

DOES ORGANIZATIONAL TECHNOLOGY ACCEPTANCE MODERATE JOB  
SATISFACTION AND TURNOVER INTENTIONS?

by

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## ABSTRACT

SHARON C. LEWIS. Does Organizational Technology Acceptance Moderate Job Satisfaction and Turnover Intentions?

(Under the direction of DR. REGINALD A. SILVER)

Often, we become so comfortable with the presence of technology in our daily lives that we do not fully consider how much technology impacts turnover intentions and job satisfaction in the workplace. Much has been researched in the way of job satisfaction and turnover intentions. However, little research has been done specifically to understand the role that technology acceptance may play in influencing the relationship between job satisfaction and turnover intentions. This research suggests that elements of organizational technology acceptance moderate the relationship between job satisfaction and turnover intentions. I obtained data via an electronic questionnaire completed by full-time US employees across several industries ( $n = 349$ ). Significant associations were observed with turnover intentions and each of the following variables, Age ( $\beta = -.201$ ,  $p < .001$ ), job satisfaction ( $\beta = -0.193$ ,  $p < .01$ ) performance expectancy ( $\beta = 0.219$ ,  $p < .01$ ) and facilitating conditions ( $\beta = -0.232$ ,  $p < .05$ ). There were two significant moderating effects, the first is attributed to facilitating conditions ( $\beta = .363$ ,  $p < .01$ ) and the second is attributed to behavioral intention ( $\beta = -.338$ ,  $p < .01$ ). The findings confirm that job satisfaction is associated with turnover intentions. Technology acceptance was partially shown to moderate the association between job satisfaction and turnover intentions.

Key Words: Technology Acceptance, Job Satisfaction, Employee Turnover, Work Motivation

## DEDICATION

I dedicate this dissertation to my incredible husband, John and two amazing bonus-children Connor and Karsen, who have embodied patience and support throughout this journey.

## ACKNOWLEDGEMENTS

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## LIST OF ABBREVIATIONS

BI: Behavioral intention

C-TAM-TPB: Combined technology acceptance model and theory of planned behavior

EE: Effort expectancy

FC: Facility conditions

IDT: Innovations diffusion theory

IT: Information technology

JS: Job satisfaction

MF: Motivation factor

MM: Motivational model

MPUC: Model of PC utilization

MT: Motivation theory

PE: Performance expectancy

SD: Standard deviation

TA: Technology acceptance

TAM: Technology acceptance model

TAM2: Technology acceptance model 2<sup>nd</sup> version

TI: Turnover intentions

TPB: Theory of planned behavior

TRA: Theory of reasoned action

UTAUT: Unified Theory of Acceptance and Use of Technology

## CHAPTER I: INTRODUCTION

Workforce stability is one of the greatest challenges that organizations face and with an ever-growing reliance on information technology, understanding the role that technology plays within the workplace becomes more important to attracting and retaining employees. Multiple studies point to the importance of technology within the workplace, (Terek, Mitic, Cvetkoska, Vukonjanski, & Nikolic, 2018). However, few studies focus on the role that technology plays within the context of job satisfaction and turnover intentions. According to the U.S. Bureau of Labor Statistics (2019), information technology occupations are projected to continue to grow over the next decade at a much higher rate than other occupations (U.S. Bureau of Labor Statistics, 2019). Thus, establishing workforce loyalty will become increasingly more important as the work environment shifts towards technological reliance. Information technology and associated occupations will grow as a result of increasing demand for artificial intelligence, machine learning, cloud computing, storage of big data, cyber security, and various other technology-related solutions. I discuss the labor forecast and why technology is so critical to the future workplace later in this paper.

While this study is not focused specifically on information technology workers, the realization that more work environments are incorporating the use of technology into their design is essential to understanding what the future workforce landscape will look like over the next decade. I note that technology workers are just an aspect of the workforce. However, because the workforce is made up of several different generations of professionals, expectations as it pertains to technology may differ depending on when the employee was born or where they lived. Familiarity with different types of

technology differs across generations because of the timelines on which these technologies were introduced. The compact disc player, for example, was not available to the Baby Boomer generation because it was introduced generations after they were born. Generation Z (Gen Z), professionals born after 1995, are entering the workforce and have an expectation of constant access to technology. As Fry notes, “Almost half of Gen Z workers say they are on their smart phone almost constantly, and more than 60% would rather leave their wallet at home than their mobile device (HeroSmyth, 2018).” Another workforce generation to consider is the group commonly referred to as Millennials or Gen Y, born after 1980 but before 1995. Millennials often look for jobs that offer state of the art technology such as virtual work environments where work can be accomplished from home or at a coffee shop as long as there is Internet access and an ability to connect to the workplace (HeroSmyth, 2018). Generations such as Gen X, born between 1965 and 1980, along with Baby Boomers, born between 1946 and 1964, are still accustomed to more traditional work environments, such as office and cubicle style workspaces (HeroSmyth, 2018; Hewlett-Packard, 2018). However, Gen X and Baby Boomers are quickly adopting technology systems as they become important to their jobs. Benefits from using these technologies include flexible schedules and mobile (cellular) enabled work environments (DeSilver, 2019; Fry, 2018; Hewlett-Packard, 2018). In many workplaces, technology has eclipsed marketing, finance, and sales, necessitating that employers need to understand what moderates JS and TI within the workplace (Kochanski & Ledford, 2001; Thatcher, Stepina, & Boyle, 2002a) . Understanding the level of technology acceptance that firms implement within their facilities is critical to

stabilizing staff as the older workforce begins to retire and the younger workforce begins to enter the workplace.

### **Research Objective**

This research strives to answer the call for more empirical testing surrounding the moderating impact that organizational technology acceptance (TA) has on the relationship between job satisfaction (JS) and workforce turnover intentions (TI) (Gatignon & Robertson, 1989; Judge, 1993; Ng & Feldman, 2010). TA is defined as, *“the degree to which a person believes that using a particular system would enhance his or her job performance”* (Davis, Bagozzi, & Warshaw, 1989). An example of TA might be a new point-of-sale technology implemented at a retail corporation, where the acceptance of the new technology exceeded 50% within one year.

Venkatesh et al, (2003) identified dimensions that I incorporate into my conceptual model. Specifically, I selected four dimensions which are: Performance Expectancy (PE), Effort Expectancy (EE), Facilitating Conditions (FC), and Behavioral Intention (BI) (Venkatesh, Morris, Davis, & Davis, 2003). PE can be viewed as how the capabilities of a system enhance an individual’s job performance (Thompson, Higgins, & Howell, 1991). As an example Venkatesh stated, “using a computer system may significantly increase the quality of the productivity on my job (Venkatesh et al., 2003) p. 448.” EE is viewed as whether or not a system is seen as relatively difficult to understand and use (Thompson et al., 1991). An example of EE would be an instance in which it takes an end-user too long to learn how to use a computer system to make it worthwhile (Venkatesh et al., 2003) p. 451. FC can be noted as a supportive environment which enables access to resources or a person to assist with the computer system if there are any

difficulties (Venkatesh et al., 2003) p. 254. For instance, FC might be realized when a company provides training or support to assist with learning new technology as it is being implemented. BI can be described as whether or not a person intends to act on a certain behavior (Venkatesh et al., 2003) p. 460. In particular, if a new finance system was implemented at my workplace, I intend to use it within three months of it being provided to the workforce. I discuss these four areas further in chapter two.

Pertaining to JS, it can be defined as, “*A pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. JS and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing*” (Locke, 1969). Spector (1997) summarizes JS as how people feel about their jobs and different aspects of their job (Spector, 1997) p 2. An example of JS is when an individual enjoys diagnosing and repairing vehicle mechanical issues, and as a result, they become a full-time mechanic working at a mechanic shop where they are known for diagnosing and resolving mechanical issues within the first attempt, 100% of the time. TI is defined as, “*the perceived desirability of leaving the organization*” and “*the perceived ease of movement from the organization*” (March & Simon, 1958). An example of TI is when the mechanic discovers that there are better ways to diagnose vehicle issues but their current employer does not implement any of those technologies. As a result, the employee becomes frustrated and decides to seek employment at other vehicle repair shops where they might find a higher degree of job satisfaction while using newer technology to more easily diagnose and repair vehicles.

Most organizations have some type of information system or IT embedded within their respective workplaces as a tool or solution for completing work tasks (Al-gahtani &

King, 1999; Danziger & Dunkie, 2005; Davis, Bagozzi, & Warshaw, 1989; Dewett & Jones, 2001; Elias, Smith, & Barney, 2012; Halac, 2015; Lo, 2015; Montealegre & Cascio, 2017; Orlikowski & Baroudi, 1991; Tams, Grover, & Thatcher, 2014; Taylor & Todd, 1995b; U.S. Bureau of Labor Statistics, 2019; Venkatesh et al., 2003). Dewett and Jones (2001) stated “These technologies encompass a broad assortment of communication media and devices which link information systems such as PeopleSoft, time card systems, payroll systems, work/ task tracking systems, and other applications or tools used to connect people including voice mail, e-mail, voice conferencing, video conferencing, the internet, groupware and corporate intranets, mobile phones, personal digital assistants, and various other forms of new digital technologies (Dewett & Jones, 2001).” Information systems and information technologies are often inseparably connected. Because it has become the norm to do so, I will refer to them jointly as information technology (IT) for the rest of this paper (Dewett & Jones, 2001).

According to the U.S. Bureau of Labor and Statistics (2019) employment of computer and IT occupations is anticipated to grow 12 percent from 2018 to 2028, much faster than the average for all occupations (U.S. Bureau of Labor Statistics, 2019). Computer and IT occupations are projected to add about 546,200 new jobs to the U.S. workforce (U.S. Bureau of Labor Statistics, 2019). The demand for these workers according to the U.S. Bureau of Labor Statistics (2019) is due to a greater emphasis on cloud computing, the collection and storage of big data, data analytics, mobile systems, digital systems, video conferencing, and information security, (U.S. Bureau of Labor Statistics, 2019). This is also known as the digital workplace or employee digital working (Fry, 2018; U.S. Bureau of Labor Statistics, 2019; Walker, 2016).

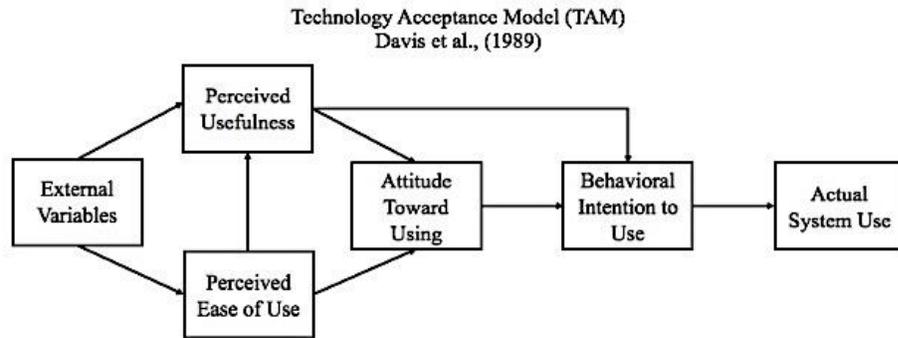
Due to the increase and above average growth seen within organizations incorporating technology, we are seeing an increase in demand for employees knowledgeable and experienced in using IT (U.S. Bureau of Labor Statistics, 2019). In recent years, IT has also enabled a more digital workplace (U.S. Bureau of Labor Statistics, 2019). A study provided by Aruba Networks and Hewlett Packard (2018) provided data from over 7,000 respondents across 15 countries and explored current levels of attitudes towards digital working, its benefits and how it affects worker behavior (Hewlett-Packard, 2018). Remarkably the study observed that employees who work in fully-enabled digital workplaces are more motivated, have higher JS, and are more likely to report a positive work/life balance (Hewlett-Packard, 2018). This finding further underlines the need to explore whether TA moderates the relationship between JS and TI.

Multiple theoretical models exist that measure technology adoption and technology acceptance (Gomez, 2017). Specifically, Venkatesh et al (2003) provided the Unified Theory of Acceptance and Use of Technology (UTAUT) which is the most widely used technology acceptance model among recent studies (Gomez, 2017). At the time of this writing, Venkatesh's 2003 article has been cited over 27,000 times (source: Google Scholar). Drawing from UTAUT, I incorporate four of its constructs (PE, EE, FC and BI) to explore whether TA provides a moderating effect on JS and TI. UTAUT was adapted from the technology acceptance model (TAM) which I explain later in this chapter and in chapter two (Davis et al., 1989).

A deeper understanding of UTAUT is important to developing a basis for TA. First, UTAUT aspires to explain user intentions to use technology systems and ultimately follow-on usage behavior. For instance, Gomez (2017), provides a quantitative study

supporting the use of UTAUT to determine the relationship between JS and technology use among government employees (Gomez, 2017). Gomez's research model showed support for the effects of BI on TA in that the effects of BI were more strongly moderated by the constructs of job satisfaction (Gomez, 2017). As I previously mentioned, Venkatesh et al. (2003) positioned the UTAUT model to ascertain user intentions. I note that the intention of employees is to use technology, and the reason that I chose this model is because it establishes predictors for TA that I used in the development of my conceptual model. I posit that organizational acceptance of technology will have a moderating effect on the relationship between JS and TI.

Before I provide additional details on UTAUT, it is important to understand the impetus of the model first. I start with providing information regarding TAM and TAM2 and then complete this chapter by summarizing why I chose UTAUT. In reviewing TAM, I noted that it was cited in over 101 studies published in major journals and conferences between 1989 and 2003 and it has been found within the information systems community to be a powerful model (Bradley, 2009; Lee, Kozar, & Larsen, 2003). TAM's theoretical background is found in both the expectancy-model and the theory of reasoned action literature and it uses two variables, perceived usefulness and perceived ease of use to determine user acceptance of technology (Bradley, 2009; Fishbein & Ajzen, 1980). Within TAM, behavioral intention is an important variable because it leads to the desired action of using a technology (Bradley, 2009). The TAM model is presented in Figure 1.

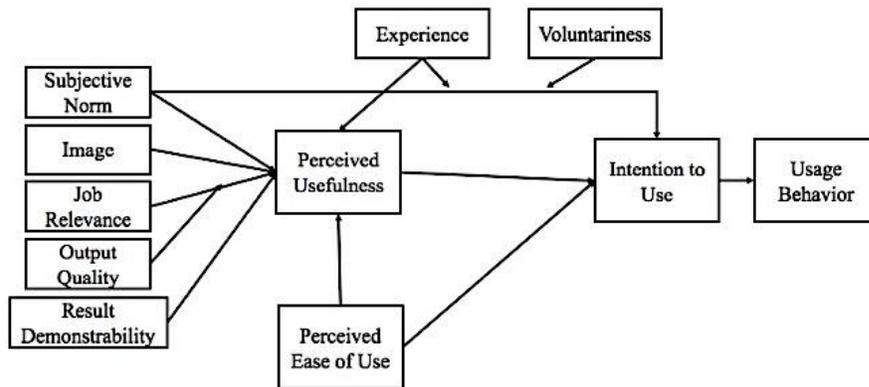


Adapted from: Davis, Fred D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly*, 319-340.

*Figure 1: TAM Model*

Many empirical studies have found TAM to only explain 40% of the variance in usage intentions and behavior (Bradley, 2009). To further explain technology adoption behavior, Venkatesh and Davis (2000) expanded TAM and introduced TAM2 which included “explaining perceived usefulness and usage intention in terms of social influence and cognitive instrumental processes” (Venkatesh & Davis, 2000) p. 186. The extended model, TAM2 introduced seven new variables. Figure 2 shows this model. Five of the seven variables directly influenced perceived usefulness (Bradley, 2009). TAM2 accounted for 60% of the variance in the drivers of user intentions and was found to have even more explanatory power than the original TAM model (Bradley, 2009).

