Literature Overview

The researcher searched research databases, including ProQuest Dissertations and Theses Global, National Bureau of Economic Research, the SAGE Encyclopedia, the U.S. Department of Labor and Statistics, U.S. Census, and Catalyst. The researcher then followed a systematic approach to find articles and references using these keywords: women/female executives, women/female executives in manufacturing, women/female leaders, feminist theories, gender differences in manufacturing, women in non-traditional occupations, male-dominated industries, women leaders, glass ceiling, glass ceiling theory, glass cliff. Finally, the researcher narrowed the search to women executives/senior leaders in paper manufacturing, which had minimal

information. Because of the limited information on women in senior leadership in the paper manufacturing industry, the researcher used comparisons from other male-dominated industries such as automotive, construction, firefighters, and other skilled trades as the primary basis for my literature review. In addition, the reference lists of each source were used to identify additional resources.

The research materials consisted of several different types of investigation resources. There are 127 documents used in this research, 93 peer-reviewed journal articles from University of Arkansas library, 8 peer-reviewed articles from chrome scholar, 18 peer reviewed scholarly books and 8 government websites. One hundred percent of the documents used in this study were peer-reviewed which adds credibility to the research according to Yin (2014). The breakdown for the various search materials is shown in Table 3.

Table 3

Literature Review Sources

<u>Sources</u>	<u>Number</u>
Books	18
Government Websites	8
Websites	8
Online Reference Sites (peer-reviewed journal articles)	93

Note: Breakdown of various search materials used

Evolution of Women in the Workforce

Women remain the “largest pool of untapped” resources as executives, board members, and CEOs in the manufacturing industry (Deloitte, 2013, p. 4). Women were expected to work until they married, have children, stay home, raise the children, and possibly reenter the labor force once their children were grown, at least until the 1960s (Guy & Fenley, 2013). Overall

participation rates in the workforce for women in the United States in the 1960s was approximately 38 percent compared to the participation rate for women today of 58 percent (Reese & Warner, 2012; U.S. Department of Labor, 2012). According to Guy & Fenley (2013), women's participation into the U.S. workforce increased as legislation leveled the playing field. They suggested that for women, as roles changed, two income earners were necessary due to the cost of living; subsequently inferring that women could seek employment and obtain education (Guy & Fenley, 2013).

Impact of Federal Laws

The Civil Rights Act of 1964 is best known as legislation designed to correct social injustice (Guy & Fenley, 2013). Congress enacted the Equal Pay Act in 1962. It was an amendment to the 1938 Fair Labor Standards Act that was passed to require women and men working the same job to be paid equally. Title VII of the Civil Rights Act of 1964 focused on the provisions for equal employment opportunities and added sex as one of the protected classes against discrimination (Guy & Fenley, 2013). Title VII of the Civil Rights Act established the Equal Opportunity Commission (EEOC), which was designed to enforce federal legislation that provided protection against discrimination based on age, disability, ethnicity, religion, race, sex, pregnancy, national origin, genetic information and prior complaints of discrimination (Guy & Fenley, 2013).

Wage Disparity and Leadership

The number of women in leadership roles has increased, but men still hold the most leadership roles, both in the public and private sectors (Wirthman, 2014). Watson (2015) stated that there is unequal wage gap between men and women. Per the American Association of University Women (AAUW), an organization that focuses on advancing equity for women and

girls through advocacy, education, philanthropy, and research, in 2015, women in the United States typically were paid just 80 percent of what men were paid, a pay gap of 20 percent (2015).

Research repeatedly highlights the earnings gap between men and women across the public and private sectors. Mohamed Alkadry and Leslie Tower (2011) conducted a study to address an overlooked manifestation of pay discrimination against women in the labor market. Using a survey of 384 public sector officers, they analyzed the indirect effects of gender on women's pay through the intervening variable of authority. The study by Alkadry and Tower (2011) revealed that the amount of authority given to a person in an organization is often based on the sex of the person; in some cases, that authority may be used to covertly practice pay discrimination between men and women. Despite the progress made by women, they remain underrepresented as senior-level leaders in similar industries like the automotive industry and are more likely than their male counterparts to receive appointments to lower-paying job opportunities (BLS, 2015). In addition, women face gender issues when being considered for a promotion; for example, married white men are viewed more favorably for promotions than married white women (Alkadry & Tower, 2011).

Traditional and Emerging Views on Gender Disparity in the Workforce

Although the number of advancing women continues to grow, much research has investigated barriers women face in the workforce. While much of this research reinforces the notion that many organizations have systematic levers to prevent women from reaching executive positions, emerging research suggests that underrepresentation of men and women in certain fields is associated with occupational gender preferences that affect career choice. The section below describes the research associated with occupational gender barriers and occupational gender preferences.

Barriers to Women Leadership

Glass Ceiling

The “glass ceiling” is defined as the barriers that women face in their attempt to advance to senior levels of leadership in organizations (Sabharwal, 2015). The Labor Department's Office of Federal Contract Compliance Programs (OFCCP, 1990) defines the corporate "glass ceiling" as the barriers that prevent women and minorities from opportunities for career advancement to higher levels of leadership in corporations. As we have seen from the numbers from the BLS, there are more men than women within the PMI Industry, which would qualify it to be considered a male-dominated industry. According to research, the glass ceiling theory further posits that organizational culture postulated by "male-dominated" values, attitudes, and behaviors, as well as autocratic leadership characterized by hierarchical authority and top-down leadership, and therefore has created barriers or the "glass ceiling" for women's progress (Hofstede, 1980; Loden, 1985; & Marshall, 1993).

Glass Cliff Theory

The glass cliff theory of women in leadership is pertinent to this investigation because it takes into consideration the effects of the “glass ceiling” metaphor that has been the dominant paradigm that explains some of the trials that women deal with concerning advancement to executive or senior leadership positions in United States Corporations (Sabharwal, 2015; Kolade & Kehinde, 2013). The glass cliff theory posits that women in leadership continue to face barriers or obstacles while climbing the corporate ladder (Sabharwal, 2015). The glass cliff theory suggests that as women are appointed to executive or CEO positions, it is often to failing organizations or are organizations that are financially struggling (Sabharwal, 2015). Dawson

1994) states that women are powerless in some organizational structures, and they are unable to overcome the discrimination they face in attaining upward mobility in corporations.

Sticky Floor Theory

In a previous section, the glass ceiling was referred to as a greater earnings gap at the top end of the earnings distribution suggesting that women who work in upper-income brackets have lower pay than their male counterparts. By contrast, a “sticky floor” refers to the scenario where women at the bottom are at a greater disadvantage and gaps are wider at the bottom (Booth et al, 2003; Arulampalam et al., 2007). In another study observing if full-time-women were more likely than men to be promoted comparing the rate of promotion, pay, and gender, Booth et al. (2001) described the term sticky floor as situations where women are promoted as often as men, but receive lower wage gains consequent upon promotion. Booth et. al (2001) identified that in firms with formal wage scales, women remain stuck to the lower wage points on the wage scale of their new, higher job grade. Berry and Franks (2010) describe the sticky floor theory as the efforts organizations make to ensure that women are at the lowest end of the economic chain (Berry & Franks, 2010). The Office of the Federal Register Federal Glass Ceiling Commission (1995) reported that 95 percent of the senior-level leadership positions of the top Fortune 500 and Fortune 1000 industrial companies were occupied by men, of which 97 percent were white men.

Double-Bind Theory

Women, at times, face a double-bind in the workplace. The double-bind theory occurs when an individual or group (in this case, women in the workplace) receives two or more conflicting messages, with one negating the other (Bateson et al, 1956). Cuddy et al. (2011) defines a double-bind as an emotionally distressing response resulting from two conflicting

messages. Brooks (2000) elaborates that the double-bind can have a punitive impact on traditional feminine and masculine behavior based on gender norms. The double-bind is often rooted in gender stereotypes that men exhibit traits of competence not weakness and women should be warm, not dominant (Cuddy et al., 2011). The dilemma is that when women display traditional masculine behavior (e.g., taking charge), they can be seen as competent; however, not liked. On the flip side, when they display traditional female behavior (e.g., taking care of), they can be viewed as less competent.

The double-bind is magnified when looking at preferred leadership traits. Organizations tend to define management characteristics in terms of masculine practices, particularly in male-dominated industries, and create a masculine social frame of reference (Gregory-Mina, 2012). Although masculine traits are preferred in leadership, when women exhibit more assertive or masculine tendencies, they are often criticized for their leadership style (Eagly & Karau, 2002). In contrast, men do not receive criticism for being assertive. Ragins (1998) conducted a study of 1,000 women executives in Fortune 1000 companies and found that women who were able to achieve career advancement predominantly attributing their success to exceeding performance expectations; however, many women in the study, described the difficulty in achieving exceptional performance marks due to the double bind where masculine traits were preferred, but also criticized if women behaved in a more masculine manner.

Cascading Gender Bias

Cascading gender bias is defined by Warren (2009) as investigating potential vulnerabilities to gender bias in talent management and the resulting effects on gender gaps in senior leadership. This is done by 1) Examining the talent management process as a whole and determining how the parts interact, 2) Identifying and assessing the presence of bias in the talent

management systems, and 3) Exploring the opportunities for gaps to arise between the design of a talent management process and its execution. Warren (2009) found that core components of talent management are linked in ways that disadvantage women, creating a cycle in which men continually dominate executive positions.

Gender Preferences in Occupational Choice

There is research implying that gender preferences can contribute to men and women being underrepresented in certain occupations. The fact that the proportion of men and women workers varies among occupation types, has been labeled a phenomenon called “occupational gender segregation” (Alonso-Villar, Del Rio, & Gradin, 2012; Mintz & Krymkowski, 2011). For example, data from the U.S. Bureau of Labor Statistics (2012) showed that approximately 9 percent of workers in construction were women, but that approximately 78 percent of workers in health services were women. This disparity, in which women are overrepresented in teaching and service jobs while men are overrepresented in technical and laborer jobs, has existed for more than 60 years (e.g., Lippa et al., 2014). Many studies have been done on this disparity, and while it is not the focus of this study, it is important to address some of the research in this area.

