WHAT IS THE RELATIONSHIP BETWEEN EMPLOYEE ENGAGEMENT AND JOB

SATISFACTION TO ORGANIZATIONAL COMMITMENT IN SUPPLY CHAIN

MANAGEMENT? AN EXAMINATION OF THESE CAUSAL FACTORS IN SUPPLY

CHAIN MANAGERS IN THE MIDDLE EAST

by

Phaylinh "Tia" Nosavan Prang

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Liberty University, School of Business

May 2020

Abstract

In the Middle East, one of the biggest challenges facing supply chain business leaders was the expatriate assignment failures, an average turnover rate of 12%, with the main reason an inability to cope with lifestyle adjustments due to cultural and family pressures. Additionally, fifty-one percent of expatriates leave the multinational corporation (MNC) within two years of repatriation (De Ruiter, Lub, Jansma, and Blomme, 2018; Haak-Saheem, Darwish, & Al-Nasser, 2017; Stoermer, Haslberger, Froese, & Kraeh, 2018). The Middle Eastern workforce showed the disproportionate ratio of expatriates to local nationals in which nearly 99% of employees in the private sector in the United Arab Emirates (UAE) were expatriates (De Ruiter et al., 2018 & Haak-Saheem et al., 2017). The purpose of this quantitative correlation study is to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS), and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. The findings of this study showed that there are statistically significant relationships among EE, JS, and OC, indicating the p-values lower than the alpha level of 0.05 for all variables. The findings also showed that age does have a moderating effect on the relationship between EE and OC, Beta = 0.115, $p = 0.049$, but not in the relationship between JS and OC. Conversely, gender, nationality, and tenure showed no moderation effect in the relationships among EE, JS, and OC. Recommendations to increase both EE and JS are (1) increase EE through organizational culture, gender-balanced management teams, self-efficacy, work-life balance, and a supportive work environment, and (2) increase JS through effective communication, employee development, rewards and recognition, and supervisor support.
Key words: Employee Engagement, Job Satisfaction, Organizational Commitment, Supply Chain Management, Middle East.

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_____   Date:_____

Dr. Steven Cates, Chair

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Dr. William (Kevin) Barksdale, Committee Member

_____   Date:_____

Dr. Edward M. Moore, DBA Program Director

Dedication

First, I want to dedicate this doctoral research to God for giving me strength, courage, and wisdom to succeed. You have inspired me to do something greater than oneself, to step outside of my comfort zone, and to make the impossible possible. Second, I dedicate this doctoral research to my dad, Phouketh Nosavan (who passed away many years ago), and my mom, Radamany Phimmasone. They believed immigrating to the United States would provide a better life and career opportunities for their children. Thank you for instilling the value of perseverance and nurturing resilience in me at a young age, which serves as the foundation of my life for almost 50 years. Third, I dedicate this doctoral research to my loving husband, Peter Prang, who is a great supporter and long-time companion for over 25 years. He has been a boundless source of inspiration and emotional support throughout my doctoral journey. Fourth, I would like to dedicate this doctoral research to my children, Justin and Sasha Prang, who encouraged me and check on me throughout my doctoral journey.

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Section 1: Foundation of the Study

High-performing organizations, irrespective of the industry, know that their employees are the lifeblood of every business to achieve growth, profitability, and a competitive advantage by aligning business goals with individual goals (Covella, McCarthy, Kaifi, & Cocoran, 2017; Narayanan, Rajithakumar, & Menon, 2019). An unexpected loss of employees (as when, for example, a large group of employees decides to leave at the same time, or when highly-talented employees quit) is a concern for any company, regardless of industry or operating territory. It is costly for any organization, since it affects business performance and increases the challenges for management, due to productivity loss and morale damage (Bake, 2019; Covella et al., 2017; Narayanan et al., 2019; Webster, Jenkins, Oyebode, Bentham, & Smythe, 2019). Moreover, so-called "millennials," which represents a significant portion of the global workforce, are known to be job-hoppers (Narayanan et al., 2019). De Ruiter et al. (2018) found that expatriates (employees) working in multinational corporations typically leave the company within two years of repatriation.

Studies show that employee engagement, job satisfaction, and organizational commitment are the essential antecedents of retention (Geisler, Berthelsen, & Muhonen, 2019; Geldenhuys, Łaba, & Venter, 2014). Understanding the factors that contribute to positive and healthy work attitudes towards engagement, satisfaction, and commitment should add valuable insight for companies seeking to increase employee retention rate. Several studies show Psychological Contract Fulfillment (PCF) plays a significant part in the emotional connection that employees have with their jobs. Three types of reciprocal connection are (1) *generalized* (highly altruistic social exchange relationships); (2) *balanced* (return of equal value and

mutuality of interest); and (3) *negative* (mutual distrust and self-interested exchange

relationships) (De Ruiter et al., 2018; Quratulain, Khan, Crawshaw, Arain, & Hameed, 2018).

The theoretical framework for the present study is derived from Job Demands-Resources

(JD-R) theory (Bakker & Demerouti, 2014) and Social Exchange Theory (SET) (Thibaut &

Kelley, 1959; Homans, 1961; Blau, 1964). Bakker and Demerouti (2014) conceptualized the JD-

R theory as involving two factors: job demands and job resources. Demerouti, Veldhuis,

Coombes, and Hunter (2019) reported that job demands, such as high work pressure, are the

leading causes of employee burnout. Conversely, job resources are the critical drivers of

employee engagement by increasing employees' willingness to achieve goals and reducing job

demands (Bakker & Demerouti, 2014).

The purpose of this quantitative correlational study is to provide insight into *why*

managers may consider leaving the organization by examining the relationship between

independent variables (employee engagement-EE and job satisfaction-JS) and dependent

variable (organizational commitment-OC) in the supply chain managers of the Middle East

organization. This study replicates and extends the work of Jones (2018), "The Relationship of

Employee Engagement and Employee Job Satisfaction to Organizational Commitment" using a

sample in the supply chain management of the Middle East organizations to explore the

significant relationship between independent variables and dependent variable.

The researcher should try to analyze the demographic characteristics of supply chain

managers using age, gender, nationality, and tenure. It is important to evaluate whether these

characteristics mediate the relationship between independent and dependent variables based on

the theories discussed above. The demographic data provides valuable insights into supply chain

managers' engagement, satisfaction, and commitment, supplying demographic trends that

company leaders might use for professional development or retention strategy.

Chapter One presents an overview of the current situation on employee engagement, job

satisfaction, and organizational commitment in the business environment. The rest of the chapter

discusses the research problem, purpose, nature of the study, research questions, and theoretical

foundations, concluding with definitions of terms, assumptions, limitations, delimitations, and

significance of the study.

Background of the Problem

Retaining high-performing and committed employees is critical for organizational

survival, competitive differentiation, and profitability as applied to supply chain management

(SCM). However, job dissatisfaction is a significant concern for businesses in the Middle East,

because it might result in higher turnover intention, especially among expatriate workers (Al-

Yami, Galdas, & Watson, 2018; Quratulain et al., 2018). Furthermore, job dissatisfaction is

increasingly crucial to all organizations because of the impact, stresses, and pressures of

globalization across many industries.

Atif, Nazir, and Abdullah (2017) found SCM to be one of the domains that could help

organizations increase competitiveness from a contemporary business setting to explore beyond

internal capabilities for continuing survival while fulfilling its mission in a competitive future.

However, SCM in the Middle East experiences multidimensional business challenges, and this is

not a straightforward process because changes are inevitable. For instance, the United Arab

Emirates (UAE) applies an economic development model that focuses on liberalism, economic

openness, and embracing globalization. Nevertheless, they experience a lack of skilled labor,

underdeveloped logistics infrastructure, and supply bottlenecks, which may be of a challenge to

achieve the ambitious goals of the Middle East organizations (Atif et al., 2017; Haak-Saheem et al., 2017).

The complexity of SCM has grown significantly, given the organizations' higher pressure to move products to the market quickly in the *right quantities* to the *right location* at the *right time* across the globe in order to minimize systemic costs while satisfying customers and gaining repeat business (Alfalla-Luque, Marin-Garcia, & Medina-Lopez, 2015; Jacobs, Yu, & Chavez, 2016). Arguably, according to Alfalla-Luque et al. (2015) and Jacobs et al. (2016), one reason for these challenges is that most SCM frameworks have focused on business partner issues and have ignored internal employees elements, as proposed by the Global Supply Chain Forum (GSCF). Also, the research considers human resources topics (i.e., communication, employee satisfaction, employee engagement, and employee commitment) as separate from supply chain management.

To overcome these challenges, Atif et al. (2017), Hanaysha (2016), and Jacobs et al. (2016) suggested that company leaders need to invest financial resources, offer professional development, and foster a supportive work environment. This includes supervisor support, team cohesion, autonomy, and involvement to better equip expatriate supply chain managers with supply chain integration (SCI) knowledge to run operations and delivery increased performance. De Ruiter et al. (2018) and Haak-Saheem et al. (2017) reported that the Middle East workforce is more problematic than elsewhere because of the disproportionate ratio of *expatriates* to *nationals* (local citizens) in Middle Eastern companies. Nearly 99% of employees in the private sector in the United Arab Emirates (UAE) are expatriates, with an average employment of two years after repatriation. Haak-Saheem et al. (2017) emphasized that local citizens make up less than 20% of

Dubai's total population, which does not have enough skilled workforce to meet business requirements and demands.

A recent study of the Middle East also presents this region as a volatile and uncertain place for doing business. The ongoing conflict in the "Holy Land" in the context of Arab uprisings and their political problems adds complexity to human resource management in terms of recruiting and keeping skilled labor (i.e., mostly expatriates) (Alfalla-Luque et al., 2015). On the contrary, the Middle East exhibits steady economic growth, with a compound annual Gross Domestic Product (GDP) growth rates between 2007 and 2010 as follows: Egypt (6%), Oman (6.1%), Qatar (16.1%) and MENA (4.6%), while worldwide economic growth was only 1.8% for the same years (Alfalla-Luque et al., 2015). Alfalla-Luque et al. (2015) argued the Middle East and North Africa (MENA) treat job creation as their number one priority because the region has long experienced an unemployment rate ranging between 10% and 25%, and the situation appears to be getting worse.

The primary source of competitive advantage in terms of globalization is for the expatriate supply chain managers to apply the supply chain integration (SCI) approach. It connects with significant business functions within and across organizations to ensure success of global ventures through engagement, job satisfaction, and organizational commitment (Atif et al., 2017; Davis, Fretwell, & Schraeder, 2018). The strength of the Middle East organizations relies significantly on the size of the expatriate community. Both human resource management and corporate strategic goals must be aligned to avoid a shortage of skilled expatriate supply chain managers, who typically leave within two years of repatriation (De Ruiter et al., 2018). The membership of the Gulf Cooperation Council (GCC) is made up of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE), where 40% of the country's gross

domestic product is from oil and gas output, and they rely heavily on expatriates to run operations (Haak-Saheem et al., 2017).

Davis et al. (2018) revealed that managing expatriates is not an easy task and can lead to substantial costs to both companies and expatriates, with the estimated cost for each expatriate assignment failure in the U.S. firms running to USD $1 million. De Ruiter et al. (2018) and Quratulain et al. (2018) emphasized that Psychological Contract Fulfillment (PCF) plays a crucial role in the expatriate's emotional connection with his or her organization, entailing the individual's belief that the organization should reasonably fulfill its obligations toward him or her based on Social Exchange Theory (SET) (Thibaut & Kelley, 1959; Homans, 1961; Blau, 1964) and affective commitment (Meyer & Allen, 1991), which in turn helps increase employee engagement, job satisfaction, and organizational commitment.

When an expatriate perceives a breach of PCF on the part of his or her organization, Almazrouei, Zacca, Evans, and Dayan (2018), De Ruiter et al. (2018) and Quratulain et al. (2018) showed an individual may feel a lack of intrinsic career success elements such as autonomy, trust, and empowerment. On the other hand, they may feel a lack of extrinsic career success in such areas as pay and fringe benefits, promotion, and advancement opportunities. Also, organizations are likely to experience counterproductive expatriate behavior such as turnover intention, disengagement, or retaliation. Agarwal and Gupta (2018) found the expatriate supply chain managers to be a special group, and therefore, it was challenging to replace their skills and knowledge that contribute to organizational profitability.

Cesário and Chambel (2017) defined commitment in two ways: an organization needs to be committed to the employees, and employees should also be similarly committed to their organization. Mowday, Porter, and Steers (1982) defined organizational commitment as "the

relative strength of an individual's identification with and involvement in a particular

organization" (p. 27).

Pham-Thai, McMurray, Muenjohn, and Muchiri (2018) revealed extensive empirical

research on employee engagement has mainly focused on Western developed countries, but there

has been limited research on non-Western developing countries, particularly in the supply chain

management of the Middle East organizations with respect to engagement, satisfaction, and

commitment. Afiouni, Ruël, and Schuler (2014) speculated that one of the reasons for limited

research on the Middle East is due to high diversity in languages, ethnicities, religions,

economies, and political systems. For this reason, academic scholarship is still fragmented,

conceptual, and descriptive in nature, which adds complexity and challenges to making

generalizations.

Waqfi and Faki (2015) further explained the Middle Eastern countries share a unique

culture, values, religion, and socioeconomic characteristics that offer a high degree of tolerance

for different lifestyles, which distinguish them from the rest of the world. Bridging the gap

between employee engagement, job satisfaction, and organizational commitment is especially

crucial in non-Western developing countries in the supply chain management of Middle Eastern

organizations. It makes this study of utmost relevance to the business environment in dealing

with a highly diverse workforce.

The supply chain business in the Middle East takes place in immature markets, which are

not the same and not comparable to the study of the Western developed countries.

Unfortunately, less research has been dedicated to understanding the Gulf Cooperation Council

(GCC) or the Organization of Petroleum Exporting Countries (OPEC) (Haak-Saheem et al.,

2017). Expatriate supply chain manager performance plays a vital role in meeting the Middle

Eastern organization requirements to address skills and know-how deficiencies, which are not available in the local market (Almazrouei et al., 2018; Davis et al., 2018). Bridging the gap between employee engagement, job satisfaction, and organizational commitment existing in the supply chain managers of the Middle East organization is the aim of this research, according to the literature review.

Problem Statement

The general problem is to address company leaders' limited knowledge that engaged, satisfied, and committed employees are a significant part of successfully fulfilling organizational goals with strong alignment with supply chain operations. It enables the business leaders and managers to identify, prioritize, and improve any aspect of execution to meet customers' requirements and demands (Srivastava & Sushil, 2017).

This study replicates and extends the work of Jones (2018), "The Relationship of Employee Engagement and Employee Job Satisfaction to Organizational Commitment," using a sample in the supply chain management of the Middle East organizations to explore the significant relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC). This study should add to the literature in understanding the relationship between EE, JS, and OC in the supply chain managers of the Middle East organization.

According to Mowday, Steers, and Porter (1979), the heart of organizational commitment is the strength of an individual's identification and involvement in an organization, and as the researchers further elaborated, "commitment attitudes appear to develop slowly but consistently over time as individuals think about the relationship between themselves and their employer.

Commitment as a construct is more global, reflecting a general affective response to the organization as a whole" (p. 226).

Research shows a "clear overlap" between Mowday et al.'s (1982) conceptualization of commitment and Meyer and Allen's (1991) three-component model (TCM). The latter incorporated both "attitudinal and behavioral approaches" and extended the concept of organizational commitment with a three-component model (TCM). It includes the *affective* commitment (emotion-based), similar to Mowday et al.'s (1982) theory, followed by *normative* commitment (obligation-based), and *continuance* commitment (cost-based) based on the employees' experience and mindsets (Cesário & Chambel, 2017; Ćulibrk, Delić, Mitrović, & Ćulibrk, 2018; Hayek, Randolph-Seng, Williams, & Ingram, 2017; Jaros, 2017; Prerana, 2017).

In 2017, a Gallup survey showed 85% of employees worldwide are "not engaged" or "actively disengaged" in their jobs, and the Middle East North Africa region reported 86% ("Disengaged employees result in lower productivity," 2018; "State of the global workplace," 2017). The researchers indicate the cost of lost productivity is between U.S. $960 billion and U.S. $1.2 trillion per annum from disengaged U.S. employees (Moletsane, Tefera, & Migiro, 2019; Power, 2017).

Employee retention across all age groups continues to be challenging in the workplace and is caused by differences in generational work values between older and younger workers (Sarraf, Abzari, Isfahani, & Fathi, 2017). Researchers report that work-life balance becomes more critical with successive generations as it influences employees' attitude and behavior in the workplace (Lyons & Kuron, 2014). Previous studies indicated a significant relationship among employee engagement, job satisfaction, and organizational commitment that primarily targeted Western developed countries, including the United States, Finland, the United Kingdom,

Australia, Germany, Canada, and the Netherlands (Bailey et al., 2017; Chordiya et al., 2017;

Pham-Thai et al., 2018). However, limited empirical research has focused on non-Western

developing countries.

The specific problem is to focus on managers within the supply chain firm, the logistics

and distribution professionals in the Middle East who have inadequate knowledge of how to

improve employee engagement and job satisfaction, which affects the employee's organizational

commitment to achieve the company's goals. Many researchers have used demographic

variables such as age, gender, race, tenure, and leadership style as predictors of commitment

(Garland et al., 2014; Lambert, Kim, Hogan, Kelley, & Garland, 2017; Liu, Loi, & Ngo, 2018;

Palupi, Cahjono, & Satyawati, 2017; Pregnolato, Bussin, & Schlechter, 2017; Yahaya &

Ebrahim, 2016). This study explores different demographic backgrounds (i.e., age, gender,

nationality, tenure) in a non-Western developing country such as those in the Middle East that

are relevant to understanding employee engagement, job satisfaction, and organizational

commitment.

Purpose Statement

The purpose of this quantitative correlation study is to examine the relationship between

independent variables (employee engagement-EE and job satisfaction-JS) and dependent

variable (organizational commitment-OC) in the supply chain managers of the Middle East

organization. Then, the study examines any moderating effects on the outcome using

demographic characteristics. The Middle East is a highly diverse region with multiple

languages, religions, ethnicities, and socioeconomic aspects, which sets them in a unique

position compared to other parts of the world (Waqfi & Faki, 2015). The study of engagement,

satisfaction, and commitment in non-Western developing countries in the SCM of Middle

Eastern organizations is vital to supporting the organizational goals, for which Pham-Thai et al. (2018) showed the limited research conducted in this context.

Employee engagement (EE) and job satisfaction (JS) are identified in this study as the independent variables, and organizational commitment (OC) is identified as the dependent variable. The sample population consists of expatriate supply chain managers that are employed full-time in a Middle Eastern organization. The instrument used to measure employee engagement is the Work and Well-Being Survey (UWES-9) developed by Schaufeli, Bakker, and Salanova (2006). Job satisfaction is measured by applying the Job Satisfaction Survey (JSS) developed by Paul Spector (1985). Organizational commitment is measured by employing the Organizational Commitment Questionnaire (OCQ) developed by Mowday et al. (1979).

Brookfield Global Trends (2014) reports the average turnover rate of 12% for expatriates in multinational corporations, and 51% leave the company within two years of repatriation (De Ruiter et al., 2018). Gulf Cooperation Council (GCC) countries heavily depend on expatriate workers due to the small number of well-trained local citizens. Breach of PCF has a negative influence on expatriate managers that prompted intentions to quit to include physical, emotional, and mental exhaustion (Haak-Saheem et al., 2017; Quratulain et al., 2018; Sheikh, Cheema, Chaabna, Lowenfels, & Mamtani, 2019; Silbiger, Berger, Barnes, & Renwick, 2017).

This study is designed to investigate the various level of employee engagement (EE) and job satisfaction (JS) that influence organizational commitment (OC). This research helps to establish that keeping a committed workforce to preserve their skills and knowledge contributes to overall organizational success.

Nature of the Study

The nature of this study is a quantitative, non-experimental, correlational design that aims to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) to attempt to quantify and evaluate the supply chain managers for each variable. In contrast, qualitative research relies on the reasons behind various aspects of behavior. It focuses on the *why* and *how* of decision-making as compared to the *what*, *where*, and *when* of quantitative research.

Qualitative research requires the researcher to work closely and directly with the participants, which involves interviews and documented techniques that provide interpretation through decoding, describing, translating, and gathering insights through a natural approach (Creswell & Poth, 2018; Yates & Leggett, 2016). Barczak (2015) found a challenge of qualitative research arises when researchers typically provide some quotes from interviews to support their observations; the problem is that a few quotes do not present adequate support of findings. Too much discussion about the data collected may distract from the research questions being examined.

Discussion of Method

Unlike qualitative research, Yates and Leggett (2016) emphasized that quantitative research requires the researcher to stay distant and independent from the participants while examining the relationships among the variables, attitudes, and opinions of the groups. *Deductive reasoning* plays a significant role in quantitative research methods that construct hypotheses, test the hypotheses with data to confirm the theories, and frame the research questions (Barczak, 2015). Quantitative research is an ideal approach for this study to determine how things vary among the variables that exhibit 2-D effects by using a survey design with a

large number of participants, as opposed to the rich data gathered in qualitative research (Curtis,

Comiskey, & Dempsey, 2016; Yates & Leggett, 2016).

Discussion of Design

The quantitative research design is made up of four types, including descriptive,

correlational, quasi-experimental, and experimental (Wells, Kolek, Williams, & Saunders, 2015).

The data collection of a *descriptive research design* is mostly observational in nature, with a

focus on the current status of a variable or phenomenon (Wells et al., 2015). A *correlational*

research design uses the relationship between two or more variables based on statistical data

from natural observation. On the other hand, a *quasi-experimental research design* tries to

formulate cause-effect relationships with the variables by using pre-existing or naturally formed

groups because the researcher cannot randomly assign those groups (Curtis et al., 2016;

Leatherdale, 2019; Orcher, 2017; Schweizer & Furley, 2016). With the *experimental research*

design, the researcher aims to find a cause-effect relationship by controlling and randomly

assigning participants according to a group of variables rather than naturally occurring groups

(Dutra & Reis, 2016; Schweizer & Furley, 2016).

Summary of the nature of the study.

Neither quasi-experimental nor experimental designs are suitable for this study because

they seek to find a predictive cause-and-effect with no consideration of the relationship between

the independent and dependent variables. Quasi-experimental design and experimental design

(often called true experimental) are considered experimental; the main difference in quasi-

experimental design is the lack of essential features on experimental studies and randomization

(Leatherdale, 2019).

In a "true experimental" designs, researchers utilize the scientific method in empirical testing and random sampling to control and manipulate variables within control groups. The challenge of a "true experimental" design is the "impossibility of randomization and manipulation of certain variables, such as disease or health habits, where ethical issues must also be taken into consideration to perform testing on some health services" (Dutra & Reis, 2016, p. 2234).

The results of quasi-experimental design may compromise internal validity because the researcher does *not* randomly divide participants into experiment and control groups, which weakens the confidence of cause-and-effect relationships among the variables (Dutra & Reis, 2016). The descriptive design is also not appropriate for this study because the report should be summarized with a single variable percentage, which does not meet the objectives of this study. Therefore, a quantitative, non-experimental, correlational design is a better choice for this study to examine the relationship between the independent and dependent variables that relies on interpretation, observation, or interactions to conclude the investigation.

Research Questions

This quantitative correlation study is to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. Many researchers have used demographic variables such as age, gender, race, tenure, and leadership style as predictors of commitment (Garland et al., 2014; Lambert et al., 2017; Liu et al., 2018; Palupi, Cahjono, & Satyawati, 2017; Pregnolato et al., 2017; Yahaya & Ebrahim, 2016). The present study will examine ten research questions and the associated hypotheses.

RQ1: What is the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ2: What is the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ3: Is age a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ4: Is age a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ5: Is gender a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ6: Is gender a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ7: Is nationality a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ8: Is nationality a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ9: Is tenure a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ10: Is tenure a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

Hypotheses

$H_0 1$: There is no statistically significant relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha1: There is a statistically significant relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0 2$: There is no statistically significant relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha2: There is a statistically significant relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

H_03: Age is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha3: Age is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

H_04: Age is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha4: Age is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

H_05: Gender is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha5: Gender is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

H_06: Gender is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha6: Gender is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$7: Nationality is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha7: Nationality is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$8: Nationality is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha8: Nationality is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$9: Tenure is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha9: Tenure is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$10: Tenure is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha10: Tenure is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Theoretical Framework

The two fundamental theories that serve as the foundation for this research are Job Demands-Resources (JD-R) theory and Social Exchange Theory (SET) (Bakker & Demerouti, 2017; Musgrove, Ellinger, & Ellinger, 2014; Zoller & Muldoon, 2019). The work of organizational theorists develops a framework that promotes relationships among employee engagement, job satisfaction, and organizational commitment. From the JD-R theory and SET theoretical perspectives, Figure 1 was designed to illustrate the conceptualized relationship.

Discussion of theory 1: job demands-resources theory.

The Job Demands-Resources (JD-R) theory was presented in 2001 to ascertain antecedents of burnout that focus on working conditions specific to every occupation and categorized job demands or job resources that lead to well-being, which in turn influence job performance and turnover intention (Bakker & Demerouti, 2017; Bakker, Demerouti, & Sanz-Vergel, 2014; Lesener, Gusy, & Wolter, 2019; Wu et al., 2019). The Job Demands-Resources (JD-R) theory gains its popularity from its *flexibility* to accommodate the different work environments in a variety of occupations.

Job resources (e.g., social support and task variety) are the predictors of employee engagement, job satisfaction, and organizational commitment that link to turnover intentions

(Bakker & Demerouti, 2017; Kulikowski & Orzechowski, 2018; Wu et al., 2019). Conversely, job demands are the primary cause of burnout that leads employees to poor health-related results and increased sickness and absence (Bakker & Demerouti, 2017; Kulikowski & Orzechowski, 2018; Wu et al., 2019). Demerouti et al. (2019) and Wu et al. (2019) argued that work stress could reduce the employees' organizational commitment, especially in a state of resource exhaustion.

   Discussion of theory 2: social exchange theory.

   Social Exchange Theory (SET) shows human interaction in the form of give-and-take tangible or intangible activities according to rewards and costs; yet, people tend to choose higher rewards with the least costs (Adongo, Kim, & Elliot, 2019). SET's popularity has risen because it can be tested and applied in a wide range of social situations. It includes workplace relationships (e.g., employee and supervisor) that affect employee engagement, job satisfaction, and organizational commitment, which in turn lead to turnover intention (Musgrove et al., 2014; Zoller & Muldoon, 2019). The organizational theorists who have been preeminent in sociology and social psychology are George Homans (1961), Gouldner (1960), John Thibaut (1959), Harold Kelley (1959), and Peter Blau (1964), who identified and expanded the Social Exchange Theory (SET) over the years (Adongo et al., 2019; Musgrove et al., 2014; Zoller & Muldoon, 2019).

   A social exchange entails a series of interactions between two or more persons and serves as a fundamental principle of SET with reciprocal behavior, tangible and/or intangible beneficial actions by creating a desire to give back to the other (Colquitt, Baer, Long, & Halvorsen-Ganepola, 2014; Musgrove et al., 2014; Zoller & Muldoon, 2019). Musgrove et al. (2014) addressed debts and repayments in various forms, such as financial, emotional, and behavioral.

Organizational commitment.

Mowday et al. (1979) defined organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization" in connection with three factors: "(1) a strong belief in and acceptance of the organization's goals and values; (2) a willingness to exert considerable effort on behalf of the organization; and (3) a strong desire to maintain membership in the organization" (p. 226). Mowday et al. (1982) found affective responses to the job, including job satisfaction and organizational commitment, emerge from the interaction of three factors: (1) job expectations, (2) organizational characteristics and experiences, and (3) job performance level. Mowday et al. (1982) identified work experience as the primary socializing force that represents an essential influence of psychological attachments, which formed loyalty and identification with the organization. Mowday et al. (1982) suggested the linkage of individuals to organizations should not be viewed as static phenomena because "across time attitudes, and behavioral acts appear to have a cyclical or reciprocal effect" (p. 205).
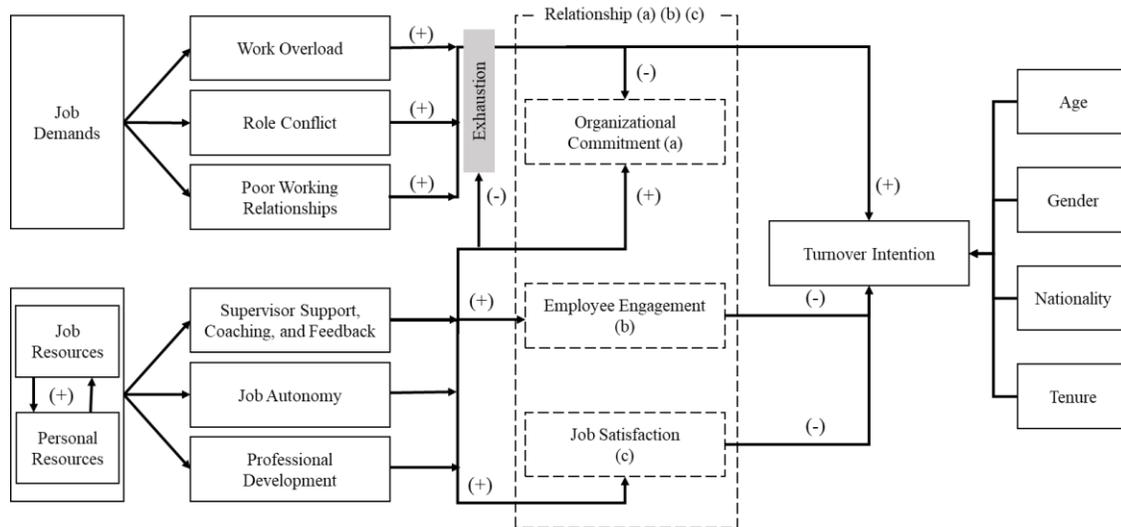
Figure 1. Relationships between theories and variables.
Source: Jones (2018)
Note.
[a] Organizational Commitment (OC): Dependent Variable
[b] Employee Engagement (EE): Independent Variable
[c] Job Satisfaction (JS): Independent Variable

Discussion of relationships between theories and variables.

Lesener et al. (2019) described the Job Demands-Resources (JD-R) theory as pathogenic health indicator. It shows the relationship between job characteristics and employee well-being where job demands predict burnout and exhaustion and job resources predict employee engagement and satisfaction, which ultimately impact employee organizational commitment, as shown in Figure 1. Smyth and Zimba's (2019) study adopts a more balanced approach using Social Exchange Theory (SET), where two people come together to build an employment relationship in social exchange. The support and recognition from the organizational level play an essential role in an individual's intention to stay in or leave the organization (Smyth & Zimba, 2019). The study of Smyth and Zimba among the apprentice participants showed unfair pressure on workload, "you are not forces to stay on, but it looks…negative towards you" (p. 106). Most of the apprentice participants are willing to go the extra mile because of the overtime payment; however, they felt unfair pressure (Smyth & Zimba, 2019). When employees feel they receive fair treatment from employers, the natural reciprocation of positive treatment leads to an increase in employees' motivation and commitment to the workplace.

The Job Demands-Resources (JD-R) theory illustrates increased work stress and burnout factors associated with *high job demands* and *low job resources*; while *high job resources* show increased employee engagement and job satisfaction with higher levels of performance (Bakker & Demerouti, 2014). Studies show that *higher personal resources* (e.g., self-efficacy, optimism, self-esteem) are positive self-evaluations. These link to resiliency, which enables individuals to control and impact their environments successfully (Bakker et al., 2014; Bermejo-Toro, Prieto-Ursúa, & Hernández, 2016).

Summary of the conceptual framework.

Both Job Demands-Resources (JD-R) theory and Social Exchange Theory (SET) propose linkages and relationship as well as the definition that require various forms and types of research and scholarship to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization (Bakker & Demerouti, 2017; Musgrove et al., 2014; Zoller & Muldoon, 2019). Demerouti et al. (2019) showed the burnout pattern based on JD-R theory relates to well-being that is harmful not only to health-related outcomes (i.e., exhaustion or disengagement), but also motivation due to the scarcity of job resources.