Technology Acceptance Model 2<sup>nd</sup> Version (TAM2)  
Venkatesh & Davis (2000)



Adapted from: Venkatesh, Viswanath, & Davis, Fred D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204.

Figure 2: TAM2 Model

Following TAM and TAM2, Venkatesh et. al (2003) developed UTAUT to explain behavioral intentions to use a type of information system or technology system, such as a financial tracking system (Davis et al., 1989; Venkatesh & Davis, 2000; Venkatesh et al., 2003; Venkatesh, Thong, & Xu, 2012). An example of a UTAUT test is when behavioral beliefs such as perceived usefulness and perceived ease of use have an impact on user intention to adopt or accept the use of wireless internet services via mobile technology (Lu, Yao, & Yu, 2005).

Upon reviewing the various technology theories, UTAUT was the most widely used model in recent studies, determining technology acceptance and use within various technologies in multiple organizational environments (Gomez, 2017; Williams, Rana, & Dwivedi, 2015) . Gomez (2017), notes, “*growing interest in technology adoption has caused researchers to investigate various aspects of technology acceptance, which has shown that work performance can be affected by new technologies entering the work place, whether it be positive or negative, and may influence the level of satisfaction an*

*employee may have for their job*” (Gomez, 2017, p. 54). While multiple studies have contributed to the understanding of JS and UTAUT within markedly different workplace settings and with several different types of technology, many studies have not addressed whether the acceptance of technology moderates the relationship between JS and TI (Gomez, 2017). I used the UTAUT model as a starting point to establish whether there is a moderation effect of TA between the relationship of JS and TI. I provide a better understanding of the UTAUT model in the following paragraphs and sections.

To start, Venkatesh et al. (2003) established the UTAUT model with original data obtained from four organizations and cross-validated this data with new data from two other organizations (Khechine, Lakhal, & Ndjambou, 2016; Venkatesh et al., 2003). This research provided strong empirical support for UTAUT and introduced three direct causes of BI (PE, EE, and Social Influence) and two direct factors of usage behavior (BI and FC) that I use within my research (Venkatesh et al., 2003).

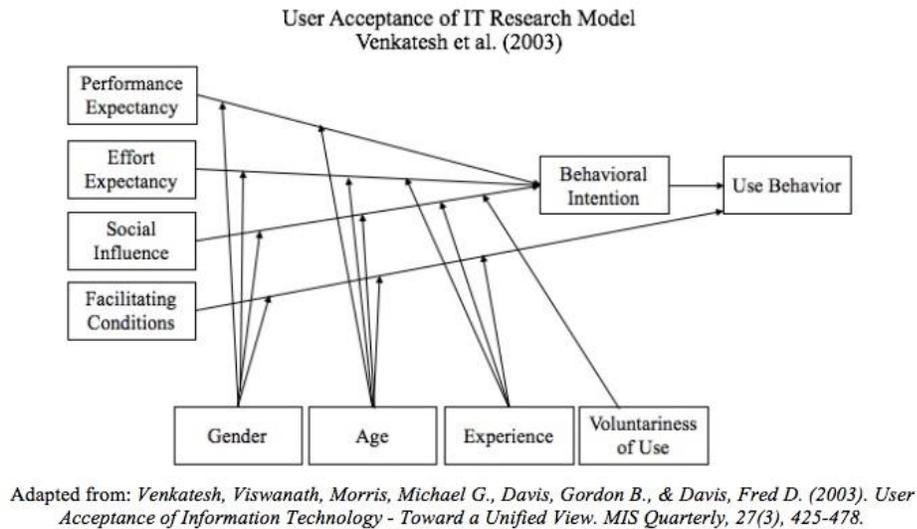
Venkatesh et. al (2003), suggested UTAUT as an acceptance model after a comprehensive evaluation of eight well-known models applied in user TA as noted below:

- 1) The Theory of Reasoned Action, (Fishbein & Ajzen, 1977)
- 2) The Technology Acceptance Model, (Davis et al., 1989)
- 3) The Motivational Model, (Davis, Bagozzi, & Warshaw, 1992)
- 4) The Theory of Planned Behavior, (Ajzen, 1991)
- 5) Combined Technology Acceptance Model and Theory of Planned Behavior, (Taylor & Todd, 1995a, 1995b)
- 6) Model of PC Utilization, (Thompson et al., 1991)

- 7) Diffusion of Innovations Theory, (Rogers, 1962, 1983)
- 8) Social Cognitive Theory, (Bandura, 1986; Compeau & Higgins, 1995)

I will address each of these models later in chapter two. The greatest improvement offered from UTAUT versus the eight models listed above was that it was able to explain up to 70% of the variance of usage behavior (Khechine et al., 2016; Venkatesh et al., 2003). According to Khechine et al. (2016) Venkatesh's UTAUT model is the closest conceptual framework for explaining intentions, acceptance, and usage of information technologies in organizations (Khechine et al., 2016; Venkatesh et al., 2003; Williams et al., 2015). The empirical findings of the original UTAUT model have attracted wide attention from academics who tested the model in various technological fields.

Below is the UTAUT research model (Figure 3) provided by Venkatesh et al. (2003) p. 447. Within chapter two, I will review the specific constructs used from the UTAUT model to test my hypotheses related to TA as a moderator of JS and TI. In the following section, I provide the research goals which further build upon my overall theory related to whether TA moderates the relationship between JS and TI.



*Figure 3: UTAUT Research Model*

### Research Goals of the Dissertation

This dissertation aims to examine the moderating impact of TA on the relationship between JS and TI. This research is important because previous research has not fully examined the link between TA, JS, and TI. While TA has been heavily researched as it relates to usefulness, ease of use, and intentions to use, the *black box* of JS and TI has not yet been opened to better understand how JS and TI might be positively or negatively moderated by TA (Davis, 1989; Venkatesh et al., 2003). As further evidence of this gap, Judge (1993), in his meta-analysis on JS and TI, invites researchers to test additional variables as potential moderators to the JS→TI relationship (Judge, 1993) p. 395. Therefore, the goal of this research is to answer the call to build upon existing research related to JS and TI (Judge, 1993; Ng & Feldman, 2010). Although JS and TI have been heavily examined by scholars (Judge, Parker, Colbert, Heller, & Ilies, 2001; Terek et al., 2018), it is worth noting that the influence that TA might have on the interaction between JS and TI has not yet been studied.

Based on research provided by Venkatesh, Davis, and Morris, TA research has progressed in recent years, but when a researcher replicates or makes a minor tweak to an existing TA model, it often hinders research progress (Venkatesh, Davis, & Morris, 2007) p 279. Therefore, unique approaches to TA research should be considered and tested to provide additional empirical foundations to pivot from (Venkatesh et al., 2007). This dissertation offers an alternate solution by not tweaking the TA model, rather I incorporate constructs from the UTAUT model: performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), and behavioral intention (BI) as moderators to JS and TI.

Further evidence provides that although scholars continue to pulse the landscape for research trends in JS and the exploration of new variables, very little research has been conducted from the view point of using TA as a moderator of relationships associated with JS (Halac, 2015), even though there is some evidence of the importance of technology to employees (Arora & Dhole, 2019). I noted that few studies have examined employee perceptions of technology used within the workplace and how this may affect turnover, (McKnight, Phillips, & Hardgrave, 2009) and what drives an employee's intentions to leave their workplace (Ghapanchi & Aurum, 2010). Coats (2011) noted, "Gen Y have grown up in a world where access to technology, especially that of social technology, is a given. Gen Y will arrive at the workplace and expect connectivity. They will expect to encounter policies and attitudes that both understand and support this essential requirement" (Coats, 2011). Morris et al. (2005) recognized, "the implementation of new business technologies has become so pervasive that acceptance and adoption is now considered to be a routine part of day-to-day operations" (Morris, Venkatesh, & Ackerman, 2005). Brougham and Haar provide, "Futurists predict

that a third of jobs that exist today could be taken by Smart Technology, Artificial Intelligence, Robotics, and Algorithms by 2025” (Brougham & Haar, 2017) p 239. Previous TA studies, however, do not seem to fully answer the question of how to evaluate TA and sustainability (Gatignon & Robertson, 1989).

Given that most organizations have some type of technology deployed within their workplace (Morris et al., 2005), a search of the available literature for TA, JS, and TI surprisingly resulted in very little peer-reviewed publications that were concerned with all three constructs in the same study. This included searches with the key words arranged differently in an attempt to identify whether the search would return results closely related to TA as a moderator on the relationship between JS and TI. However, the closest results generally found articles related to IT workers’ JS at their workplace or the role of IT in the workplace, ((McMurtrey, Grover, Teng, & Lightner, 2002; Salahshour Rad, Nilashi, & Mohamed Dahlan, 2018). To extend the search, I excluded TA from the key words. The resulting search results provided multiple responses ranging from 800 to 50,000 articles across the same databases. This reinforces the idea that JS and TI have been evaluated extensively in organizational literature (Hom & Griffeth, 1995; Judge, 1993). Another well-cited article by Tett and Meyer (1993) provided a meta-analysis that included over 155 studies supporting negative associations between JS and TI (Tett & Meyer, 1993). Further, most studies provided that increased JS resulted in reduced TI even when related to certain job types (Hom & Griffeth, 1995; Joseph, Ng, Koh, & Ang, 2007; Valentine, Godkin, Fleischman, & Kidwell, 2011). I also found multiple JS and TI articles related to: job attitudes, job affects, job characteristics, job performance, and work motivation (Brown, Charlwood, & Spencer, 2012; Dormann & Zapf, 2001;

Furnham, Eracleous, & Chamorro-Premuzic, 2009; Gabriella Winda & Wustari, 2019; Haider, 2019; Hellman, 1997; Judge, Weiss, Kammeyer-Mueller, & Hulin, 2017; McKnight et al., 2009; Valentine et al., 2011; Weiss & Merlo, 2015; Zhu, 2013). JS and TI literature provides decades of studies rooted within the area of organizational behavior, but identifying how TA fits into the model creates challenges if based upon previous research.

Employees' JS becomes a central focus area within research and discussions in workplace and organizational psychology because it is believed to have a relationship resulting in employee TI. March and Simon's (1958) model of turnover garnered the most research attention (March & Simon, 1958) leading to a longstanding relationship between JS and TI (Judge et al., 2017). According to Hom, Griffeth, and Gaertner (2000) the determinants of TI vary across workforces and a moderated test would indicate the effects of determinants of TI and the direction of those effects across situations and populations (Griffeth, Hom, & Gaertner, 2000).

While there is a tremendous amount of JS and TI research available to scholars (Hom, Lee, Shaw, & Hausknecht, 2017), as noted previously, the research generally focuses away from the level of TA within the organization. I posit that TA has been overlooked in the technology literature and my research attempts to contribute to the technology literature by highlighting the effects of technology acceptance on the relationship between JS and TI. Novel contributions from my study include the following: 1) a deeper understanding of the relationship between JS and TI in the workplace and 2) adoption of traditional management and IT theories into a more modern context vis-à-vis the use of moderating variables that will help to further explain the

relationship between JS and TI. The next section follows the research objective and research goals, by establishing the research question upon which I base my hypotheses.

### **Research Question**

As I noted earlier, much research has been conducted on JS, but very little research has been conducted on whether TA moderates JS and TI (Gatignon & Robertson, 1989; Halac, 2015; Judge, 1993; Venkatesh, Windeler, Bartol, & Williamson, 2017). A deeper understanding of the relationship between TA and JS may result in important organizational outcomes such as increased recruiting and retention rates of Millennial and Generation Z employees in the presence of higher levels of TA. As new generations enter the workforce, a greater understanding of the areas that they believe are important to increasing JS will be crucial. At the same time, understanding what level of technology is important to older generations not as well engrained or comfortable with technology is important. Business leaders should understand whether their organizations are providing the type of workplace that attracts desirable workers. Thus, understanding the correlation between JS and TI and whether TA moderates their relationship will help organizational leaders adapt to the changing workplace. The principal research question this research seeks to answer is:

*Q1: Does TA moderate the relationship between JS and TI?*

### **Significance of the Study**

Employers will require a robust and loyal workforce to support their organization as older workers begin to retire or leave. As previously stated, much of the newer generation of workers is more accustomed to newer technologies such as cloud computing, video teleconferencing, virtual collaboration, data analytics, persistent and

predictive technologies, automation, machine learning, and artificial reality. The changing workplace environment has provided a landscape of opportunities for workers.

Technological and scientific advances are coming to fruition at a rapid speed, giving agile organizations an advantage on capturing potentially profitable opportunities within technology driven areas. Thatcher, Stepina and Boyle estimated, in 2002, that up to 20 percent of information technology (IT) workers depart from their job each year (Thatcher et al., 2002a). “The cost of losing a scientist or engineer can be three to six times the cost of losing an administrator” according to Kochanski and Ledford (Kochanski & Ledford, 2001).

Mitchell and Lee (2001) posit that employees make many connections with the organizations for which they work and the communities in which they live. Once these connections are established, employees do not want to lose the relationships that they have created as a result of their employment. These employees consider the role that technology plays within enabling meaningful work and providing the ability to participate in work tasks that are fulfilling. Firms that embrace TA are far more likely to encourage ideas and innovation that theoretically could mean employees are unlikely to leave the firm (Ng & Feldman, 2010; Wang, Wang, Zhang, & Ma, 2020). Having a better understanding of the role that TA plays within the JS and TI relationship will provide firms with the ability to monitor their organization for potential retention and turnover issues, and this deeper understanding of TA will also provide the organizations with the ability to invest in key areas that may be more attractive to current and future workers.

## **Organization of the Dissertation**

This dissertation is organized into five chapters. Chapter one provides the introduction to the research objectives, goals, research questions, and significance of the study, and organization of the dissertation and summarizes JS, TA, and TI as it relates to this study. Chapter two will synthesize the different streams of JS, TA, and TI literature and highlight gaps in the existing literature, and identify opportunities for future inquiry. To address the research questions stated above, we review extant literature on JS, TA, and TI. I close Chapter two with a theoretical model and the hypotheses that have been developed from a review of existing literature. Chapter three provides the methods that will be used to obtain the data collected to empirically test the hypotheses. In chapter four, I provide the results, an overview of the data cleansing measures taken, descriptive statistics, regression analysis, and correlation coefficients. Chapter five concludes the dissertation by providing the discussion, theoretical contributions, implications, limitations and future research, and the conclusion.

## **Summary**

I consider the factors associated with JS to be critical to the future workforce. I therefore propose an extension to the JS literature to include TA based on technology resources and demands within the workplace (Ng & Feldman, 2010). I build upon existing empirical research related to TA's impact within the workforce and establish an empirical foundation for understanding today's workforce motivation by introducing TA as a new variable to be tested as a moderator. Lastly, I aspire to provide future researchers a better understanding of whether TA moderates the relationship between JS and TI.

## CHAPTER 2: LITERATURE REVIEW AND HYPOTHESES

This literature review focuses on three research areas: (a) JS, (b) TI, and (c) TA. I first provide the definitions of the theories: JS, TI, and TA. As JS is drawn from the motivation literature, I discuss it in the context of motivation theory. The second section establishes the concepts and literature that inform the conceptual model that I present. The third section synthesizes the literature as it relates to the development of the hypotheses in this study. The fourth section provides the theoretical model and hypothesis development. The final section summarizes the gaps identified within the research conducted and reflects upon previous calls for future research.

### **Definitions**

Locke (2003) encourages researchers to provide clear definitions on what each construct means (Locke, 2003). Specifically Locke notes, “*as it pertains to motivation theory as an example, in the Organizational Behavior literature, the term may refer to either Job Satisfaction or the motivation to perform, even though satisfaction versus choice, effort, and persistence are not the same phenomena, do not necessarily have the same causes or effects, and may not affect one another*” (Locke, 2003). For this research, the grounding theory is Motivation theory, and JS theory is the macro theory. I state this upfront based upon Locke’s recommendation as noted above (Locke, 2003).