Some researchers believe the gender preference concept seems to begin well before selection of an occupation. Su & Rounds (2015) suggest that the underrepresentation begins as men and women select their discipline of study in college and may be because women in the disciplines of science, technology, engineering, and mathematics (STEM), and men in the disciplines of social sciences and medical services could be categorized into two bipolar dimensions: things-people and data ideas. Su & Rounds (2015) investigated the gender differences in interests as an explanation for the differential distribution of women across sub-disciplines of STEM, as well as the overall underrepresentation of women in STEM fields. For

example, relatively few women study mechanics, electronics, or engineering compared to mathematics, or the natural and physical sciences (Su & Rounds, 2015).

Many have heard the adage ‘men like things, women like people’. Several studies analyze the ‘adage’ from the perspective of work. Existing studies have even suggested that the differential interests of men and women are one of the most important psychological mechanisms that underlie career choices and gender disparities. For example, according to Su et al., (2009), the things–people dimension refers to preference for non-personal tasks--things (e.g., working with machines and gadgets) and/or preference for interpersonal tasks--people (e.g., working with and helping people, often in teams). Further, their research suggests that the data–ideas dimension refers to preference for impersonal tasks--data (e.g., working with facts and systematic procedures) and/or preference for intrapersonal tasks--ideas (e.g., working with abstract ideas and expression). Su & Rounds (2015) found that the patterns of gender differences in interests and the actual gender composition in STEM fields were explained by the people-orientation and things-orientation of work environments and were not associated with the level of quantitative ability required. Their findings suggest potential interventions targeting interests in STEM education to facilitate individuals’ ability and career development, along with strategies to reform work environments to better attract and retain women in STEM occupations (Su & Rounds, 2015).

Groen et al (2018) provide additional research that the Empathizing-Systemizing (E-S) theory may, however, provide an alternative explanation of the reason why women opt for people-oriented careers and men generally opt for things-oriented careers. This theory coined by Baron-Cohen (2009) during his research on autism and Asperger syndrome, states that women have, on average, a stronger empathizing cognitive style, i.e., the capacity to analyze

people/feelings. Conversely, men on average have a stronger systemizing cognitive style, i.e., the capacity to analyze things/systems. Baron-Cohen further explained this theory using two cognitive styles called the empathy quotient and sympathy quotient. Individuals with higher standardized scores on the EQ than the SQ are categorized as having an empathizing or ‘female brain’ (type E), whereas individuals with higher standardized scores on the SQ than the EQ are categorized as having a systemizing or ‘male brain’ (type S). Individuals having equal standardized scores of the EQ and SQ are categorized as having a ‘balanced brain’ (type B). Their study only partially confirmed the E-S theory, because it suggests that typical sex differences were only minor in this sample and only the self-report measures predicted academic areas in the absence of a role for sex” (Groen et al, 2018).

While it concluded that self-reported E–S cognitive style better predicts entry into physical or social sciences than sex, the skewed distribution of brain types across males (more males with systemizing brain type) and females (more women with empathizing brain type) in the general population may explain the internationally observed typical and persistent underrepresentation of females in the STEM fields and underrepresentation of males in the social sciences and health services (Groen et al. 2018). Interestingly, students of physical and social sciences did not differ substantially on performance measures of empathy and systemizing. These data support the conclusion that social and physical science students, whether male or female, strongly differ in their self-reported cognitive style, but they do not substantially differ on performance measures of empathy and systemizing.

Another study by Corrêa Varella et al. (2016) examined the relationship between cognitive style and career choice in Brazil. They concluded that women's and men's interests and participation in university studies is growing, and there are still clear differences between men

and women in their interests. They further concluded that regardless of sex, cognitive style was one of the factors related to career choice in that women have more widespread cognitive styles and academic interests, ranging from humanities to biosciences, while men focus more on exact sciences. Most importantly, it seems that it is not only the sex of the individuals, but also intrasexual variance (within or occurring within the same sex) in cognitive tendencies that influences the choices of studies, and consequently careers, as demonstrated in previous studies.

Wright, Eaton, & Skagerberg (2015) conducted another study where they examined the extent to which occupational segregation can be attributed to gender differences in empathizing and systematizing: Psychological dimensions which theorists argue represent meaningful differences between men and women. They also found that occupation types had higher scores on the individual difference variable of systemizing and tended also to be the ones that employed more men than women. Scores on the SQ partially mediated the gender differences in the male-dominated areas of construction, management, and professional/scientific/tech services, and in the female-dominated area of Education. Empathizing also accounted for some of the gender segregation in the female-dominated occupation of Education and in the male-dominated occupations of management. Their findings also suggest that part of the reason why men and women are in various occupations is their tendency toward systemizing and/or empathizing.

More specifically, it suggests that part of the reason professional/scientific/tech services are male-dominated is because of men's higher SQ scores. Additionally, construction and management are male-dominated because of men's higher SQ and lower EQ scores, and education is female-dominated because of women's higher EQ and lower SQ scores. While some of the partial mediation effects were significant, they did not account for all the variation.

Systemizing was more frequently a mediator of gender segregation than empathizing, consistent with previous research, finding stronger relationships between SQ scores and individuals' interests and domains of study than between EQ scores and these same variables (e.g., Nettle, 2007; Zeyer et al., 2013). Their study also found that a "higher proportion of male-dominated fields were related to SQ and/or EQ scores (i.e., 3/5 or 60% of the male-dominated occupations versus 1/3 or 33% occupations dominated by women" (Wright, Eaton, & Skagerberg, 2014, p. 37). This finding is consistent with research by Valla et al. (2010) showing that men may be more likely than women to enter fields based on their EQ and SQ scores (being specifically directed into certain occupations based on low EQ scores). It is also consistent with work finding that women may have more occupational choice than men (Wang, Eccles, & Kenny, 2013), and with the fact that "things-oriented" jobs continue to be more segregated by gender than other jobs or job dimensions (Lippa et al., 2014). It is beyond the scope of my study to provide a detailed review of all the alternative factors contributing to the gender disparities in the PMI; however, the researcher felt it was important to address and briefly discuss alternative factors contributing to the disparity.

Manufacturing in the U.S.

Women's presence in manufacturing, (a male-dominated industry like the PMI) worldwide is known to be low. Limited research is found on the PMI specifically, therefore similar industries will be discussed in this section to provide an overview of the manufacturing industry for context. The United States Automotive Manufacturing Industry (AMI) began as a male-dominated industry with the invention of the first automobile that was built by Karl Benz in 1885 (Reynolds, 2009). Women began working in the AMI in 1929 in the engineering, sales, and design fields (Autolife, 2004). Women did not begin to work in the AMI on the assembly line

until the 1980s, at which time only a few women were managers (Autolife, 2004). One of the most important appointments of a woman in leadership in the AMI was the nomination of Mary Barra, as Chief Executive Officer of General Motors Corporation (General Motors, 2015).

General Motors is the only automotive manufacturing company to name a woman to the CEO position in the United States and the world (Bernard, 2015). Women have made substantial inroads into senior management positions, now holding more than one-third of all management positions in private industry (BLS, 2005); however, women are still underrepresented within the most senior ranks (Bass & Avolio, 1994). This is a paucity of literature on successful women in the U.S. PMI; however, the next sections discuss what is found in the literature regarding women in other male-dominated industries and strategies for success in other industries.

Women in Leadership in Male-Dominated Industries/Non-traditional Roles

Male-dominated industries seldom offer friendly or tolerant environments compared with other industries such as academia, service, or nursing (Ward, 2008), which may lead to women being underrepresented in managerial and leadership positions, combined with gender stereotypes and chauvinism (Gedro, 2010). It has also been documented that women in male-dominated industries encounter many hurdles impeding their career aspirations and success coupled with minimal opportunities for senior managerial and leadership positions (Smith and Gayles, 2018) and a slow career progression (Ward, 2008).

Dainty et al. (2000) stated that women find it very difficult to obtain leadership positions in their organizations because of men's intentional social isolation and their downplaying of women's contributions in order to maintain their positions in the male-dominated construction industry. Therefore, women are continuously challenged by many obstacles that begin with struggles to enter the construction industry and continue to struggle to move up the hierarchical

ladder, which explains their underrepresentation in the field. To cope with those challenges, Dainty et al. (2000) suggested that women are typically faced with three possibilities: adjusting their behaviors to those of men and then begin acting the same; lessening their professional goals and expectations by undertaking inferior jobs that do not match their ambitions and abilities; or lastly, giving up and changing to a more women-friendly industry.

Strategies Women Used to become Leaders in Other Industries

Keown and Ada (1982), completed a study in 1982 that focused on the success factors of women in leadership roles and much has not changed in the past 34 years. The authors mentioned that one's wardrobe was extremely important. How a leader carried themselves was still an important factor. They also stated that the women in the study demanded challenging careers and they found that having a good relationship with their boss was significant for them to remain successful in their careers. Also revealed was the importance of having a mentor, education, and detailed long-term goals.

Dawson and Kleiner (1992) realized that women in leadership roles all share common traits that include believing in themselves, not bending to the pressures of society and the norms of organizational cultures, refusing to let the discrimination of others stunt their growth and putting their careers first. Current CEO's, Presidents and Executive VP's such as Kathleen Tierney and Ruth Mahoney suggested that in order to be successful, women should always follow these rules (Katen, n.d.):

1. Work alongside your employees and your management team while being a good decision-maker.
2. Research trends and set goals.
3. Stand up for yourself without being overly aggressive.

4. Cultivate relationships with people you respect and admire.

The number of women in leadership roles has increased, but men still hold the most leadership roles, both in the public and private sectors (Wirthman, 2014). Ironically, even retail, an industry where women are the traditionally the biggest spenders and customers, accounting for approximately 85 percent of purchases, the margins are not necessarily higher (Armstrong, 2016). Of the 24 retail companies listed on the Financial Times Stock Exchange Group (FTSE – a British financial organization that specializes in providing index offerings for the global financial markets) 100 and 250 indices, three have female chief executives: Angela Spindler, of online fashion group N Brown, Veronique Laury, of DIY chain Kingfisher, and Jill McDonald, of bike chain Halfords (Armstrong, 2016). So where are most women senior leaders and what are the strategies that have been successful to recruit and retain women in these industries?