The variables in this study are employee engagement, job satisfaction, and organizational commitment. Both employee engagement and job satisfaction are the *independent variables,* since the study hypothesizes that their presence could have a relationship with the dependent variable. Organizational commitment is the *dependent variable*, and it serves as a desirable result.

Definition of Terms

Baby-Boomers: an individual who was born between 1946 and 1964; and was 55-73 years old at the time of this research (Reiser, Van Vreede, & Petty, 2019).

Employee Engagement: an individual who experiences high levels of energy with a positive, fulfilling work-related state of mind, which is not focused on any particular object, event, individual, or behavior that is characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004).

Expatriate: apply the terms of 'employee' and 'expatriate' interchangeably (De Ruiter et al., 2018).

Job Satisfaction: an individual's feeling about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs (Spector, 1997).

Generation X: an individual who born between 1965 and 1981; and was 38-54 years old at the time of this research (Reiser et al., 2019).

Millennials: an individual who born between 1982 and 2000; and was 19-37 years old at the time of this research (Reiser et al., 2019).

Organizational Commitment: a psychological attachment of an employee with a strong commitment to his/her organization, high performance to achieve organizational goals (Cesário & Chambel, 2017).

Psychological Contract Fulfillment (PCF): an employee's belief that an organization generally fulfills its promised obligations toward him/her (De Ruiter et al., 2018).

Supply Chain Manager: a participant who performs the role of either a specialist, team leader, supervisor, or manager; and willingly express his/her opinions (Smyth & Zimba, 2019).

Turnover Intention: an employee's behavioral in response to a breach of PCF that perceived negative reciprocity norms and reduced affective commitment resulting in increased intentions to leave the company (Quratulain et al., 2018).

Assumptions, Limitations, Delimitations

Assumptions, limitations, and delimitations focus on the researcher's restrictions and boundaries when conducting a scholarly study because it creates a framework for readers that adds clarity and knowledge to the uncertain areas. It involves aspects somewhat out of the

researcher's control, or perhaps the components that limit the scope and determine boundaries in the research. Gregor and Klein (2014) explained how anonymity and confidentiality would be preserved, and participants can withdraw from the study at any time with no consequences.

Assumptions

Several assumptions framed this quantitative study. The first assumption concerns the participants consisting of managers in the supply chain organization who can describe their level of job satisfaction, degree of engagement in work-related activities, and level of organizational commitment. The information shared by the sample population is *honest*, *reliable*, and *valid* related to their job in answering survey questions to the best of their knowledge and ability, without any manipulation to create meaning for this study (Orcher, 2017). Additionally, the assumption is that the measurements used in this study are valid and reliable measures.

Limitations

The limitations of this study are expected because of circumstances beyond researchers' control. According to Lee, Weber, and Rivera (2019), four dimensions of national culture for individuals are individualism, power distance, uncertainty avoidance, and masculinity that leads to different ways of thinking, feeling, and acting. Whitehall (2018) suggested that limitations may arise in terms of the demographic characteristics of the participants based on their age, gender, culture, race, education, position, and experience, which may affect the study outcomes.

The study is limited to the supply chain managers who voluntarily participate in the survey. However, some participants may decide not to take part in the survey due to feelings of job dissatisfaction. In this case, non-participants' data is not reported in this study. Moreover, the research focuses on employees working in the Middle East; therefore, the findings might not

be generalized to other countries' workforces that are different from the Middle East in terms of employment practices and cultural systems.

Delimitations

The delimitation process gives researchers control to limit the scope of the data within the defined boundaries of this study (Pham-Thai et al., 2018; Wu et al., 2019). The participants are managers working in the supply chain industry in the Middle East, but other managers in different sectors might encounter different experiences and company cultures. Another delimitation was the geographic location of the study, the Middle East. Since supply chain management operations are spread out to various areas in the Middle East, it enables the researcher to have greater access to a larger population. Gregor and Klein (2014) explained the accuracy of the research findings depends upon the adequate representation of the population. In other words, if the sample population is too small, the results of the data collected has a large margin of error; thus, the results are less valid.

Significance of the Study

Reduction of Gaps

The significance of this research may be explained through an examination of the existing literature related to employee engagement, job satisfaction, and organizational commitment. Bakker and Demerouti (2014) posed the Job Demands-Resources (JD-R) theory as a model to explore employees' well-being, which most organizations use to predict employee engagement and employee burnout. The Social Exchange Theory (SET), formulated by Thibauti and Kelley (1959, Homans (1961), and Blau (1964), helps explain the interactive exchange relationship between two people and how they benefit from each other. The measures of employee engagement, job satisfaction, and organizational commitment are determined by using

the Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006), Job Satisfaction Survey

(JSS; Spector, 1985), and Organizational Commitment Questionnaire (OCQ; Mowday et al.,

1979).

The findings benefit the organizations because engagement, satisfaction, and

commitment contribute to the performance, efficiency, and productivity of the staff. Chan

(2019) argued employee engagement relates to many workplace indicators like job satisfaction,

reduced burnout, and performance. However, family demand acts as an antecedent to employee

engagement because after-work activities are as important as those during business hours. A

positive employee engagement appeared as an influential variable in leading organizational

success because it affects employee satisfaction, loyalty, productivity, and also customer

satisfaction. Not only does the employee engagement affect the individuals' well-being,

productivity, happiness, and turnover intentions; it may also predict customer satisfaction, the

company's reputation and, ultimately, shareholder value (Chan, 2019). Karatepe, Yavas,

Babakus, and Deitz (2018) described employee engagement as "feelings of energy, absorption"

(p. 148) with positive attitudes towards his or her job and organization. Lu, Lu, Gursoy, and

Neale (2016) asserted that "highly engaged employees have higher job satisfaction when

compared to disengaged employees" (p. 741).

If this study finds a contributing cause of employees' disengagement and job

dissatisfaction, the organization may experience reduce employee turnover rate, lower hiring

costs, and lower training costs, resulting in a more productive working environment. The study

could fill significant gaps in academic understanding of employee engagement, job satisfaction,

and organizational commitment in supply chain management. Employees are unlikely to leave

the company when they feel a sense of personal achievement and success in their job (Lee & Ok, 2016).

Implications for Biblical Integration

According to Van Duzer (2010) and Hardy (1990), businesspeople are to be stewards of God's creation and its gift—business exists to serve in two dimensions: (1) to allow individuals to express themselves in meaningful and creative work while helping them flourish, and (2) to create goods and services that will benefit the community.   Proverbs 3:5 states, "Trust in the Lord with all your heart, and lean not on your own understanding; in all your ways acknowledge Him, and He shall direct your paths" (New King James Version).

The Christian scriptures are the source of work as a vocation to nourishing employee engagement, job satisfaction, and organizational commitment. The scriptures hold many life lessons that advance excellence in a personal or business context by selecting the path of righteousness for the future. One must understand and appreciate human nature itself to understand what stimulates individual engagement, satisfaction, and commitment, since people are moved by both intrinsic and extrinsic motives to help one another (Tsounis & Sarafis, 2018).

It is imperative that employees have a chance to grow personally and professionally to support business goals that foster a healthy, safe, and productive working environment. This is in line with Titus 2:7: "Show yourself in all respects to be a model of good work, and in your teaching show integrity, dignity" (English Standard Version). For this reason, human resources managers should seek out and recruit employees with a passion for excellence, commitment, and dedication to achieve organizational goals.

Employee engagement and development are essential components of the Bible's values by living lives of integrity and truthfulness. It is also critically important to ambitious employees

to develop new skills and capabilities by incorporating Christian values and teachings in both

personal and professional settings. Keller and Alsdorf (2012) revealed that Christian faith

provided a resource for ethical behavior, which serves as the foundation for honoring human

rights that may help to support employee engagement, job satisfaction, and organizational

commitment. The business leaders, managers, and employees can be influenced by the Biblical

teachings based on their commitment to the service of God, which is in line with Peter's

command, "not domineering over those in your charge, but being examples to the flock" (1 Peter

5:3, English Standard Version).

The exchange relationship between supervisors and employees depends upon reciprocal

trust, support, and shared loyalty that offers an increase in engagement, satisfaction, and

commitment (Lee & Ok, 2016). Srivastava and Sushil (2017) found a robust alignment

framework to include resource commitment, structure, people, rewards, and subunit policies and

programs help aligns with an organization's design strategy to achieve a high level of integrity in

strategy execution. Keller and Alsdorf (2012) stated, "The commandments of God in the Bible

reveal the meaning of liberation where God calls us to be what he creates us to be" (p. 39).

Relationship to Field of Study

The lifeblood of every organization is a talented and skilled workforce whose strengths

help an organization operate more efficiently to sustain business success. Effective human

resource management acts as an integral part of an organization that helps to motivate employees

while advancing organizational effectiveness and growth. In return, an organization increases

employee retention rate, which saves money on finding and training new employees (Eneh &

Awara, 2017).

The role of human resource management in an organization affects all aspects of the business, so managing human capital to keep employees engaged and satisfied helps ensure a return on the business's investment in its employees. Bakker and Demerouti (2017) and Bommelje (2015) revealed that transformational leaders had a positive influence on their staff's daily engagement through goal-setting to create purpose and directions, which drives right behaviors and meaningful results.

According to Järlström, Saru, and Vanhala (2018), the cornerstone of effective human resource management is to help build an ethical organization with mutual trust and respect. In high-performing organizations, the human resources professionals work closely with line managers in supplying the tools, guidance, and counseling to meet the business objectives. Human resources professionals should evolve into strategic roles and business partners (Järlström et al., 2018). They act as a challengers of the status quo, visionaries who can find alternatives to give the business partners choices and are able to think "outside the box" and be a facilitator for change in supporting an organization with employee engagement, job satisfaction, and organizational commitment (Eneh & Awara, 2017).

Practical strategic human resource management helps deliver corporate growth, as it gives an organization a competitive advantage to succeed in the business world—for instance, in terms of the ability to communicate effectively, pose as a functional expert, develop human resources business processes, and implement solutions that drive efficiency and effectiveness across the organization (Eneh & Awara, 2017).

Summary of the significance of the study.

Effective human resource management is critical in managing talent to create and deliver value in terms of employee engagement, job satisfaction, and organizational commitment.

Moreover, it helps drive change in management in the alignment of human resources with business strategies to ensure the organization can realize its goals (Eneh & Awara, 2017). Understanding that employees want their job to have meaning and be fulfilled with purpose has an inherent impact on the overall employee engagement and satisfaction that affects their commitment, which in turn helps to minimize the costs and adverse effects of unwanted and unplanned resignations. Colossians 3:23 states, "Whatever you do, work heartily, as for the Lord and not for men" (English Standard Version).

The working environment should not only provide encouragement, but also promote continuous learning of employees; the organization needs to equip employees with the support and resources for professional and developmental opportunities. Proverbs 22:6 states, "Train up a child in the way he should go; even when he is old, he will not depart from it" (English Standard Version). Milner, McCarthy, and Milner (2018) suggested that transformational leaders promote positive working relationships by providing well-tuned situational judgments in the form of effective communication, trust, support, and taking into consideration the different roles inherent in leadership.

A Review of the Professional and Academic Literature

The literature review for this study includes a critical analysis and synthesis of past and contemporary literature and challenges the theoretical framework of the research. The guiding structure of this research centers on the supply chain management based on the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2014) and Social Exchange Theory (SET) (Thibaut & Kelley, 1959; Homans, 1961; Blau, 1964). Rowe (2014) emphasized that researchers need to review the work of other scholars to gain insights and understanding about the topic

before beginning data collection and analysis to contribute new information to the study. The researcher aims to do the same in this literature review.

The literature review starts with an overview of the theoretical framework already described and its relevance to this study's research questions. Following this overview, the literature review should cover research of generational cohorts on approaches by which supply chain management can keep multigenerational employees engaged, satisfied, and committed to their work. After that, the literature review discusses different leadership styles to promote a supportive working environment. Next, the literature review provides an overview of employee disengagement for the supply chain management to be aware of, followed by retention and turnover to discern the relationships among employee engagement, job satisfaction, and organizational commitment. Finally, the independent and dependent variables of employee engagement, job satisfaction, and organizational commitment are defined. The literature review ends with a summary of the chapter.

The search process entails a review of 329 peer-reviewed journals, twelve books, two dissertations, and sixteen non-peer-reviewed journals. The literature review involves using many resources, including Jerry Falwell Library at Liberty University, Emerald Insight, ABI/Inform Complete, SAGE Journals, Business Source Complete, PsycARTICLES, Google Scholar, EBSCOhost, and ProQuest Central.

Key search terms used to locate the literature included *employee engagement, job satisfaction, organizational commitment, Social Exchange Theory (SET), Job Demands-Resources (JD-R) theory, generational cohorts, employee engagement, organizational culture, disengaged employees, employee retention, employee turnover, retention strategy, self-efficacy, work-life balance, work environment, employee development, supervisor support, leadership,*

coach, rewards recognition, supply chain management, Middle East, and various combinations of these terms.

The researcher uses the UlrichsWeb search on all sources to determine which articles are peer-reviewed journals. Table 1 below shows a summary of the sources by age in the literature review.

Table 1

Summary of Sources in the Literature Review

Reference Type	Less than 5 Years	Greater than 5 Years	Total	Cumulative %
Peer-Reviewed Journals	276	53	329	91.64%
Seminal and Contemporary Books	3	9	12	3.34%
Dissertations	2	0	2	0.56%
Websites and Others	14	2	16	4.46%
Total Sources	295	64	359	
Percentage of Total	82.17%	17.83%	100%	

Main element 1: social exchange theory and supply chain management.

The underpinning of Social Exchange Theory (SET) is a series of collaborations between two or more persons through an interactive process with the expectation that the exchange would offer benefits to both (Nunkoo, 2015). The primary principle of SET is to strengthen the employer-employee relationships over a period of time. The exchange of non-monetary rewards (i.e., flexible timing) and monetary rewards (i.e., bonuses) could evolve into trust, commitment, mutuality, and reciprocity. Alhassan, Ghazali, and Isha (2017) and Chiang, Chen, and Wu (2015) argued that communication and information sharing is an integral part of the supply chain management process. It improves cross-functional integration that influences the supply chain managers' engagement, satisfaction, and commitment to their work and within an organization based on SET.

The exchange of non-monetary and monetary helps increases the employees' (i.e., supply chain managers') job performance and loyalty towards the organization. It helps the development of a supply chain relationship that needs the decision-makers to plan "contracting and collaboration" within the supply chain management in mutually beneficial and reciprocal ways that reach higher levels of engagement, where trust and commitment are fostered between employers and employees (Tsanos & Zografos, 2016).

According to Harden, Boakye, and Ryan, (2018), the fairness of rewards is an example of the exchange between employer and employee because it creates the strong bond of an employer's investment in an employee, hence increasing organizational commitment. Employees experience a new level of engagement. Still, it depends on the extent of resources they obtain from an organization (i.e., supply chain management), which constitutes a two-way exchange. During the exchange process, Nunkoo (2015) pointed out that people are dependent on one another to achieve the results they value.

Harden et al. (2018) uses SET to explain that when employers are supportive of their staff (i.e., supply chain managers), a feeling of obligation arises among the employees from the exchange to adopt an effective and efficient approach with a positive attitude, which leads to organizational commitment. Tsanos and Zografos (2016) also adopted SET to show the relationship between the supply chain managers and the supply chain partners (customers) to elevate the service provider to the next level. Politis, Giovanis, and Binioris (2014) revealed that creating long-term relationships with customers is essential. The supply chain managers must work closely with the customers and the various departments in the supply chain management where their engagement, satisfaction, and commitment is affected in multiple levels of their work and the organization.

According to Liu, Wang, and Huang (2017b), the Social Exchange Theory (SET) assumes as the exchange process advances in supply chain management with time, the exchange parties employ the relationship commitment by way of express their trustworthiness in the exchange relationship. Wu, Chuang, and Hsu (2014) suggested that SET in supply chains defines the antecedents of information sharing and collaboration based on trust, commitment, reciprocity, and power. Politis et al. (2014) emphasized the strategic role of the supply chain manager has shifted to being more customers-oriented, expecting higher levels of engagement, satisfaction, and commitment to work effectively in the supply chain management ensuring the availability of the *right product*, in the *right quantity* and the *right condition*, at the *right place*, at the *right time*, with the *right information* and at the *right price*.

Supply chain managers recognize the impact of perceived organizational support and commitment by considering the quality of social exchanges between employer and employee. It helps to fulfill socio-emotional needs such as esteem and emotional support and could result in greater affective commitment (Kim, Eisenberger, & Baik, 2016). Due to the nature of the supply chain manager's job, Harden et al. (2018) revealed that they naturally develop the social exchange relationships with their customers, supervisors, colleagues, and across the functional teams in the supply chain management to instill a sense of obligation to reciprocate positive behaviors.

In the context of social exchange, a study shows support team members that help another team member (i.e., supply chain managers) to explore new things through positive interpersonal relationship and interaction could add meaning to their work and displays more engagement with team members (Shahidan, Hamid, Kamil, Rani, Aziz, & Hassan, 2016). Smyth and Zimba

(2019) revealed that employees who received professional development, training, and promotion may perceive higher levels of organizational support than other groups of employees.

Pohl and Galletta (2017) suggested that supervisor support in the form of social exchanges like empathy, caring, comfort, and encouragement are a primary source of employees' satisfaction. Aktar and Pangil (2017) found that relationship between supervisors and the supply chain managers play a significant role in social exchanges. For instance, developmental feedback given to an employee proves that the supervisor cares about their career growth. In return, an employee reciprocates with high engagement, satisfaction, and commitment to their job.

Main element 2: job demands-resource and supply chain management.

According to Schaufeli (2017), the Job Demands-Resources (JD-R) theory was introduced "about 15 years ago to understand burnout, a chronic state of work related psychological stress that characterized by exhaustion, mental distancing, and reduced personal efficacy" (p. 121). After some years, it has been extended to employee engagement characterized by vigor, dedication, and absorption (Schaufeli, 2017). The most critical aspect of the theory is two broad categories of working conditions consisting of *job demands* and *job resources*. This can be a negative or positive influence on employee well-being and the organizational results; however, they are relevant to a different type of occupation in which employees work with things, information, or people (Demerouti et al., 2019).

Job demands prompt a stress process where employees lack resources, leading to adverse outcomes, namely poor performance, sickness, absence, and low organizational commitment (Schaufeli, 2017). When the employees experienced high job demands, their job resources are likely to be low, increasing stress and burnout. From the supply chain management perspective,

the nature of the supply chain managers' job complexity on customer orientation and innovative

approach may vary within carriers and logistical services intermediaries. The supply chain

managers may encounter higher job demands due to logistical service intermediaries' need to

carry out unique, heterogeneous customer requirements (Jeng, 2018). On the other hand, the

carriers provide relatively standard services and tasks routine in nature; the job demands for

some employees may be at a lower level (Jeng, 2018).

Job resources, also known as a "motivational process," trigger excessive job resources in

achieving work goals, and reduce job demands (i.e., work pressure) and the associated costs. It

stimulates personal growth and development that leads to positive results such as organizational

commitment, intention to stay, autonomy, employee safety, corporate support, and outstanding

work performance (Lesener et al., 2019; Schaufeli, 2017). Jeng (2018) found job resources

intrinsically motivating since it serves employees' basic needs like autonomy. At the same time,

it acts as extrinsically stimulating due to being conducive to carrying out work goals. Job

resources is ingrained with motivational quality due to the energetic feeling of the employees,

which makes them respond with more engagement and better results. From the supply chain

management perspective, some supply chain managers may describe their job complexity as

more of job resources due to having autonomy, which could boost their morale and confidence to

promptly respond to customers' requests (Jeng, 2018).

Bakker and Demerouti (2014) found that personal resources is an essential extension of

the theory. It has a positive self-evaluation of the supply chain managers' work associated with

resiliency and an individual's ability to control and affect their environment (i.e., promptly

respond to customers' requests). By doing so, customer satisfaction increases customer loyalty,

enhances the organization's cash flow, and reduces operating costs by showing deep listening

skills and responding to their needs (Omoruyi & Mafini, 2016). Supply chain managers with plenty of job resources recognize the importance of reliability as it impacts the fulfillment of orders and timely execution of logistic cycles in supply chains (Lukinskiy, Lukinskiy, & Churilov, 2014). According to Jeng (2018), jobs with a variety of resources require different logistical skills and knowledge to successfully execute supply chain managers' work that drives motivation and creativity behaviors.

Schaufeli (2017) reports that *personal resources* (stable personality traits) is the antecedent of *job demands* and *job resources*. According to Addis et al. (2019), employees with higher personal resources are more goal-driven and intrinsically motivated to pursue their goals, leading to higher performance, satisfaction, and commitment. Bakker and Demerouti (2014) showed personal resources could be taught (i.e., optimism, resilience, and self-efficacy) through the development of individuals' knowledge and skills, incorporate into their daily work routines, so they acquire new competencies to help with their job tasks.

Main element 3: generational cohorts.

Benson and Brown (2011) defined a generation as "a cohort of persons passing through time that come to share a common habitus, hexis and culture, a function of which is to provide them with a collective memory that serves to integrate the cohort over a finite period of time" (p. 1844). In a workplace setting, Sarraf et al. (2017) explained the grouping of employees by generation (i.e., Baby Boomers, Generation X, and the Millennial generation) is motivated by the belief that they each have a different set of values and attitudes towards work based on shared events and experiences. Managers need to take into account these generational differences when managing their workforce. Table 2 provides an overview of personal, lifestyle, and workplace characteristics among the generations, such as Baby Boomers, Generation X, and Millennials.

Table 2

Personal, Lifestyle, and Workplace Characteristics by Generation

Views Toward	Baby Boomers (1946 – 1964)	Generation X (1965 – 1981)	Millennials (1982 – 2000)
Age at time of this research	55 – 73	38 – 54	19 – 37
Core values	Optimism Iinvolvement	Skepticism Fun Informality	Realism Confidence Extreme fun Social
Family	Disintegrating	Latch-key kids	Merged families
Education	A birthright	A way to get there	An incredible expense
Work ethic and values	Workaholics Work efficiently Personal fulfillment Desire quality Question authority Great team players	Eliminate the task Self-reliance Want structure and direction, skeptical	What is next Multitasking Tenacity Entrepreneurial Tolerant Goal oriented
Work is…	An exciting adventure	A difficult challenge A contract	A means to an end Fulfillment
Interactive style	Team player Loves to have meetings	Entrepreneur	Participative
Communication Media	Touch-tone phones Call me anytime	Cell phones Call me only at work	Internet Picture phones E-mail
Messages that motivate	You are valued You are needed	Do it your way Forget the rules	You will work with other bright, creative people
Feedback and rewards	Do not appreciate it Money Title recognition	Sorry to interrupt, but how am I doing? Freedom is the best reward	Whenever I want it, at the push of button, meaningful work Want continuous feedback
Ideal leaders	Commanding thinkers	Coordinating doers	Empowering collaborators
Work and family life	No balance Work to live	Balance	Balance

Source: Cook (2015); Hammill (2005); Wasserman (2007)

***Baby Boomers*.**

Of the three generational categories (i.e., Baby Boomers, Generation X, and Millennials), Lapoint and Liprie-Spence (2017) reported the Baby Boomers, born between 1946 and 1964, draw the *largest population* with approximately 40% of the workforce. According to "American generation fast facts" (2020), "at the end of 1946, first year of the baby boom, there were approximately 2.4 million baby boomers. In 1964, the last year of the baby boom, there were nearly 72.5 million baby boomers." Some examples of significant life-changing events while the Baby Boomers grew up that defined the world from many different perspectives include the Civil Rights Movement, the Vietnam War, and the first moon landing (Lapoint & Liprie-Spence, 2017).

Sarraf et al. (2017) and Wiedmer (2015) described the Baby Boomers as *work-centric, goal-oriented,* with *seniority* considered essential, and at the same time they expect to be valued and rewarded. Hoole and Bonnema (2015) find the Baby Boomers to be highly competitive, ambitious, and work-driven because they believe in commitment, and are therefore most likely to spend the remainder of their working years with the same organization. Lapoint and Liprie-Spence (2017) highlighted some of the strengths of the Baby Boomers from a teamwork perspective as dedication, experience, and knowledge; on the other hand, some of their weak points are that they appear to struggle with technology, work-family balance, and conflicts along with recognition and awards. Wiedmer (2015) reveals that it is very tricky and challenging to lead or supervise Baby Boomers because of their competitiveness, which can quickly upset them if they perceive threats to their authority or prestige. The underlying motivators for the Baby Boomers are money, power, and recognition (Wiedmer, 2015). Rewards and recognition help motivate the Baby Boomers to achieve more since they are competitive.

Generation X.

Generation X, born between 1965 and 1981, is also referred to as "Gen Bust" and the "lost generation," encompassing approximately 84 million people in the United States (Wiedmer, 2015). Lapoint and Liprie-Spence (2017) found Generation X to be more *risk-takers* who want a work-life balance, yet are skeptical and committed to their work and colleagues. Some of the strengths of Generation X are their independent, adaptable, techno-literate, and dare to challenge the status quo (Lapoint & Liprie-Spence, 2017). Unlike the Baby Boomers, Generation X does not see "seniority" as necessary or important (Sarraf et al., 2017).

Generation X views itself as self-reliant and learns to become resourceful, responsible, and self-sufficient because as children, they experienced dysfunctional families such as broken homes, absentee parents, or perhaps both parents are working (Wiedmer, 2015). Surrounded with technology, Generation X view work as a way of obtaining professional knowledge and honing skills while not being afraid to embrace technological innovation (Betz, 2019; Gordon, 2017). When Generation X performs well at the workplace, they expect immediate recognition through titles, praise, promotions, and pay; however, they do not have the patience to wait for promotion and salary increases (Sarraf et al., 2017).

Suomäki, Kianto, and Vanhala (2019) explained Generation X as individualistic and cynical but having flexible personal traits; at work, they value independence, quality above quantity, and competent leadership. Generation X's primary philosophy is "work to live" instead of "live to work" while enjoying flexible work arrangements (Suomäki et al., 2019). Generation X strives for money, challenges, and advancement in their careers but focus on work-life balance; nevertheless, they are more likely to change jobs to get ahead than Baby Boomers (Hoole & Bonnema, 2015).

Millennials.

The Millennial generation, born between 1982 and 2000, is also referred to as "Generation Y" and makes up approximately 76 million Americans, which constitute the largest generational cohort since the Baby Boomers (Ruiz & Davis, 2017; Wiedmer, 2015). The average employment tenure of the Millennials is 3.2 years at a job in the United States (Ruiz & Davis, 2017). One of the defining characteristics of the Millennial generation is being *digital natives* because they have experienced digital technology throughout their lives (Venter, 2017). According to Cattermole (2018), Millennials are the first generation to enter the workplace with a better grasp of an essential business tools than employees in previous generations.

Given Millennials' skills and knowledge, they come to the work environment with high demands, not only asking for creative reward packages but also to influence the way they work (Sarraf et al., 2017; Wiedmer, 2015). Some of the Millennials are drawn by large salaries, while others are drawn to meaningful work with an emphasis on inherent economic returns and recognition (Gordon, 2017; Suomäki et al., 2019).

The Millennial generation exhibits conditional loyalty, in which they are more likely to leave a company for a better job, better pay, or a better work environment (Ruiz & Davis, 2017). Millennials are likely to be uncomfortable with rigorous corporate structures and turned off by information silos because they expect speedy progression, a varied career growth with developmental opportunities, and continuous feedback (Jha, Sareen, & Potnuru, 2019). In other words, Millennials are often stereotyped as being anxious, demanding, and feeling entitled in the workplace, according to Mehra and Nickerson (2019). Yet, they expect a management style and corporate culture notably different from anything that has gone before, one that satisfies their needs (Bejtkovsky, 2016; Suomäki et al., 2019).

Main element 4: leadership.

Leadership style – laissez-faire or hands-off.

"Laissez-faire leadership" or "hands-off leadership" is described as an *absence of effective leadership* because they avoid making decisions, ignore problems, refuse to intervene, and often do not meet the expectations of their subordinates in different generations in the workplace (Ågotnes, Einarsen, Hetland, & Skogstad, 2018; Yahaya & Ebrahim, 2016). Yahaya and Ebrahim (2016) stressed that *laissez-faire leadership* has the least amount of leader involvement in employees' work, as well as totally lacking feedback or rewards. A perception of laissez-faire leadership among the employees and unfulfilled leader guidance may harm the team's performance due to leaders failing to respond to urgent questions and being absent when needed (Wellman, Newton, Wang, Wei, Waldman, & LePine, 2018).

Leadership style – transactional.

The model of transactional leadership was developed by Burns (1978), where one person connects with others for an exchange of valued things that are economic, political, or psychological in nature (Yahaya & Ebrahim, 2016). *Transactional leadership* emphasizes managing the performance of employees and outcomes based on the study of Bass (1985), an extension of Burns' work (Jensen, Andersen, Bro, Bøllingtoft, Eriksen, Holten, Jacobsen, Ladenburg, Nielsen, Salomonsen, Westergard-Nielsen, & Würtz, 2019; Yahaya & Ebrahim, 2016; Lan, Chang, Ma, Zhang, & Chuang, 2019). It involves the exchange between leaders and followers by applying rewards and penalties to stimulate team or employee performance. Lan et al. (2019) found that transactional leaders empower their employees to recognize their own interests and reduce workload anxiety while encouraging them to focus on organizational goals, including customer service and increased production. Yahaya and Ebrahim (2016) revealed that

employees are most likely to fulfill leaders' requests due to the exchange or rewards offered by

the leaders, but not because they are committed to or passionate about their jobs.

Leadership style – transformational.

According to Kim and Shin (2019), *transformational leadership* studies have drawn the

interest of many researchers and enjoyed high popularity for nearly three decades. Many studies

have reported that transformational leadership improves organizational effectiveness by fostering

employees' motivation, commitment, and self-efficacy, ultimately leading them to reach their

potential for a shared purpose. Transformational leadership shows motivation by creating

positive and valuable changes in subordinates (Lan et al., 2019). Additionally, transformational

leadership increases employees' morale and influences them to have the same vision and to

enhance team performance in a variety of ways to reach organizational goals (Lan et al., 2019).

Researchers have found a positive and significant relationship between transformational

leadership and affective commitment, since leaders promote developmental opportunities. In

turn, employees feel an emotional attachment to their organization while increasing their

engagement and job satisfaction (Imen, Sallan, Pep, & Fernandez, 2018). According to a study of

Burns (1978), transformational leadership is believed to be a mutual influence process that

affects leader-subordinate relationships where leaders and followers are mutually transformed

through the dynamic and reciprocal rules of the exchange process (Nielsen, Skogstad, Gjerstad,

& Einarsen, 2019). Transformational leaders seek to develop, share, and sustain a vision by

transforming (and motivating) employees through trust and supportive leadership, while

promoting developmental opportunities for the staff to succeed in their organizational goals

(Jensen et al., 2019; Nielsen et al., 2019).

Leadership style – coaching.

Effective transformational leaders are likely to incorporate coaching concepts in the workplace to win the hearts and minds of the employees by recognizing each person's uniqueness and treating them individually to generate feelings of trust and satisfaction (Ratiu, David, & Baban, 2016). Raza, Ali, Ahmed, and Moueed (2017) reported that traditional management practices of commanding and controlling were no longer useful, but instead focusing on supportive leadership with coaching, motivation, guidance, and developmental opportunities to increase employee engagement, job satisfaction, and organizational commitment. Hsieh and Huang (2018) discussed five dimensions of fostering leader-as-coach effectiveness, including *open communication, team approach, valuing people, accepting ambiguity, and facilitating development.*

Lynn (2017) referred to the GROW model (Grow-Reality-Options-Will) as a valuable leadership tool when conducting a coaching discussion with subordinates. First, "grow" helps to identify the obstacles to the goals an employee wants to achieve. Second, "reality" helps find the barriers currently in the way. Third, "options" help show ways to move forward in small steps. Fourth, "will" helps draw a roadmap for the next steps in reaching goals. Bommelje (2015) suggested that a leader-as-coach needs to provide a sense of purpose and direction to their employees by utilizing goal-setting with precise tasks and timeframes, as well as the right behaviors to achieve meaningful results.

Main element 5: employee disengagement.