Motivation theory (MT) dates back to the early 1930’s where it can be found within the Hawthorne studies (Locke & Latham, 2004). Early contributions from Frederick Herzberg (1966) provide a basic understanding of work motivation and JS (Herzberg, 1966). This study extracts concepts first introduced by Herzberg to assist with defining JS. Areas adjoining motivation factors, otherwise known as intrinsic factors (IF)

and hygiene factors, otherwise known as extrinsic factors (EF), provide connections within the area of JS and job dissatisfaction (Herzberg, 1966). IF can be defined with examples such as feelings of recognition and achievement. EF can be defined as the employees work environment, benefits, and job duties. These areas provide foundations for which this study builds upon and identifies the added factors such as TA in the way of workplace motivation.

The most widely known definition of JS was provided by Locke (1969), who described it as "*a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences*" (Locke, 1969, p. 316). Locke goes on to say, "*JS and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing.*" (Locke, 1969, p. 316)

TI, turnover intentions, and intentions to quit are often used interchangeably in the literature to explain the probability that an employee will resign from their job in the immediate future (Ngo-Henha, 2018). March and Simon (1958) provided the most utilized concepts of turnover intentions when they introduced voluntary turnover as one of the constructs of their organizational equilibrium theory introduced in 1958 (March and Simon, 1958). Following March and Simon (1958), Mobley (1977) expanded turnover theory by explaining how job dissatisfaction evolved into turnover (Mobley, Horner, & Hollingsworth, 1978). TI refers to the situation where an employee intends to no longer be a member of an organization (Ngo-Henha, 2018).

TA can best be defined by referring back to earlier research related to the innovations diffusion theory (IDT) first introduced by Rogers (1962) and then later updated by (Moore & Benbasat, 1991). Innovation is defined as an idea, practice, or

object that is perceived as having new standards by an individual or other element of acceptance (Rogers, 1962, 1983). Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1962). IDT has risen in popularity since Rogers first introduced it (1962) and where follow-on theories have developed. In Table 1, I provide the definitions of the variables.

*Table 1: Definition of Variables*

Variable	Definition	Author
Job Satisfaction (JS)	<i>"A pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing."</i>	(Locke, 1969) p. 316
Technology Acceptance (TA)	<i>"The degree to which a person believes that using a particular system would enhance his or her job performance".</i>	(Davis et al., 1989) p. 320
Performance Expectancy (PE)	<i>"The degree to which an individual believes that using the system will help him or her to attain gains in job performance."</i>	(Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1989, 1992; Moore & Benbasat, 1991; Venkatesh et al., 2003) p. 447
Effort Expectancy (EE)	<i>"The degree of ease associated with the use of the system."</i>	(Davis et al., 1989; Moore & Benbasat, 1991; Thompson et al., 1991; Venkatesh et al., 2003) p. 450
Facilitating Conditions (FC)	<i>"Objective factors in the environment that observers agree make an act easy to accomplish."</i>	(Thompson et al., 1991) p. 129
Behavioral Intention (BI)	<i>"BI is a measure of the strength of one's intention to perform a specified behavior."</i>	(Ajzen, 1991) p. 188. (Fishbein and Ajzen 1975) p. 288 (Veiga, Keupp, Floyd, & Kellermanns, 2017; Venkatesh et al., 2003) p. 470
Turnover Intentions (TI)	<i>"The perceived desirability of leaving the organization." and "The perceived ease of movement from the organization."</i>	(March & Simon, 1958) p.93

Moore and Benbasat (1991) adapted the characteristics of IDT presented by Rogers (1961) and cultivated them to align with TA research (Moore & Benbasat, 1991, p. 195). TA can also be associated with the technology acceptance model (Davis et al., 1989). This information systems theory simulates how users come to accept and use

a technology and is defined by Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis et al., 1989, p. 320).

The following section expands upon these definitions in the literature review and provides the identification of gaps within the existing research areas. Major themes of the study are linked within this section to the supporting theories within this study. The research variables TA, JS, and TI and are all areas heavily researched within the area of workforce motivation.

### **Literature Reviewed**

In 2019 more than a third of the workforce consisted of Millennials according to a Pew Research Center study (Fry, 2018). Amongst the Millennial generation is a unique characteristic and quality that has perplexed researchers, Millennials are unlikely to accept a job solely based on salary (Kurschner 2015). *"This research demonstrates the changing priorities of today's young workforce. Where traditionally I might have expected salary to be the number one differentiator for talent choosing their next employer, Millennials are now placing greater value on understanding what a company stands for and how, as employees, they can play a role in growing the organization into a better, stronger brand"* (Kurschner, 2015). This is why understanding the way that the future workforce thinks is critical to minimizing TI for this segment of the workforce.

The theoretical implication expected from this study is that JS (an independent variable) is associated with TI (a dependent variable). Intuitively, I expect to find an inverse relationship between JS and TI, meaning that as JS increases, TI decreases. Such a finding relative to JS and TI in the area of technology would be an addition to prior

organizational behavior research that has explored the construct of JS (Carston & Spector, 1987). I expand upon this implication by considering the possible moderating effects of TA, anticipating that higher levels of TA variables (PE, EE, FC, and BI), will strengthen the relationship between JS and TI. Conversely, lower levels of TA variables (PE, EE, FC, and BI), should weaken the relationship between JS and TI.

### **Job Satisfaction**

Judge et al. (2017) noted, “*Within this universe of related constructs, job satisfaction clearly has been the most studied construct*” (Judge et al., 2017) p. 357. JS research has provided many constructs across several decades. Researchers have spent much energy defining how people identify with their work and how they feel about their jobs as far back as the 1930’s. JS research has resulted in the use of numerous labels such as: work motivation, commitment, involvement, engagement, work subjective well-being, work affect, and JS (Judge et al., 2017). Therefore, it is not surprising that as career fields, jobs, the environment, technology, and people change, the research surrounding JS would also change.

Relative to JS, Locke and Latham (2004) provide a meta-analysis of work motivation theory and JS which examines previous empirical studies and concludes with acknowledging that in order to progress further, work motivation and JS need to be studied from new perspectives, where many topics have not been adequately studied, and certain methods have been underutilized (Locke & Latham, 2004) p. 400. In response to this call for extended research, I include TA as a moderator of JS.

Some researchers have theorized the factors and characteristics of JS in various ways. For example, research surrounding the specific facets of the job itself, the meaning

of what employees perceive they are getting out of their current work environment, what employees feel they have in their work environment and what they want, and their overall attitudes about their work (Johnson, 2009; McFarlin & Rice, 1992). These are all facets that have been explored. Another observation is with intrinsic-extrinsic distinctions noted by Naumann where the research numbers have varied between five facets (Naumann, 1993), and thirteen facets (Hackman & Oldham, 1980; Johnson, 2009; McFarlin & Rice, 1992; Naumann, 1993; Rice, Bennett, & McFarlin, 1989). Within the area of JS, intrinsic satisfaction might be realized from performing the task and extrinsic satisfaction might be derived from recognition, promotion, pay, or by receiving an award, but does not relate to the work itself, (Tietjen & Myers, 1998). For example, Hackman and Oldham (1980) conceptualized the elements of JS based on a combination of Herzberg's (1966) motivation-hygiene theory, and process theories of Adams (1965) and Vroom (1964) that incorporate external motivators (Adams, 1965; Hackman & Oldham, 1980; Herzberg, 1966; Johnson, 2009; Vroom, 1964). In Hackman and Oldham's research, they recognized the significance of including these viewpoints when assessing job satisfaction while also placing a higher priority on the intrinsic behavioral factors in their study (Hackman & Oldham, 1980; Johnson, 2009).

Spector, (1997) suggests that JS is a complex construct often measured as a global attitude of an employee toward his or her work (Spector, 1997). Spector's work within JS created a simplistic approach to employee JS --- either the employee is satisfied or dissatisfied with the job (Spector, 1997). Spector (1997) expressed the belief that an employee's level of satisfaction can differ with specific aspects of the job (Spector, 1997).

In Terek et al (2018), JS is observed as the attitude people have regarding their work and can be viewed as positive or negative depending on the feelings an employee may have in reference to their job (Terek et al., 2018) p. 41. Job attitude can often be exchanged with JS (Terek et al., 2018). This further supports the need for better understanding whether individuals' attitudes change when technology is more prevalent within the workplace.

According to McMurtrey, Grover, Teng, and Lightner (2002), information technology has a greater effect on the satisfaction of employees when a main technical professional orientation exists versus those who fall within the managerial skillset (McMurtrey et al., 2002) p 290. McMurtrey et al. (2002) research was of importance because their study investigated the JS of IT professionals where computer aided software engineering tools were being used (McMurtrey et al., 2002). The research focused on two hypotheses with the first examining whether the career orientation of IS personnel influences JS and the second incorporates the impact of computer aided software engineering tool usage on technical employees compared to managers (McMurtrey et al., 2002). Another observation made was the realization of a significant positive interaction between the difficulty of the computer tool used and the managerial competence associated with it, which led to higher JS (McMurtrey et al., 2002). McMurtrey et al (2002) noted that their results indicated that preventing the IT personnel shortage through automation may also increase JS, thereby decreasing turnover among employees (McMurtrey et al., 2002).

Nagy (2002) investigates single-item measures evaluating facet JS and multiple-item measures evaluating facet JS. The study provided that a single-item facet JS

measurement was significantly correlated with a much longer multiple-item measure of facet JS (Nagy, 2002). The single-item measure of facet JS accounted for incremental variance exceeding what the Job Descriptive Index (JDI) measure provided for all facets of JS associated with turnover intentions (Nagy, 2002). Single-item measurements may be easier and take less time to complete, cost less, and contain more validity, as well as be more flexible than multiple-item scales (Nagy, 2002).

JDI was originally developed by Smith, Kendall, and Hulin (1969) where 72 items assess five facets of job satisfaction including: the work, pay, promotions, supervision and co-workers (Smith, 1969). A shorter 30-item version, was developed by Gregson (1990) based on 6 items that included work, pay, promotions, supervision and co-workers (Gregson, 1990).

The literature reviewed provides a broad example of research across several decades, beginning in the 1960's with Vroom (1964) and concluding with Terek et al (2018). Provided below is a synopsis and an abbreviated list of the literature reviewed for JS within Table 2. Following the table, the next section presents the literature reviewed surrounding TI.

*Table 2: Literature Review - Job Satisfaction*

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Brougham & Haar, 2017	<ul style="list-style-type: none"> <li>• Job Satisfaction Theory</li> <li>• Workplace Technology, the future workforce, &amp; Disruptive Technology</li> </ul>	The future workforce surrounding: One's Interests, Values, talents, Workplace opportunities, Work-family/leisure interests	Career planning is much more salient in 25-year-old individuals versus 60-year-old individuals.
Carston & Spector, 1987	<ul style="list-style-type: none"> <li>• Organizational Behavior</li> <li>• Job Satisfaction</li> </ul>	Prior organizational behavior research has explored the construct of job satisfaction and the relationship with turnover intentions.	There is an inverse relationship to turnover intentions and job satisfaction. Additional moderators could provide new results within the area of organizational behavior.
Elias, Smith, & Barney, 2012	<ul style="list-style-type: none"> <li>• Job Attitude Theory</li> </ul>	How age matters when it comes to accepting technology within the workplace. Focus is on demographic born before 1982.	An employee's attitude towards technology in the workplace is important because such attitudes are crucial to the successful implementation of technological systems" p. 454. Attitude towards technology was positively related to extrinsic motivation, intrinsic motivation, and overall job satisfaction; however, attitude towards technology was negatively related to age. In addition, age was negatively related to extrinsic motivation. That the correlations between age and the remaining variables are small makes the results of the analyses performed to assess moderation much more important and informative" p. 459.
Gregson, 1990	<ul style="list-style-type: none"> <li>• Measuring Job Satisfaction – Using Job Descriptive Index</li> </ul>	Provides a modified way to measure job satisfaction.	Empirical research was provided to produce a peer reviewed and accepted scale to measure job satisfaction.
Hackman & Oldham, 1980	<ul style="list-style-type: none"> <li>• Organizational Theory</li> <li>• Job Satisfaction Theory</li> </ul>	Provides supporting evidence related to Herzberg's Two – Factor Theory is relevant today.	Supports Herzberg's theory continues to be the foundation for follow-on research, such as research model suggesting specific work characteristics and psychological processes that increase employee satisfaction and the motivation to excel.

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Judge, 1993	<ul style="list-style-type: none"> <li>• Affective Disposition</li> <li>• Job Satisfaction</li> <li>• Turnover Theory</li> </ul>	Given the importance of turnover decisions to individuals and organizations (Dalton & Todor, 1979; Mobley, 1982; Staw, 1980), it is surprising that more research concerning potential moderators of the job satisfaction-turnover relationship has not been conducted. (Judge, 1993) p. 395.	This study provides support for Weitz's (1952) hypothesis that affective disposition moderates the relationship between job satisfaction and voluntary turnover. Specifically, employees with a positive disposition who were dissatisfied with their jobs. Equivalently, job satisfaction and voluntary turnover were more highly related for employees with positive dispositions than for employees with negative dispositions. (Judge, 1993) p. 395.
Katzell, 1964	<ul style="list-style-type: none"> <li>• Job Satisfaction Theory</li> <li>• Values &amp; Behavior</li> </ul>	The extent to which a person participates in his job, including choosing and retaining membership in it, is directly related to the actual or expected net satisfaction evoked by the job & its attendant features, and inversely related to the net satisfaction evoked by other alternatives. p. 606	Under most circumstances only a moderately positive relationship will be found between job satisfaction & participation. Similarly, a person's investment or accomplishment on his job is directly related to the actual or expected net satisfaction associated with beneficial behavior, & contrariwise related the net satisfaction associated with non-productive behavior. p. 606
Kurschner, 2015	<ul style="list-style-type: none"> <li>• Generations Organizational Theory</li> <li>• Job Satisfaction Theory</li> </ul>	"This research demonstrates the changing priorities of today's young workforce. Where traditionally.....the number one differentiator for talent choosing their next employer, Millennials are now placing greater value on understanding what a company stands for and how, as employees, they can play a role in growing the organization into a better, stronger brand," said Trish Healy, Futurestep vice president of RPO Operations in North America. "	When asked what matters most to employees who are part of the Millennial generation - generally defined as those born after 1980 - the greatest number of respondents (23 percent) said it was "the ability to make an impact on the business," followed by "a clear path for advancement" (20 percent) and "development and ongoing feedback" (16 percent). Income came in at fourth place at 13 percent.
Locke, 1969	<ul style="list-style-type: none"> <li>• Theory of Organizational Behavior &amp;</li> <li>• Job Satisfaction Theory</li> </ul>	To explain job satisfaction, Locke provides that the first question should be what is it rather than how do I measure it.	In order to understand the job satisfaction, Locke provides empirical research supporting the need to analyze the research topic. For example, the attributes and characteristics should be identified and studied first and such is the same with job satisfaction. What is job satisfaction?