Although the researcher has been unable to identify significant literature outlining specific industries who are outright front-runners in this endeavor, there has been some common ground agreed upon as the characteristics of organizations who do it well. For example, Mattis (2001) confirmed that women can be successful in a leadership role if the following behavior and actions are supported from upper management:

1. Provide benchmarking tools and talented staff to assist as additional resources.
2. Provide strategic direction and goals.
3. Establish culpability on both ends.
4. Initiate progression planning.

Mattis (2001) further purported that human resources managers and executives should support the hiring and retention of women in leadership roles by:

1. Promoting or hiring two or more women for every vacancy in a department.

2. Aggressively intervening when the behavior of other employees suppresses a woman's contribution to the organization/department.
3. Assigning an equal representation of women on projects/task forces/work groups/committees/boards.
4. Including women on hiring and interview panels.
5. Assigning a diversity member to the department who attends diversity workshops and events, works with a diversity consult outside of the organization on women's issues, works with task and work groups on how to identify issues and who discusses diversity related topics at all staff meetings.

Harris & Norlander (2023) performed a recent study tracking a subset of firms with 20 percent or greater representation of women in top executive roles in the year 2000. They reported that these firms continue to have a higher-than-average percentage of women in top executive roles. First, the results of their study confirmed that the firms considered to have 'best practices' were still holding steady with holding significantly more women fifteen years later. Secondly, they have retained and advanced women well beyond overall status quo. Finally, men and women were similar in age and tenure. Harris & Norlander (2023) confirmed that these best practice firms really were different when it comes to advancing women into the executive ranks in areas of top-level endorsement, organizational culture, targeted recruitment and more. Nevertheless, the organizations differed in how implementation of those efforts was performed.

The common factor Harris & Norlander heard from executives at best practice firms was that although several different approaches by CEOs provided some leverage, for the glass ceiling to crack and be sustainable, "the common denominator was when the organizations or departments were led by individuals who were committed to ensuring a diverse workforce"

(2023, p. 9).

Finally, a qualitative phenomenological study completed by Heidi Richards (2017) analyzed factors that focused on women in leadership roles and their ability to break through the glass ceiling. From Richards' qualitative research of interviewing senior leaders in the private sector, three consistent themes appeared: Work-Life Balance, Respect, and Mentoring. Richards found the participants perceived that the glass ceiling still exists, especially in certain fields, and that mentors would help most women remain successful in leadership roles once they got into a certain position. The literature also recommends interventions from the "bottom-up," including mentoring, networking, alternative management structures, supportive policies, to the "top-down", featuring government initiatives, legislation, and funding (Menches & Abraham, 2007). These interventions are discussed in the next section.

Mentoring

In their gender-based study on career tactics and strategies of successful men and women, Laud and Johnson (2012) found that men and women were not necessarily divided when it came to certain factors that propelled them to success. They did, however, find that women were more inclined to use networking, education, and mentoring to climb the career ladder. A much-needed challenge to the masculine culture would be to place women into more mentoring, role-modeling and leadership roles. In some cases, these are identified in the literature as the most significant strategies for improving inclusion and career development (Taylor et al., 2015; Wright, 2016).

Menches and Abraham claimed that "mentoring significantly increases retention of women at all levels of construction" (2007, p. 705). In their study, Jenkins et al. (2019) found industry representatives cited mentoring from women and men, buddy systems, all-women teams, networking initiatives and using social media as effective ways to break down barriers and

achieve successful outcomes for women training working in the trades. "Carrie," a painter and decorator in Wright's (2016) study, reported that she was encouraged by a progressive employer to attend a tradeswoman's group, and she found it provided support in maintaining and staying in her job. These strategies also provide role models and opportunities for women in leadership. Simon and Clarke (2016, p.589) assert that women role models are 'agents of change'. Young women in their study were inspired by other women's experiences in the trades, and women in other studies claimed that women in leadership roles set an example that helped drive gender equality (Galea et al. 2015; Bridges et al. 2020).

Barriers and Obstacles

Although this study plans to focus on success factors, no complete literature review about gender diversity in a male-dominated industry can ignore the numerous studies and countless discussions on the barriers to success. Barriers to obtaining senior leadership begins with overcoming barriers to entry and retention in the industry. If women are not recruited and retained effectively, they are less likely to be able to move into senior leadership positions. Therefore, this section includes an overview of general barriers for women, such as recruiting and work-family balance issues, in similar industries and trades.

Formal Recruitment and Employment Practices

Galea et al. (2015) argued that formal practices fail because they do not address women's disadvantaged position in the (Australian) industries. They found this to be partly due to poor policy design, especially the lack of connection between policies and company values. The organizations studied implemented a range of formal policies from parental and career leave, affirmative action, gender bias training, women's support groups, flexible work arrangements, equality policies, and gender diversity committees. Galea et al. suggested that

the policies were less effective because most were focused on women rather than all employees and were not robust or revisable enough to make meaningful change.

Work-Family Balance Issues

The literature is clear that domestic commitments present a barrier to women furthering their careers in the trades (Fielden et al., 2000; Menches & Abraham 2007; Potter & Hill 2009; MacIsaac & Domene 2014; Galea et al. 2015; Simon & Clarke 2016). The literature also identifies a strong connection between gender relations at work with gender relations in the home. Taylor et al. (2012) noted that men do not face the same challenges as women in balancing work and family. Women are traditionally the primary caregivers in their families (Ibáñez, 2017). In an industry where long hours are the norm, it is difficult for women to balance both responsibilities and compete with male colleagues who are not managing the same gendered expectations.

Byrne et al. (2005) found that a lack of family policies deterred women from joining the construction industry. Byrd (1999) reports that some employers will not hire women because they believe women will resign when they start a family. Berik and Bilginsoy (2000) found that women apprentices in training were more likely to leave the program if they had domestic responsibilities. Ibáñez (2016) connects values associated with long hours with "the macho man" culture. Complicating the situation are the active rewards offered by the industry for long hours and the expectation that a committed worker will go over and above normal expectations. As Fielden et al. (2000) noted, the lack of flexibility offered to women leaves them in a double-bind, constraining their ability to manage work with family, which risks transgressing a feminine and masculine boundary of appropriate gender roles.

This review has covered the barriers and obstacles to entry for women into senior

leadership that appear egregious enough to end the story there. Corporations operate with a bottom-line and return-on-investment approach. Some literature even suggested that appointing women into senior leadership positions in corporate firms impacts share price compared with appointing men into equivalent positions (Noland et al., 2016; Erhardt et al, 2003; Carter et al. 2007). Therefore, the next section covers the business case for having more women in senior leadership positions.

The Business Case for Women in Senior Leadership Positions

Women remain underrepresented as senior-level leaders in all capacities of business, education, and industry. For example, women make-up four percent of all CEOs positions of S&P 500 companies, according to Catalyst (2014). Although women are CEOs of several prominent organizations in the United States, there are only 53 women (10.6%) CEOs out of the Fortune 500 S&P companies (Hinchliffe, 2023). In PMI operations, there are zero.

Research shows that gender diversity benefits a manufacturing firm through the improved ability to innovate, higher return on equity (ROE), and increased profitability (Deloitte, 2017). Further, in another study Deloitte (2013) modeled the relationship between diversity and inclusion and business performance, identifying an uplift of 80 percent when both conditions were high. More specifically, employees who perceived their organization was committed to, and supportive of, diversity and who felt included, were 80 percent more likely to believe they worked in a high-performing organization. Even when there was high diversity and low inclusion, or low diversity and high inclusion, the business outcomes were never as impressive as the high diversity and high inclusion combination. Deloitte continued by modeling customer service, innovation, and engagement and still found that perceptions of business outcomes were always significantly higher with high diversity and high inclusion. This led Deloitte to conclude

that when employees believe their organization is committed to inclusion, they report better business performance in terms of their ability to innovate (Deloitte, 2017).

For example, companies in the Morgan Stanley Capital International (MSCI) World Index (a stock market index of 1,652 world stocks) with strong woman leadership enjoyed both higher returns (average annual ROE of 10.1 percent versus 7.4 percent [as of September 9, 2015]) and superior average valuation (price to-book ratio of 1.76 versus 1.56), compared to companies without strong woman leadership (Morgan Stanley Capital World Index, 2015). Another analysis showed that an increase from no women in corporate leadership to 30 percent representation is associated with a 15 percent increase in net profitability (Noland et al., 2016). Women have made noteworthy increases in their ascension to the ranks of managers, professionals, and other related fields (Catalyst, 2014).

Cook and Glass (2011) examined how appointing women into senior leadership positions in U.S. corporate firms impacted share price compared with appointing men into equivalent positions. Results of this study suggested a significant positive share-price increase for women of 1.03 percent and a non-significant positive share-price increase for men of .60 percent. Contrary to the expectations, investors react positively to appointments of women in senior leadership positions. It would seem to suggest a strong case for women to be appointed.

Cook and Glass' (2011) findings also showed that the greater the percent of women in the industry (i.e., women-friendly industries), the stronger the positive relationship between the announcements of women to senior leadership positions and the corresponding cumulative abnormal returns. Further, the lower the percent of women in the industry (e.g., male-dominated industries like manufacturing), the stronger the negative relationship between the announcements of women to senior leadership positions and the corresponding cumulative abnormal returns.

Investors responded positively to the appointment of women into powerful positions, particularly in women-friendly industries (like service). Investors react more positively to the naming of a woman leader compared with the name of a male leader. However, women were evaluated negatively in male-dominated industries.

Interestingly, these results appear to contradict the results regarding women in the manufacturing study discussed earlier by Deloitte (2015) that attempts to make a business case for women in manufacturing, stating that organizations with women at the helm are more profitable. Fortune 500 companies with high percentages of women officers had a 35 percent higher return on equity and a 34 percent higher total return than companies with fewer women executives (Deloitte, 2015).