Kahn (1990) defined employee disengagement as "the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performance" (p. 694). Driving employee engagement is one of the most critical challenges for any organization, as it affects the bottom line. In 2017, a Gallup

survey showed 17% more productivity with the highest employee engagement and 21% more profits in business as compared to the lowest engagement ("Disengaged employees result in lower productivity," 2018). The world-class organizations' ratio of *engaged employees* versus *actively disengaged employees* was 9:57 (Moletsane et al., 2019).

According to Shahidan et al. (2016), disengagement affects not only organizations but also the economy. For instance, the average Australian economy loses approximately $31 billion yearly to employees' disengagement and resignation from their employers (Shahidan et al., 2016). Moreover, the North Shore Health System spent $10 million a year on employee training and development in the hope of improving retention rates and reducing turnover intentions (Shahidan et al., 2016). In a recent study, *"presenteeism"* has become an issue at the workplace, whereby two-thirds of Americans are afflicted by this phenomenon ("Disengaged workers cost companies plenty," 2018). It means the employees are in the office but are not really present or engaged in their jobs, costing the organizations ten times more than absenteeism.

Main element 6: employee retention and turnover.

Employee retention continues to be challenging for businesses, and if there is no strategy, an organization may lose valuable talent, incurring substantial costs to a firm in terms of institutional know-how, time, money, and efforts to recruit and train replacements (Alhmoud & Rjoub, 2019; Ruiz & Davis, 2017). For instance, an employee turnover study of Saudi Arabian organizations determined that the cost of losing one employee equals $200,000, or 250% of that employee's salary with a replacement cost of 150% of that employee's salary, a high cost to the organization (Alhmoud & Rjoub, 2019).

Pregnolato et al. (2017) stressed the one-size-fits-all retention strategy is not practical due to extensive changes in the global demographics in the workforce with more diverse talent pools.

Alhmoud and Rjoub (2019) revealed that 88% of highly skilled employees left their company for non-monetary motives. Compensation is the most commonly used retention strategy, but pay was actually the fifth most common reason for an employee to leave a company (Pregnolato et al., 2017). Causes of turnover include developmental opportunities (39%), unhappiness with management (23%), and lack of recognition (17%) (Alhmoud & Rjoub, 2019). To reduce employee turnover, Pregnolato et al. (2017) reported that financial rewards, recognition, and development opportunities were the most important way to retain valuable talent, including supply chain managers.

Wolff (2019) shares the profound success story of Acme Corporation, in which they improved their "disengagement rate" within nine months from 71% to 26%, and turnover dropped from 41% to 19% because of four essential elements. First, *to feel valued and understand*, where management needs to take the time to listen, understand, and consider employees' input. Second, *to express our gifts and talents*, which involves alignment of roles and responsibilities with gifts and talents of individuals. Third, *meaning and purpose in what we do*, where employees need to understand how their work links to the organizational vision and mission. Fourth, *internal drive for progress or development*, where employees need to have fair and consistent accountability and consequences according to their performance relative to standard requirements.

Independent variable in the study: employee engagement.

Defining employee engagement.

Kahn (1990) defined employee engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance" (p. 694). Other researchers described

employee engagement as the individuals who express themselves physically, emotionally, and cognitively to perform their roles while showing strong dedication to their organization (Eldor & Vigoda-Gadot, 2017; Prameswari, 2019).

Musanzikwa and Ramchander (2018) described supply chain management as the systematic and strategic coordination among various business functions, which needs engaged employees to act with purpose, energy, and passion for ensuring delivery of quality goods and services to satisfy customers' requirements. Biddison, Paine, Murakami, Herzke, and Weaver (2016) suggested that not only does employee engagement show a positive, work-related mindset, but engaged employees also prove to have high reserves of emotional energy. They are involved in their work with pride, enthusiasm, and a sense of meaningfulness (Biddison et al., 2016). Employee engagement affects the essential elements of an organization such as employee turnover, profitability, revenues, workplace safety, talent acquisition, client satisfaction, and market share.

Shahidan et al. (2016) explained that supply chain management developed in an extensive social system with leaders, employees, and colleagues that work as a team and organization, interconnected to one another. Building from the Job Demands-Resources (JD-R) theory, Chen, Shih, and Chi (2018) find the work environment in the supply chain management needs autonomy-supportive leaders who understand and appreciate their team members. Also, the leaders who acknowledge the supply chain managers' perspectives offer opportunities for making choices in projects or challenging assignments and inspiring self-initiation, where they perform at a higher level of engagement in the workplace. Sharma (2014) argued the modernized version of job satisfaction is employee engagement.

***Employee engagement and organizational culture*.**

According to Musanzikwa and Ramchander (2018), the organizational culture is a general pattern of behavior that involves the sharing of basic norms, principles, and beliefs by the employees in an organization such as company vision, mission, and language. Cao, Huo, Li, and Zhao (2015) argued that organizational culture has significant influences on supply chain integration (SCI) because it serves as a basis for management and operations practices. Shared values and beliefs are the main components of organizational culture, which determine the way an organization conducts its business. Employees refer to shared values as the guiding principle in doing business activities to include internal operations and external activities such as building relationship between buyers and suppliers.

Cao et al. (2015) found the success of supply chain integration depends upon two major factors: *capability* and the *willingness to integrate*. Strengthening the capacity for integration enables an organization to develop and manage relationships (i.e., customers, suppliers) while coordinating cross-functionally to meet customers' requirements. A willingness to integrate plays a significant part in the supply chain integration since it links to trust and a relationship commitment to proactively integrate internal and external supply chain activities. It requires the social exchange between two or more persons by incorporating the mutual and reciprocal rules of exchange in a collaborative relationship to drive a positive impact of integration and performance outcomes (Tsanos & Zografos, 2016).

Organizational culture is a *powerful ingredient* that shapes the employees' motivation, working relationships, and the process of their work. A supply chain is a network that needs a systematic and strategic collaboration to include organizational support and supervisor support for the supply chain managers to build strong relationships with the suppliers, manufacturers, distributors or intermediaries, and customers (Yunus & Tadisina, 2016). Positive organizational

culture with the support from supervisors and colleagues helps improve employee engagement in decision-making, growth, and development opportunities (Parent & Lovelace, 2018).

Many studies suggested supervisor behavior associated with employee (dis)engagement that determines how "supportive" and "unsupportive" supervisor behavior could influences employee engagement (Auh, Menguc, Spyropoulou, & Wang, 2016). Drawing from the Job Demands-Resources (JD-R) theory, it illustrates the employees' well-being and productivity based on their work (Auh et al., 2016)─for instance, the job demands (i.e., closely monitoring performance by the supervisor) and the job resources (i.e., constructive feedback from the supervisor on the ways to enhance customer service).

Promoting organizational culture is not an easy task, as it is made up of the company values with different beliefs, interests, and experiences shared by corporate members and groups. Hall (2015) identified the top five elements that energize employee engagement in a multicultural work environment while developing a healthy and productive culture. It includes *taking time to know the team; taking time for company retreat*; *taking time to empower the team; taking time to provide support and feedback, and taking time to develop the team.* It takes active supervisors to strengthen the organizational culture that forms high-performance relationships such as (1) sharing company and department goals; (2) intense listening like nothing else matters; (3) using stretching assignments; and (4) reflecting, learning, and follow-up (Stewart, 2016).

Employee engagement and gender.

According to Alves and English (2018), more gender-balanced management teams help improve the company's financial outcomes, but women still have less representation than men (40% across the globe). Hum, Parlar, and Zhou (2018) reported a responsive supply chain is

critical in coping with customers' demands in fulfilling their orders within a promised lead-time. The study of Nix and Stiffler (2016) revealed that women bring valuable perspective and diversity to address customer demands with respect to new products, better service, and faster deliveries. Women manage to deliver effective communication and collaboration skills that encourage cross-functional and inter-organization integration to improve employee engagement and supply chain performance (Nix & Stiffler, 2016).

Many previous studies have shown how women and men are different in relation to family and social roles and how they act differently in the workplace (Liu, Cho, & Putra, 2017a). For instance, women view family and work as essential components and usually could tolerate higher levels of family and work stress, which impact employee engagement. On the other hand, the priority of men is more work over family and fewer challenges in balancing work and family activities (Liu et al., 2017a). Patel and Biswas (2016) showed that men typically have the agentic traits of confidence (i.e., assertiveness) that are often seen as laissez-faire leadership and transactional leadership. In contrast, women show communal qualities of supporting the efforts of employees, nurturing, and building their skills, which in turn shows more transformational behavior.

Employee engagement is likely to be higher with women in leadership because they value staff achievements equally, and the voices of all employees tend to be heard (Liu et al., 2017a). Conversely, Liu et al. (2017a) reported that men have a better sense of control when they encounter burnout at the workplace as opposed to women; however, women surrounded themselves with higher levels of support in personal, professional, or emotional terms than men. In spite of the need to have gender balance in the workplace, Sharma and Sharma's (2015) study

reported that out of 150,000 Indian IT professionals, over 19% of the total workforce are women, but this drops to 6% at the senior management level.

Many studies reported that companies with greater representation of women in senior roles showed better business results. For instance, a study of Fortune 500 companies explained that "companies with the highest representation of women in leadership positions experienced a 35% greater return on equity and 34% higher return to shareholders than those with the lowest representation" (Nix & Stiffler, 2016, p. 46). The study of Sharma and Sharma (2015) reported the gender gap distribution of women workforce across the countries - India: 23%; USA: 52%; Spain: 48%; Canada: 46%; Finland: 44%; Austria: 29%; and Japan: 24%.

Balancing work and family requirements are still a significant challenge for many women in leadership roles. The other gender norms issues are lack of support (i.e., childcare), lack of promotion or the glass ceiling, and appropriate levels of training and development (Alves & English, 2018; Nix & Stiffler, 2016). Despite the benefits of having women in leadership positions in an organization as noted by Nix and Stiffler (2016), Gartner and AWESOME's (Advancing Women's Excellence in Supply Chain Operations, Management and Education) study revealed in Figures 2 and 3 the status of women leaders in the supply chain. Nix and Stiffler (2016) stressed that an organization needs to review its policies and procedures on ways to support women workers and offer some flexibility for them to manage family demands. Otherwise, the retention and advancement of talented women remains an issue.

Figure 2 Proportion of women leaders in supply chain declines

Average Percentage of Women in Roles

Role	Percentage
Total supply chain workforce	35%
First line managers and supervisors	30%
Senior managers and directors	26%
Vice presendents and senior directors	20%
CSCOs/EVPs/SVPs	7%
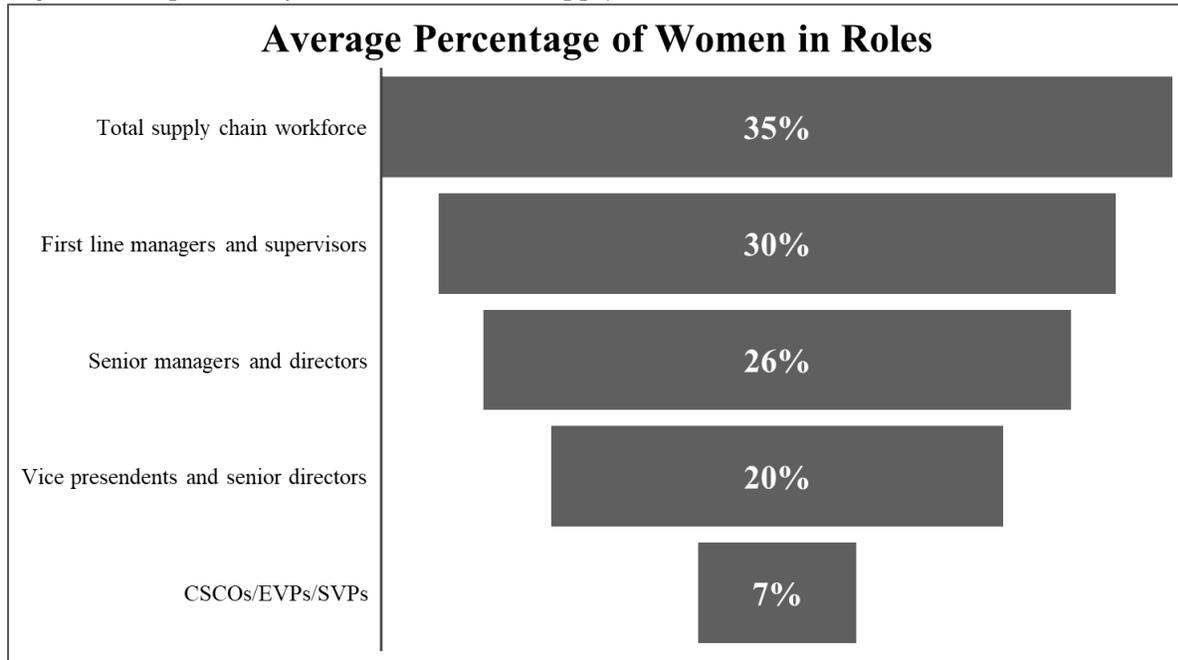
Source: Gartner (Nix & Stiffler, 2016, p. 46)

Figure 3 Is increasing the number of women leaders a goal for your supply chain company?

Yes, our supply chain company has formal targets and specific goals on management scorecards — 16%

No, the supply chain company has no formal objectives in this area — 46%

Yes, the supply chain company has gender diversity as a general objective — 31%

Do not know — 6%
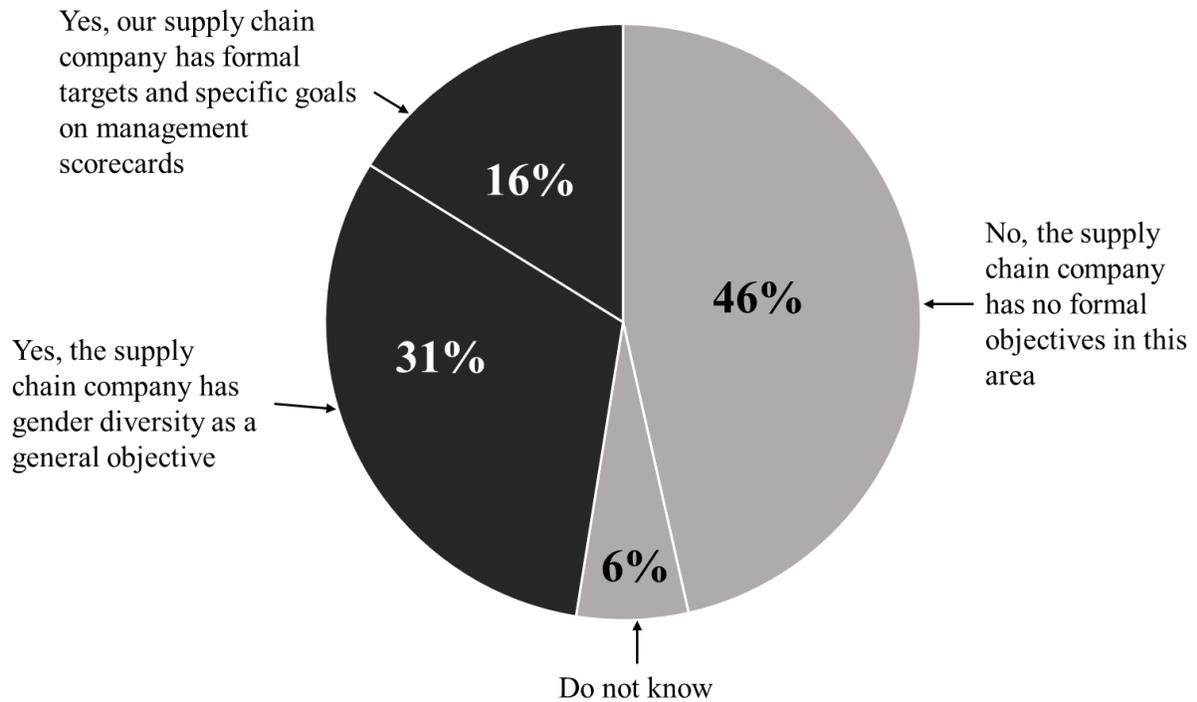
Source: Gartner (Nix & Stiffler, 2016, p. 49)

Employee engagement and self-efficacy.

Schaufeli and Bakker (2004) define employee engagement as an individual who experiences high levels of energy with a positive, fulfilling work-related state of mind, which is not focused on any particular object, event, individual, or behavior that is characterized by vigor, dedication, and absorption. Dagher, Chapa, and Junaid (2015) revealed in the research of Albert Bandura that individuals could achieve anything that they set their mind to do; only then, they have the confidence to engage in challenging activities with the belief that one's actions can make a difference.

Bandura (1997) advanced the concept of self-efficacy with the understanding that "the strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with given situations. Perceived self-efficacy influences choice of behavioral settings. The stronger the perceived self-efficacy, the more active the efforts" (pp. 193-194). Mete, Zincirkiran, and Tiftik (2014) argued that self-efficacy is the product and outcome of the employees' beliefs based on what they could do by using their skills and knowledge, but it is not a function of their skills.

Bandura (1997) emphasized employees with self-efficacy likely to go the extra mile to achieve any task, showing a lot of persistence and patience with a high degree of motivation. Top employees with self-efficacy are a great asset to any organization. For example, they are determined to execute the supply chain reliably and successfully: (1) deliver the right product to customers, (2) deliver at the right time, (3) deliver in the right quantity, (4) deliver at the right place, and (5) deliver at the right price (Mete et al., 2014; Politis et al., 2014). Bandura (1997) found employees with high self-efficacy are optimistic and view any challenges as an opportunity for mastery rather than avoidance.

Liu et al. (2017a) and Mete et al. (2014) elaborated the employees with *high self-efficacy* can cope with complex situations through control and mastery of one's work, since they demonstrate higher self-confidence, are more effective in making decisions, and show more personal initiative. Individuals with high self-efficacy are often known as highly engaged employees, whereas *low self-efficacy* cannot cope with circumstances as they are more passive in their work, weak in personal initiative and self-confidence, and more likely to fail in completion of their tasks (Liu et al., 2017; Mete et al., 2014).

Chhajer et al. (2018) suggested that self-efficacy has four distinctive dimensions: task mastery, vicarious learning, social persuasion, and emotional arousal. The most impactful method to develop efficacy is *task mastery* because it helps to achieve the individual's goals, and they are more confident in the second attempt. *Vicarious learning* exists when an individual sees another experience success in completing a task. *Social persuasion* occurs when other team members (i.e., supervisors) communicate confidence that the individual perform the job successfully, which boosts morale. An individual that has temporarily increased levels of self-efficacy experiences *emotional arousal*.

The findings of Carter et al.'s (2018) research are in line with other studies that report self-efficacy as connected with engagement and motivation based on three critical elements. First, employees with self-efficacy beliefs in achieving their goals through competency and confidence in one's skills to perform their job. Second, employees with self-efficacy beliefs in motivation to improve performance by taking steps to organize themselves and the environment, try new strategies, and reflect on situations; and third, employees with self-efficacy beliefs on the perception of one's effort for successful outcomes. Highly engaged employees typically have

higher levels of self-efficacy and are equipped to take on new challenges to enrich their skills

and knowledge upon practical change efforts (Chhajer et al., 2018).

Employee engagement and work-life balance.

In the 1970s, Obeidat, Al-Khateeb, Abdallah, and Masa'deh (2019) introduced the *work-life balance* concept as issues emerged regarding women in the workplace.   It involves many

different areas, including development policy, recruitment and retention policy, sick leave, and

working hours. Pandita and Singhal (2017) described *work-life balance* as a way an employee

balances one role with the other at a given time in a specific situation. An organization should

not only be concerned about the outcome of employees' work, but also about the quality of their

assignments.

It is difficult for employees to be fully engaged and focused on their work when they are

worried about their spouse/child's illness, aged parents, and daycare (Pandita & Singhal, 2017).

These situations cause employees to have intrapersonal conflicts in deciding which role to

perform—in this case, considering the Job Demands-Resources (JD-R) theory as an option for an

organization to address excessive job demands resulting in negative outcomes (Pandita &

Singhal, 2017; Schaufeli, 2017). The organizations that offer "flexible working" are highly

attractive during recruitment and retention for consideration of their employees' social

responsibilities (Obeidat et al., 2019). *Work-life balance* helps improve employee engagement,

job satisfaction, and organizational commitment because time is equally distributed between

professional and personal matters.

Employee engagement and work environment.

Creating and managing a healthy work environment is a continuous goal for supply chain

organizations. Thew (2019) described the health of the work environment as having authentic

leadership, meaning recognition, team collaboration, and effective decision-making for employees to perform their work. Feltovich (2019) argued the condition of the environment (i.e., building structure, workshop areas) is a vital aspect of the work environment, and it must be safe and functional to enhance the workplace experience so the well-being of employees can flourish.

It is the responsibility of management to maintain safety in the workplace because it shows that they care about the employees, including applying safety practices to their work environment like wearing work gloves, hearing protection, and eye protection. Hanaysha (2016) suggested a good working environment comprises four factors of a job, such as (1) facilities to do the work tasks, (2) comfort, (3) safety, and (4) absence of noise. Creating a supportive work environment is a critical factor in employee engagement, satisfaction, and commitment since it helps drive employee performance, achievement, and improvement within an organization (Hanaysha, 2016; Shahidan et al., 2016). Feltovich (2019) reported that some employees might have personal problems, and the supervisor should not ignore them but rather try to understand and be supportive by showing genuine concern.

Supervisors showing compassion and understanding by having an *open-door policy* is an effective way to communicate their support. A supportive work environment supplies the employees with a sense of harmony and caring atmosphere when an organization offers professional development to improve their skills, abilities, and decision-making to resolve their work (Shahidan et al., 2016). Building a safe work environment with top management support is critical for the successful implementation of supply chain quality management (SQCM) because it creates motivation and employee engagement to meet organizational goals (Quang, Sampaio, Carvalho, Fernandes, Binh An, & Vilhenac, 2016).

Independent variable in the study: job satisfaction.

Defining job satisfaction.

Despite job satisfaction's significance and extensive usage in the field of industrial psychology and organizational behavior, the definition of job satisfaction varies among researchers. Job satisfaction is often studied mainly in the area of turnover rate of employees and is therefore helpful in identifying areas for improvement by using the theoretical framework of Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2014) and Social Exchange Theory (SET) (Thibaut & Kelley, 1959; Homans, 1961; Blau, 1964).

According to Spector (1997), "job satisfaction is simply how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (p. 2). Researchers have defined *job satisfaction* as an orientation of employees' emotions, whether positive or negative, toward their job in the workplace (Buitendach & Hlalele, 2014; Raziq & Maulabakhsh, 2015). Other researchers have explained job satisfaction as a state of mind or individuals' feelings about their jobs (Ensour, Zeglat, & Shrafat, 2018). Lee, Cho, and Suh (2017) described job satisfaction as the employees' job motivation triggered by job characteristics, human characteristics, and the workplace environment. Ali and Ahmad (2017) reported job satisfaction to be how satisfied an employee is with their work. Since employees spend most of their time at the workplace, Usman (2019) emphasized that job satisfaction is critical for any organization, as it is a "psychological response" to one's job. There is a wide range of job satisfaction domains, such as overall satisfaction, supervision, coworkers, customers, pay, and promotion (Ensour et al., 2018).

The supply chain organization, as a highly service-oriented setting, finds job satisfaction critical to the business because a sizeable and skilled workforce needs responsive supply chains

to satisfy customer demands (Hum et al., 2018). The organizational factors associated with job

satisfaction are supervisors, colleague relationships, rewards and recognition, the job itself,

working conditions, and corporate support (Ensour et al., 2018).   Buitendach and Hlalele (2014)

explained that employees compare expected results and perceived as actual results given by the

job, which creates an emotional reaction to their situation. According to the study of Chen and

Taylor (2016), an organization that promotes learning helps increase job satisfaction because

repetition and experimentation stimulate employees' performance.

>   *Job satisfaction and communication.*

Alhassan et al. (2017) and De Nobile (2017) described *communication* as the lifeblood of

any organization, since it is an essential element in connecting among employees and enabling

organizations to achieve their goals. Jacobs, Yu, and Chavez (2016) reported that effective

communication helps create a working environment with respect for all employees that

ultimately impacts employee satisfaction. In other words, communication plays an essential role

in disseminating information and serves as a "backbone to develop and nurture" a healthy work

and client relationships, management, and confidence, which are the primary ingredients of

company success (Alhassan et al., 2017).

In the context of supply chain management, it is imperative to build and maintain trusting

and strategic relationships. This includes supply chain key stakeholders (i.e., customers,

suppliers) and internal employees (i.e., supervisors, colleagues), since it needs tacit complex

coordination and communication skills, making sure the competitive advantage is difficult for

rivals to replicate (Jacobs et al., 2016).

Effective use of organizational communication on job satisfaction requires supervisors to

understand and realize the types of information that are valued highly by employees, as it

increases employee engagement in the workplace (Usman, 2019). Alhassan et al. (2017) explained that employees' belief in their supervisory communication and value impacts job satisfaction, which promotes efficiency and desired outcomes in an organization.

De Nobile (2017) described openness and load as two features of communication. "Openness communication" is the level of receptiveness and responsiveness to information from other people. The "communication load" is the quantity and the complexity of information people receive. Too much information or over-complex messages, or *overload*, can cause confusion among the employees, while not having enough sharing information, or *underload*, leads to job dissatisfaction and not being able to perform at a satisfactory level (De Nobile, 2017). Therefore, adequacy of information, which is a balance of communication satisfaction and job satisfaction, holds just enough information to lay the foundation for effective work performance (Alhassan et al., 2017; De Nobile, 2017).

The findings of Valaei and Rezaei (2016) showed a *strong correlation* between organizational *communication* satisfaction and organizational commitment to supply chain management. The communication between employees and supervisors was the most significant because the employees perceive their supervisors as caring when they genuinely listen to their concerns or problems (Valaei & Rezaei, 2016). Verma (2016) argued that prominent levels of communication satisfaction and job satisfaction were associated with lower intention to leave, burnout, and absenteeism among the workforce. The practice of Job Demands-Resources (JD-R) theory is significant in the context of concern with communication load, as it links to organizational commitment and job satisfaction (De Nobile, 2017).

Job satisfaction and employee development.

Paposa and Kumar (2019) stressed that *training and development* strongly impact job satisfaction because they help the employees to master the knowledge, skills, and behaviors to improve their day-to-day activities in the workplace. Research shows that motivating employees for training generally develops a positive feeling for the training environment and tend to have higher participation rates in training activities (Ocen, Francis, & Angundaru, 2017). Opportunity to use learned capabilities depends on an employee taking personal responsibility to actively seek out assignments that allow them to use newly acquired skills, which creates a sense of job satisfaction and organizational commitment.

The study of Fletcher, Alfes, and Robinson (2018) revealed that training and development link to turnover intentions through affective and continued commitment because they extend the social exchange of employee-employer relationships. Ocen et al. (2017) elaborated that employees expand their knowledge and skills with practical training and development; therefore, the practice encourages them to obtain self-assurance and motivation to execute their work at higher levels of job satisfaction. Fletcher et al. (2018) expressed that training shapes employees' skills, abilities, and knowledge. Therefore, it enhances employee retention because it elicits obligations to repay the organization because a considerable amount has been invested in their personal and career development. Having the opportunity to work with other team members in the supply chain integration and learning from each other allows employees to step out of their regular daily routine and better understand how their work fits in with overall organizational goals (Cao et al., 2015).

Paposa et al. (2019) highlighted that if the organization regularly trains and develops employees, it improves morale, motivation, and satisfaction levels, leading to long-term organizational commitment. When employees are equipped with tools and resources to perform

their jobs well and given the training to advance in their careers, they feel supported and

satisfied. Fletcher et al. (2018) suggested that employees found their training meaningful when

the setting mirrored the practice of the employees' work environment so they could easily

connect training to their work. However, the training should use concepts, terms, and examples

familiar to employees.

Ocen et al. (2017) reported that training with strong employer and supervisor support is

most likely to execute the training practices and program most successfully. Ensour et al. (2018)

accentuate that with supervisor and colleagues' support, chances to apply newly obtained skills

on the job, and organizational culture and practices can ascertain the degree to which new

competencies are used on the job. The greater the level of supervisor support, the more likely

that they provide support functions, namely reinforcing the use of newly learned capabilities,

addressing progress with employees, and presenting opportunities to practice with a variety of

assignments.

Job satisfaction and rewards recognition.

Compensation is one of the essential elements that give employees job satisfaction.

However, research reveals that money and advancement opportunities continue to be influential

motivating tools, but they are not enough to meet the evolving needs of employees in supply

chain management (Ali & Ahmad, 2017; Noviantoro, Moeins, & Madiistriyatno, 2018).

Kuczmarski and Kuczmarski (2019) argued that an organization can achieve a more significant

increase in productivity by using *non-monetary recognition*—for instance, extra vacation time,

plaques, and gift certificates since they boost employees' morale, satisfaction, and self-esteem

and offer more with respect to employees' well-being and retention. The study of Langove and

Isha (2017) explained that *rewards and recognition* remain the essential motivational tools

because they are based on employees' contributions and accomplishments. As a result, it significantly adds to job satisfaction, reduces stress, and ultimately increases organizational effectiveness.

Achieving success in supply chain management takes a lot of hard work, time, and team collaboration. To reach corporate goals, some organizations see *financial rewards* as helping promote creativity and innovation culture at the workplace, while other firms find *psychic rewards* (i.e., praise and time off) yield far better outcomes than financial rewards (Kuczmarski & Kuczmarski, 2019). Extrinsic motivation (i.e., salary and bonus) can exert a powerful influence on human behavior but needs to be treated with care, ensuring that employee compensation is equal to the work an individual does. Most employees understand that workloads can fluctuate in the workplace. Yet, employees who perceived their compensation paid by the company as not equal to the workload may feel job dissatisfaction and low organizational commitment because compensation should be based on employees' skills and experience (Ali & Ahmad, 2017).

According to Brown, Cron, and Slocum (1998), "competition is an important aspect of psychological climate because it focuses employees' attention on the performance criteria that serve as the standards of peer-group comparison and creates demands on employees to focus their efforts on goal-related activities" (p. 89). Organizations must be creative in designing non-monetary rewards by applying Job Demands-Resources (JD-R) theory to attract, retain, and create a motivated workforce. Jones et al. (2017) argued that many studies conducted on the social environment focus on supportive or needed resources but failed to associate a contemporary work environment of competitiveness, which typically appears during the distribution of rewards, recognition, or status within the organization. The importance of a

reward system is significant, since the degree of competition in an organization such as supply

chain management could spur employees to work harder and be more productive. However, this

depends on the employees' needs, desires, and motivations, which could prompt various levels of

employee engagement, satisfaction, and commitment.

     Job satisfaction and supervisor support.

     In 2018, the United States Bureau of Labor Statistics showed "women's labor force

participation was 57.1%, and men's labor force participation was 69.1%" ("Women in the labor

force," 2019, p. 1). It is assumed that spouses have the responsibility of the family, which might

affect their job; nowadays, women tend to have greater responsibility for family care than men

(Basuil et al., 2016). According to the findings of Oludayo, Falola, Obianuju, and Demilade

(2018), the supervisors who are supportive of a work-family balance showed commitment to the

employees' well-being.

     The supply chain organizations that adapt their benefits to address the needs of their

workforce such as work-family balance show that they care. This leads to higher levels of

employee engagement, job satisfaction, and organizational commitment, where happier

employees are driven to succeed in their roles. Pohl and Galletta (2017) suggested that

employees who experienced tremendous emotional supervisor support like caring, comfort, and

encouragement are most likely to have alignment between their goals and their capabilities,

showing higher job satisfaction. Kula (2017) emphasized the quality of workplace social support

(i.e., supervisor support) does wonders to build employees' self-confidence to promote work

conditions that foster resilience and well-being.

     Usman (2019) revealed the supervisor-employee relationship with proper support and

encouragement helps employees' job satisfaction, which enables them to increase their

participation in decision-making for a variety of assignments in supply chain management.

Many researchers find a positive relationship between supervisor support and employees' job

satisfaction because it increases employees' performance and reduces turnover intentions

(Qureshi, Hamid, Jeihoony, Ali, Brohi, Magsi, & Shah, 2018). Basuil et al. (2016) claimed the

organizational support in work-family balance (rather than the supervisor) adds even more

significantly to a connection with higher affective commitment.

Dependent variable in the study: organizational commitment.

Defining organizational commitment.

The success of any organization relies upon committed employees because they bring

added value to the organization through their determination, high productivity, and awareness of

quality (Baird, Tung, & Yu, 2019). Palupi et al. (2017) reported that researchers define

organizational commitment in a variety of ways depending on each background. Mowday et al.