Author, Year	Research Framework	Area Within Dissertation	Key Findings
McFarlin & Rice, 1992	<ul style="list-style-type: none"> <li>Facet Importance as a Moderator in Job Satisfaction</li> </ul>	Facet importance failed to moderate the relationship between facet satisfaction and overall job satisfaction.	“Workers who viewed a job facet as having high importance were more satisfied with a small perceived have-want discrepancy and more dissatisfied with a large discrepancy than workers who viewed the facet as having low importance. Finally, as expected, facet importance failed to moderate the relationship between facet satisfaction and overall job satisfaction. This finding supports Locke’s proposition that facet satisfaction scores are ‘implicitly weighted’ by facet importance (McFarlin & Rice, 1992).” p. 41
Morris, Venkatesh, & Ackerman, 2005	<ul style="list-style-type: none"> <li>Theory of Organizational Behavior</li> <li>Theory of Planned Behavior</li> </ul>	Attitude towards Technology is essential. Testing age as a moderator towards technology in the workplace: work motivation and overall job satisfaction.	Age does moderate the relationship between attitude towards technology and motivation and overall job satisfaction. (Morris et al., 2005) P. 464
Naumann, 1993	<ul style="list-style-type: none"> <li>Intrinsic and Extrinsic Job Satisfaction</li> </ul>	Naumann provides, job, task, and organization characteristics are significantly related to both intrinsic and extrinsic job satisfaction.	“Identified the factors under the control of the organization that may predict expatriate job satisfaction. The results indicate that both job/task and organization characteristics are significantly related to both intrinsic and extrinsic job satisfaction. The results appear to have both managerial and research implications (Naumann, 1993).”s p. 61
Rice, McFarlin, Bennett, 1989	<ul style="list-style-type: none"> <li>Discrepancy Theory of Satisfaction</li> <li>Job Facets</li> </ul>	The difference between intrinsic and extrinsic job satisfaction.	“On the basis of discrepancy theories of satisfaction, it was hypothesized that satisfaction with specific job facets are uniquely related to discrepancies between current job facet experiences and desired levels of those same job facet experiences (i.e., between what employees now get from their jobs and what they want from their jobs) Rice et al., 1989.” p. 591
Schullery, 2013	<ul style="list-style-type: none"> <li>Generational Impact on Job Satisfaction Theory</li> </ul>	Millennials pose challenges beyond previous generations in that they have high expectations of meaningful work and fulfillment of work.	Employee high engagement has been linked with improved employee retention, product quality, and improved customer service, resulting in increased customer satisfaction and loyalty.
Spector, 1997	<ul style="list-style-type: none"> <li>Job Satisfaction Theory</li> </ul>	Application, assessment, causes, and consequences. Two categories: Environment and Individual Factors	Job satisfaction is a complex construct and is often measured as a global attitude of an employee toward his or her work.

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Stanton, Sinar, Balzer, Julian, Thoresen, Aziz, & Smith, 2002	<ul style="list-style-type: none"> <li>Developing an Updated Scale to Test Job Satisfaction Theory</li> <li>The Abridged Job Descriptive Index, BGSU, including the Abridged Job in General Scale</li> </ul>	The Job Descriptive Index is a popular measure of job satisfaction with five subscales containing 72 items. But often participants get tired due to the length and time it takes to participate in the survey.	Time consuming surveys often result in less than optimal participation. Therefore, the development of an abridged version of the Job Descriptive Index (AJDI) 25 items was tested to see if most of the same areas removed would garner the same results if they had not been removed. Results indicated that the relationships among the five abridged subscales and between the five abridged subscales and other measures were substantially preserved.
Terek et al., (2018)	<ul style="list-style-type: none"> <li>A study on the impact of information technology on job satisfaction.</li> </ul>	Their study supports that job satisfaction improves when the organization's management invest in modern technology.	Terek et al., (2018) recommends top managers should continuously and systematically invest in the purchase and maintenance of technology, and to motivate employees to work with modern technology. The effects of these investments and efforts result through better business results, and the improvement of the level of numerous organizational performance indicators, such as job satisfaction (Terek et al., 2018). p. 47.
Tietjen & Myers, 1998	<ul style="list-style-type: none"> <li>Herzberg's Theory of Motivation</li> <li>Job Satisfaction Theory</li> <li>Job Attitude Theory</li> </ul>	JS, intrinsic is realized from performing the task and extrinsic satisfaction derived from recognition, promotion, pay, or receiving an award, but does not relate to the work itself.	"How can one specify the attitude of any individual toward his or her job? What causes these attitudes? What are the consequences of these attitudes (Tietjen & Myers, 1998)?"
University, B. G. S. 2009	<ul style="list-style-type: none"> <li>The Abridged Job Descriptive Index &amp; Job in General Scale</li> </ul>	Abridged Job Descriptive Index was used for survey questions: Q9 – Q14	Survey Instrument
Vroom, 1964	<ul style="list-style-type: none"> <li>Expectancy Theory</li> <li>Motivation Theory</li> </ul>	Vroom defined his Valence, Instrumentality, and Expectancy (VIE) concept as all possible affective orientations toward outcomes.	Vroom's concept model does not yield a higher effect size than the components of the models used within the analysis.

## Turnover Intentions

Why do employees leave? March and Simon (1958) introduced the theory of organizational equilibrium (TOE) which is widely considered the first formal theory of TI (Ngo-Henha, 2018). According to March and Simon (1958), their research uncovered two perspectives related to the attraction and attainability of alternative jobs or even roles

within or external to an organization. March and Simon further define organizational equilibrium as the “perceived desirability of leaving the organization” and “the perceived ease of movement from the organization” (March & Simon, 1958) (p.93). Mitchell and Lee (2001) posit that employees make many connections with their organization and community. Once established, employees do not want to lose the relationships they create with their organization or community. When providing meaningful work and participating in work tasks which are fulfilling, employees are unlikely to want to leave their organization. I note this as I consider which TA constructs moderate the relationship between JS and TI. In some cases, FC may moderate the relationship between JS and TI because of the style in which an individual works. Compatibility is a subconstruct within FC that considers how some employees may not believe that there are other jobs that could be compatible with the way in which the employee works. Thus, I posit that some employees may shy away from leaving one company for another based on the fear of incompatibility especially if they leave and go somewhere that does not offer current state-of-the-art technology.

TI further evolved out of TOE with the notion that an employee is connected to their organization and community (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). TOE suggests that employees feel fully integrated into their organization and community and do not want to lose those connections (Ngo-Henha, 2018). Stanley et al. (2013) theorized that three mechanisms account for how employee TI profiles originate, “depending on the degree to which belonging is internally regulated, the perceived desirability and ease of movement, and the within-person contextual effects among profiles (Stanley, Vandenberghe, Vandenberg, & Bentein, 2013, p. 176).”

Adams (1965) proposes that TI occurs when an employee perceives the relationship to be fair and equitable and the rewards are commensurate with their contributions to that partnership (Adams, 1965). Further, Adams posits that in relationships, two concerns stand out: firstly, how rewarding are people's social, family, and work relationships (Hatfield, Rapson, & Bensman, 2012); and second, how fair, just, and equitable are those relationships (Hatfield et al., 2012). Of particular interest in Adams observations, there was a minimal amount of JS explored related to TI. Although Adams' research lacked the aspect or relationship associated with JS and TI, it did provide a unique perspective surrounding the extrinsic factors associated with TI.

In reviewing the literature, it is reasonable to assume that TI occurs when the environment discounts an employee's feelings on inclusion within their work environment. An employee needs to feel connected in some way to remain within their work environment, whether it is related to their salary, contribution of the work efforts, or coworkers and relationships established. Therefore, TI would likely occur without high JS. Table 3 provides a summary of the literature reviewed in the area of TI. Following Table 3, I provide the literature review on TA.

*Table 3: Literature Review - Turnover Intentions*

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Adams, 1965	<ul style="list-style-type: none"> <li>Equity Theory</li> </ul>	Turnover Intentions occurs when an employee perceives inequitable relationship.	Turnover intentions occurs when rewards are not commensurate with their contributions.
Hatfield, Rapson, & Bensman, 2012	<ul style="list-style-type: none"> <li>Theory of Organizational Equilibrium</li> <li>Equity Theory as it relates to rewards and how fair the workplace is.</li> <li>Turnover Intentions</li> </ul>	Equity theory posits that in relationships, two concerns stand out: First how rewarding are people's social, family, and work relationships? Second: How fair, just, and equitable are those relationships?	According to Equity theory people perceive a relationship to be fair and equitable when the rewards they reap are commensurate with their contributions to that relationship. In this entry, I will discuss the logic on which Equity theory is based, discuss techniques for assessing how equitable a relationship is, and discuss the consequences of fairness (or unfairness) in both personal and work relationships.
March & Simon, 1958	<ul style="list-style-type: none"> <li>Theory of Organizational Equilibrium</li> </ul>	March and Simon provided a general theory of organizational equilibrium. The two factors that determine a worker's balance are perceived desirability and perceived ease of leaving the organization; today these concepts are routinely labeled as job satisfaction.	March and Simon emphasized individual differences in capability and demographics such as tenure, gender, and age as key factors of perceived ease of movement while organizational size and job satisfaction encourage perceived desirability of movement.
Mobley, Horner, & Hollingsworth, 1978	<ul style="list-style-type: none"> <li>Turnover Intentions</li> </ul>	It provides a comprehensive withdrawal process via a sequence of steps employees goes through before leaving an organization.	It provides an intermediate linkage model proposed through a set of withdrawal cognitions. Examples are thoughts of quitting, job search, evaluation of alternatives, and job dissatisfaction to leaving.

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Ngo-Henha, 2018	<ul style="list-style-type: none"> <li>• Review and Meta - Analysis of Turnover Intentions</li> <li>• Theory of Organizational Equilibrium (TOE)</li> <li>• Social Exchange Theory</li> <li>• Herzberg’s Two-Factor Theory</li> <li>• Expectancy Theory</li> </ul>	Provided empirical examples of models and theory to provide context to the various grounded theory supporting the turnover theory.	Provides a review of existing turnover intentions theories: Theory of Organizational Equilibrium (TOE) Social Exchange Theory Herzberg’s Two-Factor Theory Expectancy Theory
Stanley, Vandenberghe, Vandenberg, & Bentein, 2013	<ul style="list-style-type: none"> <li>• Turnover Intentions</li> <li>• Latent Profile Analysis</li> </ul>	The authors theorized that three mechanisms account for how profiles operate, i.e., the degree to which membership is internally regulated, the perceived desirability and ease of movement, and the within-person contextual effects among profiles (Stanley, Vandenberghe, Vandenberg, & Bentein, 2013). p. 176	The authors provide, “The affective dominant, affective–normative dominant, and committed profiles displayed lower turnover intentions than the continuance dominant and not committed profiles. Moreover, the continuance dominant profile and the profiles in which affective dominant was high displayed lower turnover rates than the not committed profile (Stanley et al., 2013)”. p.176
Thatcher, Stepina, Boyle, 2002	<ul style="list-style-type: none"> <li>• Turnover Intentions – IT Workers</li> <li>• Job Attitudes</li> <li>• Job Characteristics</li> <li>• External Markets</li> </ul>	In 2002 an estimate of 20 percent of information technology workers turnover each year. Review of predictors related to turnover intentions.	A conceptual model is linking perceptions of the internal work environment and external markets to information technology employee turnover. Turnover of Information Technology Workers- Examining Empirically the Influence of Attitudes, Job Characteristics, and External Markets.
Winterton, 2004	<ul style="list-style-type: none"> <li>• Conceptual Model of Labor Turnover and Retention</li> </ul>	Winterton focuses his empirical research on skill retention and asserts it has been relatively neglected in previous research.	Four stages occur in the process of actually quit or the intentions to leave. <ol style="list-style-type: none"> <li>1. Low Job Satisfaction</li> <li>2. Low Commitment</li> <li>3. Labor Market Opportunities</li> <li>4. Ease of Movement</li> </ol>

## Technology Acceptance

TA is derived from several different theories. Specifically, I found for the purpose of my research that Innovation Diffusion Theory (IDT) originally introduced by Rogers was later refined by several constructs related to individual TA. Innovation is defined as an idea, practice, or object that is perceived as having new standards by an individual or

other element of acceptance (Rogers, 1962, 1983). Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 1962). The diffusion of innovations theory has risen in popularity since Rogers first introduced it (1962). Rogers presented five stages of diffusion comprising agenda-setting, matching, redefining, restructuring, clarifying, and routinizing, where later stages in the innovation process cannot be initiated until earlier stages have been finished (Rogers, 1962, 1983; Rogers, 1983). In his third edition, Rogers (1983) identified five general attributes of innovations that a variety of diffusion studies had shown to consistently influence adoption and acceptance.

Below, I provided a table (Table 4) that highlights the five areas that Rogers defined in comparison to the areas provided by Venkatesh (2003) in the UTAUT model.

*Table 4: A Core Construct Comparison: Innovation Diffusion Theory and Unified Theory of Acceptance and Use of Technology*

<i>Innovation Diffusion Theory (Rogers, 1983)</i>	<i>Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003)</i>
<i>1. Relative Advantage: the degree to which an innovation is perceived as being better than its precursor (Rogers, 1983).</i>	<i>1. Relative Advantage: “the degree to which an innovation is perceived as being better than its precursor” (Moore &amp; Benbasat, 1991; Rogers, 1983) p. 195</i>
<i>2. Compatibility: the degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters (Rogers, 1983).</i>	<i>2. Compatibility: “the degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters” (Moore &amp; Benbasat, 1991; Rogers, 1983) p. 195.</i>
<i>3. Complexity: the degree to which an innovation is perceived as being difficult to use (Rogers, 1983).</i>	<i>3. Ease of Use: “the degree to which an innovation is perceived as being difficult to use” (Moore &amp; Benbasat, 1991; Rogers, 1983) p. 195</i>
<i>4. Observability: the degree to which the results of an innovation are observable to other (Rogers, 1983).</i>	<i>4. Visibility: The degree to which one can see others using the system in the organization (adapted from Moore and Benbasat, 1991)</i>
<i>5. Trialability: the degree to which an innovation may be experimented with before adoption (Rogers, 1983).</i>	<i>5. Results Demonstrability: “the tangibility of the results of using the innovation, including their observability and communicability” (Moore &amp; Benbasat, 1991) p. 203</i>

In 1989, Davis proposed the technology acceptance model (TAM) to explain the potential user’s behavioral intention to use a technological innovation (King & He, 2006).

According to Davis, TAM is based on the theory of reasoned action, a psychological theory that seeks to explain behavior and involves two primary predictors—perceived ease of use and perceived usefulness. TAM also includes a dependent variable, behavioral intention, that the theory of reasoned action (TRA) assumed to be closely linked to actual behavior (Davis, 1989).

Later, Venkatesh and Davis (2000) expanded upon Davis' first TAM research model and in collaboration they introduced TAM2. Venkatesh and Davis noted that TAM2 reflected the impacts of three interrelated social forces affecting an individual confronted with the prospect to accept or reject a new technology system: subjective norm, voluntariness, and image (Venkatesh & Davis, 2000).

In 2003, Venkatesh, Morris, Davis, and Davis published another expanded model to TAM called, Unified Theory of Acceptance and Use of Technology (UTAUT) where they reviewed and identified eight prominent technology models and consolidated the similarities to establish a unified theory of acceptance and use of technology (Venkatesh et al., 2003). The existing models researched were:

- 1) Theory of Reasoned Action (TRA) (Sheppard, Hartwick, & Warshaw, 1988; Venkatesh et al., 2003)

Originating from social psychology, a fundamental theory of human behavior which has been used to predict an array of behaviors (Venkatesh et al., 2003). TRA provided two core constructs: attitude toward behavior and subjective norm. Attitude toward behavior relates to the feelings one has towards performing a specific behavior (Fishbein & Ajzen, 1977). Subjective norm is the perspective an individual might have towards how

someone should behave or react to a behavior (Fishbein & Ajzen, 1977).

TRA was applied to individual acceptance of technology where Davis et al. (1989) found the variance explained was consistent with similar studies which employed TRA for other types of behaviors (Davis et al., 1989).

2) TAM and TAM2 (Davis, 1989; Venkatesh & Davis, 2000)

TAM is designed based on information systems and focused on predicting IT acceptance and usage on the job. There are three constructs associated with TAM and TAM2. The first construct, perceived usefulness represents what an individual believes while using a particular system and that use of the system will improve his/her job performance. The second construct is perceived ease of use which can be understood as the degree to which someone believes that using a system is free from effort (Davis, 1989).

The third construct was specific to TAM2 and it extended TAM by including subjective norm as a predictor of intentions (Venkatesh & Davis, 2000).