Theoretical Framework

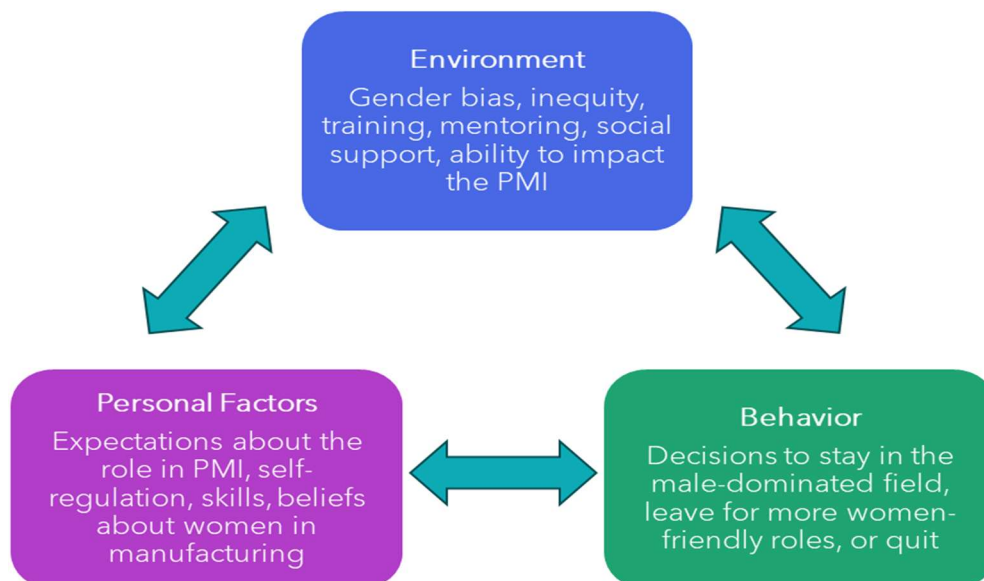
This study will use the social cognitive theory as a lens to explore the success factors of women senior leaders in PMI operations. This framework will provide the foundation for studying the lived experiences of women senior leaders in the PMI operations. The purpose is to further understand the success factors these women used to advance to their current positions and ascend into senior levels of leadership in U.S. PMI operations. The determination of the best design and method for this study was made according to the overarching research question *R1*: *What are the lived experiences of women in United States PMI operations regarding their advancement to senior leadership positions?* In this qualitative phenomenological study, semi-structured interviews will be used to gain an understanding of the perceptions and lived experiences of women in leadership positions in PMI operations.

Social Cognitive Theory (SCT)

Bandura (1977) describes the Social Cognitive Theory in three distinctive features: the influence of individual experiences, the actions of others, and environmental factors on individual health behaviors. SCT has been used to explain a wide range of human social behaviors such as substance abuse and mental health issues. SCT assumes individuals learn socially by observing the behavior of others as well as the consequences of their behaviors. For example, if a behavior is rewarded, individuals are likely to imitate or repeat it; while if a behavior is punished, that behavior is generally not repeated or imitated. SCT is applicable for this study because the research questions will not only address the experiences of women in senior-level leadership positions in paper manufacturing operations but will also seek to examine advancement opportunities based on their respective environments.

Figure 2

Theoretical Framework



How Self-Efficacy Helps You Achieve Your Goals – Social Cognitive Theory

As mentioned above, according to Bandura (1977), SCT is a theory that focuses on the process of a person's learning from others, and the development of their personality. As people learn from others, personal, behavioral, and environmental factors will influence the development of learning. Although Bandura agreed with other researchers on the topic that behavior is learned through experience, he also argued that people learn through observation and imitation of others. He further outlined that these three factors, as shown in Figure 2 above, have a great influence on a person's cognition.

In addition, SCT also proposes that learning will happen more often in a place where there is a close identification between the role model and observer. In other words, this occurs when the observer believes they have the self-efficacy needed to act like the role model. Accordingly, self-efficacy determines the degree of motivation, cognition, and emotion in the learning process. A person is influenced by self-efficacy, or what they believe they can achieve. It enables people to influence events and take a hand in shaping the courses their lives take. Self-efficacy is a person's belief in their ability to produce desired results by their own actions. It is the foundation of human motivation and accomplishments; unless people believe they can produce desired effects by their actions, they have little incentive to act or persevere in the face of difficulty. Bandura (Davidson & Davidson, 2003) emphasized that there are four major ways of developing a strong sense of self-efficacy: mastery, social modeling (when people see others succeed), social persuasion (convey faith in people's capability but also arrange things for others in ways that bring success and avoids placing them in situations prematurely where they will fail, and physical and emotional states (awareness of their states in order to judge their capabilities; stress, fatigue, depression can lower one's sense of efficacy). Self-efficacy should not be confused with self-esteem. Self-efficacy is a judgement of capability; self-esteem is a judgement

of self-worth. For example, Bandura is credited as saying he has no efficacy in ballroom dancing, but he does not devalue himself because of it; he really could not care less. (Davidson & Davidson, 2003).

Chapter Summary

Paper manufacturing operations is primarily a male-dominated work environment. Researchers suggest that developing self-confidence, self-efficacy, and resilience are important strategies to adopt in male-dominant workplaces. In career development, Social Cognitive Theory also helps to explain how a person can set up their career development plan for success. Through a positive view of their own abilities and surrounding themselves with a positive network of mentors, a person has a better chance of achieving their career goals.

Chapter two presented a synopsis of the strategies used in researching the literature, a breakdown of the theoretical framework used for this study, as well as an overview of the theoretical influences on the literature used. Chapter three provides the details of the research method and outlines the systematic process followed to identify the issues experienced by senior-level women during their careers.

CHAPTER THREE

Introduction and Overview

This phenomenological study focuses on how women navigated the socio-cultural landscape of a male-dominated field to become senior leaders. The purpose of this study is to understand how women describe their journey in becoming senior leaders within the paper manufacturing environment. With women representing less than a third of the manufacturing workforce, manufacturers, specifically PMI operations, are missing out on a critical talent pool, which could aid remarkably in closing the skills gap (Deloitte, 2015).

Research Questions

The research questions for this phenomenological study are:

RQ1: What are the lived experiences of women in United States PMI operations regarding their advancement to senior leadership positions?

SQ1: What metaphors/language do women use to describe their journey to promotion?

SQ2: What are the perceived attributes of successful women in the journey to promotion?

SQ3: How are women prepared for senior leadership roles?

SQ4: What sustains women on their journey to promotion?

Research Design and Rationale

Proposed Research Design

The phenomenological qualitative study design is appropriate for this study because the researcher will engage the participants in a conversational style interview process (Yin, 2014). The phenomenological qualitative design focuses on the lived experiences of the participants

and allows them to tell their stories in their own words (Wilson, 2015).

Qualitative Method

The descriptive phenomenological qualitative design is appropriate for this study because the objective is to understand the lived experiences of women in the PMI providing an opportunity for me to collect data regarding a common experience of the participants (Creswell, Hanson, Clark, & Morales, 2016; McCusker & Gunaydin, 2015; Roller & Lavrakas, 2015). Qualitative studies allow the participants the freedom to provide rich detail regarding their understanding in semi-structured interviews (Crouch & McKenzie, 2006). In conducting a qualitative study, the researcher does not deal with the measurable behaviors or attitudes. Rather, the researcher deals with certain aspects of the participants' perspectives, whereas in a quantitative design the data collected is numerical and results in hypothesis being determined (Bartos, 1986). Qualitative research provides the researcher with the prospect of collecting data in a social setting in which the participants can describe how they make sense of their surroundings (Berg, 2009). Qualitative research has a central characteristic, which is the researcher is studying a phenomenon to understand what effect it has on the people it involves (Merriam, 2014).

Qualitative research provides a means by which the researcher can advance their appreciation for how people make sense of their experiences and their lives (Merriam, 2014). A qualitative approach was selected for this study instead of a mixed method approach, because the research question could be answered by studying the perceptions and the lived experiences of the women being interviewed. The research seeks to uncover new words and phrases that would aid in describing their experience.

Population and Proposed Research Sample

There are varying perspectives in the research regarding sample size for qualitative

research, but Creswell (2013) recommends 5-25 participants for phenomenology. Following Creswell's (2013) recommendation, the researcher will ask a purposefully selected group of five to fifteen women in the PMI, who are currently serving in senior leadership or previously held a position in PMI senior leadership. This range is sufficient for saturation (Wilson, 2015).

Sampling should occur until the point of saturation according to Merriam (2014). The data will be collected in an ethical manner and there will be a chain of custody for the data (Yin, 2014).

The researcher will be responsible for ensuring that bias is avoided, and that the data will be recorded as accurately as possible (Yin 2014).

Overview of Information Needed

For this study, senior leadership is defined as those serving in senior-level positions. A purposive sample of five to fifteen women representing mid-level management and high leadership positions from the paper manufacturing industry will be utilized in this study. The accessible women in executive level leadership positions in PMI operations are limited, which makes getting a larger sample size very difficult. The participants for this study will be obtained using a snowballing technique, which will involve one person referring another (Streeton et al., 2004). The researcher will use snowballing to provide diversity in participants and added credibility and trustworthiness to the investigation. Streeton, et al. (2004) determined that the snowballing technique is an effective way to gain referrals from one person to the other and gain credibility for the research in the process.

Data Collection

Conducting interviews for qualitative research has some advantages and disadvantages. Interviewing will allow me to obtain in-depth information about the subject. The researcher will be able to obtain clarification on responses, ask open-ended questions during an interview,

and provide a more personal approach to data collection. For this study, all participants will be strictly from PMI organizations. Potential participants will be identified as women who are serving in senior leadership roles in PMI organizations. The selection of participants is limited to women who have served at least 10 years in these roles to gain in-depth information for the study. The researcher will create a solicitation message to send to a personal LinkedIn™ account requesting volunteers for the study. Once the agreement is received, the researcher will request the potential participants' email addresses and contact them, sending additional overview information about the study. Upon confirmation of their interest, the researcher will contact these women, asking if they would like to participate in the study and ask for additional recommendations to reach the goal of 15. The researcher will email each participant a cover letter explaining the process via an informed consent form that includes an initial survey (Appendices A and B) to obtain basic demographic information and request a follow-up interview in their preferred format. The researcher will follow up with participants two weeks later via email. After all responses have been returned, a follow-up semi-structured 45-minute interview with each designated participant will be conducted (Appendix C). Interviews will be conducted and recorded via phone or a video conferencing tool (e.g., Zoom) at the participant's discretion. Along with sending consent forms, participants will be briefed on the risks and benefits of participating in the voluntary research endeavor.