(1979) defined organizational commitment definition as "the relative strength of an individual's

identification with and involvement in a particular organization" in connection with three factors:

"(1) a strong belief in and acceptance of the organization's goals and values; (2) a willingness to

exert considerable effort on behalf of the organization; and (3) a strong desire to maintain

membership in the organization" (p. 226).

Research shows a "clear overlap" between Mowday et al.'s (1982) conceptualization of

commitment and Meyer and Allen's (1991) three-component model (TCM). The latter

incorporated both "attitudinal and behavioral approaches" and extended the concept of

organizational commitment with a three-component model (TCM). It includes the *affective*

commitment (emotion-based), similar to Mowday et al.'s (1982) theory, followed by *normative*

commitment (obligation-based), and *continuance* commitment (cost-based) based on the

employees' experience and mindsets (Cesário & Chambel, 2017; Ćulibrk et al., 2018; Hayek et al., 2017; Jaros, 2017; Prerana, 2017).

Mowday et al. (1982) expressed the individual's willingness to exert their *energy* on behalf of and the desire to stay in an organization, while Meyer and Allen (1991) focused on *psychological state or bonds*, respectively, linking the individual to the organization (Hanaysha, 2016). Both Mowday et al. (1982) and Meyer and Allen (1991) agreed that a *voluntary psychological bond* between an employee and their organization exists because they shared the core values between employee and employer, which fosters their relationship (Lambert et al., 2017). According to Giauque and Varone (2019), the organizational commitment concept has been exceptionally reliable when measuring human behavior in organized groups, particularly in comparison with employee engagement or job satisfaction as other theoretical constructs.

Alfalla-Luque et al. (2015) and Muthukumaran (2017) suggested that commitment is one of the antecedents of supply chain management because committed employees tend to take on challenging assignments. Then, the employees come up with productive ways to solve problems to meet the customers' requirements that shows higher operational efficiency across the organizational processes. Hanaysha (2016) claimed that organizations are interested in highly committed employees because of lower turnover rates, heightened organization citizenship behavior, and higher levels of corporate support.

Hanaysha (2016) stressed that organizational commitment plays a pivotal role and is based on the trustworthiness of employees according to company values, whether they stay with the organization for a more extended period, and willingness to work passionately towards achieving organizational goals. Creating a balance between employees' commitment and organizational performance is essential. The organization can demonstrate this by willing to

recognize and reward superior performers, which results in higher levels of commitment from the employees in achieving supply chain management excellence (Alfalla-Luque et al., 2015; Ali & Ahmad, 2017).

        Attitudinal and behavioral commitment approaches.

        Mowday et al. (1982) stated, "attitudinal commitment focuses on the process by which people come to think about their relationship with the organization. Behavioral commitment relates to the process by which individuals become locked into a certain organization and how they deal with this problem" (p. 26). Attitudinal and behavioral commitment are closely related, so it is essential to consider both approaches to address the problem of organizational behavior (Mowday et al., 1982). Garland et al. (2014) described affective commitment and continuance commitment as different points of an attitudinal-behavior continuum: *affective commitment* (attitudinal side) and *continuance commitment* (behavioral side). Affective commitment is likely to emerge due to positive experiences connected with attitudinal process advancement—in other words, affective commitment or attachment within an organization described as attitudinal in nature. Researchers have shown the affective commitment has a positive impact on job performance, attendance, organizational citizenship behaviors, job satisfaction, employee engagement, occupational commitment, and employee well-being (Chordiya et al., 2017; Hayek et al., 2017).

        According to Mowday et al. (1982), "committed people are thought to be more likely to remain with the organization and to work toward organizational goal attainment" (p. 19). Affectively committed employees are great assets to any organization because they feel valued and are willing to *act as ambassadors* for their organization. Mowday et al. (1982) described the employee-employer relationship as an employment exchange relationship, where commitment

requires the acceptance of core goals and values of the organization. When the organization

satisfies its purposes, Kim, Eisenberger, and Baik (2016) found that affective commitment

advances to the new levels of job satisfaction and employee engagement with higher

performance outcomes. More significant affective commitment results when employees receive

fair and attractive reward packages, as they perceive their organization to be trustworthy and

thoughtful (Naeem, Mirza, Ayyub, & Lodhi, 2019). According to Lapointe and Vandenberghe

(2017), the employees view the supervisory mentoring as part of their development that leads to

a positive impact on affective commitment.

Mowday et al. (1982) suggested that cyclical behavioral-attitudinal relationships exist

where committed employees present dedicated behaviors, which in turn strengthen the

employees' commitment attitudes. In this case, behavioral commitment refers to an explicit

demonstration of commitment by the employees. Palupi et al. (2017) explained that job

satisfaction and employee engagement are behaviors shown by employees concerning their

work. According to Garland et al. (2014), researchers do not guarantee attitudinal commitment

from employees based on their past choice (behavioral commitment) to become attached to an

organization. Conversely, employees with definite organizational goals and values (attitudinal

commitment) do not necessarily stay in an organization (Garland et al., 2014).

Based on *normative commitment*, Meyer and Allen (1991) examined employees' belief

that they have the responsibility or obligation to stay with the organization, or feeling that it is

the right thing to do rather than constraining them to do things to avoid negative consequences.

Jaros (2017) defined normative commitment in "two dimensions" where employees are obliged

to remain in an organization that reflects a sense of *indebted obligation* to the organization, and

the other reflects a sense of *moral duty*.

Mowday et al. (1982) and Meyer and Allen (1991) shared *common thoughts* concerning the *psychological bond* between an employee to their organization, which develops over time due to favorable and satisfying treatment by the company. The findings of Mowday et al. (1979) showed that highly committed employees are less likely to leave the company and most likely to be more engaged than their less committed counterparts. Employees who are not committed to their work may threaten the organization due to a high degree of absenteeism and turnover rate (Garland et al., 2014). Both absenteeism and turnover rate are expensive to the organization in terms of the costs of training and developing new employees.

When affective commitment is high, Jaros (2017) argued that normative commitment would likely undergo a sense of moral duty or a "strong desire" to stay in the company. The outcome of *high affective commitment* creates normative commitment's obligations to reflect on their hopes, values, and aspirations. The organizational social exchange, defined as employee's experience of long-term investment and give-and-take between the employee and employer, positively affects normative commitment between employee and employer, guided by mutual trust, respect, and give-and-take in the social exchange relationship (Liu et al., 2018). The study explains that *higher normative commitment* would lead positively toward organizational change (Lee et al., 2017).

More significant normative pressure generally goes to employees with a *higher individual-level power distance* to reflect their loyalty and prescribed duty in reacting to organizational social exchange (Liu et al., 2018). On the other hand, employees with a *low individual-level power distance* believe in equal distribution of power in the workplace, resulting in less responsiveness to organizational "normative pressure" (Liu et al., 2018). It is incredibly challenging to develop a low individual-level power distance into a strong normative

commitment, despite their engagement at a prominent level of social exchange (Liu et al., 2018). Jaros (2017) argued the nature of *normative commitment* changes from one dimension to another, depending on the employees' experience with either high levels of affective commitment or continuance commitment.

Meyer and Allen (1991) described *continuance commitment* as lack of employment alternatives and perceived cost(s) outweighs the benefits associated with leaving the organization. Bhatti, Ju, Akram, Bhatti, Akram, and Bilal (2019) described *continuance commitment* as "ratiocinative continuance" because of the decision of the employees based on a careful cost-benefit analysis of leaving the organization. Some of the reasons (economic or social) as to *why* an employee decides to stay in an organization are loss of benefits (i.e., pension, salary), years of employment in an organization, supportive working environment, career development opportunities, and job autonomy (Bhatti et al., 2019; Lambert et al., 2017).

Hayek et al. (2017) revealed continuance commitment to be a *double-edged sword* because it reduces employee turnover, which might come at the cost of employees' well-being. Research show that high continuance commitment is associated with lower levels of self-reported engagement in prosocial behaviors (Lambert et al., 2017). The individual may feel trapped in the organization due to the inflated costs of leaving that leads to strain and frustration, and hence is resistant to engage in organizational citizenship behaviors (Hayek et al., 2017; Lambert et al., 2017).

Personal characteristics.

Previous studies related to causes of commitment employ personal characteristics such as age, gender, race, tenure, leadership style, and other personality factors to determine the level of organizational commitment. Many researchers have shown the *age* of an employee is positively

related to commitment in the association of the generations, but a few studies show age is not associated with commitment (Lambert et al., 2017; Liu et al., 2018; Sarraf et al., 2017; Yahaya & Ebrahim, 2016). Mowday et al. (1982) suggested higher commitment among older employees because of fewer job alternatives for them, while Meyer and Allen (1984) argued that older employees may have higher commitment because they are more satisfied and have better positions (Yahaya & Ebrahim, 2016).

Some studies show inconsistent results on *gender* and commitment. According to the study of Yahaya and Ebrahim (2016), women are more committed than men. On the other hand, the research of a large Korean corporation shows that men are more committed to their organizations than women (Yahaya & Ebrahim, 2016). Many researchers have reported that gender is associated with organizational commitment (Garland et al., 2014; Lambert et al., 2017; Liu et al., 2018). The findings of Lambert et al. (2017) revealed that *race* lacks a significant connection in the multivariate analysis, which is consistent with previous studies.

Auh et al.'s (2016) study included nationality (i.e., U.S., Canada, Western Europe, China, Taiwan, India, Korea, and Japan) as a covariate to control confounding effect if any, that culture may have on power distance where supervisor monitors every step of how employees talk and interact with customers. The researchers conducted manipulation checks using job demands (i.e., close monitoring) and job resources (i.e., customer service feedback) and it shows "a high (but not low) submissive work context perceive more stress from close monitoring" (Auh et al., 2016, p. 736). It ensures that submissiveness was not complicated by different cultural views of authority and hierarchy. Moreover, Prideaux, Lee, and Tsang (2018) and Sarraf et al. (2017) showed the basic socio-demographic data of *age* and country of *nationality* as commonly used criteria for employee segmentation and diversity, which help contribute to the organizational

behavior researches. It explores workforce diversity and generational differences to improve organizational outcomes such as productivity, organizational commitment, employee engagement, and job satisfaction.

Researchers report the length of service or *tenure* is positively related to organizational commitment (Garland et al., 2014; Lambert et al., 2017; Mowday et al., 1982; Yahaya & Ebrahim, 2016). A study conducted at a university in Saudi Arabia reveals the length of service in the organization as the best positive predictor associated with organizational commitment; however, another comparative study of bank employee tenure in Kenya and the United States showed a negative relationship to employee commitment (Yahaya & Ebrahim, 2016).

Summary of the literature review.

The research suggests that there is a relationship among employee engagement, job satisfaction, and organizational commitment that acts as the antecedent for retention (Geisler et al., 2019; Geldenhuys et al., 2014). Substantial empirical research on employee engagement has mainly focused on Western developed countries, but there have been few studies of non-Western developing countries (Pham-Thai et al., 2018). Creating a competitive advantage is the goal of any successful organization to include supply chain management because it gives a business an edge over competitors and a better position as a market leader. Committed employees are the backbone of any successful organization because they are aligned with the company's mission, vision, and values, and are invested in helping the organization succeed (Muthukumaran, 2017).

The "hallmark of winning organizations" is a common bond and mutual commitment between employees and organizational success, realizing the significance of Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2014) and Social Exchange Theory (SET) (Thibaut & Kelley, 1959; Homans, 1961; Blau, 1964). Studies show that "happy employees" are

more engaged, motivated, productive, and committed with higher job satisfaction to participate in the social exchange between themselves and their organizations, which leads to satisfied customers (Ali & Ahmad, 2017; Fletcher et al., 2018; Jacobs et al., 2016).

The members of a generational cohort (i.e., Baby Boomers, Generation X, and Millennials) bring different dynamics to the supply chain management. Each generational cohort has its own set of motivators, values, and preferences that affect work satisfaction, as illustrated in Table 3. To truly harness their potential, both leaders and managers need to understand their generational characteristics (Coetzee, Ferreira, & Shunmugum, 2017; Gordon, 2017; Hoole & Bonnema, 2015).

Mehra and Nickerson (2019) show that openness in employee-employer communication creates higher job satisfaction, as it promotes information sharing, transparency, and constructive feedback. Researchers realize that all three generational categories demand more consistent interactions to increase their engagement, job satisfaction, and organizational commitment (Gordon, 2017; Mehra & Nickerson, 2019). With a combination of transactional and transformational leadership styles, effective leaders apply a coaching approach and work satisfaction factors, as per Table 3. This increases retention and reduces turnover intentions within the supply chain management for all three generational categories.

Table 3

Comparison of generational cohort work satisfaction factors

Job Satisfaction Factors	Baby Boomers (1946 – 1964)	Generation X (1965 – 1981)	Millennials (1982 – 2000)
Pay	Reflection of work (High)	Low pay (High)	Beginning career (High)
Autonomy	Trust and confidence (High)	Trust (High)	Learning mode (Low)

Task requirements	Aware of tasks/options (Moderate)	Managing multiple priorities (High)	Too many tasks (High)
Relationship	Hierarchical (Low)	Hierarchical (Low)	Hierarchical (Low)
Interaction	Team mentality (High)	Team mentality (High)	Team mentality (High)
Professional status	Knowledge and years of experience (High)	Educational-level achievement and experience (Moderate)	Education-level achievement (Low)

Source: Gordon (2017, p. 242)

Transition and Summary of Section 1

In Section 1, the researcher discusses and explains the relationships among the independent and dependent variables associated with employee engagement, job satisfaction, and organizational commitment, dedicating much attention to supply chain management in the Middle East. It also covers the background of the business problem, problem statement, and purpose. The purpose statement explains quantitative correlations as the methodology and design for this study, along with the sample population and the geographical location. The research questions and hypotheses lead the study based on the problem and purpose statements.

The researcher records the theoretical framework, the definition of terms, assumptions, limitations, delimitations, and the significance of the study. The literature review involves an exhaustive review and evaluation of the academic and professional literature on different subjects concerning Job Demands-Resources (JD-R) theory, Social Exhange Theory (SET), employee engagement, job satisfaction, and organizational commitment to reach a deep understanding of the business problem.

Section 2 concentrates on the technical aspects of this study with the following subsections: the role of the researcher, the role of the participants, research method and design, population and sampling, and data collection. The role of the researcher explains and provides clarity concerning any relationship with the participants and to ensure objectivity. The research

method and design subsection justify and validate the selection. Population and sampling describe the eligibility criteria and the sufficient number of participants required for the study. Then, the data collection subsection explains the details of instrumentation or the data collection tool.

Section 2: The Project

Section 2 examines various parts of this quantitative correlational study in relation to the research methodology and the procedures used to answer the research questions. The methodological matters are discussed in subsections, namely (1) purpose statement; (2) role of the researcher; (3) role of participants; (4) research method and design; and (5) population and sampling. Moreover, the remainder of Section 2 focuses on the data collection, data analysis, and reliability and validity of the study, followed by a summary of this section to transition to Section 3.

This study replicates and extends the work of Jones (2018), "The Relationship of Employee Engagement and Employee Job Satisfaction to Organizational Commitment," which used a sample of the Northeast Chapter of the New York State Society of CPAs (NYSSCPA). In contrast, this study uses a sample of supply chain managers of the Middle East organization, adding this research to the body of knowledge.

Purpose Statement

The purpose of this quantitative correlation study is to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. Then, the study examines any moderating effects on the outcome using demographic characteristics. The Middle East is a highly diverse region with multiple

languages, religions, ethnicities, and socioeconomic aspects, which sets them in a unique

position compared to other parts of the world (Waqfi & Faki, 2015). The study of engagement,

satisfaction, and commitment in non-Western developing countries in the SCM of Middle

Eastern organizations is vital to supporting the organizational goals, for which Pham-Thai et al.

(2018) showed the limited research conducted in this context.

Employee engagement (EE) and job satisfaction (JS) are identified in this study as the

independent variables, and organizational commitment (OC) is identified as the dependent

variable. The sample population consists of expatriate supply chain managers that are employed

full-time in a Middle Eastern organization. The instrument used to measure employee

engagement is the Work and Well-Being Survey (UWES-9) developed by Schaufeli, Bakker, and

Salanova (2006). Job satisfaction is measured by applying the Job Satisfaction Survey (JSS)

developed by Paul Spector (1985). Organizational commitment is measured by employing the

Organizational Commitment Questionnaire (OCQ) developed by Mowday et al. (1979).

Brookfield Global Trends (2014) reports the average turnover rate of 12% for expatriates

in multinational corporations, and 51% leave the company within two years of repatriation (De

Ruiter et al., 2018). Gulf Cooperation Council (GCC) countries heavily depend on expatriate

workers due to the small number of well-trained local citizens. Breach of PCF has a negative

influence on expatriate managers that prompted intentions to quit to include physical, emotional,

and mental exhaustion (Haak-Saheem et al., 2017; Quratulain et al., 2018; Sheikh, Cheema,

Chaabna, Lowenfels, & Mamtani, 2019; Silbiger, Berger, Barnes, & Renwick, 2017).

This study is designed to investigate the various level of employee engagement (EE) and

job satisfaction (JS) that influence organizational commitment (OC). This research helps to

establish that keeping a committed workforce to preserve their skills and knowledge contributes to overall organizational success.

Role of the Researcher

The role of a researcher in quantitative studies is theoretically non-existent; however, they must ensure that research concerning human subjects follows ethical standards (Hebert, Satariano, & Braun, 2015). In optimal quantitative research, the participants perform as if the researcher were not there. The researcher is responsible for obtaining permission for research, conveying the purpose of the research, managing the data collection ethically, and correctly reporting the results of the research. The researcher should ensure an unbiased approach by removing bias and subjectivity from the study to avoid potential distortion of meaning of the results. *The Belmont Report* supplies the guidelines to protect the researcher and the participants (human subjects) according to the underlying ethical principles of respect for persons, beneficence, and justice (U. S. Department of Health & Human Services, 1979).

The research methods need to be easily replicated by other researchers who conduct similar studies in the future. For this reason, proper documentation of the research is critical to include the data analysis methods, research outcomes, and any recommendations. The data collection process consisted of planning, developing, and organizing the distribution of an online survey to the sample participants. The communication contains the instructions along with a survey link, and the participants' responses to the questions are anonymous.

The researcher has no personal contact with any of the research participants at the time they receive, complete, or submit the online survey. Upon receipt of the completed survey, the researcher reviews, organizes, and analyzes the data by using the Statistical Package for the Social Sciences (SPSS) software, also known as IBM SPSS Statistics. The SPSS is a software

package that the researcher uses to analyze statistical data. The research results realized from the quantitative research method are logical, statistical, and unbiased.

Role of Participants

According to Knechel (2019), no matter what the research topic is, it is rarely logistically possible to recruit the entire population of interest for a study. The researcher typically enrolls a sample that represents the broader characteristics of the population. Sedgwick (2014) revealed that sample size calculations have statistical power; however, it should not be viewed as an exact science, but rather giving the researcher a "ballpark" figure needed for participants, that is, a 95% confidence interval of 15% to 25%, and then increase the required sample size by 20% to cover the potential failure rate for incomplete online research surveys. Knechel (2019) reported that probability sampling is the best technique to increase sample size and avoid sampling errors because any member of the population has an equal opportunity to be recruited in the study.

In this quantitative study, the sample population consists of managers in the supply chain industry in a Middle Eastern corporation. A subset of the entire population includes a sample made up of the supply chain managers, supervisors, team leaders, and specialists working full time in a Middle Eastern organization (Knechel, 2019). The criteria for the research sample are: (1) work full time; (2) be older than 18 years of age; (3) be of either gender; (4) employed in the supply chain industry located in the Middle East; and (5) be either in a manager, supervisor, team leader, or specialist. The researcher meets with the participants (i.e., supply chain managers, supervisors, team leaders, and specialists) and discusses the purpose of the study, nature of the study, participants' rights, and strict measures for data integrity and participants' confidentiality. All participants involved in the study completes a consent form that explains the purpose of the study, discloses any risks relating to the study, and assures participants' confidentiality.

Research Method and Design

The choice of research method and design could impact the findings of the study, so selecting appropriate study designs is critical to address the research questions and hypotheses. The purpose of this quantitative correlation study was to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. Therefore, this section focused on the validation of a quantitative methodology instead of choosing qualitative or mixed methods research.

Discussion of method.

Quantitative and qualitative methods are the two main types of research methods. Quantitative research involves numerical data analyzed statistically, while qualitative research uses non-numerical data (Barczak, 2015; Creswell, 2014; Creswell & Poth, 2018; Muijs, 2011). There are two substantially different worldviews that govern quantitative and qualitative methods whereby quantitative is viewed as more "realist" or sometimes "positivist," whereas qualitative research is seen as being "subjectivist" (Muijs, 2011).

For this study, the researcher employs a quantitative, non-experimental, correlational research study to effectively and precisely evaluate specific hypotheses to determine whether a relationship between the independent variables (employee engagement and job satisfaction) and dependent variable (organizational commitment) exists within a particular population in a specific demographic domain. The approach of quantitative research is to test objective theories by exploring the relationships among variables, from which in turn variables can be measured that generalize and form predictions from a sample of people within a large population (Creswell, 2014).

According to Barczak (2015) and Creswell (2014), quantitative research operates more within a *deductive model* of fixed and set research objectives, which begins with identifying a theory relates to the topic being examined, developing hypotheses, and testing whether the hypotheses are supported by evidence. It builds in protections against bias, controlling for alternative information, and it can generalize and replicate its findings. Watson (2015) treated quantitative research as the systematic investigation of social phenomena, employing statistical or numerical data, analyzing the data for trends and relationships, and finally, verifying the measurements taken.

Unlike quantitative research, qualitative researchers use the *inductive reasoning* approach for investigating and understanding the meaning that individuals or groups ascribe to a social or human problem (Creswell, 2014). Qualitative research focuses on the "why" instead of the "what" of social phenomena by using multiple systems of inquiry into human phenomena, including a wide range of methods like interviews, case studies, ethnographic research, and discourse analysis, to name just a few examples (Creswell & Poth, 2018; Muijs, 2011). Goswami (2015) reports that "a non-quantitative measure is prone to manipulation and biased interpretation, especially if the group's or individual's performance is not defendable" (p. 320). Creswell (2014) describes "qualitative data" as *open-ended* without predetermined answers, while "quantitative data" is *closed-ended* responses typically found on questionnaires or psychological instruments.

Gobo (2015) revealed mixed methods research as a combination of quantitative and qualitative methodologies whereby the researcher benefits from the strengths of each; however, it is costly and time-consuming to capture the entire phenomenon. Stockman (2015) reported that researchers continue to face challenges with mixed methods research despite its growing

popularity because of misconceptions and demands in acquiring new knowledge and skills in both quantitative and qualitative research methods to become an independent academic researcher and to deliver quality research.

Discussion of design.

The researcher chose to use a quantitative, non-experimental, correlational research design for this study. Although there are several types of quantitative research design, Muijs (2011) asserted that they usually fall under one of the main categories, such as experimental research (i.e., experimental or quasi-experimental research) and non-experimental research (i.e., correlational research).

The experimental design (also known as true experimentation) is an experiment with a test under controlled conditions and focuses only on the variable(s) that the researcher wants to study while all others are kept constant, and it typically takes place in laboratories (Muijs, 2011). According to Dutra and Reis (2016), experimental design involves manipulation of the study's population, treatment, and measurement. It typically entails excessive cost to conduct a true experiment, with a small number of participants involved in the study and little time for follow-up. For this reason, an experimental design would not meet the goals of the research questions due to the manipulation of variables and random assignment of participants to conditions.

A quasi-experimental design intends to identify a cause-effect relationship between two or more variables (Dutra & Reis, 2016). Leatherdale (2019) unveils the strengths of quasi-experimental design concerning internal validity, pre-interventional, and post-interventional measures within a longitudinal time series. In this study, the researcher examines only the perceptions of the participants (supply chain managers) at one specific point in time, and no

intervention takes place, which means a quasi-experimental design would not meet the criteria of this study.

The objective of a correlational research design is to examine the relationships among two or more variables based on statistical data from natural observation, which can be relational (using correlation analysis) and predictive (using regression analysis) without imposing manipulation on any variables (i.e., change of conditions) or randomly assign participants to a control group (Curtis et al., 2016).

A quantitative, non-experimental, correlational research design supplies numeric description of trends, attitudes, or opinions of a population by examining sample groups of a specific population (Creswell, 2014). Survey research aims to learn about a large population by surveying sample groups with the plan of generalizing to a broader population (Creswell, 2014). Survey research helps to get a sense of behavior in the sampling groups through a precise process that allows the researcher to assess behavior and produce a statistical representation of findings more accurately (Curtis et al., 2016).

In this study, a non-experiment survey is part of the research design with no treatment (or intervention) by the researcher (Creswell, 2014). To precisely analyze the data collected, the IBM SPSS v26 statistical software package is used to produce a statistical representation of findings more accurately (Curtis et al., 2016). The sample population consists of supply chain managers who work full-time in the supply chain management division or department of a Middle Eastern organization. The data was gathered from surveying supply chain managers concerning their perceptions about their levels of employee engagement, job satisfaction, and organizational commitment along with their demographic information. Three questionnaires

were used to measure three variables: employee engagement (independent variable), job

satisfaction (independent variable), and organizational commitment (dependent variable).

The *first survey* (Schaufeli et al., 2006), a Work and Well-Being Survey (UWES-9),

measured supply chain managers' engagement by using 9 items to assess how they feel at work.

The *second survey* used is Spector's (1985) Job Satisfaction Survey (JSS), which measured

supply chain managers' job satisfaction by using 36 items to assess how satisfied they are with

their job. The *third survey* used is Mowday et al.'s (1979) Organizational Commitment

Questionnaire (OCQ), which measured supply chain managers' feelings about their company or

organization using a 15-items OCQ. Finally, the researcher collects seven demographic items:

age, gender, nationality, tenure, and follow with three questions: Do you work full time? Are

you employed in the supply chain industry located in the Middle East? Is your current job be

either in a manager, supervisor, team leader, or specialist? The researcher receives written

permission for all three surveys to conduct the research.

Summary of research method and design.

Both qualitative and mixed methods research share many benefits and advantages, but for

this study, these research methods did not meet the research specifications. However, a

quantitative, non-experimental, correlational research study is considered to be the most

appropriate method for this study because the researcher adopts correlational statistics to

describe and measure the "degree" or "relationship" between two or more variables or sets of

scores (Creswell, 2014). Moreover, quantitative research can generalize data to larger

populations, and it can easily be replicated by future researchers.

For this study, the researcher selected a quantitative, non-experimental, correlational

research design. Yezbick and Tutty (2017) emphasized that a quantitative, non-experimental

correlational research design allows the researcher to determine whether correlations exist between employee engagement (measured by the UWES-9 scores; Schaufeli et al., 2006), job satisfaction (measured by the JSS scores; Spector, 1985), and organizational commitment (measured by the OCQ scores; Mowday et al., 1979).

Population and Sampling

Discussion of Population.

The sample population for this research included 5,106 full-time, supply chain professionals with management responsibility working in the Middle East. The sample population data are individuals who hold a managerial or supervisory level job. The focus population of 71,432 was taken from the "Planning and Statistics Authority" report, which is the number of employees in supply chain management in the Middle East organizations consisting of more than ten employees' company size (Al-Nabit, 2017). For the purposes of this study, the supply chain manager is an individual who has the managerial capacity to plan, direct, and facilitate their team to effectively achieve organizational goals (Laud, Arevalo, & Johnson, 2015). The purposive sampling technique was chosen for this study.

This study aims to help Middle Eastern organizations better understand the levels of employee engagement, job satisfaction, and organizational commitment among supply chain managers. Retention strategy can be developed based on the findings of this study to avoid shortage of skilled expatriate supply chain managers, who typically leave the company within two years of repatriation (De Ruiter et al., 2018). The specific criteria for research participants are: (1) work full time; (2) be older than 18 years of age; (3) be of either gender; (4) employed in the supply chain industry located in the Middle East, (5) be either in a manager, supervisor, team

leader, or specialist role; (6) able to read and write English; (7) accessible during data collection period; and (8) ready to participate in the study (Walia et al., 2014).

   Discussion of Sampling.

   Purposive sampling was chosen because the participants are selected based on the research requirements. If the components do not serve the research purpose, they are excluded from the sample. The study adopts the purposive sampling technique through Internet recruitment and survey methods to engage immediately available samples of a target population, reducing the risk of bias and focusing more on variables (Keng & AlQudah, 2017). With purposive sampling, the study benefits from the selected participants because they present sufficient knowledge and information to contribute answers relevant to the research questions (Barratt et al., 2015; Walia et al., 2014).

   Unlike purposive sampling, Creswell (2014) explained that convenience sampling is a less desirable non-probability sample since it depends on the ease of access to participants who are chosen based on convenience and availability. For this reason, convenience sampling does not meet the research requirements. Creswell (2014) recommended a random sampling method because everyone in the population has the same probability of being chosen. Unfortunately, random sampling does not meet the research requirements because specific criteria need to be met by the participants to supply answers relevant to the research questions. For stratified random sampling, the characteristics of the populations must be known in advance so that the population can be stratified before the choice of the sample (Creswell, 2014). In this case, stratified random sampling does not meet the research requirements, since the characteristics of the populations are unknown before the study.

The sample size needed for this study is 189, as illustrated below, using a population size

of 5,106 based on a 95% confidence level who fulfill the inclusion criteria (Keng & AlQudah,

2017; Sedgwick, 2014; Walia, Ramanadin, & Kiran, 2014). The sample size of 189 is realistic

and achievable for this study. The sample size formula shows *n0* is the sample size, *Z* is z-score

(i.e., 1.96, which means 0.1 in each tail) with 95% confidence level, *p* is the estimated proportion

of an attribute within the current population, *e* is the margin of error, and *N* is population size.

$$n0 = \frac{\dfrac{Z^2 * p(1 - p)}{e^2}}{1+ \left(\dfrac{Z^2 * p(1 - p)}{e^2 N}\right)} = \frac{\dfrac{(1.96)^2 * 0.15(1 - 0.15)}{(0.05)^2}}{1+ \left(\dfrac{(1.96)^2 * 0.15(1 - 0.15)}{(0.05)^2 * 5106}\right)} = 188.68 = 189 \text{ Sample Size}$$

Research shows that a high survey response rate helps reduce sampling bias concerns,

while upholding the validity of survey-based research findings (Barratt et al., 2015; Pedersen &

Nielsen, 2016). According to Pedersen and Nielsen (2016), the survey response rate is relatively

low, between 15% and 20%. Pedersen and Nielsen (2016) shared that online questionnaires are

relatively inexpensive, and the researcher can swiftly collect data from the selected participants.

The demographics of the online questionnaires displayed managerial professionals in the supply

chain management of a Middle Eastern organization with a minimum of one subordinate

employee.

Maintaining anonymity in this research is critical, so the employees are not asked for

their name or job title. The information requested in the survey are: *age* (i.e., 18-21, 22-29, 30-

39, 40-49, 50-59, 60 and above), *gender* (i.e., male/female), *nationality* (i.e., Egypt, India, Nepal,

Nigeria, Pakistan, Philippines, Sri Lanka, and other), and *tenure* (i.e., less than 1 year, 1 to 2.9

years, 3 to 3.9 years, 4 to 4.9 years, 5 to 5.9 years, 6 to 6.9 years, and 7 years and above). Once

the survey data is collected, the researcher assesses the data and divides it into various data

groups in cross-tabulations to examine and compare survey data across different demographic categories.

Summary of population and sampling.

Creswell (2014) emphasized that a researcher needs to design a sampling strategy to identify the population while providing the judgment of an expert with a specific purpose in mind. For this study, the sample population was 5,106 full-time, supply chain professionals with management responsibility working in the Middle East. Purposive sampling is the best choice for this study. Barratt, Ferris, and Lenton (2015) maintained that purposive sampling helps the researcher better understand the hidden populations with a long history of employee engagement, job satisfaction, and organizational commitment. Purposive sampling is mostly used by researchers when a hard-to-reach population needs to be measured (Barratt et al., 2015).