3) Motivational Model (MM) (Vallerand, 1997) or Motivation Theory

Davis et al. (1992) used motivation theory to understand technology adoption within information systems (Davis et al., 1992). Two constructs form this model, extrinsic motivation and intrinsic motivation. Extrinsic motivation reflects the notion that a user believes that performing a task will result in a reward or the avoidance of a punishment. Intrinsic motivation is when someone performs a task because it's personally fulfilling or rewarding.

4) Theory of Planned Behavior (TPB) (Ajzen, 1991)

TPB extends TRA by adding a construct of perceived behavioral control.

There are three constructs: attitude toward behavior, subjective norm, and perceived behavioral control (Ajzen, 1991). Perceived behavioral control is the ease or difficulty in performing the behavior. Attitude toward behavior and subjective norm are addressed in TRA.

5) Combined TAM and TPB (C-TAM-TPB) (Taylor & Todd, 1995a, 1995b)

According to Venkatesh et al. (2003), this model combines the predictors of TPB, attitude toward behavior, subjective norm and perceived behavioral control, with perceived usefulness from TAM and is considered a hybrid model (Taylor & Todd, 1995a; Venkatesh et al., 2003).

6) Model of PC Utilization (MPUC) (Thompson et al., 1991)

Derived from Triandis' (1977) theory of human behavior, this model competes against the perspective proposed by TRA and TPB (Triandis, 1977; Venkatesh et al., 2003). This model consists of six core constructs: job-fit, complexity, long-term consequences, affect toward use, social factors, and facilitating conditions. Job-fit is the extent to which someone believes that by using a technology, it will positively reflect on their job performance (Thompson et al., 1991). Complexity is the degree to which innovation is seen to be difficult to understand and use (Thompson et al., 1991). Long-term consequences are the result of a task with a pay-off in the future (Thompson et al., 1991). Affect towards use is considered a positive or negative feeling associated with a particular act (Thompson et

al., 1991). Social factors are an individual's perspectives associated with factors surrounding a group or culture (Thompson et al., 1991).

Facilitating conditions are considered the objective factors within an environment that participants observe as making an act easy to accomplish (Thompson et al., 1991).

7) Innovation Diffusion Theory (IDT) (Rogers, 1962, 1983)

IDT is grounded in sociology where it has been used to study a variety of innovations and has seven core constructs: relative advantage, ease of use, image, visibility, compatibility, results demonstrability, and voluntariness of use (Rogers, 1962, 1983). Relative advantage according to Moore and Benbasat, (1991) is the degree to which an innovation is perceived to be a precursor. Ease of use is the level at which an individual perceives that a system is difficult to use (Moore & Benbasat, 1991). Image is the level to which one perceives innovation to enhance their image or status within a social system (Moore & Benbasat, 1991). Visibility is the degree to which an individual can see that others are using the system (Moore & Benbasat, 1991). Compatibility is the level of innovation that is perceived as aligning with values and needs of potential adopters (Moore & Benbasat, 1991). Results demonstrability is considered the tangibility of the subsequent use of an innovation (Moore & Benbasat, 1991).

8) Social Cognitive Theory (SCT) (Bandura, 1986; Compeau & Higgins, 1995; Compeau, Higgins, & Huff, 1999)

SCT consists of five core constructs: outcome expectations – performance, outcome expectations - personal, self-efficacy, affect, and anxiety.

Outcome expectations – performance are the related consequences of the behavior (Compeau & Higgins, 1995). Outcome expectations – personal are the consequences of the behavior (Compeau & Higgins, 1995). Self-efficacy is the judgement of one's ability to use a specific technology in an effort to complete a task (Venkatesh et al., 2003). Affect is an individual's liking towards a particular behavior (Venkatesh et al., 2003). Anxiety is the emotional reaction an individual has when it comes to performing a particular behavior (Venkatesh et al., 2003).

While there have been multiple models and several theories developed to explain TA, there still exists limitations in this area of research. Sun and Zhang (2006) examined the role of moderating factors in user technology acceptance and identified two limitations within the explanatory power of some of the models as well as a generalizability amongst the constructs creating an inconsistent relationships amongst the different constructs (Sun & Zhang, 2006). Sun and Zhang (2006) noted that many of the existing TA studies account for less than 60% of variance explained and they contrasted the explanatory power between laboratory studies and field studies (Sun & Zhang, 2006).

In short, the competitive environment among potential adopters is essential in determining receptivity to innovation. I theorize that TA will provide further understanding of an individual's intentions to use a technology. For example, Page and State (2012) argued that throughout the United States Department of Defense:

*“There is a shortfall in employees with the expertise needed to develop cost-effective defense systems; particularly when it involves complex supply chain management. True talent (both customer and contractor) is difficult to recruit, expensive to hire, and challenging to retain. However, as the complexity and risk involved with product development and supply chain management continue to increase, so does the need for experience and expertise. Unfortunately, the most complex and messy projects are also among the most unpleasant (extremely high stress, time and effort requirements), resulting in talent limiting their involvement, and transferring out” (Page & State, 2012, p. 216).*

While experienced workers are critical to the workforce, engaging and attracting new workers and leaders is crucial to the future of industry, but must coincide with retaining those employees as well. Schullery (2013) observed significant generational differences in work-related values between Gen X, Millennials, and Baby Boomers within the areas of leisure, extrinsic, intrinsic, and social values (Schullery, 2013, p. 260). Schullery (2013) explains how researchers have studied differences in work values, which are conceptualized as “outcomes people desire and feel they should attain through work.” (Schullery, 2013, p. 259) The highest rated value by Millennials was leisure followed by extrinsic values with intrinsic values and social values tied for third place (Schullery, 2013). Gen X ranked extrinsic values first, while leisure, intrinsic values, and social values came in second (Schullery, 2013). Baby Boomers ranked leisure and extrinsic third and provided intrinsic and social at number one (Schullery, 2013). To provide further context, Schullery (2013) explains that the strongest statistical change in value ratings for Millennials was for leisure rewards at work, which was measured with

questions related to a job that allows for self-paced work, work that is “mostly free of supervision,” and time for “other things in your life,” as well as increased vacation (Schullery, 2013, p. 260). By recognizing these four areas of value, it proves helpful to understand the unique differences spanning the age gaps in workers.

Evans and Reeder (2010) suggested that using a combination of the hiring process, the acquisition process, and training resources to raise the level of technical skills will encourage employees to continue investing in professional development (Evans & Reeder, 2010). In other words, providing incentives such as access to new technology solutions or being part of a new system implementation may encourage employees to obtain training or learn about future innovations. Rigorous professional certifications are being developed from a collective body of knowledge which further requires industry to ensure their workforce is able and encouraged to obtain and retain required credentials. Table 5 provides a summary of the literature reviewed within the area of TA.

Table 5: Literature Review - Technology Acceptance

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Brougham, & Haar, 2017	<ul style="list-style-type: none"> <li>Technology Acceptance</li> </ul>	Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA) identifies awareness and establishes whether an employee believes new technology will positively impact or negatively impact their future career prospects.	“I expect STARA awareness to have a similar detrimental influence on the key job outcomes of career satisfaction, and turnover intentions, as STARA can threaten a person’s overall career development and make it more challenging to fulfil one’s needs. For example, working for an employer who actively explores and trials robotics to replace employees is likely to be perceived by an employee that they are undervalued and not regarded highly by their employer. This is likely to lead to higher turnover intentions.” p. 242
Compeau and Higgins, 1995	<ul style="list-style-type: none"> <li>Social Cognitive Theory</li> </ul>	Core constructs to UTAUT: Outcome Expectations – Performance and Outcome Expectations – Personal	The performance-related consequences of the behavior. Specifically, performance expectations deal with job related outcomes (Compeau and Higgins 1995). Outcome expectations-personal are the personal consequences of the behavior. Personal expectations deal with the individual esteem and sense of accomplishment (Compeau and Higgins 1995).
Davis, Bagozzi, & Warshaw, 1989	<ul style="list-style-type: none"> <li>User Acceptance of Technology</li> <li>Perceived Ease of Use</li> <li>Perceived Usefulness</li> </ul>	Understanding user acceptance of technology. Perceived Ease of Use: The degree to which an individual believes that using a particular system would be free of physical and mental effort. Perceived usefulness: The degree to which an individual believes that using a particular system would enhance his or her job performance.	Davis, Bagozzi, and Warshaw’s (1989) results yield three main insights concerning the determinants of managerial computer use: <ol style="list-style-type: none"> <li>1. People's computer use can be predicted reasonably well from their intentions.</li> <li>2. Perceived usefulness is a major determinant of people's intentions to use computers.</li> <li>3. Perceived ease of use is a significant secondary determinant of people's intentions to use computers.</li> </ol>

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Fishbein and Ajzen, 1995	<ul style="list-style-type: none"> <li>Core constructs supporting the Theory of Reasoned Action</li> </ul>	Core constructs are attitude toward behavior and subjective norm.	TRA provided two core constructs: attitude toward behavior and subjective norm. Attitude toward behavior relates to the feelings one has towards performing a specific behavior (Fishbein & Ajzen, 1977). Subjective norm is the perspective an individual might have towards how someone should behave or react to a behavior (Fishbein & Ajzen, 1977).
Gatignon & Robertson, 1989	<ul style="list-style-type: none"> <li>Innovations Diffusion Theory</li> </ul>	Call for further research as it pertains to motivation theory and technology diffusion.	Continued conceptualization of the model previously proposed in the Journal of Marketing via an empirical study of factors which account for the acceptance or denial of high technology innovation.
Halac, 2015	<ul style="list-style-type: none"> <li>Technology Orientation</li> </ul>	Halac (2015) posits technology orientation could be seen as a complex combination of capabilities that are glued with learning and unlearning and ultimately can be considered a multidimensional construct. Those areas are: top management capability, technological capability, commitment to learning, and commitment to change.	The gap of associating technology orientation on functional level as a reflection of technology-push approach was argued. This study is the first research that offered and supported a multidimensional concept of technology orientation. Therefore, considering the four newly exposed dimensions top management capability, technological capability, commitment to learning and commitment to change, definition of technology orientation was extended to firm level.
Moore and Benbasat, 1991	<ul style="list-style-type: none"> <li>Technology Acceptance</li> </ul>	Empirical test for a new scale for adoption of IT innovation. Constructs: Compatibility, Relative Advantage, Result Demonstrability, Visibility, Ease of Use, Trialability, Image.	Creation of an overall instrument to measure various perceptions of using an information technology innovation.
Patterson, West, Shackleton, Dawson, Lawthom, Maitlis, and Wallace, 2005	<ul style="list-style-type: none"> <li>Validation of Organizational Climate</li> <li>Diffusion of Innovations</li> </ul>	This paper describes the development and validation of a multidimensional measure of organizational climate, the Organizational Climate Measure (OCM), based upon Quinn and Rohrbaugh's Competing Values model. 17 Scales	Used the Innovation and Flexibility Scales for Technology Acceptance. Innovation and Flexibility <ol style="list-style-type: none"> <li>1. New ideas are readily accepted here</li> <li>2. This company is quick to respond when changes need to be made</li> <li>3. Management here are quick to spot the need to do things differently</li> <li>4. This organization is very flexible; it can quickly change procedures to meet new conditions and solve issues as they arise</li> <li>5. Assistance in developing new ideas is readily available</li> <li>6. People in this organization are always searching for new ways of looking at problems</li> </ol>

Author, Year	Research Framework	Area Within Dissertation	Key Findings
Rogers, 1962 and 1983	<ul style="list-style-type: none"> <li>Diffusion of Innovations</li> </ul>	<p>Provided the Diffusion of Innovations Theory construct by submitting five characteristics of an innovation:</p> <ol style="list-style-type: none"> <li>Relative Advantage</li> <li>Compatibility</li> <li>Complexity</li> <li>Observability</li> <li>Trialability</li> </ol>	<p>Rogers (1962) identified five general attributes of innovations that a variety of diffusion studies had shown to consistently influence adoption.</p> <ol style="list-style-type: none"> <li>Relative Advantage: degree to which an innovation is perceived as being better than its precursor</li> <li>Compatibility: degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters</li> <li>Complexity: degree to which innovation is perceived as being difficult to use</li> <li>Observability: degree to which the results of an innovation are observable to others</li> <li>Trialability: degree to which an innovation may be experimented with before adoption.</li> </ol>
Sun and Zhang, 2006	<ul style="list-style-type: none"> <li>Technology Acceptance Theory and Moderators</li> </ul>	<p>Moderating factors may account for both the limited explanatory power and inconsistencies between studies.</p>	<p>Sun and Zhang (2006) examined the role of moderating factors in user technology acceptance and identified two limitations within the explanatory power of some of the models as well as a generalizability amongst the constructs creating an inconsistent relationships amongst the different constructs (Sun &amp; Zhang, 2006). Sun and Zhang (2006) noted many of the existing TA studies account for less than 60% of variance explained and the explanatory power between laboratory studies and field studies between academia and industry.</p>
Taylor and Todd, 1995	<ul style="list-style-type: none"> <li>Combined TAM and TPB</li> </ul>	<p>Predictors of TPB with perceived usefulness provide further understanding of the benefits from a combined model.</p>	<p>Predictors of TPB and perceived usefulness from TAM to provide a hybrid model.</p>
Thompson, Higgins, and Howell, 1991	<ul style="list-style-type: none"> <li>Model of PC Utilization</li> <li>Theory of Human Behavior</li> </ul>	<p>Model of PC Utilization (MPUC) (Thompson et al., 1991) was derived from Triandis' (1977) theory of human behavior, this model competes against the perspective proposed by TRA and TPB (Triandis, 1977; Venkatesh et al., 2003). This model consists of six core constructs: job-fit, complexity, long-term consequences, affect toward use, social factors, and facilitating conditions.</p>	<p>Job-fit is the extent someone believes that by using a technology, it will positively reflect on their job performance (Thompson et al., 1991). Complexity is the degree which innovation is seen to be difficult to understand and use (Thompson et al., 1991). Long-term consequences is the result of a task with a pay-off in the future (Thompson et al., 1991). Affect towards use is considered a positive or negative feeling associated with a particular act (Thompson et al., 1991). Social factors are an individual's perspectives associated with factors surrounding a group or culture (Thompson et al., 1991). Facilitating conditions are objective factors within an environment that participants observe as making an act easy to accomplish (Thompson et al., 1991).</p>
Author, Year	Research Framework	Area Within Dissertation	Key Findings

Venkatesh, Morris, Davis, and Davis, 2003	<ul style="list-style-type: none"> <li>• User Acceptance of Information Technology</li> <li>• Unified Theory of Acceptance and Use of Technology</li> </ul>	Formulation of a unified model that integrates elements across the models proposed.	This article uses eight different models to integrate the acceptance and use of technology within: Theory of reasoned action, technology acceptance model, motivational model, theory of planned behavior, the model of PC utilization, the innovation of diffusion theory, and the social cognitive theory.
Veiga, Keupp, Floyd, and Kellermanns, 2017	<ul style="list-style-type: none"> <li>• Technology Adoption</li> </ul>	Adopters' pre-adoption intentions to use a system will positively influence actual usage during system adoption and thereby have a positive, indirect effect.	Empirical study of how adopters' pre-adoption expectations, enacted over time, can influence their post-adoption proficiency, by shaping how and why they spend time using the system during the adoption period.

Below I provide a synopsis (Table 6) of the theories, research variables, and survey instruments (further expanded upon in chapter 3) within this study and mentioned earlier in this chapter. Column one establishes where I have added the macro theory to provide the foundation of each supporting theory used within this research study. Next to the macro theory is the supporting theory used within my research. I then have added the research variables that were used as part of the supporting theories which integrate into the survey instrument. The purpose of this table is to succinctly show the connections between the macro theory, supporting theory, research variables, and survey instrument.