Upon receiving approval from the IRB, to allow for in-depth conversations, the researcher plans to structure the data collection in a two-pronged approach. The interview questions will consist of descriptive, open-ended questions seeking to obtain a large amount of information from participants (Spradley, 1979). Probing questions will be used to follow-up and expand participants' initial responses (Merriam, 1998). When applicable, the researcher

will also utilize interpretive questions to confirm what participants said (Kvale, 1996). Kvale noted this is a useful technique because it helps eliminate bias, as it acts as a clarification of a researcher's interpretations. Interview questions have been developed to discover the perceptions, thoughts, and feelings of women senior leaders in PMI and what has been their lived experiences regarding their advancement to senior leadership positions.

Pilot/Field Study

A field study also known as a pilot test, allows the researcher to have an assessment of the interview questions completed by experts in the field of study to ensure that the research questions will answer the research questions (Christensen et al., 2011, Gerring, 2012). Once the field test is conducted the feedback can be used to adjust and improve the interview questions. Copies of the interview questions and interview protocol are in Appendices C and D. This initial draft will be vetted by peer debrief and pilot process; upon vetting the draft will be updated accordingly and it will be used during the interview with proposed participants. First, the researcher will review the questions with the committee chair who specializes in human resources. Then, the researcher will review the questions with a human resource professional from the PMI. After this, the researcher will conduct a mock interview with a candidate who will not be included in the actual research, thus avoiding biases and ensuring questions are credible, reliable, and dependable.

Data Analysis Plan

The qualitative data analysis will be collected through verbal data from the participants; then the data will be transcribed and analyzed for common themes and categories from the participants' words (Richards & Morse, 2013). The researcher will use the verbal data provided by the participants to uncover the meaning and experience of women who have navigated the

socio-cultural landscape of a male-dominated field to become senior leaders. Using manual coding or NVivo (Release 1.0) / March 2020, the raw data from each interview will be organized into non-overlapping themes and synthesized into categories and statements. Due to the sample size manual, the coding is appropriate. Data analysis will transform the perceptions and information gathered during the interviews into key findings (Saldaña, 2009). The researcher will begin analyzing the data collected after each interview to better understand answers to the questions and to review key concepts. The narrative interviews will be analyzed to understand themes, documenting roadmaps and factors that may help career advancement for women in the PMI and advance theory.

Ethical Considerations

Data Management and Confidentiality

All information will be kept confidential to the extent allowed by applicable State and Federal law. The researcher will keep the study records private and confidential; however, certain people may need to see the study records. Anyone who looks at the records will be required to sign a confidentiality form and attest that they will keep the records confidential as well. The anticipated individuals that may review the study include:

- the research team, including the researcher and other approved research staff (for example, graduate research assistants).
- certain university staff who need to know more about the study, and individuals who provide oversight to ensure that the study is being conducted correctly and ethically.
- any agency of the federal, state, or local government that regulates this research.
- University of Arkansas Institutional Review Board and related staff who have oversight responsibilities for this study, including staff in Research Integrity and Compliance.

If the results of the research are ever requested to be presented at conferences or other public forums, the results of this project will be coded in such a way that participants' identities will not be identifiable in the final form of this study. In early communications with the participants, when identifying interest in the topic, most women are comfortable with being identified and had no concerns with confidentiality or remaining anonymous because they were highly engaged in wanting to advance the research help identify key strategies to allow proportion of women holding senior leadership positions in the industry to increase. The researcher will be as discreet as possible with this data; however, the researcher does retain the right to use and publish non-identifiable data.

While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses. All data will be stored in a secure location accessible only to me. Identifiable data and any participant-specific information will be destroyed five years after the research is published. De-identified data will be kept on my secure laptop only. The researcher will code the selected participants with either non-gender-centric (e.g., Tracy) pseudonyms selected by the participant or randomly selected to help maintain their confidentiality in the data collection phase. To further establish credibility, the researcher will also be asking each participant to review transcripts of their interviews and my interpretations to clear up any confusion or misinterpretation.

Trustworthiness

The trustworthiness of this study is established through credibility, dependability, confirmability, and transferability of findings. Consistent data collection, data analysis, and thoroughly detailed explanations of the data analysis process are used.

Credibility

Credibility is established through correctly portraying the participants' perspectives throughout the study results. This will be accomplished by addressing the following strategies recommended by Bloomberg and Volpe (2019) and Creswell and Poth (2018):

- Prolonged engagement: Relationships will be established with the participants, providing a deeper understanding of culture surrounding the phenomenon being studied.
- Member checks: Participants will review the conclusions to ensure the participants' perspectives are portrayed and the findings are free of any biases held.
- Peer debriefing: Impartial colleagues can question the results after reviewing the study's methodology, transcripts, and data, allowing examination of assumptions and alternative viewpoints of the data.

Transferability

Readers will determine how and to what extent they will apply this case study's process and findings to their own situation. This study will produce "descriptive context-relevant findings that can be applicable to broader contexts while still maintaining content-specific richness" (Bloomberg & Volpe, 2019, p. 205). This is accomplished through purposive sampling and data saturation. Data saturation occurs when enough interviews are conducted to allow for the repetition of themes or patterns and when new themes or patterns stop emerging. This will be necessary to complete the study (Fusch & Ness, 2015).

Dependability and Confirmability

Audit trailing and reflexivity are strategies that are used to ensure dependability and confirmability in qualitative research (Houghton, et al. 2013, Morse, 2015). Dependability in qualitative research often refers to how stable the data are and is often equated to the concept of

reliability (Rolfe, 2006). According to Tobin and Begley (2004) confirmability refers to the correctness of the data and its neutrality. Strategies for ensuring dependability will include sampling, peer review of the data for accuracy and the personal relationships the researcher may have with the participants. The more rigorous qualitative research is, the more trustworthiness is established in the research findings (Merriam, 2014). When rigor is determined by observations and interviews and closely resemble reality then the researcher achieves internal validity in the qualitative research (Schermerhorn, Hunt & Osborn, 2008). Also, to help control for potential survivorship bias, this study will be led in a fashion that would yield the same results if another researcher were researching the same phenomenon, thereby ensuring reliability of the findings (Md. Ali & Yusof, 2011).

Confirmability is closely related to dependability (Houghton, et al., 2013). Confirmability in qualitative research is related to how stable the data are (Houghton, et al., 2013). Excluding personal feelings and personal biases are essential in achieving confirmability (Leedy & Ormrod, 2013). The researcher plans to achieve confirmability by excluding personal feelings or biases through the interview process by using field notes and bracketing (Hesse-Biber 2011; Leedy & Ormrod, 2013). As discussed earlier, the use of NVivo software will add confirmability by providing an audit trail and record for the decisions that are made during the data analysis phase (Houghton, et al., 2013).

The University of Arkansas is committed to ensuring that researchers use safe, ethical practices when engaging in human subjects' research (HSR). Prior to the inception of the study, the researcher will submit to the university's Institutional Review Board (IRB) for approval per federal regulations and the institutional policy governing HSR.

Limitations and Delimitations

One of the limitations of this study is related to transferability, (i.e., could this study be replicated in other industries?) To address this threat to validity, instead of conducting interviews with only the company the researcher worked for, the plan is to interview several participants from other companies within the industry. The study could be replicated in the forestry or corrugated box industries, areas in which a male-dominated culture is present; however, even though such a measure may be in place, this study could not be replicated in other fields (i.e., education, medical). Personal bias could also be a limitation to this study as the researcher was an internal audit manager and talent and development manager for approximately 18 years in the PMI. Bias exists because the researcher is a woman and former employee; therefore, potentially able to recognize factors that may contribute to women leaving PMI operations.

A perceived limitation is interviewees may be reluctant to share or not be completely honest when answering questions. This could result in an unintentional misrepresentation. Also, participants are from women from PMI who have successfully navigated to senior levels of a male-dominated industry. This may result in biased answers if participants have a pre-conceived value of how they succeeded. Additional limitations are the voluntary participation and limited number participants who may not be representative of the entire population.

Another limitation of this study that should be considered is survivorship bias. Survivorship bias relates to an error produced by focusing on data from subjects who proceeded past a selection or elimination process while overlooking those who did not; it can result in overly optimistic results because failures are ignored (Elston, 2021).

Lastly, this study is limited to one segment of the PMI. The paper manufacturing

industry is a complex industry that includes forestry, converting, pulp, and paper. However, this study is focused solely on paper manufacturing industry and the participants of this study are senior leaders from paper and pulp manufacturing operations sector of the industry.

Chapter Summary

Chapter three presented the research design and rationale, the methods and reason for a phenomenological study, the feasibility of the research and sampling designs, data collection procedures, and data analysis. The chapter outlined the population and sampling methods being considered in conducting an in-depth, cross-sectional analysis on a single population of women. The researcher will choose purposive sampling to discover, understand, and gain deeper insight into a sample that provided the most opportunity to learn (Merriam, 2009). Finally, plans for data collection and data analysis were documented in detail. This phenomenological study will aim to understand how women describe their journey to becoming a senior-level leader within the paper manufacturing operations environment. This method is planned to develop a deep understanding of the strategies that influence career advancement from the perception and experiences of the interview participants. Specifically, the researcher will ascertain how these women navigate the socio-cultural landscape of a male-dominated industry through to senior leadership levels in PMI operations.