Data Collection

The researcher uses a combination of three existing validated survey instruments in this study (see Appendix E, F, G - Permission) for data collection to examine and measure the independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC). The researcher collects data from the combination of (a) Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006), (b) Job Satisfaction Survey (JSS; Spector, 1985), and (c) Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979). The UWES-9 measured the employee engagement, the JSS measured job satisfaction, and the OCQ measured supply chain managers' organizational commitment. The Demographic Characteristics Survey (DCS) was applied to collect respondent data to include age, gender, nationality, and tenure at a current company (see Appendix A). The online survey (i.e.,

SurveyMonkey) web-linked to four sections of the composite survey was emailed to the

participants by the researcher (see Appendices A, B, C, D).

Instrument 1: work and well-being survey (UWES-9).

The first instrument in this study is the Work and Well-Being Survey (UWES-9)

developed by Schaufeli et al. (2006) (see Appendix B). A variety of tools has been used over the

years to assess employee engagement, but UWES-9 continues to be the most popular and most

commonly used measure of engagement, characterized by vigor, dedication, and absorption, the

assumed opposite of the core burnout dimensions of exhaustion and cynicism (Kim, Park, &

Kwon, 2017). Schaufeli et al. (2006) described vigor, dedication, and absorption as follows: (1)

vigor – an individual with high energy and mental resilience while working; (2) dedication – an

individual heavily involved in one's work with a sense of significance, pride, and challenge; and

(3) absorption – an individual fully focused and happily engrossed in one's work. More recently,

the original Work and Well-Being Survey (UWES) has evolved from the 17-item UWES-17 to a

shortened 9-item version (Kim et al., 2017). Schaufeli et al. (2006) revealed that "the shortened

versions of the scales correlated highly with their original longer counterparts, sharing more than

80% of their variances" (p. 712).

The items of the UWES-9 (see Appendix B) are arranged into three subscales, which

enables the researcher to examine the results on both total and subscale levels (Kim et al., 2017).

According to Schaufeli et al. (2006), UWES-9 reflects the underlying dimensions of

engagement: vigor (VI, three items); dedication (DE, three items); and absorption (AB, three

items). The items are scored on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always*).

Longo, Gunz, Curtis, and Farsides (2016) stressed the benefit of using reliable and valid

measurement tools to reduce error variances. Based on Schaufeli et al.'s (2006) study of the

factorial validity of the UWES-9, the three scale scores have consistent evidence of internal consistency and test-retest reliability — Cronbach's alpha for total nine-item scale between 0.80 and 0.92 (median = 0.92) across all ten countries, such as Australia, Belgium, Canada, Finland, France, Germany, The Netherlands, Norway, South Africa, and Spain. Cronbach's alpha of *vigor* (three-item IV scale median = 0.77, range between 0.60 and 0.88), *dedication* (three-item DE scale median = 0.85, range between 0.75 and 0.90), and *absorption* (three-item AB scale median = 0.78, range between 0.66 and 0.86)

Shuck, Zigarmi, and Owen's (2015) study examined psychological states concerning employee engagement and performance using the Work and Well-Being Survey (UWES-9). The study yielded internal consistency reliability estimates for each subscale as follows: *vigor* (α = 0.91 for 3 items); *dedication* (α = 0.91 for 3 items); and *absorption* (α = 0.83 for 3 items). For the combined scale, the reliability estimate was α = 0.92. When the study shows higher total scores for each subscale and the combined scale, it means that high degrees of engagement have been reported.

The UWES has been strongly validated in many countries such as China, Japan, Canada, Finland, Norway, South Africa, and Spain (Kim et al., 2017; Schaufeli et al., 2006). The Work and Well-Being Survey (UWES-9) showed consistent evidence of the internal consistency reliability coefficient, for instance, Shu (2015) showed Cronbach's α of 0.91, and Ünal and Turgut (2015) showed Cronbach's α of 0.96. For this reason, it serves as a valid and reliable instrument, so it is not required for alteration to the tool. UWES-9 is a suitable instrument for this study to test employee engagement due to its strong reliability and validity measures. The researcher received written permission for UWES-9 to conduct the research (see Appendix E; Schaufeli et al., 2006).

Instrument 2: job satisfaction survey (JSS).

The second instrument in this study is the Job Satisfaction Survey (JSS) developed by Spector (1985) to measure the employees' points of view on job aspects that impact their level of satisfaction. Spector created the JSS, which was initially meant for the social service sector as a multidimensional instrument, but he later thought that other industries could utilize the JSS instrument as well (Tsounis & Sarafis, 2018). To date, JSS is one of the most commonly used job satisfaction instruments, and hundreds of studies about its psychometric characteristics (Tsounis & Sarafis, 2018). The JSS is used in cross-cultural and transnational research, including the United States, Singapore, Turkey, Pakistan, Taiwan, and Iran (Batura, Skordis-Worrall, Thapa, Basnyat, & Morrison, 2016).

The JSS has 36 items with nine subscales to assess employee attitudes on various areas such as pay, coworkers, benefits, and nature of work (Li & Huang, 2017; Saiti & Papadopoulos, 2015). First, *pay* measures the salary paid to an employee in return for their work. Second, *promotion* measures promotional opportunities. Third, *supervision* measures the employee-supervisor relationship. Fourth, *fringe benefits* measures the level of satisfaction concerning monetary and nonmonetary fringe benefits. Fifth, *contingent rewards* measures rewards and recognition based on performance. Sixth, *operating conditions* measures the operating policy and procedures of an organization. Seventh, *coworkers* measures the relationships among the people in the workplace. Eighth, *nature of work* measures the value of job assignments. Ninth, *communication* measures communication effectiveness in an organization.

According to Ogunkuade and Ojiji (2018) and Spector (1997), JSS incorporates both positive and negative statements in a 36-item, nine-facet subscale to assess employee attitudes about aspects of the job. Each item is ranked on a 6-point Likert scale such as 1 = disagree very

much; 2 = disagree moderately; 3 = disagree slightly; 4 = agree slightly; 5 = agree moderately; 6 = agree very much. The JSS negatively worded items are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, and 36. The negatively worded items are reverse scored, where 1 = 6, 2 = 5, 3 = 4, 4 = 3, 5 = 2, and 6 = 1. Because each item's score can be from 1 to 6, the study participant facet scores can range from 4 to 24 (Spector, 1997). A total score is computed from all items based on the sum of 36 items, which can range from 36 to 216. Spector (1994) showed the total scale of JSS reliability coefficient alpha of 0.91 and test-retest reliability over an 18-month time span is 0.71. Likewise, Saiti and Papadopoulos (2015) reported that Cronbach's alpha reliability coefficient was 0.91, the same result as Spector (1985), above the threshold of 0.50 (Nunnally & Bernstein, 1994).

Al-Mahdy, Al-Mahdy, Al-Harthi, Al-Harthi, and Salah El-Din (2016) used the Arabic version of the Job Satisfaction Survey (JSS) to assess teacher job satisfaction for the Omani population. The Cronbach's alpha reliability coefficients in the study of Al-Mahdy et al. (2016) for promotion, supervision, and nature of work were 0.787, 0.843, 0.676, respectively, above the threshold of 0.50 (Nunnally & Bernstein, 1994). Tsounis and Sarafis (2018) conducted a study at the Therapy Center for Dependent Individuals (KETHEA), the largest rehabilitation and social reintegration network for drug addicts in Greece. The study covered all employees (i.e., administrative staff, therapy-prevention staff, etc.) using the JSS to measure employee job satisfaction. The study showed the reliability for the total scale among the 36 items was 0.87.

Many researchers have confirmed the validity and the reliability of the JSS instrument in various studies showing Cronbach's alpha with high scores (Al-Mahdy et al., 2016; Ogunkuade & Ojiji, 2018; Saiti & Papadopoulos, 2015; Spector, 1985; Tsounis & Sarafis, 2018). For this reason, the JSS is the right instrument for this study to test employee job satisfaction because of

its strong reliability and validity measures, and it needs no modification. The researcher received

written permission for JSS to conduct the research (see Appendix F; Spector, 1985).

      Instrument 3: organizational commitment questionnaire (OCQ).

      The third instrument in this study is the Organizational Commitment Questionnaire

(OCQ) developed by Mowday et al. (1979), the most commonly used unidimensional measure of

organizational commitment. For their study, Mowday et al. (1979) defined organizational

commitment as "the relative strength of an individual's identification with and involvement in a

particular organization" in connection with three factors: "(1) a strong belief in and acceptance of

the organization's goals and values; (2) a willingness to exert considerable effort on behalf of the

organization; and (3) a strong desire to maintain membership in the organization" (p. 226).

      The Organizational Commitment Questionnaire (OCQ) consists of 15 items, and the

response format uses a 7-point Likert scale with the following choices: (1) strongly disagree; (2)

moderately disagree; (3) slightly disagree; (4) neither disagree nor agree; (5) slightly agree; (6)

moderately agree; (7) strongly agree (Mowday et al., 1979, 1982). The OCQ negatively worded

items are 3, 7, 9, 11, 12, and 15. The six questions are reverse scored, where $1 = 7, 2 = 6, 3 = 5,$

$4 = 4, 5 = 3, 6 = 2,$ and $7 = 1$. Mowday et al. (1979) conducted a study of 2,563 employees in

nine different public and private work organizations, resulting in high internal consistency

(coefficient alpha) with a reliability of 0.90 with a range from 0.82 to 0.93. Moreover, Lam

(1998) conducted test-retest reliability of the OCQ based on responses of 104 sales supervisors

from eight diverse organizations in Hong Kong over a period of 10 weeks, resulting in 0.59 ($p <$

0.01).

      Kanning and Hill's (2013) study compared the reliability and validity of the

Organizational Commitment Questionnaire (OCQ) in terms of employee surveys in international

companies in seven countries (six languages). The study involved 2,812 participants from an

international company who were surveyed in relation to language adaptation of the

Organizational Commitment Questionnaire with six languages in seven countries (i.e., United

States, Canada, Germany, Poland, Spain, Hungary, and Malaysia) (Kanning & Hill, 2013). Five-

point Likert scales were used to measure the OCQ items, ranging from 1 = "totally disagree" to 5

= "totally agree." The response rate of the total sample was 52.6% (1,478 questionnaires) with

the result of high internal consistency (coefficient alpha) reliability value in each case between

0.72 and 0.93, which makes the translations successful (Kanning & Hill, 2013).

The studies verify the validity and the reliability of the OCQ instrument, which results in

high Cronbach's alpha scores (Kanning & Hill, 2013; Thakre & Mayekar, 2016; Yucel &

Bektas, 2012). For this reason, the OCQ is a relevant instrument for this study to test employee

organizational commitment, and requires no alteration. The researcher received written

permission for OCQ to conduct the research (see Appendix G; Mowday et al., 1979).

Demographic characterics survey.

Analyzing demographic characteristics data helps the researcher to understand the

dynamics and insights into the supply chain managers' engagement, job satisfaction, and

organizational commitment. The composition demographic characteristics survey consists of

four questions concerning age, gender, nationality, and tenure at a current company as a supply

chain manager. Manikandan (2011) showed the quantitative researcher commonly applies

frequency distribution to organize data into a meaningful form that can be easily understood.

Manikandan (2011) discussed the characteristics of frequency distribution, such as (1) it

measures the central tendency and location (i.e., mean, median, mode); and (2) it measures the

dispersion (i.e., range, variance, standard deviation).

The sample of demographic characteristics questions used for data collection is included in Appendix A. Many researchers find demographic data useful when conducting a study of participants' characteristics and their relationship to employee engagement, job satisfaction, and organizational commitment (Garland et al., 2014; Lambert et al., 2017; Liu et al., 2018; Prideaux et al., 2018; Sarraf et al., 2017; Yahaya & Ebrahim, 2016).

Operationalization.

The seven demographic characteristics and three instrument questionnaires produced data for ten variables. As shown in Table 4, the demographic characteristics survey (DCS) included age, gender, nationality, tenure at a current company, and follow with three questions: Do you work full time? Are you employed in the supply chain industry located in the Middle East? Is your current job be either in a manager, supervisor, team leader, or specialist? The total amount of employee engagement (UWES-9) instrument is in the range of 0 to 54, which equals to the sum of three employee engagement subscales (see Table 4). The total amount of job satisfaction (JSS) instrument is in the range of 36 to 216, which is equal to the sum of nine job satisfaction subscales (see Table 4). The total amount of organizational commitment (OCQ) instrument is in a range of 15 to 105, which is equal to the sum of the three organizational commitment subscales (see Table 4).

Table 4

Demographic, Independent Variables and Dependent Variable Subscales

Demographic, Variables and Subscales by Type	Source	Item Number

I. Demographic Characteristics		
Composite Demographic Characteristics	DCS	1-7
Age	DCS	1
Gender	DCS	2
Nationality	DCS	3
Tenure with a Current Employer	DCS	4
Do you work full time?	DCS	5
Are you employed in the supply chain industry located in the Middle East?	DCS	6
Is your current job be either in a manager, supervisor, team leader, or specialist	DCS	7
II. Independent Variable – Employee Engagement		
Composite Employee Engagement	UWES-9	1-9
Vigor	UWES-9	1, 2, 5
Dedication	UWES-9	3, 4, 7
Absorption	UWES-9	6, 8, 9
III. Independent Variable – Job Satisfaction		
Composite Job Satisfaction	JSS	1-36
Satisfaction Level – Pay	JSS	1, 10, 19, 28
Satisfaction Level – Promotion	JSS	2, 11, 20, 33
Satisfaction Level – Supervision	JSS	3, 12, 21, 30
Satisfaction Level – Fringe Benefits	JSS	4, 13, 22, 29
Satisfaction Level – Contingent Rewards	JSS	5, 14, 23, 32
Satisfaction Level – Operating Conditions	JSS	6, 15, 24, 31
Satisfaction Level – Coworkers	JSS	7, 16, 25, 34
Satisfaction Level – Nature of Work	JSS	8, 17, 27, 35
Satisfaction Level – Communication	JSS	9, 18, 26, 36
IV. Dependent Variable – Organizational Commitment		
Composite Organizational Commitment	OCQ	1-15
Commitment Level – Involvement	OCQ	1, 2, 4, 6, 7
Commitment Level – Identification	OCQ	5, 8, 12, 13, 14
Commitment Level – Loyalty	OCQ	3, 9, 10, 11, 15

Note: The table above displayed as it appeared in the web questionnaire. DCS, Demographic Characteristics Survey; UWES-9, Work and Well-Being Survey (Schaufeli et al., 2006); JSS, Job Satisfaction Survey (Spector, 1985); OCQ, Organizational Commitment Questionnaire (Mowday et al., 1979).

Data collection techniques.

Supply chain managers were selected to take part in this research using a web-based

survey through SurveyMonkey. SurveyMonkey is a reputable company with a strict privacy

policy whereby online surveys and responses are private by default (SurveyMonkey privacy

basics, 2019). SurveyMonkey enables the researcher to easily create surveys, collect and store

data, and generate reports (McDowell & Murphy, 2018). The information collected through the

SurveyMonkey is anonymous for all survey instruments using Likert-type measurement scales.

All participants were 18 years or older at the time of the study, and their participation was

entirely voluntary without any cash incentives. An invitation from a SurveyMonkey was sent to

the sample population of 5,106 for this research as a recruitment method for a potentially hard-

to-reach participant pool who met the inclusion criteria. For the web-based survey, the

participants received an email with the survey link. Clicking on the link took the respondent to a

secure online SurveyMonkey tool, from where they were asked to confirm the consent

information on the first page of the survey tool (see Appendix I – Consent Form).

SurveyMonkey is user-friendly and only needs minimal computer literacy for the participant to

complete the survey (McDowell & Murphy, 2018).

SurveyMonkey stays open and available for *three weeks* until the sample size is satisfied.

The respondents must accept the terms of the informed consent form by choosing "agree" on the

survey tool before they can continue with the survey. Upon completion of the survey,

respondents choose "finished" to exit the survey tool. The data of survey responses are collected

and stored in a secure location for seven years to protect the confidentiality of the participants

(Grace, Nagle, Burgert-Brucker, Rutzick, Riper, Dontamsetti, & Croft, 2019).

Data organization techniques.

The survey data collected from the respondents are anonymous and safely stored on

SurveyMonkey's secure server for at least seven years. Seven years after completion of the

study, all data collection to include physical and electronic documents, data, and files destroyed

by the researcher. SurveyMonkey maintains the privacy and confidentiality of all data

collection, since it hosts the research content and participant responses (SurveyMonkey Privacy

Basics, 2019). The respondents are free to take the survey using a desktop, laptop, tablet, or

mobile at their convenience (McDowell & Murphy, 2018).

To ensure the study meets the acceptable sample size, the researcher monitors the

participation during the *three-week* data collection period. SurveyMonkey is not only a powerful

tool, but is also one of the most widely used to create and run professional online surveys using a

web interface. It offers a variety of analytical tools such as easy-to-understand charts and graphs

with the ability to filter and compare responses (McDowell & Murphy, 2018). Once the three-

week data collection period is over, the researcher closes the online survey and extracts the data

from SurveyMonkey in CSV, PDF, and SPSS formats. The researcher can export the data in

Microsoft Excel format to IBM SPSS Statistics for intensive analysis (McDowell & Murphy,

2018).

Maintaining participants' confidentiality is critical to the researcher; for this reason, all

data is stored in a secure and password-protected laptop computer. The responses' raw data

stays on the SurveyMonkey website under the protection of its privacy and security compliance

such as Europe's General Data Protection Regulation (GDPR), which became law on May 25,

2018 (SurveyMonkey committed to GDPR compliance, 2019) and only the researcher has access

to the data.

Summary of data collection.

Supply chain managers who participated in this study used an anonymous online survey,

which safely stored on SurveyMonkey's secure server for at least seven years. McDowell and

Murphy (2018) found SurveyMonkey's ease of use, cost-effectiveness, flexibility, user-

friendliness, and efficiency, which lets the researcher customize the survey and collect a large

amount of data. It allows the researcher to analyze and report the data in a simple format. Moreover, the data can be exported to other statistical packages (i.e., IBM SPSS Statistics) to conduct complex analysis (McDowell & Murphy, 2018).

Data Analysis

This quantitative correlation study examines the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization by answering the research questions and the associated hypotheses.

RQ1: What is the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ2: What is the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ3: Is age a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ4: Is age a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ5: Is gender a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ6: Is gender a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ7: Is nationality a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ8: Is nationality a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ9: Is tenure a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

RQ10: Is tenure a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The null and alternative hypotheses for this study included the following:

$H_0 1$: There is no statistically significant relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha1: There is a statistically significant relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$2: There is no statistically significant relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha2: There is a statistically significant relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$3: Age is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha3: Age is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$4: Age is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha4: Age is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$5: Gender is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha5: Gender is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$6: Gender is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha6: Gender is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$7: Nationality is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha7: Nationality is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$8: Nationality is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha8: Nationality is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$9: Tenure is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha9: Tenure is a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

$H_0$10: Tenure is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Ha10: Tenure is a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

Variables used in the study.

The researcher uses the IBM Statistical Package for Social Science (SPSS) version 26 to code and analyze the data from the online survey (SurveyMonkey). The IBM SPSS Statistics is an intuitive, and user-friendly tool that addresses the entire analytical process that helps the researcher draw more profound and meaningful insights from the data and predictions (Secchi, 2015). Table 5 shows the variables related to this study.

Table 5

Variable Type

Variable Type	Variable Description	Survey Name	Answered Grouping
Independent Variable	Employee Engagement (EE)	UWES-9	0 – 2 = Low EE
			3 – 6 = High EE

Independent Variable	Job Satisfaction (JS)	JSS	1 – 3 = Low JS
			4 – 6 = High JS
Dependent Variable	Organizational Commitment (OC)	OCQ	1 – 3 = Low OC
			4 – 7 = High OC

The researcher uses the Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006), which consists of 9 items to collect employee engagement data and group them by the participant answers on a 7-point Likert scale into low or high (0 = Never, 6 = Always). The norms suggest ratings of 0 to 2 reflect low employee engagement, and 3 to 6 high employee engagement.

The researcher uses the Job Satisfaction Survey (JSS; Spector, 1985), consisting of 36 items to collect employee job satisfaction data and group them by the participant answers on a 6-point Likert scale into low or high (1 = disagree very much, 6 = agree very much). The norms suggest ratings of 1 to 3 reflect low job satisfaction, and 4 to 6 high job satisfaction.

The researcher uses the Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979) consisting of 15 items to collect employee organizational commitment data and group them by the participants' answers on a 7-point Likert scale into low or high (1 = strongly disagree, 7 = strongly agree). The norms suggest ratings of 1 to 3 reflect low organizational commitment, and 4 to 7 high organizational commitment.

Multiple linear regression.

According to Aliahmadi, Mozafari, Jafari-Eskandari, and Nozari (2016), regression is a reliable statistical method. The linear regression approach allows researchers to model the relationships among the dependent variable (i.e., organizational commitment) and one or more independent variables (i.e., employee engagement and job satisfaction). Aliahmadi et al. (2016) further reported that multiple regression analysis is a multivariate statistical technique to apply the independent variables whose values are known to predict a single dependent variable. Fitting

the best linear relationship entails multiple linear regression using more than one independent variable to predict the dependent variable. Multiple linear regression is beneficial, especially in large population studies, to examine associations between variables. Multiple linear regression is suitable for this study to determine the relationships among employee engagement, job satisfaction, and organizational commitment.

Benefits of multiple linear regression.

One of the benefits of using multiple linear regression is to predict an outcome variable (y) based on various distinct predictor variables (x) (Kam & Abdul Hamid, 2015). In multiple linear regression, R, R^2(R-squared), and R^2_{adj} (*adjusted* R^2) denote the correlation coefficient, the coefficient of determination, and the R^2_{adj} between the observed values of the outcome variable (y) and the fitted (predicted) values of y, respectively (Amirat, Ziani, & Messadi, 2016; Green & Salkind, 2017; Jaseviciene & Jurksaityte, 2014).

Amirat et al. (2016) emphasized the values of R^2 and R^2_{adj} attest to the good fitting performances of the model. Wang, Nguyen, and Tran (2014) argued the correlation coefficient represented by (*r*) measures the strength of the linear relationship between two variables. After the formulation of multiple regression equations, the researcher can check the R^2 (coefficient of determination) as to potential ability; R^2 value is always between 0 and 1 (Wang et al., 2014). A larger R^2 indicates a stronger association, whereas a smaller R^2 indicates a lesser relationship, which represents the amount of variance in the dependent variable that is explained by the independent variables in a regression model. As a statistic, R^2 values are testable for statistical significance.

Other statistical tests.

Alternative statistical tests, such as ANOVA is not appropriate for this study. Kim (2014) selected the analysis of variance (ANOVA) method to compare the means of three groups and determine their statistical differences. When comparing more than two groups' means, the one-way ANOVA is the appropriate method, but it is not suitable for this study. After carefully assessing the quantitative options, the researcher is confident that multiple linear regression is the best choice to answer the research questions and the associated hypotheses.

Quantitative data analysis.

Details of data screening and cleaning.

For this study, the researcher conducts the data collection from the Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006), the Job Satisfaction Survey (JSS; Spector, 1985), and the Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979) using a secure online SurveyMonkey tool. After data collection, the researcher conducts data screening and cleaning to find missing items in the incomplete survey and remove them from the analysis. DeSimone, Harms, and DeSimone (2015) shared three types of screening techniques such as direct, archival, and statistical.

Direct screening methods. Direct screening allows the researcher to evaluate each participant based on specific behaviors when they respond to the survey (DeSimone et al., 2015). The self-report is one of the direct screening techniques that generally appear in the form of a question or a set of questions to draw attention, effort, or thoughtfulness but vulnerable to dishonesty in response to survey (DeSimone et al., 2015). Another direct screening technique is instructed items, where the researcher provides explicit instructions to respondents to ensure that they are paying attention (DeSimone et al., 2015).

Archival screening methods. Archival screening methods focus on patterns of responding

behaviors to the survey and do not require survey modification (DeSimone et al., 2015). The

semantic synonym is one of the archival screening techniques to recognize respondents who

show different responses to similar items (DeSimone et al., 2015). Whereas semantic antonym

technique, it identifies respondents who indicate similar responses to various items (DeSimone et

al., 2015). Another technique is response time, which allows the researcher to have a minimum

amount of time for respondents to spend on an item to answer the questions correctly (DeSimone

et al., 2015).

Statistical screening methods. Statistical screening methods need no survey modification

since it focuses on statistical techniques to detect unusual response patterns (DeSimone et al.,

2015). Psychometric synonyms, psychometric antonyms, and personal reliability are statistical

screening techniques. First, psychometric synonyms "assumes that respondents do not

appreciably change over the course of survey administration" (DeSimone et al., 2015, p. 174).

Second, psychometric antonym, it uses "the same assumption and methods as the psychometric

synonyms approach but instead identifies item pairs with the largest negative inter-item

correlations" (DeSimone et al., 2015, p. 175). Finally, personal reliability, it examines each

respondent's consistency within each measure (DeSimone et al., 2015).

The researcher should understand the distribution of each variable using the descriptive

statistics, and always visually inspect data for data-entry errors or implausible values (DeSimone

et al., 2015). Descriptive statistics are an essential part of the research, which enables the

researcher to present the data in a more meaningful way and better interpretation of the data

("Descriptive and inferential statistics," 2020). The research typically used two types of

statistics to describe the data. First, measures of central tendency: it shows the central position of

a frequency distribution for a group of data, using the mode, median, and mean ("Descriptive and inferential statistics," 2020). Second, measures of spread: it compiles a group of data by explaining how spread out the scores are, using the range, quartiles, variance, and standard deviation ("Descriptive and inferential statistics," 2020).

The disadvantage of an online survey is the researcher is not able to observe participants' behavior. Table 6 offers a brief description of the three types of screening techniques. Chen et al. (2014) discussed five complementary procedures of data cleaning: (1) describe and determine error types; (2) explore and find errors; (3) correct errors; (4) document error examples and error types; and (5) improve data entry procedures to reduce future mistakes. During the data cleaning process, the researcher needs to conduct due diligence with regard to data formats, completeness, rationality, and restrictions associated with the study (Chen et al., 2014). When the researcher conducts data screening and cleaning, Osborne (2013) said that it is like an art and a science process, whereby a thoughtful researcher uses a variety of different pieces of data to decide on the most prudent course of action.

Table 6

A brief description of each data screening technique

Technique	Category	Intended to screen respondents who:
Self-report	Direct	Admit to responding with low effort
Instructed items	Direct	Are not paying attention; defy test instructions
Bogus items	Direct	Are not paying attention; respond dishonestly
Semantic synonyms	Archival	Respond inconsistently across similar items
Semantic antonyms	Archival	Respond inconsistently across dissimilar items
Response time	Archival	Respond too quickly
Longstring	Archival	Respond the same way to all items
Psychometric synonyms	Statistical	Respond inconsistently across similar items
Psychometric synonyms	Statistical	Respond inconsistently across dissimilar items
Personal reliability	Statistical	Respond inconsistently within each measure
Mahalanobis D^2	Statistical	Respond in a substantially atypical manner

Source: DeSimone et al. (2015, p. 172)

Assumptions of multiple linear regression.

The four popular assumptions of the multiple linear regression are linearity, multicollinearity, homoscedasticity, normality, and outliers (Ahmad, Nawawi, & Salin, 2016; Bachleda & Bennani, 2016; Bell & Jones, 2015). The researcher applies a variety of assumptions to ensure no bias and error. For instance, standard multiple regression can only determine a relationship accurately if the independent and dependent variables are linear in nature. Most statistical tests therefore rely on several assumptions about the variables to properly perform the analysis.

Before performing multiple regression analyses, the researcher carefully inspects the data collection in this study to ensure it satisfies several conditions (Kassim, Anwar, Arokiasamy, Md Isa, & Ping, 2017). In the first condition, Simpson et al. (2014) showed *linearity* as an essential assumption when conducting the multiple linear regression analysis. For linear regression to occur, it needs the relationship between independent and dependent variables and closely aligned with each other (Kassim et al., 2017; Savescu, 2015). Ahmad et al. (2016) and Savescu (2015) explained the linearity assumption could best be tested with scatterplots.

In the second condition, *multicollinearity* occurs when the independent variables (predictors) measure the same phenomena, resulting in high correlation with one another (Kassim et al., 2017; Savescu, 2015; Voyer & Voyer, 2015). In this study, the researcher uses a scatterplot of the two predictors to detect multicollinearity in the predictions (Savescu, 2015). According to Kassim et al. (2017), the assumption of non-multicollinearity shows that there should be no correlations among the predictors or explanatory variables. Williams, Gómez Grajales, and Kurkiewicz (2013) explained that in severe cases such as a high correlation between two or more predictors, multicollinearity shows no unique least-squares solution to

regression analysis. Less severe multicollinearity, which is more common, shows unstable

estimates of the coefficients for specific predictors (Williams et al., 2013).

In the third condition, the assumption of *homoscedasticity* (meaning "same variance")

needs an equal variance in the value of the dependent variable for any corresponding

independent variables (Kassim et al., 2017). The research also uses the scatterplot in this study to

check for homoscedasticity between residuals and predicted values whereby the mean may vary,

but the variance must be the same (Kassim et al., 2017).

In the fourth condition, Kassim et al. (2017) reported the assumption of *normality*

concerns the residuals where the independent variable must have normal distribution at the

regression line. The researcher uses the skewness and kurtosis statistics in this study to prevent

normality assumption violations (Al-Anazi, Shamsudin, & Johari, 2016). However, a primary

issue may arise if the assumptions of multivariate normal distribution skewness and kurtosis are

higher than ±3 and ±10, respectively (Al-Anaz et al., 2016).

In the fifth condition, Williams et al. (2013) expressed that in some cases, the

consequences of regression analysis may be strongly influenced by an *outlier* that deviates

markedly from other observations in the sample on one or more variables under analysis, or a

highly unusual combination of values. Filzmoser, Ruiz-Gazen, and Thomas-Agnan (2014)

showed that multivariate outlier detection plays an essential role in the statistical analysis of

multivariate data because it helps the researcher reach conclusions about data quality as well as

abnormal phenomena in the data. In this study, the researcher utilizes Cook's distance to

identify outliers, since that is the diagnostics tool most widely used by researchers (Williams et

al., 2013).

Violations of assumptions.

Bootstrapping methods are popular for dealing with violations of assumptions to statistical inference (Cohen & Abedallah, 2015; Font, 2016; Kapelko & Lansink, 2015). The researcher uses bootstrapped samples in a variety of situations like validation of a predictive model performance, ensemble methods, estimation of bias, and variance of the model through repeat random sampling observation, with replacement from the data set to calculate the desired statistic in each resample (Cohen & Abedallah, 2015; Font, 2016; Kapelko & Lansink, 2015). Likewise, Kapelko and Lansink (2015) described bootstrapping as the repeated simulation of the data-generating process that imitates the original unknown sampling distribution of the estimators. The researcher uses the bootstrapping methods in this study to address and eliminate violations of the assumptions by testing and re-testing the data-generating process to detect problems, which may affect statistical assumptions.

Understanding the inferential results.

In this study, the researcher employs descriptive and inferential statistics to analyze data using the IBM Statistical Package for Social Science (SPSS) version 26. Malik and Khalid (2016) associated descriptive statistics with the medians, modes, variances, and standard deviation to summarize the distribution of data to find the characteristics (i.e., age, gender, nationality, tenure) of the participants and trends in the data. Ferreira and Patino (2015) and Armstrong (2019) explained inferential statistics such as *t*-test and analysis of variance (ANOVA) that test the relationship between the hypotheses, which helps the researcher to draw meaningful conclusions about the population.

According to Ferreira and Patino (2015), statistical hypothesis testing is the most common approach to address the problem through the calculation of the *p*-value ($p < .05$ is a

typical value used). In another word, 0.05 is the cut-off value to reject the null hypothesis, which implies that no difference exists, and extreme value for the test statistic is expected to be less than 5% of the time (Ferreira & Patino, 2015). The researcher uses the Pearson's product-moment correlation coefficient or Pearson's (*r*) in this study to measure the strength, direction, and probability of the linear associations among the dependent variable (organizational commitment) and independent variables (employee engagement and job satisfaction) (Akoglu, 2018; Rebekić, Lončarić, Petrović, & Marić, 2015).