*Table 6: Linking Theories, Research Variables, and Survey Instruments*

Macro Theory	Supporting Theory or Theories	Research Variable	Survey Instrument
<ul style="list-style-type: none"> <li>• Job Satisfaction (Locke, 1969)</li> </ul>	<ul style="list-style-type: none"> <li>• Workforce Motivation (Locke &amp; Latham, 2004)</li> </ul>	<ul style="list-style-type: none"> <li>• Work Satisfaction</li> <li>• Pay Satisfaction</li> <li>• Promotion Satisfaction</li> <li>• Supervision Satisfaction</li> <li>• Coworker Satisfaction</li> <li>• Job in General Satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Abridged Job Descriptive Index (Stanton et al, 2002)</li> </ul>
<ul style="list-style-type: none"> <li>• Theory of Organizational Equilibrium (March and Simon, 1958)</li> </ul>	<ul style="list-style-type: none"> <li>• Intentions to Quit (Mobley et al., 1978)</li> <li>• Turnover Intentions (Locke, 1968)</li> </ul>	<ul style="list-style-type: none"> <li>• Actively Seeking Work</li> <li>• Intentions to Leave</li> <li>• Passively Seeking</li> <li>• Quitting</li> </ul>	<ul style="list-style-type: none"> <li>• Intentions to leave the organization survey. (Wayne et al, 1997)</li> </ul>
<ul style="list-style-type: none"> <li>• Diffusion of Innovations Theory (Rogers, 1962, 1983)</li> </ul>	<ul style="list-style-type: none"> <li>• Technology Acceptance Model (Davis et al., 1989)</li> </ul>	<ul style="list-style-type: none"> <li>• Support for New Technology</li> <li>• Speed: Response to Change</li> <li>• Flexibility</li> <li>• Support for New Idea Generation</li> <li>• Desire to Change</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational climate measure (Patterson et al., 2005)</li> </ul>
<ul style="list-style-type: none"> <li>• Diffusion of Innovations Theory (Rogers, 1962, 1983)</li> </ul>	<ul style="list-style-type: none"> <li>• User Adoption of Information Technology (Venkatesh et al., 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Performance Expectancy</li> <li>• Effort Expectancy</li> <li>• Facilitating Conditions</li> <li>• Behavioral Intention</li> </ul>	<ul style="list-style-type: none"> <li>• User Adoption of Information Technology (UTAUT) (Venkatesh et al., 2003)</li> </ul>

In this section, I have provided some of the background and literature related to JS, TI, and TA. In the following section, I will incorporate the literature reviewed into my conceptual model and provide the resulting hypotheses that I tested within this study.

### **Conceptual Model and Development of Hypotheses**

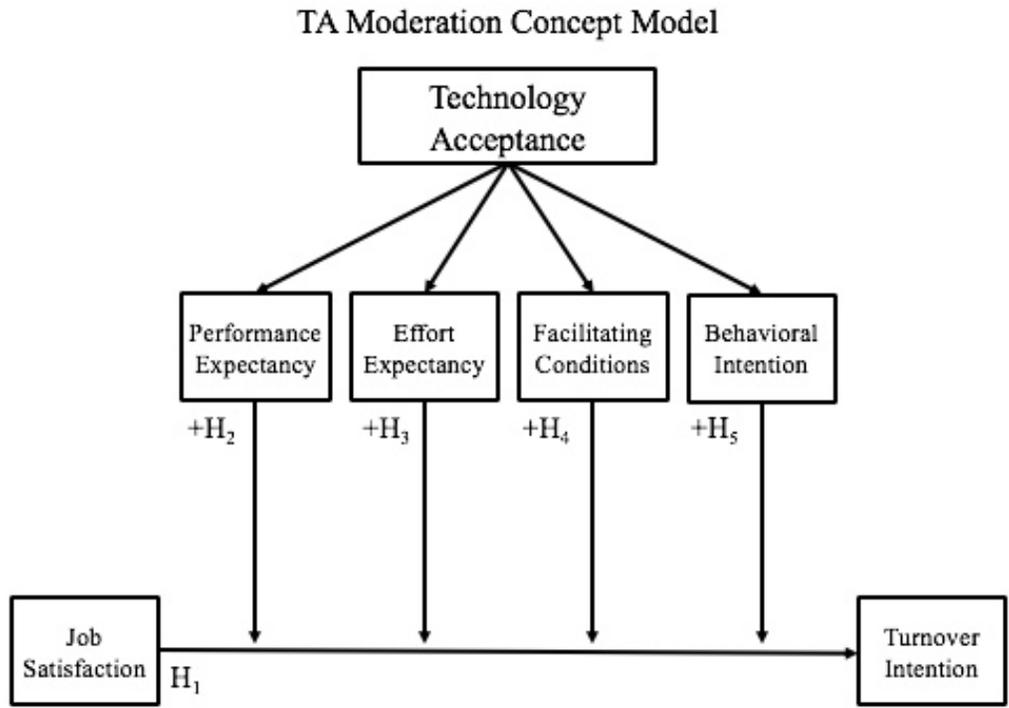
In earlier studies, TA has been largely based on the organizational and functional roles associated with user adoption and perceived usefulness, rarely focusing on the moderating role of TA and the direct or indirect impact it may have on JS or TI. The review of literature suggests TA is valuable for the future direction of organizations (Venkatesh, 2006). Additionally, the literature suggests that JS is uniquely different between generations whereas earlier models of JS may not have included important variables which pertain to the current generation and future generations (Schullery, 2013).

Workers appear to be changing their perspectives as it relates to JS, which means areas that might contribute positively or negatively towards TI might be changing as well. More studies are showing that workers are interested in working for organizations that provide automation and digital work enabled environments. As an example, in the previously mentioned 2018 report by Aruba Networks & Hewlett-Packard that surveyed over 7,000 workers from various organizations, sectors, and fifteen different countries highlighted that 71% of responses indicated that the workplace of the future should be fully automated and 72% indicated that the workplace should become completely interactive and automatically update and adjust itself (Hewlett-Packard, 2018). An even more important revelation from the Aruba Networks study was that workers are more likely to be positive about their work environment and organization in general when technology has been implemented correctly and 73% of respondents praised their company's vision (Hewlett-Packard, 2018). Lastly, the Aruba Network study also reported a 74% rating for JS with good or a very good reaction from participants within the study as it relates to higher levels of technology adoption within their workplace (Hewlett-Packard, 2018). In particular though, minimal information was available regarding whether there was any impact towards TI. It is unknown whether higher levels of JS as it relates to TA might result in a lower desire for TI. Based on this study and the past literature noted already, there is considerable cause to further understand what drives TI.

Winterton established key stages that individuals process when considering to quit a job with low JS, resulting in dissatisfaction as a key contributing factor to them actually quitting that job (Winterton, 2004). In order for an employee to reach the point of job

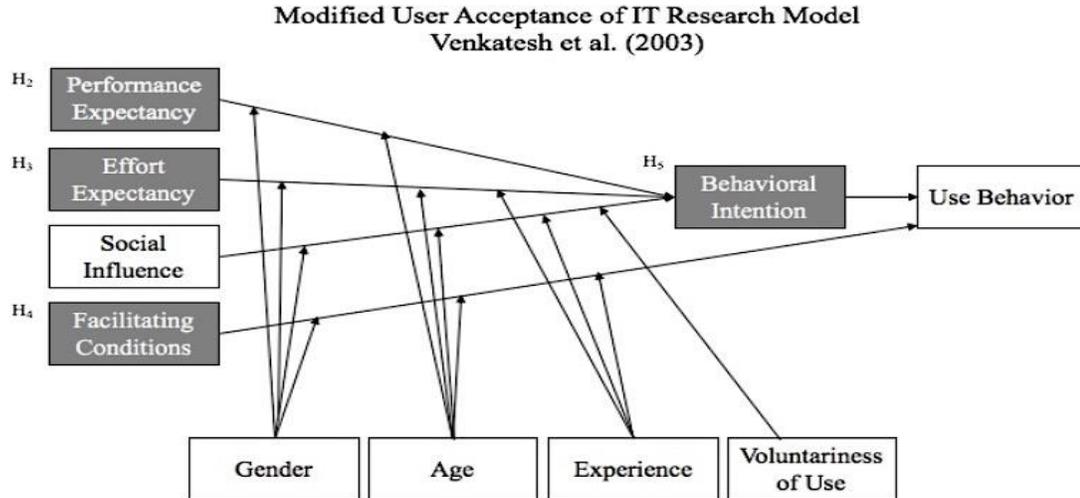
dissatisfaction something caused them to be unhappy with their job. The contributing factors for JS provided by Winterton (2004) assume that there must be a low commitment from the organization or company, there must be an ease of movement, and labor markets must provide new opportunities for employees resolve to be quitting (Winterton, 2004). In reviewing this topic, I assert that the lack of organizational acceptance can be related to and is observable within the area of TA in an organization. Therefore, dissatisfied employees look to find labor markets that are more committed to investing in the latest technology, thus facilitating the ease of movement for employees desiring more JS. A higher level of organizational acceptance and implementation of technology theoretically, may provide a strengthened relationship between JS and TI amongst workers who view technology as a contributor to their job performance.

Synthesizing extant literature on JS, TA, and TI, I propose a theoretical model (Figure 4) in which I investigate the direct effect between JS and TI. This investigation is expanded further to determine if the relationship between JS and TI is moderated by elements of TA. TA is represented in the model by four constructs drawn from Venkatesh's UTAUT model. The four constructs are: Performance Expectancy (PE), Effort Expectancy (EE), Facilitating Conditions (FC), and Behavioral Intention (BI). I chose these four constructs based on their power of prediction as demonstrated by Venkatesh et al. (2003). Each construct is discussed as part of the hypothesis development later in this chapter.



*Figure 4: Theoretical TA Moderation Concept Model*

As previously mentioned, the four moderating variables are adapted from Venkatesh's (2003) UTAUT model which I have provided below in Figure 5. These constructs have been successfully demonstrated to serve as adequate measures of technology acceptance in prior research studies.



Adapted from: Venkatesh, Viswanath, Morris, Michael G., Davis, Gordon B., & Davis, Fred D. (2003). *User Acceptance of Information Technology - Toward a Unified View*. *MIS Quarterly*, 27(3), 425-478.

Figure 5: Modified User Acceptance of IT Research Model

To measure the acceptance of technology, Venkatesh et al. (2003) reviewed eight models which were provided earlier in this chapter. Their study assessed data from four organizations over a six-month period with the points of measurement, the eight models explained between 17 percent and 53 percent of the variance in user intentions to use information technology (Venkatesh et al., 2003). Based on the previous results just provided, Venkatesh et al. (2003) formulated UTAUT with four core determinants of intentions and usage and four moderators of key relationships (Venkatesh et al., 2003). These relationships were tested with data from two new organizations (adjusted R<sup>2</sup> of 70 percent) (Venkatesh et al., 2003). UTAUT was found to be a useful tool for this study because it incorporated four constructs that lend themselves to TA: PE, EE, FC, and BI. Next, I explore the four constructs tested in Venkatesh et al. (2003) UTAUT model to provide a foundation for my hypothesis and research.

### Performance Expectancy

Venkatesh et al. (2003) observed in their seminal UTAUT study that PE as a construct within each individual model tested had the strongest prediction of intentions and remains significant at all points of measurement in both voluntary and mandatory settings. Venkatesh et al (2003) used behavioral intention as the dependent variable, and performance expectancy as the independent variable with gender and age as a moderator. Experience was not tested as a moderating variable for PE. The results indicated that the effect of PE is stronger for men and younger workers. The dependent variable across the tests was Turnover Intentions.

### *Effort Expectancy*

Venkatesh et al. (2003) hypothesized a relationship between EE and behavioral intention and they suggested that this relationship would be moderated by gender, age, and experience, such that the effect would be stronger for women, particularly younger women, and particularly at early stages of experience (Venkatesh et al., 2003). Results were partially supported, moderation was stronger for women, and experienced older workers (Venkatesh et al., 2003).

### *Facilitating Conditions*

Venkatesh et al. (2003) noted, “*Empirical results indicate that facilitating conditions do have a direct influence on usage beyond that explained by behavioral intention, however, alone the effect is expected to increase with experience as users of technology find multiple avenues for help and support throughout the organization*”

(Venkatesh et al., 2003, p. 468). The result supported the idea that facilitating conditions would not have a significant influence on behavioral intention but would demonstrate a stronger result for older workers with increasing experience.

### *Behavioral Intention*

Venkatesh et al. (2003) supported the idea that behavioral intention would result in having a significant positive influence on technology usage. *BI as a direct effect = .59 and BI as a direct effect plus interaction = .51*

The UTAUT research study Venkatesh et al. (2003) conducted aspired to integrate the disjointed theory and research on TA into a unified theoretical model while also considering the eight established models provided earlier. As Venkatesh et al. (2003) point out in their research, the measures for UTAUT should be considered preliminary, opening the door to future research that targets fully developing and validating the appropriate scales for each construct. Of importance, Venkatesh et al. (2003) note that most of the key relationships in the model were moderated to include age which moderated all of the relationships in the model. p. 469 Age has received very little attention in TA research literature according to Venkatesh et al. (2003) which were contrary to their results. Further, Venkatesh et al. (2003) called for future research to be focused on integrating UTAUT with research that has identified causal antecedents of the constructs used within the model (Venkatesh et al., 2003, p. 470). The next section provides the introduction to the five hypotheses and expands upon the platform for my research study.

## Hypotheses

Predicated upon a singular research question, “*Q1: Does TA moderate the relationship between JS and TI*”, I develop five distinct hypotheses that explore whether elements of TA moderate the relationship between JS and TI.

I took into account the literature reviewed to provide theoretically grounded concepts that could be tested. First, I note that the relationships between JS and TI is well-established and is the result of an interface between the individual and their workplace signaling a relationship between work satisfaction, positive or negative, and degrees of TI (Judge, 1993). As noted by Judge, multiple empirical meta-analyses over the years have clearly established the significant role of JS in predicting turnover (Judge, 1993). Judge noted, “*Carsten and Spector (1987), in a meta-analysis of 47 studies, estimated a corrected correlation between JS and turnover of -.26 (the 95% confidence interval did not include 0)*” (Carsten & Spector, 1987; Judge, 1993). Because sampling error accounted for only 21% of the variance in correlations across studies, the authors concluded that room for significant moderator effects existed (Carsten & Spector, 1987; Judge, 1993). In fact, Carsten and Spector found that alternative employment opportunities moderated the relationship between JS and turnover (Carsten & Spector, 1987). On the basis of Carsten and Spector's findings, the potential exists that other variables interact with JS in predicting turnover (Carsten & Spector, 1987; Judge, 1993).

The assumption that turnover is a negative consequence for organizations is understandable given logical outcomes surrounding the loss of an employee (Staw, 1980). Turnover will likely involve some costs for the organization, such as: recruitment, selection, training, and these costs may be more noticeable to managers or administrators

than any benefits which may result from a change in personnel (Mobley, 1982; Staw, 1980). Organizational psychologists have posited that overall satisfaction is construed as the judgment one has or expresses about one's job as a whole, and the evaluation of aspects of one's job such as: work tasks, pay, promotions, supervision, or coworkers, make up the Job Descriptive Index (Smith, Kendall, & Hulin, 1969, p. 357).

Work motivation may drive key outcomes of both intent to leave and voluntary turnover and explains significant incremental variance over and above JS, job alternatives, and job search (Carsten & Spector, 1987; Herzberg, Mausner, & Snyderman, 2017; Judge & Klinger, 2008; Locke, 1976; Mitchell et al., 2001; Mobley, Griffeth, Hand, & Meglino, 1979; Spector, 1997; Springer, 2011; Tett & Meyer, 1993; Thatcher, Stepina, & Boyle, 2002b). Employee work motivation and JS has been linked with improved employee retention, product quality, and improved customer service, resulting in increased satisfaction and loyalty, and therefore provides motivation for employees to remain in their job versus turnover (Schullery, 2013; Venkatesh et al., 2003). In contrast, TI would theoretically be a response to dissatisfaction, resulting in lower levels of JS and consequently would be negatively associated with TI. Therefore, I posit that a higher level of JS are negatively associated with an employee's intention to voluntary turnover.