References

- Alkadry, M.G., & Tower, L. E. (2011). Covert pay discrimination: How authority predicts pay differences between men and women. *Public Administration Review*, 71(5), 740-750.
- Alonso-Villar, O., Del Rio, C., & Gradin, C. (2012). The extent of occupational segregation in the United States: Differences by race, ethnicity, and gender. *Industrial Relations: A Journal of Economy and Society*, 51(2), 179–212. <https://doi.org/10.1111/j.1468-232X.2012.00674.x>.
- Armstrong, A. (2016, Aug 28). What's holding women back in retail?: It's Britain's most female-focused sector, but running a retailer remains a predominantly male pursuit. Ashley Armstrong asks why. *The Sunday Telegraph*. Retrieved from <https://www.proquest.com/newspapers/whats-holding-women-back-retail/docview/1814426705/se-2>
- Arulampalam, W., Booth, A. L., & Bryan, M. L. (2007). Is there a glass ceiling over Europe? Exploring the gender gap across the wage distribution. *Industrial and Labor Relations Review*, 60(2), 163–186. <https://doi.org/10.1177/001979390706000201>.
- Autolife. (2004). *Gender and the automobile in the United States*. Retrieved from http://www.autolife.umd.umich.edu/Gender/Walsh/G_Overview7.htm.
- Bandura, A. (1977), *Social Learning Theory*, Prentice Hall, Englewood Cliffs, N.J.
- Baxter, J., & Wright, E. O. (2000). The glass ceiling hypothesis: A comparative study of the United States, Sweden, and Australia. *Gender and Society*, 14(2), 275-294.
- Bartos, R. (1986). Qualitative Research: What it is and where it came from. *Journal of Advertising Research*, 26(3), RC-3.
- Bass, B. M., & Avolio, B. J. (1994). Transformational leadership and organizational culture.

- International Journal of Public Administration*, 17(3–4), 541–554.
<https://doi.org/10.1080/01900699408524907>
- Bateson, G., Jackson, D. D., Haley, J., & Weakland, J. H. (1956). Towards a theory of schizophrenia. *Behavioural Science*, 1(4).
- Berg, B. L. (2009). *Qualitative research methods for the social sciences* (7th ed.) Allyn & Bacon: Pearson.
- Berik, G., & Bilginsoy, C. (2000). Do unions help or hinder women in training? Apprenticeship programs in the United States. *Industrial relations: A Journal of Economy and Society*, 39(4), 600-624.
- Bernard, R. (2015). *100 leading women for 2015 named by Automotive News*. The News Wheel. Retrieved from <http://thenewswheel.com/100-leading-womenfor-2015-named-by-automotive-news/>.
- Berry, P., & Franks, T. J. (2010). Women in the world of corporate business: Looking at the glass ceiling. *Contemporary Issues in Education Research (Littleton, Colo.)*, 3(2), 1.
<https://doi.org/10.19030/cier.v3i2.171>.
- Bloomberg, L. D., & Volpe, M. (2019). *Completing your qualitative dissertation: A road map from beginning to end* (4th ed., pp. 49–52). Sage.
- Booth, A. L., Francesconi, M., & Frank, J. (2003, April). A sticky floors model of promotion, pay, and gender. *European Economic Review*, 47(2), 295–322.
[https://doi.org/10.1016/S0014-2921\(01\)00197-0](https://doi.org/10.1016/S0014-2921(01)00197-0).
- Brooks, A. K. (2000). Transformation. In Hayes, E. & Flannery, D. (Eds.), *Women as learners: The significance of gender in adult learning*. Jossey-Bass.

- Buchanan, N.T., Settles, I.H., Hall, A.T., & O'Connor, R.C. (2014). A review of organizational strategies for reducing sexual harassment: Insights from the U. S. military. *Journal of Social Issues*, 70, 687-702.
- Byrd, B. (1999). Women in carpentry apprenticeship: A case study. *Labor Studies Journal*, 24(3), 3-22.
- Byrne, Z. S., Stoner, J., Thompson, K. R., & Hochwarter, W. (2005). The interactive effects of conscientiousness, work effort, and psychological climate on job performance. *Journal of Vocational Behavior*, 66(2), 326-338.
- Bystydzienski, J. M. (2009). Why So Few Women? Explaining Gendered Occupational Outcomes in Science, Technology, Engineering and Mathematics Fields: Gender and Occupational Outcomes: Longitudinal Assessments of Individual, Social, and Cultural Influences. Edited by Helen M.G. Watt and Jacquelynne S. Eccles. Washington D.C., American Psychological Association, 384 pp. \$69.95 (hard cover). ISBN 13: 978-1-4338-0310-9. *Sex Roles*, 60(9–10), 751–753. <https://doi.org/10.1007/s11199-008-9548-6>.
- Carter, D., D'Souza, F. P, Simkins, B. J, and Simpson, W. G. 2007. The diversity of corporate board committees and firm financial performance. Working paper. Stillwater, OK: Department of Finance, Oklahoma State University.
- Catalyst. (2014). *How the new discrimination is holding women back*. Retrieved from <http://www.catalyst.org/zing/how-new-discrimination-holding-women-back>.
- Ceci, S. J., & Williams, W. M. (Wendy M., 1960. (2007). *Why aren't more women in science?: Top researchers debate the evidence* (First). American Psychological Association. <https://doi.org/10.1037/11546-000>.
- Ceci, S. J., & Williams, W. M. (2009). *The mathematics of sex: How biology and society conspire*

- to limit talented women and girls*. Oxford University Press, Incorporated.
- Chin, J. L., & Trimble, J. E. (2014). *Diversity and leadership*. Thousand Oaks, CA: Sage.
- Chin, J. L. (2011). Women in leadership transforming visions and current contexts. *Forum on Public Policy online*, 2011(2).
- Christensen, L. B, Johnson, R. B., & Turner L. A. (2011). Research methods, design, and analysis (11th ed.). Allyn & Bacon.
- Civil Rights Act of 1964, Pub. L. No. 88-352, 78 Stat. 241 (1964).
- <https://www.govinfo.gov/content/pkg/STATUTE-78/pdf/STATUTE-78-Pg241.pdf>
- Cook, A. & Glass, C. (2011). Leadership change and shareholder value: How markets react to the appointments of women. *Human Resources Management*, 50(4), 501-519.
- doi:10.1002/hrm.20438.
- Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J., Hanson, W. E., Clark, V., & Morales, P. A. (2016). Qualitative research designs. *The Counseling Psychologist*, 35(2), 236-264. Doi: 10.1177/0011000006287390.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (Fourth edition.). SAGE.
- Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Science Information*, 45(4), pp. 483-499.
- Cuddy, A. J. C., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Organizational Behavior*, 31, 73-98.
- Dainty, A., Neale, R., and Bagilhole, B. (2000). Comparison of men's and women's careers in UK construction industry. *Journal of Professional Issues in Engineering Education and*

- Practice*, 126(3), 110-115.
- Dainty, A. R. J., Bagilhole, B. M., & Neale, R. H. (2000). A grounded theory of women's career under-achievement in large UK construction companies. *Construction Management and Economics*, 18(2), 239–250. <https://doi.org/10.1080/014461900370861>.
- Davidson, F. (Producer), & Davidson, J. (Director). (2003). Bandura's Social Cognitive Theory: An Introduction. [Video/DVD] Davidson Films.
<https://video.alexanderstreet.com/watch/bandura-s-social-cognitive-theory-an-introduction>.
- Dawson, P. (1994). *Organizational change: A processual approach*. Paul Chapman.
- Dawson, S. L., & Kleiner, B. H. (1992). Lessons from successful women business leaders. *Equal Opportunities International*, 11(6), 1.
- Deloitte (2013a). *Untapped resource: How manufacturers can attract, retain, and advance talented women*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/us-indprod-pip-women-in-manufacturing-report-02052013.pdf>.
- Deloitte (2013b). *Waiter, is that inclusion in my soup? A new recipe to improve business performance*. Retrieved from <https://www.deloitte.com/content/dam/Deloitte/au/Documents/human-capital/deloitte-au-hc-diversity-inclusion-soup-0513.pdf?term=cap-andrew-hoog>.
- Deloitte (2015). *Women in manufacturing study: Exploring the gender gap*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/usmfg-women-in-manufacturing-2015-study.pdf>.
- Deloitte (2016). *Global manufacturing competitiveness index*. Retrieved from

- <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Manufacturing/gx-global-mfg-competitiveness-index-2016.pdf>.
- Deloitte (2017). *Women in manufacturing: Stepping up to make an impact that matters*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/us-manu-women-in-manufacturing.pdf>.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573–598. doi:10.1037//0033-295X.109.3.573.
- Elston, D. M. (2021). Survivorship bias. *Journal of the American Academy of Dermatology*. <https://doi.org/10.1016/j.jaad.2021.06.845>.
- Erhardt, N. L., Werbel, J. D., and Shrader, C. B. 2003. Board of director diversity and firm financial performance. *Corporate Governance: An International Review* 11, April: 102–11.
- Ferriman, K., Lubinski, D., & Benbow, C. P. (2009). Work preferences, life values, and personal views of top math/science graduate students and the profoundly gifted: Developmental changes and gender differences during emerging adulthood and parenthood. *Journal of Personality and Social Psychology*, 97(3), 517–532. <https://doi.org/10.1037/a0016030.supp>.
- Fielden, S. L., Davidson, M. J., Gale, A. W., & Davey, C. L. (2000). Women in construction: The untapped resource. *Construction Management & Economics*, 18(1), 113-121.
- Flabbi, L., Macis, M., Moro, A., & Schivardi, F. (2019). Do female executives make a difference? The impact of female leadership on gender gaps and firm performance. *The Economic Journal*, 129(622), 2390–2423. <https://doi.org/10.1093/ej/uez012>
- Fusch, P.I. & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The*

- Qualitative Report*, 20(9), 1408-1416. <http://www.nova.edu/ssss/QR/QR20/9/fusch1.pdf>.
- Galea, N., Powell, A., Loosemore, M. & Chappell, L. (2015). Designing robust and revisable policies for gender equality: lessons from the Australian construction industry, *Construction Management and Economics*, 33:5-6, 375-389, DOI: 10.1080/01446193.2015.1042887.
- Gedro, J. (2010). The lavender ceiling atop the global closet: Human resource development and lesbian expatriates. *Human Resource Development Review*, 9(4), 385-404. doi: 10.1177/1534484310380242.
- General Motors (2015). *General Motors Annual Report*.
<http://www.annualreports.com/Company/generalMotors>.
- Gerring, J. (2012). *Social science methodology: A unified framework*. Cambridge University Press.
- Gould, E., Schieder, J., & Geier, K., (2016). *What is the gender pay gap and is it real?* Economic Policy Institute. <https://www.epi.org/publication/what-is-the-gender-pay-gap-and-is-it-real/>.
- Gregory-Mina, H. (2012). Gender barriers of women striving for a corporate officer position: A literature. *Advancing Women in Leadership*, 32, 1-44.
- Groen, Y., Fuermaier, A. B. M., Tucha, L. I., Koerts, J., & Tucha, O. (2018). How predictive are sex and empathizing–systemizing cognitive style for entry into the academic areas of social or physical sciences? *Cognitive Processing*, 19(1), 95–106.
<https://doi.org/10.1007/s10339-017-0848-z>
- Guy, M., & Fenley, V., M. (2013). Inch by inch: Gender equality since the Civil Rights Act. *Review of Public Administration* 31(1), 40-58.