According to Akoglu (2018) and Armstrong (2019), Pearson's correlation coefficient (*r*) is one of the most frequently used statistics used to (1) ascertain a statistically significant positive or negative relationship between two or more variables; and (2) measure the degree of statistical significance that can be connected to a correlation. Pearson's correlation helps determine the relationships among employee engagement, job satisfaction, and organizational commitment in this study. Rebekić et al. (2015) emphasized the correlation coefficient is denoted by (*r*), an indicator of the strength and direction of the relationship between variables, and how closely data is within a scatterplot along a straight line. The absolute value of (*r*) can vary from -1 to 1; however, $r > 0$ means a positive relationship, while $r < 0$ means a negative relationship; $r = 0$ shows no relationship (Akoglu, 2018; Rebekić et al., 2015).

Results in Excel and statistical package sciences.

The researcher utilizes IBM Statistical Package Social Science (SPSS) version 26 in this study to conduct the data analysis, which examines the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization.

The researcher extracts the data in the SurveyMonkey to Excel spreadsheets and put them in proper format before uploading it into SPSS.

The study of Nzuza and Lekhanya (2014) used the IBM SPSS Statistics to evaluate the internal factors that influence the centralized procurement of stocks in a South African municipality. Moreover, Nzuza and Lekhanya (2014) applied both descriptive and inferential statistics to analyze their results and draw conclusions through IBM SPSS Statistics. Like other researchers, Reuben, Chiba, and Scheepers (2017) employed the IBM SPSS Statistics in their study to investigate the impact of leadership style on stress-related presenteeism in South African knowledge workers. Reuben et al. (2017) applied the descriptive statistics of mean, median, mode, and standard deviation along with skewness and kurtosis to measure and analyze the sample data collected.

IBM SPSS Statistics is user-friendly, flexible, and easily performs robust analyses, which allows researchers to create graphs and statistics for analysis purposes (Nzuza & Lekhanya, 2014; Reuben et al., 2017; Secchi, 2015). For this reason, the researcher uses the IBM SPSS Statistics in this study to gain insights quickly into the data like intricate patterns and associations of the variables through data manipulation and statistical procedures to draw conclusions and make predictions.

Summary of Data Analysis.

Chen, Mao, and Liu (2014) and Osborne (2013) emphasized that data cleaning is essential to preserve data consistency. Chen et al. (2014) reported that "data cleaning is a process to identify inaccurate, incomplete, or unreasonable data, and then modify or delete such data to improve data quality" (p. 183). Like other researchers, Dorazio (2016) showed data screening and cleaning is a critical process because missing data may have a significant effect on

the research findings.   The researcher applies a variety of assumptions associated with particular

statistical models and types of statistics. The researcher utilizes IBM Statistical Package Social

Science (SPSS) version 26 in this study to conduct the data analysis.

Reliability and Validity

Reliability.

Reliability relates to the consistency of a measure or the degree to which an instrument

measures in the same way when used under the same conditions with the same subjects (Heale &

Twycross, 2015). Reliability covers the consistency, stability, and repeatability of the results, and

Table 7 shows these three attributes of reliability.

Table 7

Attributes of Reliability

Attributes	Description
Homogeneity (or internal consistency)	The extent to which all the items on a scale measure one construct
Stability (or test/retest)	The consistency of results using an instrument with repeated testing
Equivalence	Consistency among responses of multiple users of an instrument, or among alternative forms of an instrument

Sources: Creswell (2014, p. 206); Heale and Twycross (2015, p. 67)

With *homogeneity (or internal consistency)*, Heale and Twycross (2015) described

internal consistency as "using item-to-total correlation, split-half reliability, Kuder-Richardson

coefficient, and Cronbach's α. In split-half reliability, the results of a test, or instrument, are

divided in half. Correlations are calculated comparing both halves" (p. 66). Creswell (2014)

suggested researchers should ask themselves, "Are the items' responses consistent across

constructs?" to review how they report measures of internal consistency and also to determine

whether scores resulting from past use of the instrument demonstrate reliability (p. 206). The

Cronbach's α result is a number between 0 and 1—strong correlations indicate high reliability,

whereas low correlations indicate weak correlations, and the instrument may not be reliable (Heale & Twycross, 2015). Nunnally and Bernstein (1994) suggested the reliability score having a threshold of 0.50.

With s*tability (or test/retest)*, Heale and Twycross (2015) described stability as "tested using test-retest and parallel or alternate-form reliability testing. Test-retest reliability is assessed when an instrument is given to the same participants more than once under similar circumstances" (p. 67). For test-retest correlations, researchers should ask themselves, "Are scores stable over time when the instrument is administered a second time?" to determine whether scores resulting from past use of the instrument demonstrate reliability (Creswell, 2014, p. 206). Heale and Twycross (2015) explained as a general rule, a correlation coefficient of less than 0.3 indicates a weak correlation, from 0.3 to 0.5 is moderate and greater than 0.5 is strong.

With *equivalence*, Heale and Twycross (2015) assessed equivalence through inter-rater reliability, and rigor is imposed to ensure sufficient data for evaluation of the validity and reliability of the tools or instruments utilized in the study. Creswell (2014) suggested researchers should ask themselves, "Were errors caused by carelessness in administration or scoring?" to determine whether there was consistency in test administration and scoring (p. 206). Heale and Twycross (2015) suggested a good quality research study produces evidence of how all factors have been addressed.

Validity.

Creswell (2014) reported that validity in quantitative research addresses whether one can draw significant and useful inferences from the research instrument scores. Researchers posit three significant validity types (see Table 8): content validity, construct validity, and criterion validity (Creswell, 2014; Heale & Twycross, 2015).

Table 8

Types of Validity

Type of Validity	Description
Content Validity	The extent to which a research instrument accurately measures all aspects of a construct
Construct Validity	The extent to which a research instrument (or tool) measures the intended construct
Criterion Validity	The extent to which a research instrument is related to other instruments that measure the same variables

Sources: Creswell (2014, p. 206); Heale and Twycross (2015, p. 66)

With *content validity*, Creswell (2014) asserted the researcher should ask themselves, "Do the items measure the content they were intended to measure?" (p. 206). Heale and Twycross (2015) elaborated on content validity, or whether the instrument is adequately designed to cover all content related to the variable.

With *construct validity*, Creswell (2014) asserted the researcher should ask these questions: "Do items measure hypothetical constructs or concepts? Do results correlate with other results?" (p. 206). Heale and Twycross (2015) shared that construct validity determines whether the researcher can make inferences about test scores related to the research concept.

With *predictive or concurrent validity*, Creswell (2014) asserted the researcher should ask these questions: "Do scores predict a criterion measure? Do results correlate with other results" (p. 206)? Heale and Twycross (2015) revealed three types of criterion validity such as convergent validity (instrument is highly correlated with instruments measuring similar variables), divergent validity (instrument is poorly correlated to instruments that measure different variables), and predictive validity (instrument should have high correlations with future criteria) (p. 66).

Instrument 1 (reliability and validity): UWES-9.

The researcher uses the Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006) as an independent variable to measure employee engagement. The UWES-9 consists of a nine-item self-reported scale, with each subscale having three items: vigor (VI), dedication (DE), and absorption (AB). The UWES-9 response format is on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always*).

Many researchers have implemented UWES-9 in international studies and validated it in various countries using industrial-organizational settings with more than 21 translated versions (see Table 9), including Brazil, Finland, Italy, Japan, China, Norway, Russia, Serbia, South Africa, and South Korea (Carmona-Halty, Schaufeli, & Salanova, 2019; Ho Kim, Park, & Kwon, 2017). The Cronbach's alpha ranges from 0.78 to 0.87, above the threshold of 0.50 (Nunnally & Bernstein, 1994).

Eman-Nafa (2016) employed the Arabic version of the UWES-9 to study females in the education sector in Saudi Arabia. The Arabic version of the UWES-9, like the Dutch version, manifests evidence of the reliability and validity of the instruments, which shows prominent internal consistency reliability above the threshold of 0.50 (Nunnally & Bernstein, 1994). Martin's (2017) study also confirmed UWES-9 as exceptionally reliable, with a Cronbach's α of 0.90. Table 9 illustrates the reliability and validity of the translated UWES-9 instruments.

Table 9

Reliability and validity of the translated UWES-9 versions

Instruments	Version	*n*	VI α	DE α	AB α	Total
UWES-9	English	2000	0.940	0.870	0.890	-
UWES-9	Arabic	414	0.778	0.864	0.869	0.851
UWES-9S	Spanish	1502	0.890	0.890	0.870	0.900
UWES-9K	South Korean	342	0.906	0.893	0.902	-

UWES-9	Portuguese	522	0.930	0.930	0.900	0.960
	Brazilian	524				

Sources: Carmona-Halty et al. (2019, p. 2); Eman-Nafa (2016, p. 194); Ho Kim et al. (2017, p. 572); Martin (2017, p. 64); Sinval, Pasian, Queirós, and Marôco (2018, p. 11)
Note: VI, vigor; DE, dedication; AB, absorption

Instrument 2 (reliability and validity): JSS.

This study uses the Job Satisfaction Survey (JSS; Spector, 1985) for the independent

variable to measure employee job satisfaction. The JSS has 36 items in nine subscales to include

(1) salary, (2) promotion, (3) supervision, (4) benefits, (5) contingent rewards (performance-

based rewards), (6) operating procedures (required rules and procedures), (7) co-workers, (8)

communication, and (9) nature of work (meaningfulness of work) (Li & Huang, 2017).

The JSS response format is on a 6-point Likert scale ranging from 1 (*disagree very much*)

to 6 (*agree very much*). Spector (1997) reported the summarized scores for 36 items with a

possible score range from 36 to 216 whereby *dissatisfaction* ranged from 36 to 108, *satisfaction*

ranged from 144 to 216, and *uncertain* ranged from 108 to 144 (Ngidi & Njidi, 2017). Spector

(1997) showed the JSS with a reliability coefficient alpha of 0.91.

Ogunkuade and Ojiji's (2018) study of job satisfaction in the public and private sectors in

Nigeria employed fifteen participants in human resource management to rate the instrument for

its suitability to perform a validity test. The result of Cronbach's α is 0.98, which is significant

internal consistency (Ogunkuade & Ojiji, 2018). The researchers further applied the reliability

test that focused on the quality of measurement. The reliability coefficient alpha for the JSS of

the Nigerian respondents was 0.75, above the threshold of 0.50, as compared to the original

coefficient alpha of 0.92 (Spector, 1994).

In short, the JSS is a valid, reliable, and suitable instrument for the study of job

satisfaction in a foreign country such as Nigeria. Likewise, Tsounis and Sarafis (2018)

implemented the Greek JSS with a sample of 239 employees, resulting in a reliability coefficient

alpha of 0.87 for the total scale. Table 10 shows the comparative presentation of internal

consistency coefficients of JSS in the United States, Greek, United Arab Emirates (UAE), Saudi

Arabia, and South Africa. Li and Huang (2017) verified the JSS with satisfactory reliability with

the whole-scale reliability score of 0.91, and after eighteen months of test-retest, it showed a

correlation coefficient of 0.71.

Table 10

Comparative presentation of internal consistency coefficients of JSS

Subscale	American Sample Spector (1985)		Greek Sample		United Arab Emirates (UAE) Sample		Saudi Arabia Sample		South Africa Sample	
	n	α	*n*	α	*n*	α	*n*	α	*n*	α
Pay	2870	0.75	239	0.62	1017	0.919	137	0.658	60	0.81
Promotion	2870	0.73	239	0.67	1017	0.898	137	0.624	60	0.73
Supervision	2870	0.82	239	0.87	1017	0.916	137	0.773	60	0.65
Fringe Benefits	2870	0.73	239	0.73	-	-	-	-	60	0.79
Contingent Rewards	2870	0.76	239	0.71	-	-	-	-	60	0.81
Operating Procedures	2870	0.62	239	0.48	-	-	-	-	60	0.38
Coworkers	2870	0.60	239	0.67	1017	0.829	137	0.659	60	0.71
Nature of Work	2870	0.78	239	0.74	1017	0.792	137	0.705	60	0.76
Communication	2870	0.71	239	0.71	1017	0.743	-	-	60	0.70
Total Satisfaction	2870	0.91	239	0.87	1017	0.887	137	0.864	60	0.90

Sources: Abanumy and Alshitri (2015, p. 468); Abdulla, Djebarni, and Mellahi (2011, p. 134);
Ngidi and Ngidi (2017, p. 10255); Tsounis and Sarafis (2018, p. 5)

Instrument 3 (reliability and validity): OCQ.

The researcher uses the Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979) for the dependent variable to measure organizational commitment. There are 15 items on the OCQ; the self-reported survey asks participants to rate using a 7-point Likert scale agreeing or disagreeing with statements, of which six are negatively poled to measure their commitment to their organization (Kanning & Hill, 2013; Mowday et al., 1979; Thakre & Mayekar, 2016). A median coefficient alpha shows 0.90 within a range of 0.82 to 0.93 in a study of 2,563 employees in nine different public organizations, which shows a high reliability rate (Mowday et al., 1979).

Lam (1998) applied the test-retest reliability of the OCQ to eight diverse organizations in Hong Kong, with 104 sales supervisors using a 15-item OCQ twice over ten weeks; "Pearson correlation between scores at test and retest was 0.59 ($p < .01$) (p. 788)." Kanning and Hill's (2013) study examined the translation and validation of the OCQ using the three variables of job satisfaction, performance, and support of company values to include Germany, Poland, the United States, Canada, Hungary, Spain, and Malaysia. The researchers confirmed the relationship between the OCQ and the variables, and it shows a significant correlation among the variables and phenomenal success in translations (Kanning & Hill, 2013).

Al-Yami, Galdas, and Watson (2019) conducted a study of the two largest Ministry of Health hospitals in Riyadh, Saudi Arabia, concerning organizational commitment because of no organizational commitment tools exist in Arabic for health organizations. The Arabic version of the organizational commitment tool could help Arabic speaking employers better understand their employees' perceptions about the organization (Al-Yami et al., 2019). There was 4,858 total staff in these sites, so one sample from each hospital was recruited, leading to the final

sample of 412 (Al-Yami et al., 2019). Researchers use a two-factor structure (Factor one: value commitment; and Factor two: commitment to stay) for translation and back-translation of the OCQ Arabic version followed by Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to test the factorial validity and item response theory of Mokken scaling (Al-Yami et al., 2019).

Al-Yami et al.'s (2019) study revealed Factor one with a congruence coefficient of 0.90 (value of commitment; $n = 193$ and $n = 219$) , and Factor two is 0.78 (commitment to say; $n = 193$ and $n = 219$), above the threshold of 0.50. Cronbach's α coefficient range of 0.69 to 0.91 for the two factors in both samples signifies the Arabic version reliability of OCQ across cultures with good internal consistency. Also, Liou, Tsai, and Cheng (2013) showed consistent evidence of OCQ with satisfactory reliability and evident validities tested in diverse professional groups with a Cronbach's α of 0.83.

Summary of reliability and validity.

The research instruments (UWES-9, JSS, and OCQ) already have proven reliability. Many researchers have implemented UWES-9 in international studies and validated it in various countries using industrial-organizational settings with the Cronbach's alpha ranges from 0.78 to 0.87, above the threshold of 0.50 (Carmona-Halty et al., 2019; Ho Kim et al., 2017; Eman-Nafa, 2016). Li and Huang (2017) confirmed the JSS reliability score of 0.91, and after eighteen months of test-retest, it revealed a correlation coefficient of 0.71. Researchers found a high-reliability rate for OCQ with a median coefficient alpha of 0.90 within a range of 0.82 to 0.93 in nine different public organizations (Mowday et al., 1979).

Transition and Summary of Section 2

Section 2 starts with restating the purpose of this quantitative correlational study: to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. Then, using demographic characteristics that may influence the work environment (i.e., unique culture). This section presents a comprehensive explanation related to the role of the researcher, the role of the participants, research method and design, population and sampling, data collection instruments, data collection techniques, data organization techniques, data analysis, and reliability and validity. A careful review of various parts of Section 2 is essential to determine the meaningful relationships among the independent variables (employee engagement and job satisfaction) and dependent variable (organizational commitment) while maximizing the validity and reliability of the study.

Creswell (2014) emphasized that "validity and reliability of scores on instruments lead to meaningful interpretations of data" (p. 200). The IBM Statistical Package for Social Science (SPSS) version 26 analyzes data using multiple linear regression to compare the relationships among a dependent variable and independent variables. The outcome of the research may contribute to positive and healthy work attitudes towards engagement, satisfaction, and commitment, which adds in turn to the current body of knowledge of ways to increase employee retention rates in the supply chain industry.

Section 3 looks at the presentation of the findings and discuss the applications to professional practice. After examining and analyzing the research findings (i.e., outliers or discrepancies in the data), the researcher suggests recommendations for action, recommendations for further study, reflections of the study, and finally a summary and conclusions.

Section 3: Application to Professional Practice and Implications for Change

Section 3 consists of an overview of the study and presentation of the findings. The section continues with applications to professional practice, as well as recommendations for action, and further study. The reflections section involves a discussion of the researcher's doctoral study experience. The section then closes with a conclusion to the study.

Overview of the Study

The purpose of this quantitative correlation study was to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. Although the Middle East exhibits steady economic growth, unemployment rate for the MENA region was between 10% and 25%, which appears to be getting worse (Alfalla-Luque et al., 2015). Nearly 99% of employees in the private sector in the UAE are expatriates, with an average employment of two years after repatriation (De Ruiter et al., 2018 & Haak-Saheem et al., 2017). The specific focus of this study was on managers within the supply chain firm—those logistics and distribution professionals in the Middle East who have inadequate knowledge of how to improve employee engagement and job satisfaction, which in turn affects the employee's organizational commitment to achieve the company's goals.

The independent variables were employee engagement and job satisfaction, and the dependent variable was organizational commitment. The researcher investigated the relationships among these variables by compiling three surveys previously used by the scholars to study the employee engagement (UWES-9; Schaufeli et al., 2006), job satisfaction (JSS; Spector, 1985), and organizational commitment (OCQ; Mowday et al., 1979) into one new survey, including the demographic characteristics. The participants provided self-reported data

using a web-based survey through SurveyMonkey. The sample size needed for this study is 189

completed surveys, using a population size of 5,106 based on a 95% confidence level.

Presentation of the Findings

This subsection included the findings of the tests and summaries of the statistical

assumptions using IBM for Windows, SPSS Version 26. The participants' self-reported data

through SurveyMonkey (online survey). The data was uploaded from SurveyMonkey to an

Excel spreadsheet. Then, the researcher conducted data screening and cleaning to find the

missing items in the incomplete survey and remove them from the analysis. Next, the data was

uploaded into SPSS to conduct the analysis. The researcher performed the preliminary analyses

in SPSS to determine whether there were violations in assumptions of the regression in terms of

normality, linearity, and heteroscedasticity. The outcome of the regression analysis should

explain whether the test is significant and whether to support or reject null hypothesis. The

statistical tests, such as frequency counts, means, and standard deviations, were used to test the

hypotheses.

Demographic breakdown.

The survey data collection ran from January 20th to February 1st, 2020, yielding 562 total

responses. Of the 562 responses, 357 were fully completed and usable for data analysis. Table

11 shows that most of the respondents were male, 315 (88.24%), and 42 (11.76%) were female.

Most of the respondents were in the age range of 30 and 39 (50.98%). Indians are the primary

respondents with 216 (60.50%), followed by the Philippines at 44 (12.32%). The first group of

the respondents have been employed for seven or more years in their current company, or 130

(36.41%), followed by the second group with between 1 and 2.9 years tenure, or 93 (26.05%).

All respondents were employed full-time in the supply chain industry or associated with the

International Road Transport Union (IRU) in the Middle East, having a current job as a manager,

supervisor, team leader, or specialist.

Table 11

Demographic breakdown

Variable	Category	N	%
Gender			
	Female	42	11.76
	Male	315	88.24
Age Range (in years)			
	18-21	0	0
	22-29	47	13.17
	30-39	182	50.98
	40-49	107	29.97
	50-59	20	5.60
	60 and above	1	.28
Nationality			
	Egypt	3	.85
	India	216	60.50
	Nepal	26	7.28
	Nigeria	11	3.08
	Pakistan	7	1.96
	Philippines	44	12.32
	Sri Lanka	29	8.13
	Other	21	5.88
Tenure			
	Less than 1 year	52	14.57
	1 to 2.9 years	93	26.05
	3 to 3.9 years	17	4.76
	4 to 4.9 years	24	6.72
	5 to 5.9 years	23	6.45
	6 to 6.9 years	18	5.04
	7 years and above	130	36.41
Employment Status	Full-Time	357	100.00
Company Industry / Region	Supply Chain / Middle East	357	100.00
Current Job	Manager, Supervisor, Team Leader, or Specialist	357	100.00

Note: $N = 357$

Descriptive statistics for independent and dependent variables.

The descriptive statistics are mean, standard deviation, skewness, and kurtosis used for the independent variables (employee engagement and job satisfaction) and dependent variable (organizational commitment). See Table 12. Employee engagement consisted of three subscales: vigor, dedication, and absorption. There are nine subscales of job satisfaction: pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. Organizational commitment consisted of three subscales including involvement, identification, and loyalty.

The mean score for employee engagement was 5.272 (SD = 0.499, Min = 3.78, Max = 6.00, see Table 12), indicating that the level of employee engagement was relatively "high" for the majority of the participants. The Work and Well-Being Survey (UWES-9; Schaufeli et al., 2006) consists of 9 items to collect the employee engagement data and group the answers using a 7-point Likert scale into low or high, ranging from 0 = (Never) to 6 = (Always). The norms suggest ratings of 0 to 2 reflecting low employee engagement, and 3 to 6 indicating high employee engagement.

In this study, the mean score for job satisfaction was 4.346 (SD = 0.647, Min = 2.64, Max = 5.86, see Table 12), which indicated that the level of job satisfaction was relatively "high" among the participants. In other words, more of the participants were satisfied rather than dissatisfied with their current job. The Job Satisfaction Survey (JSS; Spector, 1985) consists of 36 items to collect the employee job satisfaction data and group them by the participants' answers positioned on a 6-point Likert scale into low or high (1 = disagree very much, 6 = agree very much). The norms suggest ratings of 1 to 3 reflect low job satisfaction, and 4 to 6 high job satisfaction.

This study also showed the mean score for organizational commitment as 5.645 (SD =

0.692, Min = 3.80, Max = 7.00, see Table 12), which means this sample showed a relatively high

level of OC. The Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979)

consisted of 15 items to collect the employee organizational commitment data and organize it by

the participant answers on a 7-point Likert scale by low or high such as 1 = strongly disagree, 7

= strongly agree. The norms suggest ratings of 1 to 3 reflecting low organizational commitment,

and 4 to 7 high organizational commitment. Skewness and kurtosis indicate how closely the data

fit a normal distribution (Al-Anaz et al., 2016). The assumption of multivariate normal

distribution becomes concerned when skewness and kurtosis are higher than ±3 and ±10,

respectively. Table 12 exhibited skewness (within ±3) and kurtosis (within ±10), indicating that

the distribution was approximately symmetric. However, Table 12 showed "dedication" kurtosis

greater than one when compared to other variables.

Table 12

Means, Standard Deviations, Skewness, and Kurtosis for Predictor and Criterion Variables

Variable	M	SD	Min	Max	Skewness		Kurtosis	
					Stat	Std Err	Stat	Std Err
Employee Engagement[a]	5.272	0.499	3.78	6.00	-0.505	0.129	-0.267	0.257
Vigor	5.078	0.738			-0.575	0.129	-0.337	0.257
Dedication	5.611	0.591			-2.032	0.129	5.119	0.257
Absorption	5.128	0.718			-0.659	0.129	-0.288	0.257
Job Satisfaction[b]	4.346	0.647	2.64	5.86	-0.038	0.129	-0.499	0.257
Pay	3.883	1.123			-0.245	0.129	-0.465	0.257
Promotion	3.891	0.938			0.106	0.129	-0.022	0.257
Supervision	5.131	0.942			-1.090	0.129	0.789	0.257
Fringe Benefits	3.906	1.010			0.137	0.129	-0.319	0.257
Contingent Rewards	3.902	1.081			0.069	0.129	-0.604	0.257
Operating Conditions	3.299	0.809			0.217	0.129	0.220	0.257
Coworkers	5.022	0.816			-0.745	0.129	0.625	0.257
Nature of Work	5.266	0.693			-0.827	0.129	0.149	0.257
Communication	4.817	0.989			-0.663	0.129	-0.609	0.257
Organizational Commitment[c]	5.645	0.692	3.80	7.00	-0.257	0.129	-0.609	0.257

Involvement	6.275	0.746	-1.028	0.129	0.610	0.257
Identification	5.789	0.939	-0.660	0.129	-0.180	0.257
Loyalty	5.383	0.997	-0.451	0.129	0.056	0.257

Note: *N* = 357

[a] The Work & Well-being Survey (UWES-9): 7-point Likert scale ranging from 0 (never) to 6 (always)

[b] Job Satisfaction Survey (JSS): 6-point Likert scale ranging from 1 (disagree very much) to 6 (agree very much)

[c] Organizational Commitment Questionnaire (OCQ): 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree)

Reliability analysis.

The research instruments already have consistent evidence of reliability. These include the Work and Well-Being Survey (Cronbach's α 0.91; UWES-9; Schaufeli et al., 2006; Shu, 2015), the Job Satisfaction Survey (Cronbach's α 0.91; JSS; Spector, 1997), and the Organizational Commitment Questionnaire (OCQ; Mowday et al., 1979; Yucel & Bektas, 2012).

For job satisfaction, participants answered 36 items about how satisfied they were with their current job in a supply chain management setting using a 6-point Likert scale, ranging from 1 = (disagree very much) to 6 = (agree very much). Nineteen of the 36 total items are reverse scored. For organizational commitment, participants answered 15 items regarding their feelings about their current company. Six items were also needed for OCQ reverse scoring such as 3, 7, 9, 11, 12, and 15. Mowday et al. (1979) and Spector (1994) agreed that items negatively phrased and reverse-scored help reduces response bias.

An acceptable Cronbach's alpha coefficient was necessary for each instrument to measure internal consistency (reliability) and meet reliability requirements. According to Nunnally and Bernstein (1994), the scales should be reliable and values of a single test-retest coefficient with the threshold of 0.50. Table 13 showed the internal reliability of employee engagement, job satisfaction, and organizational commitment above the threshold of 0.50 (Nunnally & Bernstein, 1994).

Table 13

Reliability Statistics for Independent and Dependent Variables

Variables	Cronbach's Alpha
Employee Engagement	0.617
Job Satisfaction	0.899
Organizational Commitment	0.725

Note: $N = 357$

Tests of assumption.

Tests of assumption for multiple regression were conducted before proceeding with

parametric inferential statistical analyses.

Normality. Table 14 showed the results of the Kolmogorov-Smirnov test for the

independent variables (employee engagement and job satisfaction) and dependent variable

(organizational commitment). For employee engagement, the test was significant at $D(357) =$

0.095, $p < 0.001$, indicating that a variable was not normally distributed. For job satisfaction, the

test was not significant at $D(357) = 0.042$, $p > 0.05$, which means the distribution was not

significantly different from a normal distribution. For organizational commitment, the test was

significant at $D(357) = 0.053$, $p < 0.05$, which suggests the assumption of normality was

violated. Hence, only job satisfaction met the assumption of normality. Both frequency

histogram and normal probability P-P plot of regression standardized residuals were used to

conduct more tests on the variables. Therefore, employee engagement, job satisfaction, and

organizational commitment all met the assumption of normality (Figure 4-9).

Table 14

Kolmogorov-Smirnov test

Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
	Stat	Df	Sig.	Stat	Df	Sig.