Hence the hypothesis is written as:

*H1: Higher levels of employee JS are negatively associated with employee TI.*

#### *Moderating Variables*

Given the importance of TI within the workplace (Dalton & Todor, 1979; Mobley, 1982; Staw, 1980) it is surprising that not more research concerning potential moderators of the JS-turnover relationship has been conducted (Judge, 1993, p. 395). I

answer this call for additional research by establishing elements of TA as a moderator of the relationship between JS and TI.

This section provides four hypotheses that develop the core of my theory wherein I propose that TA moderates the relationship between JS and TI. I provide that within the area of TA many scholars have included moderation as part of their research, but most within the realm of what moderates users accepting technology (Davis et al., 1989; Davis & Morris, 2007; Venkatesh & Davis, 1996; Venkatesh et al., 2003). In their 2006 article, Sun and Zhang provide a recommendation for further exploration of moderation within the Theory of TA (Sun & Zhang, 2006). Further, Sun and Zhang (2006) acknowledge, similarly to Halac (2015), further understanding and research of moderating factors may explain both the limited explanatory power and the inconsistencies from past TA studies (Sun & Zhang, 2006). One particular example was from Agarwal and Prasad (1998) where they openly criticized the absence of moderating influences in TA models and called upon researchers to investigate moderating effects in future studies (Adams, Nelson, & Todd, 1992; Agarwal & Prasad, 1998; Sun & Zhang, 2006; Venkatesh et al., 2003). Thus, many researchers answered the call and extended TA research by adding in additional moderators to their research. One example again is Venkatesh et al. (2003) who extended their research within the UTAUT model by reviewing four moderators within their study: experience, voluntariness, gender, and age (Sun & Zhang, 2006; Venkatesh et al., 2003). This example is only one such example in an important field of study. Sun and Zhang (2006) noted that they believe other examples exist for more moderating factors with empirical evidence, but they are limited and more research is needed.

Because minimal investigation has been done in the way of moderation and TA, researchers have looked at alternative options to examining TA in terms of its moderating effect on other constructs. As I mentioned in chapter 1, I searched for any literature that would provide examples of TA being used as a moderator of the relationship between JS and TI, which included: ProQuest, UNCC Atkins Library Databases, Google Scholar, WorldCat, Wiley Online, EBSCO, Emerald Insight, and ABI/INFORM Complete. This then led to me consider the existing models of TA and whether they examine the level of satisfaction workers might obtain when using a form of technology within the area of their job and workplace. The closest model to this was the UTAUT model.

The UTAUT model explains behavioral intention. In order to understand a user's behavior, an understanding of the measure for their behavior is critical. Each of the constructs I use within my study are needed in order to develop the basis for the employees intention to use the technology. This then influences whether the employee will enjoy their job more or less, ultimately resulting in whether they then will voluntarily leave or stay in their current role.

It is important to keep in mind that the strength of JS is rooted in the worker's perceived desired outcome within their job or work environment. Therefore, if the worker's perception is that they are not receiving a positive outcome from their job or workplace they will likely leave. This is of particular interest as previously noted because as we move further into the twenty first century, we see technology becoming more of a presence within the workplace. In fact, many organizations cannot continue without the technology that they currently have in place, which is why understanding how elements of TA moderate the relationship between JS and TI is important.

### *Performance Expectancy*

According to Venkatesh, performance expectancy (PE) is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance (Venkatesh et al., 2003). I note that understanding the opportunities of using technology would provide increasing returns related to an employee's PE and therefore will improve their job performance and provide for job growth and relevant efficiencies. Venkatesh et al. (2003) tested five constructs as part of the PE construct. The five constructs mentioned previously on page 35, are from the different models that pertain to PE and consisted of: perceived usefulness (Combined TAM-TPB models), extrinsic motivation (Motivation Model,) job-fit (MPCU), relative advantage (IDT), and outcome expectations (SCT) (Venkatesh et al., 2003). Areas where Venkatesh et al. (2003) noted these similarities were: usefulness and extrinsic motivation (Davis, 1989; Davis et al., 1992), usefulness and job-fit (Thompson et al., 1991), usefulness and relative advantage (Davis, 1989; Moore & Benbasat, 1991), usefulness and outcome expectations (Compeau & Higgins, 1995; Davis, 1989), and job-fit and outcome expectations (Compeau & Higgins, 1995).

Previously, I proposed that higher levels of employee JS will be negatively associated with employee TI. My theory posits that the introduction of a moderating variable, in this example PE, will either strengthen or weaken the relationship between JS and TI. In other words, higher levels of PE would result in a less negative interaction between JS and TI. Conversely, lower levels of PE would result in a more negative interaction between JS and TI. In keeping with this thought process, given the understanding of the UTAUT model and TA, the perception that employees will want to

perform an activity or use a technology system would be perceived as contributory to their success and would be considered a higher level of PE relative to job performance, productivity, and possible promotability (Davis et al., 1992). Again, Venkatesh et al. (2003) defines PE, as the degree to which an individual believes that using a system will help attain job performance. Within UTAUT, PE was the strongest predictor of intentions as demonstrated by Venkatesh et al. (2003) and remained significant at all points within their research model. Extant theories suggest that PE as a construct of TA positively influences an employee's intention to use technology (Davis, 1989; Davis et al., 1989, 1992; Terek et al., 2018; Venkatesh et al., 2003). Employees with higher levels of PE are likely to develop a positive intention to use a technology system that is perceived to be beneficial to their job performance and in turn this would have a positive moderating effect on the interaction between JS and TI (Thompson et al., 1991). For instance, when employees experience a system to provide more accurate information or produce data faster than they previously were able to with the previous method, the employee perceives there to be an increase in their productivity resulting in an increase in the moderating variable (PE) and therefore creating a desire for the employee to want to stay based on these improvements which may not be available at another organization. This in turn implies that PE would have a positive effect on the relationship between JS and TI by making it less negative. The relationship between JS and TI will be moderated based on how a given user perceives the technology will improve their performance by increasing their productivity, thus improving the negative relationship between JS and TI (Gomez, 2017). Individuals with high PE will be less likely to voluntarily turnover their position even when JS is low because they perceive that the technology that they use in

their job assists them in the performance of that job. These individuals might be less likely to leave the organization to go work in that same job at a different organization where the technology either does not exist, is not as effective, or may even be unknown. In essence, this would mean that they would be going to work in a dissatisfying job that was even harder to perform due to the absence of the technology. As such, they are less likely to turnover and remain in a job that may be dissatisfying and correlated with TI but the PE that they receive as a result of the job inclines them to remain.

Additionally, one of the job satisfaction facet's as identified by Judge et al. (2001) is opportunities for advancement (promotion) and this construct closely aligns with job performance and therefore positively increases PE, manifesting itself to strengthen the negative relationship between JS and TI because they perceive use of the technology improves their chances for job advancement which again is associated with PE (Judge, Parker, et al., 2001). Therefore, if an individual observes increased performance through PE associated with a technology, they are likely to have a lower chance of voluntary turnover because they perceive a benefit by remaining with the current organization. Hence the hypothesis is written as:

*H<sub>2</sub>: The relationship between employee JS and TI is moderated by PE, in particular, higher levels of PE enhance this relationship and lower levels of PE weaken this relationship.*

### *Effort Expectancy*

The UTAUT model explains the construct of effort expectancy (EE) to be the degree of ease associated with the use of the technology system (Venkatesh et al., 2003). The constructs and models tested regarding EE included: perceived ease of use

(TAM/TAM2), complexity (MPCU), and ease of use (IDT) (Venkatesh et al., 2003). Venkatesh (2003) notes that effort-oriented constructs are expected to be more noticeable in the early stages of a new behavior, when process issues represent impediments to overcome, and later become overshadowed by instrumentality concerns (Davis, 1989; Venkatesh & Davis, 2000). For example, an employee given a new technology to use to perform their job may approach it with the notion that learning the system would be easy. Where alternatively, an employee might take too long to learn the system and thus take away from important job duties. An assumption might be that employees will approach new technology as an opportunity to help save time on the time-consuming tasks, allowing for more time to be obligated towards important work tasks, versus the counter viewpoint of it would take too much time to learn the new technology.

Previously, I proposed that higher levels of employee JS will be negatively associated with employee TI. I now consider how this direct effect between JS and TI might be influenced depending on whether there are high or low levels of the TA variable, EE. I posit that employees who understand and can adapt to technology will perceive a higher level of EE because of the ease of use associated with the system (Moore & Benbasat, 1991). EE posits that employees will perceive a certain degree of ease associated with in this case technology, and will lead to a desired performance and ultimately to desired outcomes (Nyberg, 2010). Yu (2012) noted, EE significantly influenced intention to use technology given the outcome would be beneficial (Yu, 2012). For instance, when employees experience a system to be user friendly, they perceive there to be an increase in performance with minimal effort or time being invested in learning the new system, resulting in higher levels of the moderating variable (EE). If

employee's expectations are not met, they will perceive more effort is required and therefore have a lower degree of EE which influences the independent variable (JS) and the dependent variable (TI) and the likelihood of voluntary turnover may increase as a result of this interaction effect (Porter & Steers, 1973). This might be due to an employee perceiving added time and effort to learn or adapt to using a new technology which might not occur at another organization. Restated, if an employee observes an effort associated with technology is costly, they will see this as not beneficial to their JS because it requires added effort and more time is now invested in accomplishing the task therefore increasing their chances to voluntarily turnover (Christen, Iyer, & Soberman, 2006). Further, the time and effort invested by the employee may not have an equitable payoff in the way of observing increased productivity and performance resulting in little gain for the employee and therefore lowering EE. This would imply EE influences the employee's perception to observe the technology as being less beneficial to them, therefore strengthening the negative relationship between JS and TI. Alternatively, EE might be improved by increasing the degree of ease through a phased in approach of the technology and creating an opportunity for input from the employee along with the ability to become more of a stakeholder, creating a positive benefit, lessening the desire to want to voluntarily leave as it would mean the employee might not have the same opportunity or observe the same type of EE with another employer. Hence the hypothesis is written as:

*H3: The relationship between employee JS and TI is moderated by EE, in particular, higher levels of EE enhance this relationship and lower levels of EE weaken this relationship.*

*Facilitating Conditions*

Facilitating conditions (FC) is the degree to which an employee believes that an organizational and technical infrastructure exist to support use of the system (Venkatesh et al., 2003). Three different models were tested by Venkatesh as part of incorporating it into UTAUT: perceived behavioral control (TPB, C-TAM-TPB), FC (MPCU), and compatibility (IDT). Thatcher, Stepina, and Boyle tested a conceptual model linking perceptions of the internal work environment FC and external markets to information, TA, and employee turnover (Thatcher et al., 2002a).

Another important dynamic that Venkatesh mentioned is that attitude falls within FC for TA, "An employee's attitude towards technology in the workplace is important because such attitudes are crucial to the successful implementation of technological systems" (Elias et al., 2012). p. 454 Attitude (FC) towards technology was positively related to extrinsic motivation, intrinsic motivation, and overall JS; however, attitude towards technology was negatively related to age while, age was negatively related to extrinsic motivation (Elias et al., 2012). I consider technology to be related to FC for employees' work environments. According to equity theory, people perceive a relationship to be fair and equitable when the rewards they reap are commensurate with their contributions to that relationship, thus enabling the level of facilitation to be positively related to TA and JS (Mobley, 1982; Mobley et al., 1979; Mobley et al., 1978). Alternatively, equity theory predicts that the key outcomes of both intentions to leave and "voluntary turnover" explain significant incremental variance over and above JS.

Lastly, Taylor and Todd (1995b) recognized the theoretical similarity by modeling FC as a core component of perceived behavioral control in the Theory of Planned Behavior (Taylor & Todd, 1995b). The compatibility construct from IDT joins

items that tap the fit between the individuals work style and the use of the technology system in the organization (Taylor & Todd, 1995b; Venkatesh et al., 2003).

Previously, I proposed that higher levels of employee JS will be negatively associated with employee TI. I now posit that the interaction between JS and TI might be influenced depending on whether there are high or low levels of the TA variable, FC. For example, consider where an employee perceives that objective factors in the environment make an act easier to do, they are considered to have high FC (Thompson et al., 1991). According to Maruping et al. (2017), as individuals estimate their subjective probability of using the system, they consider the extent to which the environment provides support by way of resources and guidance that promote use, which establishes the level of FC and in turn the level of associated satisfaction (Maruping, Bala, Venkatesh, & Brown, 2017). Additionally, FC captures the objective factors associated with technology use that are external to the individual and constitute enablers and/or impediments that can affect whether or not system use occurs resulting in higher or lower JS (Warshaw & Davis, 1985a; 1985b). Gogus et al. (2012) reported that access to new technologies had a higher rate of FC resulting with a significant impact related to job motivation and technology use (Gogus, Nistor, Riley, & Lerche, 2012). With this in mind, notionally when an individual perceives there to be an increase in FC of newer technology such as, additional technical infrastructure and training to learn a new technology exists, then the employee foresees more support from their organization and an enabling ability to learn and adapt to the new technology. This, in turn, improves the ease associated with use of the system through increased FC. This ultimately would tend to influence an employee's desire to

remain with an organization, therefore acting as a moderator and creating a positive influence on the relationship between JS and TI by improving it.

According to Gomez (2017) as new technology is implemented into the workplace, so are policies, procedures, and new tasks associated with increased job responsibilities, by increasing FC to ease the changes associated with new technology, this will result in moderating the relationship between JS and TI. This is because when new technology is introduced into the workplace, the purpose is to improve job performance by providing employees with tools to help increase their productivity and create more FC resulting in a positive effect on JS and TI (Ellickson & Logsdon, 2002). Therefore, if there is low JS and high TI, introducing higher levels of FC related to new technology should moderate the effect on the relationship between JS and TI because the employee perceives FC to improve the workplace and increase job performance, therefore enhancing the relationship. Hence the hypothesis is written as:

*H4: The relationship between employee JS and TI is moderated by FC, in particular, higher levels of FC enhance this relationship and lower levels of FC weaken this relationship.*

#### *Behavioral Intention*

Venkatesh (2003) notes throughout the introduction of the UTAUT model that behavioral intention is the underlying theory for all the intention models and can be further examined in Sheppard's extended review of the intention – behavior relationship (Sheppard et al., 1988). Venkatesh et al. (2003) further note that the outcomes of behavioral intentions is driven by the combination of the three factors, PE, EE, and FC. Of particular interest, FC is a combination of perceived behavioral control and compatibility from IDT. When BI and FC are combined, they create the outcome of

technology use, which Venkatesh et al. (2003) explains is the degree to which an individual believes that the organization and its technical infrastructure support the use of the technology system. Adopters behavioral intention to BI positively influence actual usage during the TA period and subsequently have a positive indirect effect on usage achieved post acceptance of the technology (Veiga et al., 2017). p. 695.

Previously, I proposed that higher levels of employee JS will be negatively associated with employee TI. I now consider how this relationship between JS and TI might change based on whether there are high or low levels of the TA variable, BI. My theory suggests if an employee's intentions are to use the technology, they would have high levels of BI (Taylor & Todd, 1995a, 1995b). Psychological models of the decision making process preceding employee turnover have made extensive use of BI as explanatory constructs to technology use (Steel & Ovalle, 1984). According to Maier et al. (2013) their study concluded that when new technology is implemented into the workplace, high BI related to use, will have a significant interaction effect on the relationship between JS and TI because of the attainment of perceived benefits. This result is due to the perception that higher BI represents an increased likelihood of engaging with a technology. Considering this observation, employees who have taken time to learn the technology, obtained certifications in the technology, and have provided training to other coworkers or other stakeholders, will exhibit high BI to use technology due to their commitment to use and syndicate it throughout the organization. The employee will have a stronger commitment to remain with the organization where the technology has been accepted, therefore, buffering the negative relationship between JS and TI. Given this scenario, BI positively moderates the relationship between JS and TI

because an employee perceives there to be increased productivity by using the system and therefore increased performance.