- Haggerty, J. R. (2013). *Gender gap widens in manufacturing*. Retrieved from <http://www.wsj.com/articles/SB10001424052702304173704579260054078221622>.
- Harris, D., & Norlander, P. (2023). Where the glass ceiling cracks: Features of organizations where women rise to the top. *Advancing Women in Leadership Journal*, 42, 23–33. <https://doi.org/10.21423/awlj-v42.a363>
- Hesse-Biber, S. N., & Leavy, P. (2011). *The practice of qualitative research* (2nd ed.). Sage.
- Hinchliffe, E. (2023, June 5). *Women CEOs run 10.4% of Fortune 500 companies. A quarter of the 52 leaders became CEO in the last year*. Fortune. Retrieved October 17, 2023, from <https://fortune.com/2023/06/05/fortune-500-companies-2023-women-10-percent/>.
- Hofstede, G. H. (1980). *Culture's consequences: International differences in work-relate values*. Sage.
- Houghton, C. Casey, D. Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, 20(4), 12-17. <https://search.proquest.com/docview/1317920491?accountid=458>.
- Hutchins, B. L. (1904). The employment of women in paper mills. *The Economic Journal*, 14(54), 235–248. <https://doi.org/10.2307/2220544>.
- Ibáñez, M. (2017, January). Women in the construction trades: Career types and associated barriers. In *Women's studies international forum*, 60, pp. 39-48. Pergamon.
- International Paper Company (n.d.). Engineering and Health & Safety: Recruit, Engage, Align College Hires. <https://www.internationalpaper.com/company/regions/north-america/careers/students-recent-graduates/new-graduate-opportunities/engineering>.
- Jenkins, K., Narayanaswamy, L., & Sweetman, C. (2019). Introduction: Feminist values in research. *Gender & Development*, 27(3), 415-425.

- Kaufman, R. L. (2010). *Race, gender, and the labor market: Inequalities at work*. Lynne Rienner Publishers.
- Katen, L. (n.d.). Six high-powered women share their secrets for success. *The Muse*. Retrieved from <https://www.themuse.com/advice/6-highpowered-women-share-their-secrets-for-success>. <https://relevantmagazine.com/faith/relationship-god-defines/>
- Keown, Jr., C.F., & Ada, L. K. (1982). Success factors for corporate woman executives. *Group & Organization Studies (Pre-1986)*, 7(4), 445.
- Kolade, O. J. & Kehinde O. (2013). Glass ceiling and women career advancement: Evidence from Nigerian construction industry. *Iranian Journal of Management Studies*, 6(1), 79-99.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Sage.
- Laud, R. L., & Johnson, M. (2012). Advancing upward? An examination of career tactics and strategies of successful men and women. *Allied Academies International Conference, Academy of Organizational Culture, Communications and Conflict Proceedings*, 17(1), 21-25.
- Leedy, P.D., & Ormrod, J.E. (2013). *Practical research: Planning and design* (9th ed.). Prentice Hall.
- Lekchiri, S., & Kamm, J. D. (2020). Navigating barriers faced by women in leadership positions in the U.S. construction industry: A retrospective on women's continued struggle in a male-dominated industry. *European Journal of Training and Development*, 44(6/7), 575-594. <https://doi.org/10.1108/EJTD-11-2019-0186>.
- Lippa, R. A., Preston, K., & Penner, J. (2014). Women's representation in 60 occupations from 1972 to 2010: More women in high-Status jobs, few women in things-oriented jobs.

- PLoS ONE*, 9(5), e95960. <https://doi.org/10.1371/journal.pone.0095960>.
- Loden, M. (1985). *Feminine leadership or how to succeed in business without being one of the boys*. Times Books.
- MacIsaac, K. M., & Domene, J. F. (2014). Learning the tricks of the trades: Women's experiences. *Canadian Journal of Counselling and Psychotherapy*, 48(1).
- Marshall, J. (1993). Organisational cultures and women managers: Exploring the dynamics of resilience. *Applied Psychology: An International Review*, 42(4), 313–322.
<https://doi.org/10.1111/j.1464-0597.1993.tb00747.x>.
- Mattis, M. C. (2001). Advancing women in business organizations: Key leadership roles and behaviors of senior leaders and middle managers. *The Journal of Management Development*, 20(4), 371-388.
- McCusker, K. & Gunaydin, S. (2015). Research using qualitative, quantitative or mixed methods and choice based on the research. *Perfusion*, 30(7), 537-542. doi: 10.1177/0267659114589116.
- Md. Ali, A., & Yusof, H. (2011). Quality in qualitative studies: The case of validity, reliability, and generalizability. *Issues in Social & Environmental Accounting* 5(1/2), 25-64. Millar.
- Menches, C. L., & Abraham, D. M. (2007). Women in construction—tapping the untapped resource to meet future demands. *Journal of Construction Engineering and Management*, 133(9), 701-707.
- Merriam, S. B. (2014) *Qualitative research in practice: Examples for discussion and analysis*. Jossey-Bass.
- Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. Wiley. <http://ebookcentral.proquest.com/lib/uark->

ebooks/detail.action?docID=4040452.

Mintz, B., & Krymkowski, D. H. (2011). The intersection of race/ethnicity and gender in occupational segregation. *International Journal of Sociology*, 40, 31-58.

Morgan Stanley Capital World Index (2015). *MSCI equity indexes August 2015 index review*. Press Release. <https://www.msci.com/documents/10199/149ed7bc-316e-4b4c-8ea4-43fcb5bd6523>.

Morrison, A. M., & Von Glinow, M. A. (1990). Women and minorities in management. *American Psychologist*, 45(2), 200-208.

Morrison, A. M., White., R. P., & Von Velsor, E. (1987). *Breaking the glass ceiling: Can women reach the top of America's largest corporations?* Reading, MA: Addison-Wesley.

Noland, M., Moran, T., & Kotschwar, B. R. (2016). *Is gender diversity profitable? Evidence from a global survey*. Peterson Institute for International Economics Working Paper, (16-3).

Office of Federal Contract Compliance Programs. (1990). OFCCP studies corporate glass ceiling. *Labor Law Journal*, 41(10), 736.

Office of the Federal Register, National Archives and Records Administration. (1995, October 26). 60 FR 55061 - Glass Ceiling Commission; Postponement of Commission Meetings. [Government]. Office of the Federal Register, National Archives and Records Administration. <https://www.govinfo.gov/app/details/FR-1995-10-27/95-26729>.

Potter, M., & Hill, M. (2009). Women into non-traditional sectors: Addressing gender segregation in the Northern Ireland workplace. *Journal of Vocational Education and Training*, 61(2), 133-150.

- Ragins, A. (1998). *Breaking the glass ceiling: Can women reach the top of America's largest organizations?* Addison-Wesley.
- Reese, C. C., & Warner, B. (2012). Pay equity in the states: An analysis of the gender-pay gap in the public sector. *Review of Public Personnel Administration*, 32, 312-331.
- Reynolds, T. (2009). An annotated chronology of in-car technology. *Chronicle for Driver Education Professionals*, 56(2), 16.
- Richards, H. S. (2017). *Success factors of women in leadership roles and breaking through the glass ceiling: A phenomenological qualitative study* [Ed.D., Nova Southeastern University].
<https://www.proquest.com/docview/2386887614/abstract/BC5FDEB8C56E450APQ/3>
- Richards, L., & Morse, J. M. (2013). *Qualitative methods* (3rd ed.). Sage Publications.
- Roller, M. R. & Lavrakas, P. J. (2015). *Applied qualitative research design*. The Guilford Press.
- Ryan, M. K., & Haslam, S. A. (2005). The glass cliff: Evidence that women are overrepresented in precarious leadership positions. *British Journal of Management*, 16, 81–90.
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1467-8551.2005.00433.x>.
- Sabharwal, M. (2015). From the glass ceiling to the glass cliff: Women in senior executive service. *Journal of Public Administration Research & Theory*, 25(2), 399-426.
doi:10.1093/jopart/mut030.
- Saldaña, J. (2009). *The coding manual for qualitative researchers*. Sage.
- Schermerhorn, R., Hunt, J., & Osborn. (2008). *Organizational behavior* (10th ed.). John Wiley & Sons, Inc.