Mean EE	0.095	357	0.000	0.960	357	0.000
Mean JS	0.042	357	0.199	0.993	357	0.075
Mean OC	0.053	357	0.019	0.983	357	0.000

Employee Engagement (EE), Job Satisfaction (JS), Organizational Commitment (OC)

Frequency histogram (Figure 4) of employee engagement showed a bell curve, and it was overly peaked in the middle of the distribution. From the researcher's observation, the levels of normality for employee engagement was found to be acceptable.
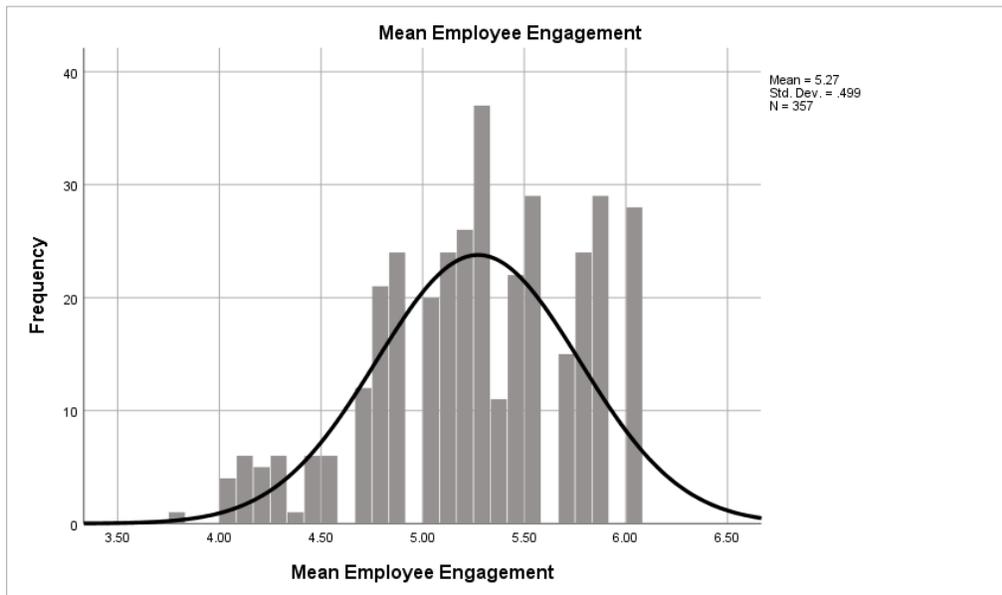
Figure 4 Frequency histogram for Employee Engagement

As shown in Figure 5, job satisfaction exhibited a bell curve within the normal distribution. The levels of normality for job satisfaction was found to be acceptable.
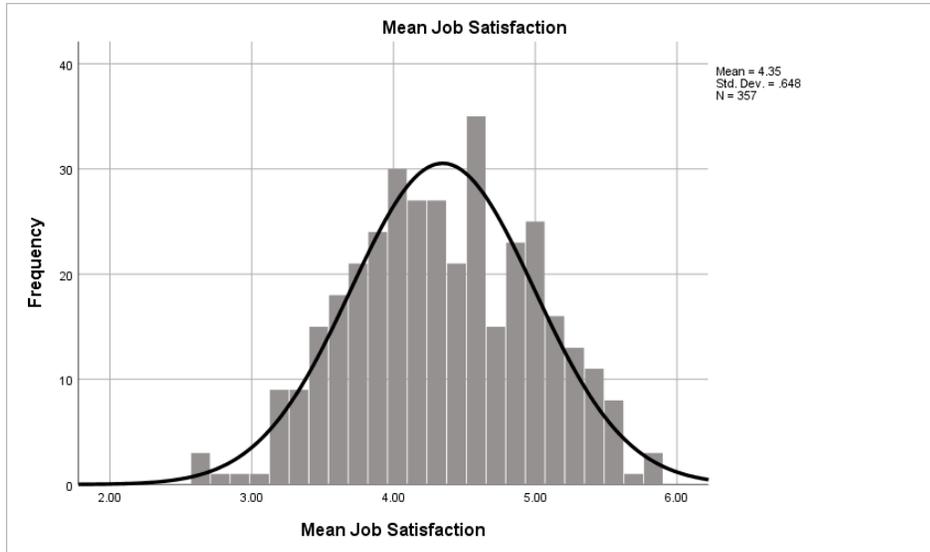
Figure 5 Frequency histogram for Job Satisfaction

Figure 6, organizational commitment, also showed a bell curve within the normal

distribution. The levels of normality for job satisfaction was found to be acceptable.
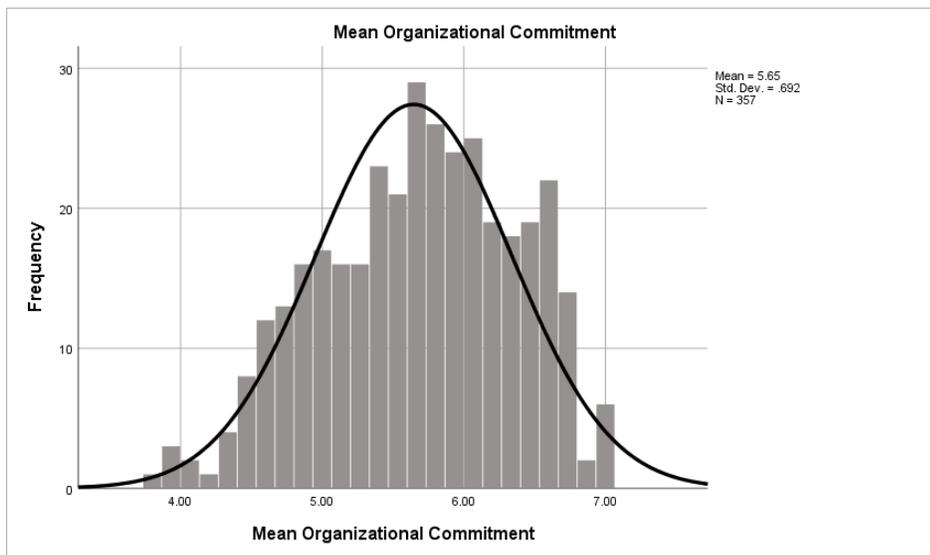
Figure 6 Frequency histogram for Organizational Commitment

The normal probability P-P plot of the regression standardized residuals was conducted

for employee engagement and found that most of the residual cluster near the plotline, which

indicated that the data met the assumption of normality (Figures 7).
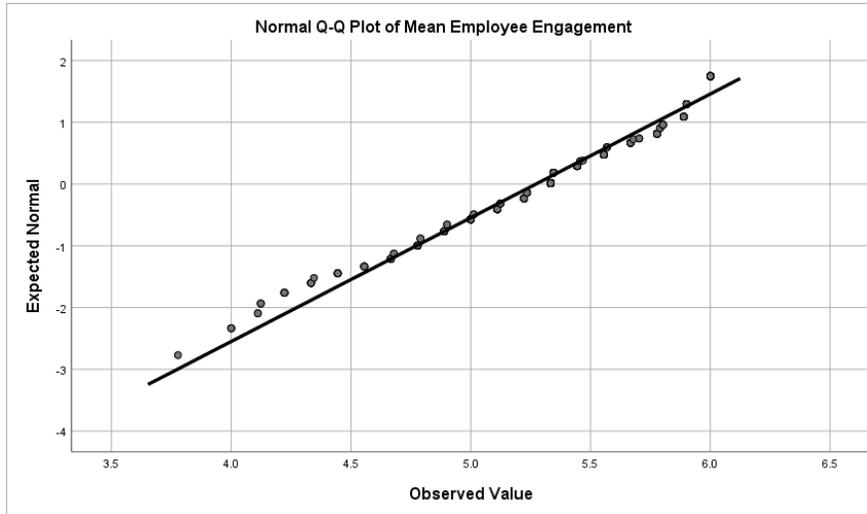
Figure 7 Normal Probability P-P Plot of Regression Standardized Residuals for Employee Engagement

Another normal probability P-P plot of the regression standardized residuals was

conducted for job satisfaction and found that most of the residual cluster near the plot line,

indicating that the data met the assumption of normality (Figures 8).
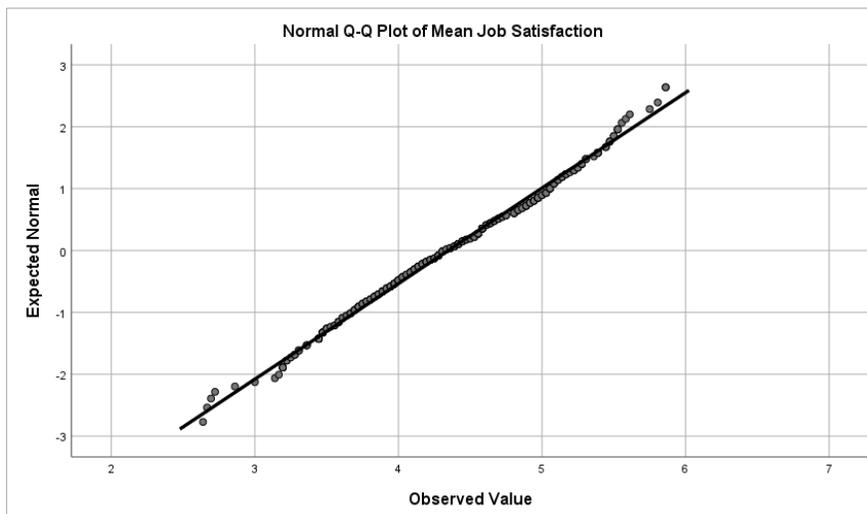
Figure 8 Normal Probability P-P Plot of Regression Standardized Residuals for Job Satisfaction

Lastly, the normal probability P-P plot of the regression standardized residuals was

conducted for organizational commitment and found that most of the residual cluster near the

plot line for employee engagement, which indicated the data met the assumption of normality

(Figures 9).
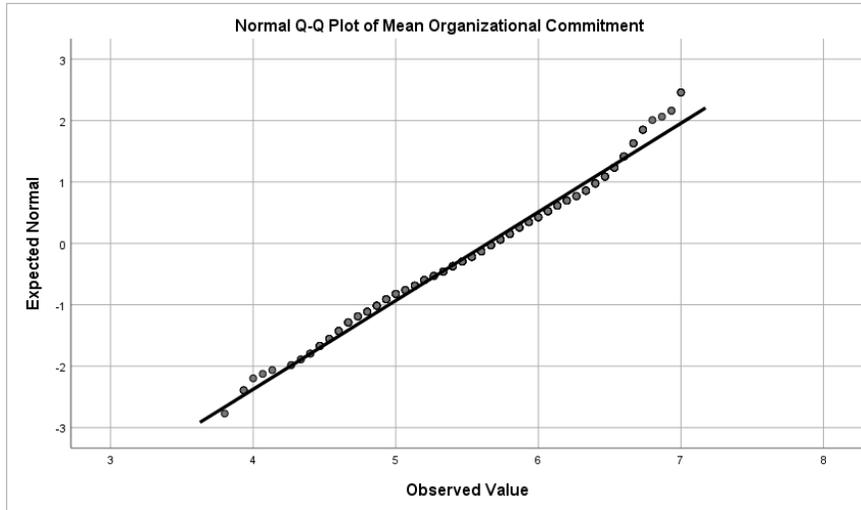
Figure 9 Normal Probability P-P Plot of Regression Standardized Residuals for Organizational Commitment

Multicollinearity. Multicollinearity occurs when the independent variables (predictors) measure the same phenomena, resulting in high correlation with one another (Kassim et al., 2017; Savescu, 2015; Voyer & Voyer, 2015). To detect multicollinearity, the researcher used the variance inflation factor (VIF). According to Kassim et al. (2017), the assumption of non-multicollinearity indicated that there should be no correlations among the predictors or explanatory variables. The general rule in analyzing a multiple regression output for multicollinearity: (1) If the VIF value lies between 1-10, then there is no multicollinearity; (2) if the VIF <1 or >10, then there is multicollinearity. Table 15 shows a VIF value of slightly above one, indicating that the data met the assumption of no multicollinearity.

Table 15

Tests of Multicollinearity based on the Coefficients Output – Collinearity Statistics

Variable	Tolerance	VIF
Employee Engagement	0.903	1.108
Job Satisfaction	0.869	1.150
Age	0.852	1.174
Gender	0.968	1.033
Nationality	0.941	1.062
Tenure	0.880	1.137

Outliers.   Boxplot was used to find outliers. In Figure 10, employee engagement boxplot showed no outliers.
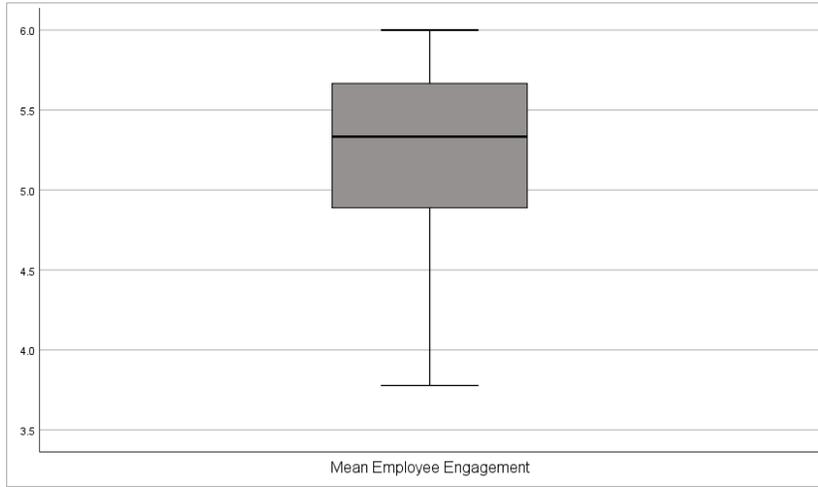
Figure 10 Boxplot for Employee Engagement Outliers

In Figure 11, job satisfaction boxplot showed no outliers.
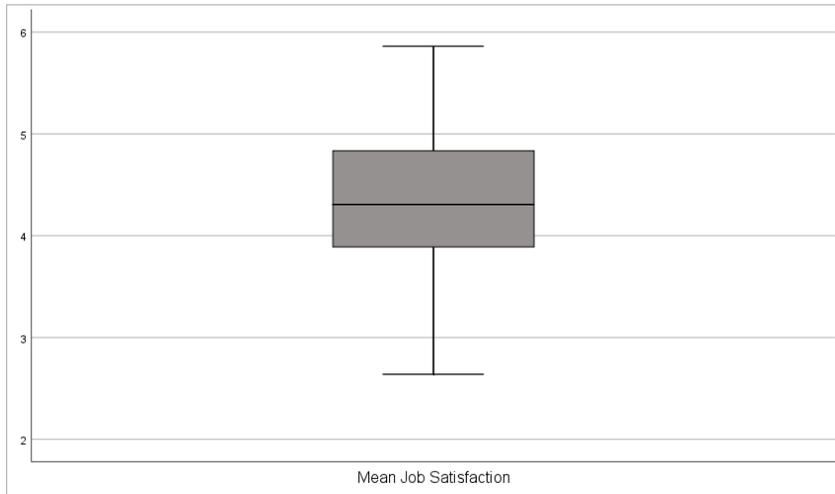
Figure 11 Boxplot for Job Satisfaction Outliers

In Figure 12, organizational commitment boxplot showed no outliers.
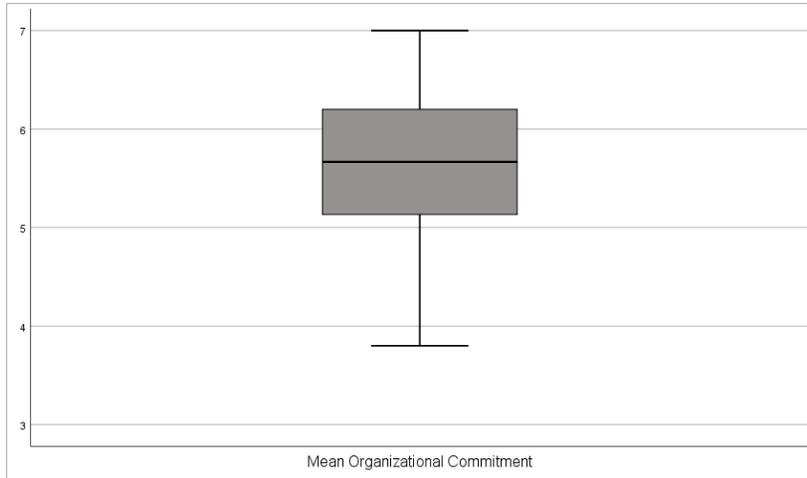
Figure 12 Boxplot for Organizational Commitment Outliers

   Homoscedasticity. The researcher addressed the assumption of homoscedasticity using a

scatterplot of standardized residuals with the standardized predicted values for the study's OCQ

scores. Kassim et al. (2017) reported that homoscedasticity (meaning "same variance") requires

an equal variance in the value of the dependent variable for any corresponding independent

variables. Figure 13 showed the results of OCQ scores distribution around the fit line. Based on

the output of the scatterplot, there were no significant violations of the homoscedasticity

assumption.
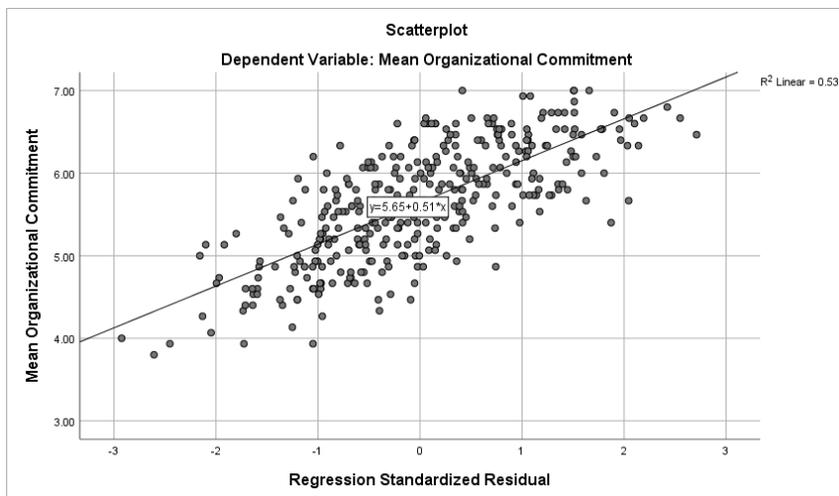
Figure 13 Standardized Residuals and Standardized Predicted Values of OCQ

Linearity. The researcher created a bivariate scatterplot to test linearity assumptions. Figure 14 examined the extent of linearity between employee engagement and the dependent variable of organizational commitment. Based on the visual inspection of the scatterplot in Figure 14, there was no sign of a curvilinear relationship. Therefore, the data met the assumption of linearity.
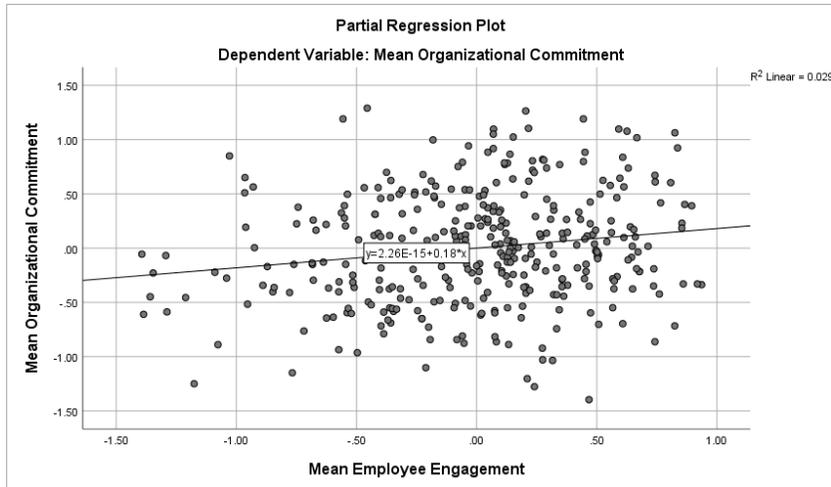
Figure 14 Scatterplot of Employee Engagement with Organizational Commitment

Figure 15 depicts the outcome, i.e., there was no violation examined the extent of linearity between job satisfaction and the dependent variable of organizational commitment, and the data met the assumption of linearity.
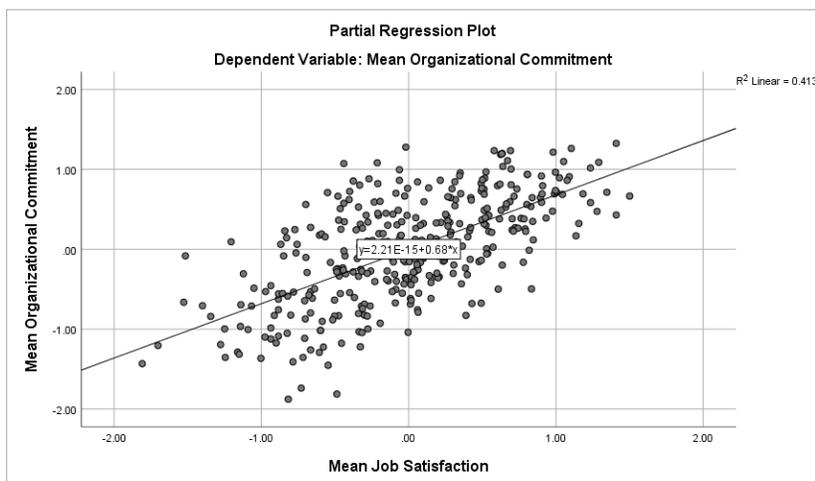
Figure 15 Scatterplot of Job Satisfaction with Organizational Commitment

Hypotheses testing results for H1.

- $H_0$1: There is no statistically significant relationship between employee engagement

  (EE), measured by the UWES-9 scores, and organizational commitment (OC),

  measured by OCQ scores, in the supply chain managers of the Middle East

  organization.

Regression analysis used to examine the relationship between employee engagement

(EE) and organizational commitment (OC). The analysis included three sets (1) EE regressed on

OC, and (2) three elements of EE regressed on OC.

EE regressed on OC. Bivariate regression used to measure the relationship between EE

and OC, and the model indicated a statistically significant relationship with $F(1, 355) = 36.525$, p

< 0.001. The adjusted R^2 was 9.1%, indicating that EE explained 9.1% of OC scores correctly

(See Table 16). The significance in Table 17 shows that EE is statistically significant in

predicting OC ($p < 0.001$); therefore, the null hypothesis was rejected. A one-unit increase in

EE, also increases the OC by 0.305 units.

Table 16

Employee Engagement Regressed on Organizational Commitment

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.925	1	15.925	36.525	0.000
Residual	154.783	355	0.436		
Total	170.708	356			
R-square	9.3%				
Adjusted R-square	9.1%				

Three elements of EE regressed on OC. Multiple regression used to measure the

relationship between three elements of EE (vigor, dedication, and absorption) and OC. VIF

value of vigor, dedication, and absorption lies around one, which showed that multicollinearity

does not exist (Kassim et al., 2017). Vigor (Beta = 0.191, $p = 0.001$) and dedication (Beta =

0.190, $p = 0.001$) were statistically significant predictor of OC. Conversely, absorption (Beta =

0.035, $p = 0.515$) is not a significant predictor of OC. Table 17 results suggested that *vigor* (high

energy and mental resilience on the individual's work) and *dedication* (heavily involved in one's

work with a sense of significance, pride, and challenge) are more important elements in

predicting OC.

Table 17

Three Elements of Employee Engagement regressed on Organizational Commitment

Term	Standarized Coefficients	p	VIF
Employee Engagement	0.305	0.000	1.000
R-square	9.3%		
Adjusted R-square	9.1%		
Vigor	0.191	0.001	1.287
Dedication	0.190	0.001	1.185
Absorption	0.035	0.515	1.121
R-square	10.9%		
Adjusted R-square	10.1%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized
regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Hypotheses testing results for H2.

- H_02: There is no statistically significant relationship between job satisfaction (JS),

  measured by JSS scores, and organizational commitment (OC), measured by OCQ

  scores, in the supply chain managers of the Middle East organization.

Regression analysis used to examine the relationship between job satisfaction (JS) and

organizational commitment (OC). The analysis included three sets (1) JS regressed on OC, and

(2) three elements of JS regressed on OC.

JS regressed on OC. The model of bivariate regression was a statistically significant fit

of the data $F(1, 355) = 293.22$, $p < .001$ (See Table 18). The adjusted R^2 (.451) showed virtually

no shrinkage from the unadjusted value (.452), indicating the model may generalize well for the

relationship between JS and OC. The significance in Table 19 shows that JS is statistically

significant in predicting OC ($p < 0.001$); therefore the null hypothesis was rejected. A one-unit

increase in JS also increases the OC by 0.673 units.

Table 18

Job Satisfaction Regressed on Organizational Commitment

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	77.220	1	77.220	293.224	0.000
Residual	93.488	355	0.263		
Total	170.708	356			
R-square	45.2%				
Adjusted R-square	45.1%				

     Nine elements of JS regressed on OC. Multiple regression used to measure the

relationship between nine elements of JS (pay, promotion, supervision, fringe benefits,

contingent rewards, operating conditions, coworkers, nature of work, and communication) and

OC. The adjusted R^2 was 47.9%, meaning that nine elements of JS explained 47.9% of OC

scores correctly, and also 47.9% of the data fit the regression model (See Table 19). The VIF

value of each element of JS showed no issues with multicollinearity because it lies between one

and ten (Kassim et al., 2017). The regression analysis in Table 19 showed that communication

(Beta = 0.309, $p < 0.001$), nature of work (Beta = 0.160, $p = 0.001$) and fringe benefits (Beta =

0.150, $p = 0.008$) were all significantly related to OC. Conversely, pay (Beta = 0.106, $p =$

0.096), promotion (Beta = 0.024, $p = 0.626$), supervision (Beta = 0.033, $p = 0.508$), contingent

rewards (Beta = 0.090, $p = 0.096$), operating conditions (Beta = 0.004, $p = 0.911$), and coworkers

(Beta = 0.046, $p = 0.379$) were not a significant predictor of OC.

     The results of the multiple regression in Table 19 suggested the *communication* element

of JS (measures communication effectiveness in an organization) was more important element in

predicting OC, followed by the *nature of work* (measures the value of job assignments), and then

fringe benefits (measures the level of satisfaction concerning monetary and nonmonetary fringe

benefits) (Li & Huang, 2017; Saiti & Papadopoulos, 2015).

Table 19

Nine Elements of Job Satisfaction regressed on Organizational Commitment

Term	Standarized Coefficients	*p*	VIF
Job Satisfaction	0.673	0.000	1.000
R-square	45.2%		
Adjusted R-square	45.1%		
Pay	0.106	0.096	2.742
Promotion	0.024	0.626	1.653
Supervision	0.033	0.508	1.731
Fringe Benefits	0.150	0.008	2.193
Contingent Rewards	0.090	0.096	1.971
Operating Conditions	0.004	0.911	1.085
Coworkers	0.046	0.379	1.879
Nature of Work	0.160	0.001	1.506
Communication	0.309	0.000	2.052
R-square	49.2%		
Adjusted R-square	47.9%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Hypotheses testing results for H3 and H4.

- $H_0 3$: Age is not a moderating factor in the relationship between employee

  engagement (EE), measured by the UWES-9 scores, and organizational commitment

  (OC), measured by OCQ scores, in the supply chain managers of the Middle East

  organization.

- $H_0 4$: Age is not a moderating factor in the relationship between job satisfaction (JS),

  measured by JSS scores, and organizational commitment (OC), measured by OCQ

  scores, in the supply chain managers of the Middle East organization.

Multiple regression used to measure the moderating effect of age in the relationship between EE and OC, and JS and OC. In Table 20, the VIF value of age, AgexEng, AgexSat, EE, and JS lies around one, which indicated that multicollinearity does not exist (Kassim et al., 2017). For $H_0 3$, the moderator analysis revealed that AgexEng does have a statistically significant moderating effect on the relationship between EE and OC (Beta = 0.115, p = 0.049); therefore, the null hypothesis was rejected. A one-unit increase in AgexEng, also increases the OC by 0.115 units. Conversely, in $H_0 4$, the moderator analysis showed that AgexSat does not moderate the relationship between JS and OC (Beta = 0.064, p = 0.198); therefore, the null hypothesis was supported. The results of moderator analysis ($H_0 4$) indicated that no significant association with the addition of age to the relationship between JS and OC.

Table 20

Age, Employee Engagement, Job Satisfaction regressed on Organizational Commitment

Demographic	Term	Standarized Coefficients	p	VIF
Age and EE	Age	0.100	0.051	1.035
	EE	0.287	0.000	1.035
	AgexEng	0.115	0.049	1.342
	EE	0.247	0.000	1.342
	R-square	10.3%		
	Adjusted R-square	9.8%		
Age and JS	Age	0.054	0.178	1.023
	JS	0.665	0.000	1.023
	AgexSat	0.064	0.198	1.610
	JS	0.633	0.000	1.610
	R-square	45.5%		
	Adjusted R-square	45.2%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Hypotheses testing results for H5 and H6.

- H_05: Gender is not a moderating factor in the relationship between employee

    engagement (EE), measured by the UWES-9 scores, and organizational commitment

    (OC), measured by OCQ scores, in the supply chain managers of the Middle East

    organization.

- H_06: Gender is not a moderating factor in the relationship between job satisfaction

    (JS), measured by JSS scores, and organizational commitment (OC), measured by

    OCQ scores, in the supply chain managers of the Middle East organization.

Another multiple regression was used to measure the moderating effect of gender in the

relationship between EE and OC, and JS and OC. The VIF value of gender, GenxEng, GenxSat,

EE, and JS lies around one, which indicated that multicollinearity does not exist (Kassim et al.,

2017). Based on the results of the moderator analysis, no moderation effect was found in the

relationship of GenxEng (EE and OC, Beta = -0.025, $p = 0.663$) and GenxSat (JS and OC, Beta =

-0.088, $p = 0.100$). Gender was no longer significantly related to commitment when combined

with EE or JS; therefore, the null hypothesis was supported. See Table 21.

Table 21

Gender, Employee Engagement, Job Satisfaction regressed on Organizational Commitment

Demographic	Term	Standarized Coefficients	p	VIF
Gen and EE	Gen	-0.026	0.606	1.000
	EE	0.305	0.000	1.000
	GenxEng	-0.025	0.663	1.291
	EE	0.317	0.000	1.291
	R-square	9.4%		
	Adjusted R-square	8.9%		
Gen and JS	Gen	-0.065	0.100	1.003

JS	0.676	0.000	1.003
GenxSat	-0.088	0.100	1.858
JS	0.732	0.000	1.858
R-square	45.7%		
Adjusted R-square	45.3%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Hypotheses testing results for H7 and H8.

- $H_0 7$: Nationality is not a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

- $H_0 8$: Nationality is not a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization.

More multiple regression used to measure the moderating effect of nationality in the relationship between EE and OC, and JS and OC. The VIF value of nationality, NatxEng, NatxSat, EE, and JS lies around one, which indicated that multicollinearity does not exist (Kassim et al., 2017). Based on the results of the moderator analysis, no moderation effect was found in the relationship of NatxEng (EE and OC, Beta = -0.074, p = 0.147) and NatxSat (JS and OC, Beta = -0.011, p = 0.784). The addition of nationality showed no significant association in the relationship between EE, JS, and OC. Therefore, the null hypothesis was supported. See Table 22.

Table 22

Nationality, Employee Engagement, Job Satisfaction regressed on Organizational Commitment

Demographic	Term	Standarized Coefficients	p	VIF
Nat and EE	Nat	-0.074	0.142	1.000
	EE	0.304	0.000	1.000
	NatxEng	-0.074	0.147	1.017
	EE	0.315	0.000	1.017
	R-square	9.9%		
	Adjusted R-square	9.4%		
Nat and JS	Nat	-0.013	0.751	1.010
	JS	0.671	0.000	1.010
	NatxSat	-0.011	0.784	1.020
	JS	0.674	0.000	1.020
	R-square	45.2%		
	Adjusted R-square	44.9%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Hypotheses testing results for H9 and H10.

- $H_0 9$: Tenure is not a moderating factor in the relationship between employee

  engagement (EE), measured by the UWES-9 scores, and organizational commitment

  (OC), measured by OCQ scores, in the supply chain managers of the Middle East

  organization.

- $H_0 10$: Tenure is not a moderating factor in the relationship between job satisfaction

  (JS), measured by JSS scores, and organizational commitment (OC), measured by

  OCQ scores, in the supply chain managers of the Middle East organization.

Lastly, multiple regression was used to measure the moderating effect of tenure in the

relationship between EE and OC, and JS and OC. The VIF value of tenure, TenurexEng,

TenurexSat, EE, and JS also lies around one, which showed multicollinearity does not exist

(Kassim et al., 2017). Based on the results of the moderator analysis, no moderation effect was

found in the relationship of TenurexEng (EE and OC, Beta = -0.043, p = 0.407) and TenurexSat

(JS and OC, Beta = 0.052, p = 0.188). Therefore, the null hypothesis was supported. See Table

23. There was no significant association with the addition of tenure to the relationship between

EE, JS, and OC.

Table 23

Tenure, Employee Engagement, Job Satisfaction regressed on Organizational Commitment

Demographic	Term	Standarized Coefficients	p	VIF
Tenure and EE	Tenure	-0.048	0.346	1.000
	EE	0.306	0.000	1.000
	TenurexEng	-0.043	0.407	1.028
	EE	0.312	0.000	1.028
	R-square	9.5%		
	Adjusted R-square	9.0%		
Tenure and JS	Tenure	0.053	0.182	1.022
	JS	0.680	0.000	1.022
	TenurexSat	0.052	0.188	1.010
	JS	0.667	0.000	1.010
	R-square	45.5%		
	Adjusted R-square	45.2%		

Note. Beta (95% confidence interval) of the linear regression is presented as the standardized
regression coefficient. VIF = variance inflation factor of the predictor. N = 357.

Relationship of hypotheses to research questions.

The purpose of this research was to examine the relationship between independent

variables (employee engagement-EE and job satisfaction-JS) and dependent variable

(organizational commitment-OC) in the supply chain managers of the Middle East organization.

Supply chain managers who took part in this research displayed a statistically significant positive

relationships among EE, JS, and OC. The research findings and the data analysis associated with

the research questions and hypotheses are summarized in this section. The predictor variables

were EE and JS, and the dependent variable was OC.

Research question one.

The first research question was: What is the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The results of the regression model, $F(1, 355) = 36.525$, $p < 0.001$, indicated a statistically significant relationship between EE and OC. The adjusted R^2 was 9.1%, indicating that EE explained 9.1% of OC scores correctly. See Table 16. The significance in Table 17 shows that EE is statistically significant in predicting OC ($p < 0.001$); therefore, the null hypothesis was rejected for the first research question. A one-unit increase in EE, also increases the OC by 0.305 units.

Research question two.

The second research question was: What is the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The results of the regression model, $F(1, 355) = 293.22$, $p < .001$, indicated a statistically significant relationship between JS and OC. The adjusted R^2 (.451) showed virtually no shrinkage from the unadjusted value (.452), indicating the model may generalize well for the relationship between JS and OC. A one unit increase in JS, also increases the OC by 0.673 units. Therefore, the null hypothesis was rejected for the second research question. See Tables 18 and 19.

Research questions three and four.

The third research question was: Is age a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment

(OC), measured by OCQ scores, in the supply chain managers of the Middle East organization? The fourth research question was: Is age a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The results of the moderator analysis, Beta = 0.115, p = 0.049, indicated that age does have a moderating effect on the relationship between EE and OC. As AgexEng increased by one unit, levels of OC also increased by 0.115 units. Therefore, the null hypothesis was rejected for the third research question. However, the researcher failed to reject the fourth research question null hypothesis. The result of the moderator analysis found that AgexSa does not moderate the relationship between JS and OC (Beta = 0.064, p = 0.198). See Table 20. There was no significant association with the addition of age to the relationship between JS and OC. Therefore, the null hypothesis was supported for the fourth research question.

Research questions five and six.

The fifth research question was: Is gender a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization? The sixth research question was: Is gender a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The researcher failed to reject the fifth and sixth research questions. Based on the results of the moderator analysis, no moderation effect was found in the relationship between GenxEng (EE and OC, Beta = -0.025, p = 0.663) and GenxSat (JS and OC, Beta = -0.088, p = 0.100). See

Table 21. Gender was no longer significantly related to commitment when combined with EE or JS; therefore, the null hypothesis was supported for the fifth and sixth research questions.

Research questions seven and eight.

The seventh research question was: Is nationality a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization? The eighth research question was: Is nationality a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

The researcher also failed to reject the seventh and eighth research questions. Based on the results of the moderator analysis, no moderation effect was found in the relationship between NatxEng (EE and OC, Beta = -0.074, $p = 0.147$) and NatxSat (JS and OC, Beta = -0.011, $p = 0.784$). See Table 22. The addition of nationality showed no significant association with the relationship between EE, JS, and OC. Therefore, the null hypothesis was supported for the seventh and eighth research questions.