- Servon, L. J., & Visser, M.A. (2011). Progress hindered: The retention and advancement of women in science, engineering and technology careers. *Human Resource Management Journal*, 21(3), 272-284. Doi;10.1111/j.1748-8583.2010.00152.x.
- Simon, L., & Clarke, K. (2016). Apprenticeships should work for women too. *Education & Training (London)*, 58(6), 578-596. <https://doi.org/10.1108/ET-02-2016-0022>.
- Smith, K. N., & Gayles, J. G. (2018). “Girl power”: Gendered academic and workplace experiences of college women in engineering. *Social Sciences (Basel)*, 7(1), 11. <https://doi.org/10.3390/socsci7010011>.
- Spradley, J. (1979) *The ethnographic interview*. Holt Rinehart & Winston.
- Streeton, R., Cooke, M., & Campbell, J. (2004). Researching the researcher: Using a snowballing technique. *Nurse Researcher (through 2014)*, 12(1), 35-46. Retrieved from <https://search.proquest.com/docview/200839960?accountid=458>.
- Su, R., Rounds, J., & Armstrong, P. I. (2009). Men and things, women and people: A meta-analysis of sex differences in interests. *Psychological Bulletin*, 135(6), 859–884. <https://doi.org/10.1037/a0017364>
- Su R, Rounds, J. (2015) All STEM fields are not created equal: People and things interests explain gender disparities across STEM fields. *Front Psychol* 6:1–20. <https://doi.org/10.3389/fpsyg.2015.00189>
- Taylor, S. J., Bogdan, R., & DeVault, M. (2015). *Introduction to qualitative research methods: A guidebook and resource*. John Wiley & Sons.
- Taylor, T.S., & Nivens, B. (2012). Risk and reward: Black women leading out on a limb, *The League of Black women Global Research Institute*. Retrieved from

<https://www.proquest.com/magazines/sponsorship-gap-yields-executive-trap/docview/2290796197/se-2>.

United States Department of Labor (n.d.). *Electrical and Electronics Engineers: Occupational Outlook Handbook*. Retrieved May 2, 2022, from <https://www.bls.gov/ooh/architecture-and-engineering/electrical-and-electronics-engineers.htm>.

United States Department of Labor. (2011). *BLS spotlight on statistics: Women at work*. U.S. Bureau of Labor Statistics.

www.bls.gov/spotlight/2011/women/pdf/women_bls_spotlight.pdf.

United States Department of Labor. (2012, September 7). *International labor force participation rates for women, 2011* (TED: The Editor's Desk). U.S. Department of Labor, U.S. Bureau of Labor Statistics. http://www.bls.gov/opub/ted/2012/ted_20120907.htm.

United States Bureau of Labor Statistics (2015). Labor force statistics from current population survey. Retrieved from <http://www.bls.gov/cps/cpsaat18.htm>.

United States Bureau of Labor Statistics. (2020). Labor force statistics from the current population survey (Current Population Survey, CPS). U.S. Department of Labor. Division of Labor Force Statistics. <https://www.bls.gov/cps/cpsaat11.htm>.

United States Bureau of Labor Statistics (2021). *Women in the labor force: A databook*. Retrieved April 30, 2022, from <https://www.bls.gov/opub/reports/womens-databook/2020/home.htm>.

United States Bureau of Labor Statistics. (2022). U.S. Department of Labor, *Occupational Outlook Handbook*, Industrial Machinery Mechanics, Machinery Maintenance Workers, and Millwrights, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/industrial-machinery->

mechanics-and-maintenance-workers-and-millwrights.htm.

Ward, L. (2008). Female faculty in male-dominated fields: Law, medicine, and engineering. *New Directions for Higher Education*, 2008(143), 63-72. <https://doi.org/10.1002/he.314>.

Warren, A. K. (2009). Cascading gender bias, compounding effects: An assessment of talent management systems (Publication Code D85). Catalyst.
<http://www.catalyst.org/publication/292/cascading-gender-biases-compounding-effects-an-assessment-of-talent-management-systems>.

Wilson, A. (2015). *A guide to phenomenological research*. *Nursing Standard (2014+)*, 29(34), 38. doi:<http://dx.doi.org/10.7748/ns.29.34.38.e8821>.

Wirthman, L. (2014, Nov 30). Want to get things done in U.S.? Elect more women. *Denver Post*.
Retrieved from <http://www.denverpost.com>.

Wright, D. B., Eaton, A. A., & Skagerberg, E. (2015). Occupational segregation and psychological gender differences: How empathizing and systemizing help explain the distribution of men and women into (some) occupations. *Journal of Research in Personality*, 54, 30–39. <https://doi.org/10.1016/j.jrp.2014.06.004>.

Wright, S. (2016). *Language policy and language planning: From nationalism to globalisation*. Springer.

Yin, R.K. (2014). *Case study research: Design and methods* (5th ed.). Sage

Appendix A

Cover Letter

XX/XX/2023

Dear (TBD),

My name is Ericka Pulphus Eggleston, and I am a graduate student completing my doctorate degree at University of Arkansas under the direction of Dr. Kit Kacirek. I am investigating how senior women leaders navigated the Paper Manufacturing Industry (PMI).

As a participant, I invite you to participate in a two-part request for information. First, by completing the enclosed brief questionnaire that should only require approximately 5-10 minutes of your time. Secondly, you will be involved in a semi-structured 45 minute to 1-hour cellphone or zoom interview. The only potential risk that may occur as a result of your participation is that sensitive information may not remain confidential. However, all potential precautions have been taken to minimize the occurrence of this possibility. You will not be asked to provide your name or the name of your institution at any time during this research.

Please do not write your name or the name of your institution anywhere on the enclosed questionnaire. A code number and pseudonym has been assigned to your form to assist in the tracking of returns, though the file containing your assigned code number will be kept in a secure location on the University of Arkansas campus available only to myself and my faculty chair. As per Institutional Review Board (IRB) guidelines, the consent information will be kept for future reference. At no time will you or your organization be identified as participants in this study in the reporting of results. To avoid the potential of identifying an organization, the return envelopes will be immediately destroyed. By answering the questions contained in this survey and returning it to me, you are giving your consent to participate in the study and allow me to use your responses for this research. Individual data will only be available to my dissertation committee and myself. Though the results of this research may be published, only group data will be reported; your identity will remain confidential.

Your participation is completely voluntary, and you may choose to skip any questions that you do not feel comfortable answering or stop at any time. If you have any questions, you can contact me at ejpulphu@uark.edu or my advisor, Dr. Kit Kacirek at kitk@uark.edu.

Enclosed, you will find a self-addressed, stamped return envelope for mailing your initial responses. Please try to return the enclosed questionnaire within two weeks of receiving this letter. You may keep this letter of consent for future reference. Thank you in advance for taking the time to complete this survey.

Sincerely,

Ericka Pulphus Eggleston
Graduate Student
University of Arkansas
ejpulphu@uark.edu

Appendix B

Interview Questions Part 1 - Demographics

Exploring Success Factors of Women Senior Leaders in Paper Manufacturing Industry: A Descriptive Phenomenological Study

Pseudonym: _____ Date: _____ Time: _____

Q1: Ethnicity (Please circle one)

American Indian or Native American

Asian

African American or Black

Hispanic or Latino

White

Other

Prefer not to answer

Q2. Age (Please circle one)

20 - 30

31 – 40

41 – 50

51 – 60

61 – Older

Prefer not to answer

Q3. Highest Level of Education (Please circle one)

Associate Degree

Bachelor's Degree

Master's Degree

Professional Degree

Doctorate Degree

Prefer not to answer

Q4. Marital Status (Please circle one)

Single/never married

Married or Domestic partnership

Widowed

Divorced

Separated

Prefer not to answer

Q5. Number of years of service (Please circle one)

5 – 10

11 – 15

16 – 20

21 – 25

26 – 30

31 – 35

36 – 40

41+

Prefer not to answer

Q6. Number of years in current position (Please circle one)

1 – 5

6 – 10

11 – 15

16 – 20

21 – 25

26 – or more

Prefer not to answer

Appendix C

Interview Questions Part 2

Exploring Success Factors of Women Senior Leaders in Paper Manufacturing Operations
Industry: A Descriptive Phenomenological Study

Pseudonym: _____

Date: _____

Time: _____

Q1: What drew you to a manufacturing?

Q2: How would you describe your journey to senior leadership?

Q3: What experiences prepared you for leadership?

Q4: Describe your personal traits that sustained you during your journey?

Q5: What strategies did you use to be perceived as a leader?

Q6: What resources supported your leadership journey?

Q7: What obstacles presented themselves during your journey?

Q8: How did you navigate these obstacles?

Q9: What compromises did you make to become a senior leader?

Q10: How have you changed since beginning your journey?

Appendix D

Interview Questions Part 2 Script & Interview Protocol

Exploring Success Factors of Women Senior Leaders in Paper Manufacturing Industry: A Descriptive Phenomenological Study

Introductory Protocol

To facilitate our notetaking, I would like to audio tape our conversations today. Please sign the release form. For your information, only researchers on the project will be privy to the tapes which will be eventually destroyed after they are transcribed. In addition, you must sign a form devised to meet our human subject requirements. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Thank you for your agreeing to participate.

I will begin with re-reviewing the informed consent form that was sent with your initial survey and obtaining your agreement and signed consent to proceed. I have planned this interview to last no longer than 45 minutes to 1 hour.

Closing Protocol

I would like to remind you of a few items. All information will be kept confidential to the extent allowed by applicable State and Federal law. I will keep the study records private and confidential; however certain people may need to see the study records. Anyone who looks at the records will be required to sign attest that they will keep them confidential as well. The anticipated individuals that may review the study include:

- *the research team, including the researcher and other approved research staff (for example, graduate research assistants)*
- *certain university people who need to know more about the study, and individuals who provide oversight to ensure that we are doing the study in the right way.*
- *any agency of the federal, state, or local government that regulates this research.*
- *University of Arkansas Institutional Review Board (IRB) and related staff who have oversight responsibilities for this study.*
- *In the event the results of the research are ever requested to be presented at conferences; the results of this project will be coded in such a way that participants' identity will not be attached to the final form of this study.*
- *I retain the right to use and publish non-identifiable data. While individual responses are confidential, aggregate data will be presented representing averages or generalizations about the responses as a whole.*
- *All data will be stored in a secure location accessible only to me. De-identified data will be kept on my secure laptop only. I will be providing and coding the selected participants with random gender-centric (e.g., Tracy, Avery, etc.) pseudonyms to help maintain confidentiality and anonymity in the data collection phase.*
- *I will also be asking you to review transcripts of the interviews and my interpretations to clear up any confusion or misinterpretation.*