Research questions nine and ten.

The ninth research question was: Is tenure a moderating factor in the relationship between employee engagement (EE), measured by the UWES-9 scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization? The tenth research question was: Is tenure a moderating factor in the relationship between job satisfaction (JS), measured by JSS scores, and organizational commitment (OC), measured by OCQ scores, in the supply chain managers of the Middle East organization?

Lastly, the researcher failed to reject the ninth and tenth research questions. Based on the results of the moderator analysis, no moderation effect was found for the relationship between TenurexEng (EE and OC, Beta = -0.043, p = 0.407) and TenurexSat (JS and OC, Beta = 0.052, p = 0.188). See Table 23. Therefore, the null hypothesis was supported for the ninth and tenth research questions. There was no significant association with the addition of tenure to the relationship between EE, JS, and OC.

Summary of the findings.

The findings of this study showed that there is a statistically significant relationships among EE, JS, and OC, indicating the p-values lower than the alpha level of 0.05 for all variables. As a result, the researcher rejected the null hypotheses for H_01, H_02, and H_03. Conversely, the findings indicated that age does not moderate the relationship between JS and OC. The findings also showed that gender, nationality, and tenure were not moderating variables in the relationships among EE, JS, and OC. Based on the above reasons, the researcher failed to reject the null hypotheses (H_04, H_05, H_06, H_07, H_08, H_09, and H_010).

Applications to Professional Practice

Previous scholars revealed the complexity of supply chain management, which is made up of people, processes, and technologies to deliver value to the customers (Alfalla-Luque et al., 2015; Jacobs et al., 2016). This means that the organizations face higher pressure to move products to the market quickly in the *right quantities* to the *right location* at the *right time* across the globe in order to minimize systemic costs while satisfying customers and gaining repeat business. Supply chain managers play an essential role in supply chain management to run operations and consistently deliver improved performance. The findings of this research may assist supply chain business leaders in developing employee retention strategies to retain highly

skilled and experienced supply chain managers in Middle Eastern organizations, particularly in

locations with talent shortage, since talent typically leaves the company within two years of

repatriation (De Ruiter et al., 2018).

Supply chain managers in Middle Eastern organizations who took part in this research

showed statistically significant positive relationships among employee engagement (EE), job

satisfaction (JS), and organizational commitment (OC). The findings of this research revealed

that supply chain managers' level of engagement and satisfaction affects their organizational

commitment. Scholars found the EE, JS, and OC are significant antecedents of retention

(Geisler et al., 2019; Geldenhuys et al., 2014). Scholars also indicated that "happy employees"

are more engaged, motivated, productive, and committed with higher job satisfaction to

participate in social exchanges between themselves and the organization, which leads to satisfied

customers in the supply chain management (Ali & Ahmad, 2017; Fletcher et al., 2018; Jacobs et

al., 2016).

The study of the Gallup survey in 2017 showed 17% more productivity with the highest

employee engagement and 21% more profits in business as compared to the lowest engagement

("Disengaged employees result in lower productivity," 2018). For this reason, supply chain

business leaders need to understand the root causes of employee engagement and job satisfaction

among their workforce and plan to achieve higher organizational commitment results. Effective

human resource management is an integral part of helping business leaders develop employee

retention strategies. Previous scholars also found that improved retention of supply chain

managers could result in lower turnover, lower absenteeism, lower supervision costs, lower costs

of employee replacement and training, and enhanced job performance (Chordiya et al., 2017).

The Bible can be fully integrated into all aspects of today's business (i.e., supply chain management) and human resource management practices. Human beings are made in the image of God, and it is God's calling for people to work and perform a specific job or business to increase employee engagement, job satisfaction, and organizational commitment in supply chain management in Middle Eastern organizations. Colossians 3:23-24 says, "Whatever you do, work heartily, as for the Lord and not for men, knowing that from the Lord you will receive the inheritance as your reward" (ESV). God has a plan and purpose for everyone. Proverbs 3:5-6 states, "Trust in the Lord with all your heart, and lean not on your own understanding; in all your ways submit to him, and he will make your paths straight" (NIV).

Recommendations for Action

The findings of this research indicated that employee engagement (EE) and job satisfaction (JS) have significant influence on the organizational commitment (OC) of the supply chain managers in Middle Eastern organizations. Additionally, the results of this study showed that age has a moderating effect on the relationship between EE and OC, but not between JS and OC. For other demographic characteristics (i.e., gender, nationality, tenure), the findings of this research showed no moderation effect in the relationships among EE, JS, and OC.

Recommendation one.

Consistent with prior research, the results of H1 suggested the supply chain manager's level of engagement is vital to the employee's commitment and intention to stay with the organization. The recommendations in Table 24 were developed to increase employee engagement (EE) in supply chain management by explaining its five items: organizational culture, gender-balanced management teams, self-efficacy, work-life balance, and a supportive work environment.

Table 24

Recommendations to Increase Employee Engagement (EE)

EE Items	Course of Action
Organizational Culture	• Reinforce the company's mission, vision, and core values to keep the company on track and focused on what is important (Musanzikwa and Ramchander (2018) • Increase support from supervisors in decision-making, growth, and development opportunities (Parent & Lovelace, 2018) • Train supervisors to build high-performance relationships such as intense listening like nothing else matters (Stewart, 2016)
Gender-Balanced	• Creates gender-balanced management teams to help improve employee engagement and the company's financial results • Increase women representation to enhance effective communication, collaboration, and bring a valuable perspective to address customer demands while increasing employee engagement (Nix & Stiffler, 2016)
Self-Efficacy	• Builds employee's confidence about his or her abilities, using a coaching approach (Chhajer et al., 2018) • Fosters positive influences on employee's behavior to see challenge duties as an opportunity to master rather than avoid them (Slåtten, 2014)
Work-Life Balance	• Increase work-life balance at a workplace to avoid burnout (Pandita & Singhal, 2017) • Introduce the flexible working policy to improve recruitment and retention (Obeidat et al., 2019)
Work Environment	• Introduce the open-door policy to improve communication (Shahidan et al., 2016) • Creates a work environment with authentic leadership, meaning recognition, and team collaboration for employees to perform their work (Thew, 2019)

Recommendation to increase employee engagement (EE) through organizational culture.

Shared values and beliefs are a critical part of organizational culture to increase EE and working

relationships. About 95% of this survey participants are Generation X or Millennials. Previous

scholars found some differences in work ethic and values between the generations. The work

ethic and values of Generation X, "eliminate the task, self-reliance, want structure and direction,

and skeptical," while the Millennials are looking for "what is next multitasking, tenacity,

entrepreneurial, tolerant, and goal-oriented" (Bejtkovsky, 2016, p. 108). Other characteristics

that differed between Generation X and the Millennials were their interactive style; for instance,

Generation X (entrepreneur) versus the Millennials (participative) (Bejtkovsky, 2016). To

maximize performance of different generations, scholars suggested five ways to boost their

employee engagement in a multicultural work environment. A positive organizational culture

includes (1) taking time to know the team, (2) taking the time for a company retreat, (3) taking

time to empower the team, (4) taking time to provide support and feedback, and (5) taking time

to develop them (Hall, 2015; Parent & Lovelace, 2018). Additionally, the researcher

recommends conducting an employee engagement survey (i.e., UWES-9) once a year using a

valid survey instrument to monitor the progress of employee engagement and developing a plan

of action to address potential issues.

  Recommendation to increase employee engagement (EE) through gender-balanced

management teams. Previous scholars found higher levels of EE with women in leadership

because they valued staff achievements equally, and the voices of all employees tend to be heard

(Nix & Stiffler, 2016; Patel & Biswas, 2016). Women surround themselves with higher levels of

support in an organization that influences the supply chain managers' engagement, job

satisfaction, and organizational commitment. The researcher recommends that supply chain

business leaders have gender-balanced management teams.

  Recommendation to increase employee engagement (EE) through self-efficacy.

Employees with self-efficacy generally have a high degree of motivation, optimism, engagement,

and willingness to go the extra mile to achieve any tasks, which drives a higher level of

employee engagement (Bandura, 1997). Previous scholars revealed that employees with self-

efficacy deliver the right product to customers, deliver at the right time, deliver in the right

quantity, deliver at the right place, and deliver at the right price (Mete et al., 2014; Politis et al.,

2014). Employees with self-efficacy are equipped to take on new challenges to enrich their skills

and knowledge in practical change efforts (Chhajer et al., 2018). The researcher recommends

that supply chain business leaders improve professional development for the supply chain

managers to improve their self-efficacy and set reasonable goals and expectations.

Recommendation to increase employee engagement (EE) through work-life balance

approach. An organization with a flexible working policy experiences a higher level of EE

because it encourages an employee to balance one role with another role at a given time in a

specific situation (Obeidat et al., 2019; Pandita & Singhal, 2017). About 95% of the survey

participants are of Generation X or Millennials who have found that work-life balance is an

essential part of their life. The researcher recommends that supply chain business leaders

implement a flexible working policy in the workplace. Previous scholars noted that a good

work-life balance reduces the level of stress and burnout based on the Job Demands-Resources

(JD-R) theory (Bejtkovsky, 2016; Demerouti et al., 2019).

Recommendation to increase employee engagement (EE) through a supportive work

environment. Previous scholars found that a supportive work environment helps create a

productive organization whereby the level of supply chain managers' well-being and their work

performance are increased (Hanaysha, 2016; Shahidan et al., 2016). The researcher recommends

having an open-door policy to encourage effective communication between supply chain

managers and business leaders. Additionally, the condition of the environment needs to be safe

and functional in supply chain management so the well-being of the employees can flourish

(Feltovich, 2019).

Recommendation two.

The results of H2 implied that the supply chain manager's level of job satisfaction (JS) is

crucial to the employee's commitment and intention to stay with the organization. The

recommendations in Table 25 were developed to increase employees' job satisfaction by

explaining its four items: communication, employee development, rewards and recognition, and

supervisor support.

Table 25

Recommendations to Increase Job Satisfaction (JS)

JS Items	Course of Action
Communication	• Increase effective communication to build and maintain trusting relationship between supervisors, employees, colleagues, and customers (Alhassan et al., 2017; Valaei & Rezaei, 2016)
	• Train supervisor to genuinely listen to the employees' concerns or problems because it shows that they care (Valaei & Rezaei, 2016)
Employee Development	• Increase training and development for employees to master their knowledge, skills, and behaviors with a strong company and supervisor support (Ocen et al., 2017; Paposa & Kumar, 2019)
Rewards & Recognition	• Increase rewards and recognition based on employees' contributions and achievement (Langove & Isha, 2017)
	• Boost employees' morale with non-monetary recognition such as extra vacation time, plaques, and gift certificates to increase productivity (Kuxzmarski & Kucamarski, 2019)
Supervisor Support	• Increase supervisor-employee relationship with support and encouragement help boost employees' satisfaction (Usman, 2019)
	• More supervisors supportive of work-family balance shows commitment to the employees' well-being (Oludayo et al., 2018)

Recommendation to increase job satisfaction (JS) through effective communication.

Previous scholars found that clear two-way communication between supply chain business

leaders and supply chain managers significantly increases the level of job satisfaction. Supply

chain managers perceive their business leaders as caring when they genuinely listen to their

concerns or problems (Valaei & Rezaei, 2016). A higher level of job satisfaction emerged when

communication was used correctly in disseminating information, which builds and maintains trusting and strategic relationships in supply chain management (Alhassan et al., 2017; Jacobs et al., 2016). More scholars shared that levels of communication satisfaction and job satisfaction are associated with lower intention to leave, burnout, and absenteeism (De Nobile, 2017; Verma, 2016). The researcher recommends administering a yearly job satisfaction survey (i.e., JSS) using a valid survey instrument to monitor the progress of supply chain managers' satisfaction, followed by a plan of action on potential issues.

Recommendation to increase job satisfaction (JS) through employee development. Previous scholars revealed that training and development significantly increase the level of supply chain managers' satisfaction, which links to turnover intentions because it extends the social exchange of employee-employer relationships (Fletcher et al., 2018). Supply chain managers perceive training as an essential part of self-development to master their knowledge, skills, and behaviors, improving their day-to-day activities in the workplace (Paposa & Kumar, 2019). In turn, supply chain managers feel supported and satisfied when they are equipped with tools and resources that allow them to apply newly obtained skills on their job (Ensour et al., 2018). The researcher recommends that supply chain managers receive communication training on how to engage in conversation with business leaders to achieve tasks more effectively and efficiently.

Recommendation to increase job satisfaction (JS) through rewards and recognition. Money and advancement opportunities continue to be an influential motivating tool, but it is not enough to meet the evolving needs of employees in supply chain management (Ali & Ahmad, 2017; Noviantoro et al., 2018). "Eighty-eight percent (88%) of highly skilled employees left the company on the basis of non-monetary motives" (Alhmoud & Rjoub, 2019, p. 3). Previous

scholars found psychic rewards such as praise and time off yield better results than financial

rewards because it increases the employee's morale, satisfaction, and self-esteem, leading to a

higher level of job satisfaction (Ali & Ahmad, 2017; Kuczmarski & Kucamarski, 2019; Langove

& Isha, 2017; Noviantoro et al., 2018). The researcher recommends that supply chain business

leaders use more forms of non-monetary recognition such as extra vacation time, plaques, and

gift certificates based on the supply chain managers' contributions and achievements to increase

job satisfaction.

Recommendation to increase job satisfaction (JS) through supervisor support. Previous

scholars found that employees who experienced emotional support from their supervisors (i.e.,

caring, comfort, and encouragement) have significantly higher levels of job satisfaction (Kula,

2017; Pohl & Galletta, 2017; Usman, 2019). Positive supervisor-employee relationships

improve employees' performance and reduce turnover intentions in the supply chain

management (Qureshi et al., 2018). Other scholars suggested that work-family balance

supported at the organizational level encountered an even higher level of employees' satisfaction

and commitment than at the supervisor level (Basuil et al., 2016). The researcher recommends

that supply chain business leaders improve supervisor-employee relationships with supply chain

managers while encouraging a work-family balance at the organizational level.

Supply chain business leaders should regularly monitor and assess supply chain

managers' engagement, job satisfaction, and organizational commitment by having scheduled

employee surveys once a year (i.e., UWES-9, JSS, and OCQ). All supply chain managers should

be trained in effective communication and ways to improve the supervisor-employee

relationship. The results of the survey and the comments from the supply chain managers form a

basis to address the issue. These innovative business solutions are linked to company vision and

strategy. In turn, business strategy dramatically influences human resources strategy, which defines how people will be attracted, retained, and motivated to achieve the company's strategic goals.

This study added to the body of knowledge within supply chain management in the areas of human resource management and work environment. Previous scholars noted that a one-size-fits-all retention strategy is not a practical approach due to extensive changes in global demographics in the workforce with more diverse talent pools (Pregnolato et al., 2017). This study should form the basis to help supply chain business leaders develop and execute innovative business solutions to improve the supply chain managers' engagement, job satisfaction, and organizational commitment.

To advance the dissemination of this study results, the researcher could provide a summary article of the results to distribute for publication such as *Human Resource Management* and *Supply Chain Management: An International Journal.* Also, the distribution of the summary article will include emailing the summary article to survey participants, supply chain professionals, and business leaders. Next, the researcher could present the findings at the logistics and supply chain management forum and leadership conferences. Liberty University will publish this study and add to its doctoral research library so that scholars and future scholars will have access to this study in the ProQuest/UMI dissertation database.

Recommendations for Further Study

In this study, the researcher examined the relationship between independent variables (employee engagement-EE and job satisfaction-JS), dependent variable (organizational commitment-OC), and demographic characteristics (age, gender, nationality, and tenure). The results revealed that relationships exist among employee engagement, job satisfaction, and

organizational commitment. The recommendations listed below are for future researchers who

may be interested in filling the gaps in the current study.

1. This study was conducted in supply chain management in the Middle East.

   Replicating this study in other geographical locations, different industries, or specific

   companies, as well as varying the sizes of the companies studied, will enable future

   researchers to confirm the generalizability of these findings.

2. This study was limited to a quantitative method. Use of an additional qualitative

   method may add valuable data because of its use of open-ended questions without

   predetermined responses. Future researchers may develop better understanding of

   participants' underlying reasons and motivations through personal experience

   concerning their engagement, job satisfaction, and organizational commitment.

3. This study used the specific variables of employee engagement, job satisfaction,

   organizational commitment, age, gender, nationality, and tenure. Replicating the

   same study with different predictor variables to show the relationships among

   leadership style, employee development, organizational culture, generational

   differences, and organizational commitment would be beneficial to organizations and

   the general literature.

4. This study used a snapshot of data over a specific period. Replicating this study in

   the same work environment would allow future researchers to compare the two sets

   of data to determine whether the study results remain the same or change.

Reflections

The researcher believes the lifeblood of every business is the employees who help an

organization to achieve growth, profitability, innovation, and competitive advantage. The

researcher has about thirty years of hands-on human resources experience working in the United

States and non-Western developing countries. The researcher has lived and worked in the

Middle East for over eleven years.

        The idea for this study emerged from the researcher's experience working in supply chain

management in the Middle East. As an expatriate working in the Middle East, the researcher's

observation and intuition in supply chain management led to consideration of whether

introducing employee retention strategy into management practice would benefit the business

leaders to encourage employee engagement, job satisfaction, and organizational commitment in

the workplace. Several people (both local and expatriates) in the Middle East told the researcher

that they are either unemployed or actively searching for another job. In this study, the

researcher expected to find lower levels of employee engagement and job satisfaction, leading to

a low level of organizational commitment. The results of this study showed that individuals

working in the supply chain management in the Middle East are highly engaged, satisfied with

their current job, and more committed, which makes them more likely to stay with their current

company.

        Reflecting on the DBA journey, it was challenging at times, but it gave the researcher a

sense of purpose and self-fulfillment. Each section of the doctoral degree process (i.e., the

foundation of the study, data collection, data analysis, and presentation of the findings) helped

unleashed the true potential of becoming a better researcher. Proverbs 22:6 states, "Train up a

child in the way he should go; even when he is old he will not depart from it" (ESV). The skills

that the researcher obtained in the DBA program are invaluable lessons that reinforce the

researcher's passion for serving the community. The DBA journey starts with believing in

yourself, followed by commitment, time management, self-motivation, writing skills, patience, problem-solving ability, and finally, resilience.

The researcher thought that it would be a big challenge for data collection to meet the required sample size. The results were shocking because the researcher received 562 responses, which was a phenomenal response rate for only two weeks. Additionally, using the SPSS was an enjoyable learning experience for the researcher, mainly in terms of recoding variables, formulating new variables, and running a regression analysis.

Summary and Study Conclusions

The purpose of this quantitative correlation study was to examine the relationship between independent variables (employee engagement-EE and job satisfaction-JS) and dependent variable (organizational commitment-OC) in the supply chain managers of the Middle East organization. First, the researcher examined the relationship, if any, between the independent variable of EE and the dependent variable of OC. Second, the researcher examined the relationship between the independent variable of JS and the dependent variable of OC. Lastly, the researcher took each of the demographic variables (age, gender, nationality, and tenure) to determine if the moderation factor existed in the relationships among EE, JS, and OC.

The findings of this study showed there is a statistically significant relationships among EE, JS, and OC, indicating p-values lower than the alpha level of 0.05 for all variables. As a result, the researcher rejected the null hypotheses for H_01, H_02, and H_03. Conversely, the findings indicated that age does not moderate the relationship between JS and OC. The findings also showed that gender, nationality, and tenure were not moderating variables in the relationships among EE, JS, and OC. Based on the above reasons, the researcher failed to reject the null hypotheses (H_04, H_05, H_06, H_07, H_08, H_09, and H_010).

Supply chain managers play a critical role in getting the products to market quickly in the right quantities to the right location at the right time across the globe in order to minimize systemic costs while satisfying customers and gaining repeat business (Alfalla-Luque et al., 2015; Jacobs et al., 2016). The study findings provide the business leaders with better understanding and insight as to *why* supply chain managers may consider leaving the organization and ways to help an organization increase EE, JS, and OC. In turn, an organization could experience increased retention, reduced turnover intentions, lower hiring costs, and lower training costs, which allow the business to achieve growth, profitability, and competitive advantage by aligning business goals with individual goals (Covella et al., 2017; Narayanan et al., 2019). Supply chain business leaders should plan to foster an organizational culture strategically with shared values as the guiding principle in leading to higher levels of employee engagement, job satisfaction, and organizational commitment.

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Appendix A: Survey Questions (Section I – DCS)

Section I: Demographic Characteristics Survey (DCS)

1. To what age group do you belong?

    ◯18-21 ◯22-29 ◯30-39 ◯40-49 ◯50-59 ◯60 and above

2. What is your gender?

    ◯Male ◯Female

3. What is your nationality?

    ◯Egypt ◯India ◯Nepal ◯Nigeria ◯Pakistan ◯Philippines ◯Sri Lanka

    ◯Other

4. How many years have you been working for your current employer?

    ◯Less than 1 year ◯1 to 2.9 years ◯3 to 3.9 years ◯4 to 4.9 years

    ◯5 to 5.9 years ◯6 to 6.9 years ◯7 years and above

5. Do you work full time?

    ◯Yes ◯No

6. Are you employed in the supply chain industry located in the Middle East?

    ◯Yes ◯No

7. Is your current job be either in a manager, supervisor, team leader, or specialist?

    ◯Yes ◯No

Appendix B: Survey Questions (Section II – UWES-9)

Section II: Employee Engagement – Work and Well-Being Survey (UWES-9)

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job.

Please use the following scale:

0 = Never

1 = Almost never – a few times a year or less

2 = Rarely – once a month or less

3 = Sometimes – a few times a month

4 = Often – once a week

5 = Very often – a few times a week

6 = Always – Every day

Work and Well-Being Survey (UWES)							
	Never	Almost Never	Rarely	Sometimes	Often	Very Often	Always
At work, I feel I am bursting with energy. (VII)	0	1	2	3	4	5	6
At my job, I feel strong and vigorous. (V12)	0	1	2	3	4	5	6
I am enthusiastic about my job. (DE2)	0	1	2	3	4	5	6
My job inspires me. (DE3)	0	1	2	3	4	5	6
When I get up in the morning, I feel like going to work. (VI3)	0	1	2	3	4	5	6
I feel happy when I work intensely. (AB3)	0	1	2	3	4	5	6
I am proud of the work that I do. (DE4)	0	1	2	3	4	5	6
I am immersed in my work. (AB4)	0	1	2	3	4	5	6
I get carried away when I am working. (AB5)	0	1	2	3	4	5	6

Appendix C: Survey Questions (Section III – JSS)

Section III: Job Satisfaction Survey (JSS)

The following 36 statements are about how satisfied you are with your job. Please read each

statement carefully and choose the option that is closest to reflecting your opinion.

Please use the following scale:

1 = Disagree very much

2 = Disagree moderately

3 = Disagree slightly

4 = Agree slightly

5 = Agree moderately

6 = Agree very much

Job Satisfaction Survey (JSS)						
	Disagree Very Much	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Agree Very Much
I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
There is really too little chance for promotion on my job.	1	2	3	4	5	6
My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
I am not satisfied with the benefits I receive.	1	2	3	4	5	6
When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6

I like the people I work with.	1	2	3	4	5	6
Sometimes I feel my job is meaningless.	1	2	3	4	5	6
Communication seems good within this organization.	1	2	3	4	5	6
Raises are too few and far between.	1	2	3	4	5	6
Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
My supervisor is unfair to me.	1	2	3	4	5	6
The benefits we receive are as good as those most other organizations offer.	1	2	3	4	5	6
I do not feel that the work I do is appreciated.	1	2	3	4	5	6
My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6
I find I have to work harder at my job because of the incompetence of people I work with.	1	2	3	4	5	6
I like doing the things I do at work.	1	2	3	4	5	6
The goals of this organization are not clear to me.	1	2	3	4	5	6
I feel unappreciated by the organization when I think about what they pay me.	1	2	3	4	5	6
People get ahead as fast here as they do in other places.	1	2	3	4	5	6
My supervisor shows too little interest in the feelings of subordinates.	1	2	3	4	5	6

The benefit package we have is equitable.	1	2	3	4	5	6
There are few rewards for those who work here.	1	2	3	4	5	6
I have too much to do at work.	1	2	3	4	5	6
I enjoy my coworkers.	1	2	3	4	5	6
I often feel that I do not know what is going on with the organization.	1	2	3	4	5	6
I feel a sense of pride in doing my job.	1	2	3	4	5	6
I feel satisfied with my chances for salary increases.	1	2	3	4	5	6
There are benefits we do not have which we should have.	1	2	3	4	5	6
I like my supervisor.	1	2	3	4	5	6
I have too much paperwork.	1	2	3	4	5	6
I don't feel my efforts are rewarded the way they should be.	1	2	3	4	5	6
I am satisfied with my chances for promotion.	1	2	3	4	5	6
There is too much bickering and fighting at work.	1	2	3	4	5	6
My job is enjoyable.	1	2	3	4	5	6
Work assignments are not fully explained.	1	2	3	4	5	6

Appendix D: Survey Questions (Section IV – OCQ)

Section IV: Organizational Commitment Questionnaire (OCQ)

Listed below are a series of statements that represent possible feelings that individuals might

have about the company or organization for which they work. With respect to your own feelings

about the particular organization for which you are now working, please indicate the level of

your agreement or disagreement with each statement by choosing one of the seven options listed.

Please use the following scale:

1 = Strongly Disagree

2 = Moderately Disagree

3 = Slightly Disagree

4 = Neither disagree nor agree

5 = Slightly Agree

6 = Moderately Agree

7 = Strongly Agree

Organizational Commitment Questionnaire (OCQ)							
	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Moderately Agree	Strongly Agree
I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	1	2	3	4	5	6	7

I talk up this organization to my friends as a great organization to work for.	1	2	3	4	5	6	7
I feel very little loyalty to this organization. (R)	1	2	3	4	5	6	7
I would accept almost any type of job assignment in order to keep working for this organization.	1	2	3	4	5	6	7
I find that my values and the organization's values are very similar.	1	2	3	4	5	6	7
I am proud to tell others that I am part of this organization.	1	2	3	4	5	6	7
I could just as well be working for a different organization as long as the type of work was similar. (R)	1	2	3	4	5	6	7
This organization really inspires the very best in me in the way of job performance.	1	2	3	4	5	6	7
It would take very little change in my present circumstances to cause me to leave this organization. (R)	1	2	3	4	5	6	7

I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	1	2	3	4	5	6	7
There's not too much to be gained by sticking with this organization indefinitely. (R)	1	2	3	4	5	6	7
Often, I find it difficult to agree with this organization's policies on important matters relating to its employees. (R)	1	2	3	4	5	6	7
I really care about the fate of this organization.	1	2	3	4	5	6	7
For me, this is the best of all possible organizations to work for.	1	2	3	4	5	6	7
Deciding to work for this organization was a definite mistake on my part. (R)	1	2	3	4	5	6	7

Appendix E: Written Permission (UWES; Schaufeli et al., 2006)

Re: Request for use of the UWES-9

Schaufeli, W.B. (Wilmar) <w.schaufeli@uu.nl>
Thu 7/25/2019 4:31 PM
To: Prang, Phaylinh <pprang@liberty.edu>

Dear Tia,

Thank you very much for your interest in my work.

You may use the UWES free of charge, but only for non-commercial, academic research. In case of commercial use we should draft a contract.

Please visit my website (address below) from which the UWES can be downloaded, as well as all my publications on the subject.

Good luck with your research.

With kind regards,

Wilmar Schaufeli

Wilmar B. Schaufeli, PhD | Full Professor of Work and Organizational Psychology | *Social, Health & Organizational Psychology* | Utrecht University | P.O. Box 80.140, 3508 TC Utrecht, The Netherlands | Phone: (31) 6514 75784 | Site: www.wilmarschaufeli.nl | citations |

Appendix F: Written Permission (JSS; Spector, 1985)

RE: Request for use of the Job Satisfaction Survey (JSS)

Paul Spector <paul@paulspector.com>
Thu 7/25/2019 5:38 PM

To: Prang, Phaylinh <pprang@liberty.edu>

Dear Tia:

You have my permission to use the JSS in your research. You can find copies of the scale in the original English and several other languages, as well as details about the scale's development and norms, in the Assessments/Our Assessments section of my website: paulspector.com. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation). You also have permission to translate the JSS into another language under the same conditions in addition to sharing a copy of the translation with me. Be sure to include the copyright statement, as well as credit the person who did the translation with the year.

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector, Distinguished Professor
Department of Psychology
PCD 4118
University of South Florida
Tampa, FL 33620
Pspector@usf.edu
Website: http://shell.cas.usf.edu/~pspector/

Appendix G: Written Permission (OCQ; Mowday et al., 1979)

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This is to certify that:

Phaylinh Prang

Has completed the following CITI Program course:

Social & Behavioral Research - Basic/Refresher (Curriculum Group)
Social & Behavioral Researchers (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Liberty University

Verify at www.citiprogram.org/verify/?w2d153dc2-c908-4bf9-a301-4a94a177d864-31619066

Appendix I: Consent Form

The Liberty University Institutional
Review Board has approved
this document for use from
11/19/2019 to --
Protocol # 4053.111919

CONSENT FORM

WHAT IS THE RELATIONSHIP BETWEEN EMPLOYEE ENGAGEMENT AND JOB
SATISFACTION TO ORGANIZATIONAL COMMITMENT IN SUPPLY CHAIN
MANAGEMENT? AN EXAMINATION OF THESE CAUSAL FACTORS IN SUPPLY
CHAIN MANAGERS IN THE MIDDLE EAST
Phaylinh "Tia" Nosavan Prang
Liberty University
School of Business

You are invited to be in a research study to determine the relationship between employee
engagement and job satisfaction to organizational commitment in supply chain management.
You were selected as a possible participant because you are currently employed in the supply
chain industry located in the Middle East and hold a position of manager, supervisor, team
leader, or specialist. Please read this form and ask any questions you may have before agreeing
to be in the study.

Phaylinh "Tia" Nosavan Prang, a doctoral candidate in the School of Business at Liberty
University, is conducting this study.

Background Information: The purpose of this study is to examine the relationship between
employee engagement, job satisfaction, and organizational commitment, using demographic
characteristics that may influence the work environment (i.e., unique cultural) in the supply chain
management of a Middle East organization.

Procedures: If you agree to be in this study, I would ask you to do the following things:
1. Participate in an anonymous online survey, which contains 60 questions and should take
   no more than 30 minutes to complete.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you
would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. Research records will be stored
securely, and only the researcher will have access to the records. I may share the data I collect
from you for use in future research studies or with other researchers; if I share the data that I
collect about you, I will remove any information that could identify you, if applicable, before I
share the data.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether
or not to participate will not affect your current or future relations with Liberty University or any
supply chain organization. If you decide to participate, you are free to not answer any question or
withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Phaylinh "Tia" Nosavan Prang. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at 974-3387-0796 or by email at pprang@liberty.edu. You may also contact the researcher's faculty chair, Dr. Steven Cates, at scates1@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Appendix J: Permission Request

October 10, 2019

[Recipient]
[Title]
[Email Address]

Dear [Recipient]:

As a graduate student in the School of Business at Liberty University, I am conducting research as part of the requirements for a Doctor of Business Administration degree. The title of my research project is "What is the relationship between employee engagement and job satisfaction to organizational commitment in supply chain management? An examination of these causal factors in supply chain managers in the Middle East." The purpose of my research is to examine the relationship between employee engagement, job satisfaction, and organizational commitment in the supply chain management of a Middle East organization.

I am writing to request your permission to contact members of your organization to invite them to participate in my research study.

Participants will be asked to complete an anonymous, online survey via SurveyMonkey. Participants will be presented with consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please respond by email to pprang@liberty.edu.

Sincerely,

Phaylinh Nosavan Prang
Liberty University Doctoral Candidate

Appendix K: IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

November 19, 2019

Phaylinh "Tia" Nosavan Prang
IRB Exemption 4053.111919: What is the Relationship between Employee Engagement and Job Satisfaction to Organizational Commitment in Supply Chain Management? An Examination of these Causal Factors in Supply Chain Managers in the Middle East

Dear Phaylinh "Tia" Nosavan Prang,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

> (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
>
>> (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

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