Individuals who have stronger intentions to use the technology had likely invested time (personal and professional) and effort to learn the technology. This time commitment and the related mastery of the technology that is not necessarily portable between organizations will likely facilitate more commitment to the organization as organization specific skills are developed. This in turn will improve the negative relationship between satisfaction and turnover, as the individual will perceive a stronger bond to the workplace due to the organizational specific investments they make. Hence the hypothesis is written as:

*H5: The relationship between employee JS and TI is moderated by BI, in particular, higher levels of BI enhance this relationship and lower levels of BI weaken this relationship.*

I propose a theoretical model in which JS is the independent variable, TI is the dependent variable, and TA is the moderating variable. I hypothesize that the variables associated with TA (i.e., PE, EE, FC, and BI) will moderate the relationship between JS and TI. Table 7 provides a summary of the hypotheses as described above.

Table 7: Hypotheses

<b>Hypotheses Description</b>	
H1	Higher levels of employee JS are negatively associated with employee TI.
H2	The relationship between employee JS and TI is moderated by PE, in particular, higher levels of PE enhance this relationship and lower levels of PE weaken this relationship.
H3	The relationship between employee JS and TI is moderated by EE, in particular, higher levels of EE enhance this relationship and lower levels of EE weaken this relationship.
H4	The relationship between employee JS and TI is moderated by FC, in particular, higher levels of FC enhance this relationship and lower levels of FC weaken this relationship.
H5	The relationship between employee JS and TI is moderated by BI, in particular, higher levels of BI enhance this relationship and lower levels of BI weaken this relationship.

A goal of this paper is to provide context to the existing research available, expand upon research on TA, JS, and TI, while providing a platform to explore workplace motivators as the next generation of workers enters the job market.

Many theories mentioned in this chapter establish TA as a well-researched area (Venkatesh et al., 2007). JS and TI also are well established and extensively written about in terms of empirical research (Judge, 1993; Judge & Kammeyer-Mueller, 2012). As noted, a gap exists within the current research which calls for new and innovative ways for TA to be tested in an effort to observe its potential as a moderating variable. A review of the various TA theories pointed towards the UTAUT model as a well-accepted and used model to understand user acceptance of technology within the workplace (Venkatesh et al., 2017). Based on the hypotheses presented within this chapter, I theorize PE, EE, FC, and BI will moderate the relationship that exists between JS and TI. I theorize that these constructs will either enhance or weaken the relationship between JS

and TI. This is important for researchers because, to date, studies only exist where different moderators have been tested as part of TA. No identifiable research was available which provided the impact of TA being tested as a moderator to JS.

Given that there is a scarcity of TA research available, my study attempts to bridge all three areas together in an way that introduces a new approach to TA along with JS while also extending the UTAUT model. Based on this approach, this study will provide a substantial contribution expanding what is known about the relationship between JS and TI, including factors that either strengthen or weaken this relationship.

This concludes chapter two. In chapter three, I outline the methodology used to test the above-mentioned hypothesis.

## CHAPTER 3: METHODOLOGY

The goal of this chapter is to describe the methodology used to test the research model and hypotheses outlined in this dissertation proposal. The first section provides the methodology overview. The second section reviews the survey method which provides the details of my survey and how the survey was administered. In the third section, I review constructs, the measures, and the scales used in the survey. The final section of this chapter outlines the data analyses plan for the dissertation.

### **Overview**

This study collected quantitative data from full-time employees in the US, through an electronic survey. The survey was cross-sectional, with the data collected at one point in time. Hayes (2017) suggests, “when the goal is to uncover the boundary conditions of an association between two variables, moderation analysis is used” (Hayes, 2017). I expand upon this and use moderated hierarchical multiple regression analysis to test the relationship between JS and TI by using TA as a moderator.

The survey instrument contains previously validated and accepted scales from motivation and JS research, UTAUT research, and TI research. Data were analyzed using regression methods. The following section provides additional details of the survey method used.

### **Survey Instrument**

A 44-item survey was developed from the incorporation of previously published research (Appendices A - H). There are eleven additional questions not included within the 44-item survey which were not part of the dissertation or tested within this current study. Of the eleven questions, the initial question (#1) on the survey, was a qualifying

question which requested the individual's acceptance to participate in the survey.

Appendix C includes six questions specific to TA which did not come from the UTAUT model and therefore I did not use these questions for this study. In Appendix H, there are four additional questions that were included for Social Influence and were also excluded from the current study but captured for the purposes of future research. The remaining survey items have been tested and published in peer-reviewed journals, signifying their appropriateness in this type of research design. The scales for these survey items have also been drawn from established research which should lend credence to the findings in this research study.

The survey was distributed electronically via LinkedIn as well as via snowball sampling and was conducted via the Internet by using Qualtrics XM™. Qualtrics provides a simple platform for users to access (Creswell & Creswell, 2017). I chose an electronic survey method based on the rapid turnaround time, end user compatibility, and the multiple Internet-compatible browsers that are available (Creswell & Creswell, 2017).

The sampling methodology consists of employees based in the US and contains questions about the individual's job role and their employment status (part or full-time). The majority of respondents were employees who are professionals working in varied industry sectors.

Survey responses were analyzed using IBM SPSS Statistics 26® and reported results included descriptive statistics such as the mean, mode, median, and standard deviation (SD) for survey items. Reliability was evaluated by calculating the corresponding Cronbach Alpha for each survey item. Further explanation can be found in the next section which provides the measures for this study.

## **Measures**

The survey for this research utilizes established scales for each of the constructs. I begin by providing an introduction to the variables with a summary table. I then follow by introducing the dependent variable followed by the independent variable measures. Next, I introduce the moderating variables PE, EE, FC, and BI. Lastly, I reviewed the control variables. 8 of the survey items were the control variables, of which one control variable (Employment Sector) was not included in the final results. This item was held from the study because of the similarity to responses that were provided for industry and occupation. Below, I have provided a summary of the scales in Table 8.

Table 8: Summary of Variables and Measures

Variable	Measure	Source
<b>Dependent Variable</b>		
Turnover Intentions (TI) 5 Questions	5 Item Scale Modified to 7-point Likert scale.	Intentions to Quit Scale (Wayne et al, 1997).
<b>Independent Variables</b>		
Job Satisfaction (JS) 6 Questions	6 Item Scale Yes = 1, No = -1, ? =0	Abridged Job Descriptive Index and Job in General Scale BGSU (Stanton et al, 2002).
<b>Moderator</b>		
Technology Acceptance (TA) 6 Questions	6 Item Scale Modified to 7-point Likert scale.	Diffusion of Innovations (Patterson et al 2005)
Performance Expectancy (PE) 4 Questions	4 Item Scale Modified to 7-point Likert scale.	Performance Expectancy (Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1989, 1992; Moore & Benbasat, 1991; Venkatesh et al., 2003)
Effort Expectancy (EE) 4 Questions	3 Item Scale Modified to 7-point Likert scale.	Effort Expectancy (Davis et al., 1989; Moore & Benbasat, 1991; Thompson et al., 1991; Venkatesh et al., 2003)
Facilitating Conditions (FC) 5 Questions	5 Item Scale Modified to 7-point Likert scale.	Facilitating Conditions (Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1992; Thompson et al., 1991; Venkatesh et al., 2003)
Behavioral Intention (BI) 3 Questions	10 Item Scale Modified to 7-point Likert scale.	Behavioral Intention to Use Technology (Ajzen, 1991; Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1989; Fishbein & Ajzen, 1977; Taylor & Todd, 1995a, 1995b; Veiga et al., 2017; Venkatesh et al., 2003)
<b>Controls</b>		
Age Gender Race Employment Sector* Industry Occupation Number of Employees Tenure	Multiple-Item Question	Qualtrics (XM)
* Employment Sector was not included in the final results.		

### *Dependent Variable: Turnover Intentions*

As previously stated, the relationship between JS and TI has been empirically tested and accepted by many researchers (Judge, 1993). Given this understanding, within this study the dependent variable is TI. I used Wayne et al.'s (1997) five-item survey to assess employee's intentions to leave. Four of the questions were scored on a Likert scale: "I am actively looking for a job outside [your company/organization] name"; "As soon as I can find a better job, I'll leave [your company/organization]"; "I am seriously thinking about quitting my job"; and "I often think about quitting my job at [your company / organization]". Each question was scored with 1 being "Strongly Disagree", and 7 being "Strongly Agree". One question, "I think I will be working at another company five years from now" was reverse scored. A total of 5 items exist within the TI scales ( $\alpha = 0.924$ ). Additional information on this scale can be viewed in Appendix A.

### *Independent Variable: Job Satisfaction*

There are six questions and six facet scales related to JS. The Abridged Job Descriptive Index, BGSU also includes the Abridged Job in General Scale, is a well-accepted empirically proven scale by Stanton, Sinar, Balzer & Julian's (2002) that I used to measure JS. Respondents answered questions about work pay, opportunities for promotion, supervision people, and the job in general.

The scale originally was introduced by Smith et al. (1969) in her seminal article, "The measurement of work and satisfaction" and was later updated by Bowling Green State University (2009) and has been empirically tested (BGSU, 2009; Smith, Kendall, & Hulin, 1969). The Abridged Job Descriptive Index, BGSU including the Abridged Job in

General Scale tests an employee's job satisfaction "...globally where the participant is asked to consider their work on the present job such as, "Work on Present Job: Think of the work you do at present. How well do each of the following words or phrases describe your work (Stanton, Sinar, Balzer, & Julian, 2002)?" Each question has descriptive words associated with question and the participant is asked to answer each one with either "Y" for yes, "N" for no, or "?" if they cannot decide. An example as it relates to the question regarding work on present job would be, "*Fascinating, Satisfying, Good, Exciting, Rewarding, and Uninteresting*" (reverse coded)." According to Stanton, "*Researchers have established that the AJDI scales have yielded scores with high internal consistency that are usable for a variety of respondent populations and predictive of a number of organizationally relevant outcomes such as intentions to quit the organization (Stanton et al., 2002, p. 175).*" A total of 38 items exists within the JS scales. I followed a similar process to Gillespie et al.'s (2016) scoring method (Gillespie et al., 2016). Responses were scored as follows: Yes = 1, No = -1, ? = 0 with negatively worded items being reverse-coded. I summed items scores in order to create scores for each facet and aggregated the alpha ( $\alpha = 0.739$ ) for JS based on Stanton et al. (2002). Present Job ( $\alpha = 0.607$ ), Pay Satisfaction ( $\alpha = -0.511$ ), Promotion Opportunity ( $\alpha = 0.398$ ), Supervisor Satisfaction ( $\alpha = 0.603$ ), People Satisfaction ( $\alpha = 0.337$ ), and General Job Satisfaction ( $\alpha = 0.302$ ). Additional information can be viewed in Appendix B. It is important to note that the negative alpha for Pay Satisfaction was the result of a negative scoring convention (Yes = 1, No = -1, ? = 0), this violates the expected range for alpha of 0 to 1. However, the alpha for the aggregated Job Satisfaction construct was used as the

measurement item for job satisfaction in the regression analysis. The issues incurred with the job satisfaction scale are later discussed as a limitation in Chapter 5.

#### *Moderating Variables: Technology Acceptance*

The next section consisted of six questions specifically pertaining to TA. These questions were added for future research and are not part of this initial study. I have included them here to acknowledge that future research within this area will later include the data from the below questions stated in Appendix D. The scale was obtained from Patterson (2005), and questions consisted of: *“This company is quick to respond when changes need to be made”*; *“Assistance in developing new ideas is readily available”*; or *“Management here are quick to spot the need to do things differently.”* I used a Likert Scale with 1 being “Strongly Disagree” and 7 being “Strongly Agree”. Additional reliability coefficients are in chapter 4 and the scale details can be viewed in Appendix C ( $\alpha = 0.925$ ).

#### *Performance Expectancy*

I included four questions related to performance expectancy which were adopted from: Compeau and Higgins (1995); Compeau et al. (1999); Davis et al. (1989, 1992); Moore and Benbasat (1991); Venkatesh et al. (2003). I asked questions posing performance related behaviors such as, *“Using technology enables me to accomplish tasks more quickly.”* Another performance expectancy question recommended and used by Venkatesh (2003) was, *“Using technology increases my productivity”*. Each question used a Likert scale with Strongly Disagree (1) – Strongly Agree (7). The details of this

scale can be viewed in Appendix D ( $\alpha = 0.784$ ).

### *Effort Expectancy*

I used three questions obtained from Davis et al. (1989); Moore & Benbasat, (1991); Thompson et al. (1991); Venkatesh et al. (2003) to test EE. The questions ranged from: “My interaction with technology would be clear and understandable”; “It would be easy for me to become skillful at using technology within my workplace”; and “Learning to operate technology is usually easy for me”. I used a Likert scale with “Strongly Disagree” scored as 1 and “Strongly Agree” scored as a 7. Additional reliability coefficients are in chapter 4 and the scale details can be viewed in Appendix E ( $\alpha = 0.803$ ).

### *Facilitating Conditions*

Within the next section I provided five questions taken from Compeau & Higgins, (1995); Compeau et al. (1999); Davis et al. (1992); Thompson et al. (1991); Venkatesh et al. (2003). “I have the resources necessary to use organizational technology”; “I have the knowledge necessary to use organizational technology”; “Learning to operate technology is usually easy for me”; “Specialized training for my organization’s technology systems is available to me if needed”; and “Using my organization’s technology fits into my work style”. The results were scored using a Likert scale with “Strongly Disagree” being a 1 and “Strongly Agree” being a 7. Appendix F provides the summary of the FC survey questions ( $\alpha = 0.873$ ).

### *Behavioral Intention*

Behavioral intention to use the system was measured using a three question scale adapted from: Ajzen (1991); Compeau & Higgins (1995); Compeau et al., (1999); Davis et al., (1989); Fishbein & Ajzen, (1977); and Taylor & Todd, (1995a, 1995b) and has been extensively used in much of the previous individual acceptance research (Venkatesh et al., 2003). Questions were asked such as: *“I intend to use the technology system in the next 6 months”*; *“I plan to continue to use some type of technology system in the future”*; or *“I will always try to use some type of technology system in my daily life and at work.”* I then used a seven-point Likert score, with 1 being “Strongly Disagree and 7 being “Strongly Agree”. Within Appendix G, I have provided the survey instrument for BI ( $\alpha = 0.849$ ).

### *Social Influence*

I included Social Influence (SI) as a future construct to examine. For the current research, this construct was not observed or included in the statistical analysis. I used the SI scale obtained from Venkatesh’s (2003) UTAUT model (Ajzen, 1991; Fishbein & Ajzen, 1977; Mathieson, 1991; Moore & Benbasat, 1991; Taylor & Todd, 1995b; Thompson et al., 1991; Venkatesh et al., 2003). Questions examined were: *“People who are important to me think that I should use technology to accomplish tasks”* or *“People who influence my behavior think that I should use technology to accomplish tasks.”* For this scale, I also used a Likert Scale with 1 being “Strongly Disagree” and 7 being “Strongly Agree”. Additional information regarding this scale can be viewed in Appendix H ( $\alpha = 0.853$ ).

### *Control Variables*

I used a combination of Qualtrics Experience Management (XM)<sup>TM</sup>, my LinkedIn social network, and a snowball effect to obtain my sample of 349 responses over a period of two weeks. Within my survey, I provided eight questions related to control variables: Age, Gender, Race, Employment Sector, Industry, Occupation, Number of Employees, and Tenure. The respondents self-reported all information collected within the demographic's questions (Q1 – Q8).

Additionally, the use of the demographic scales provided for accurate data collection and allowed the most common data to be analyzed using a descriptive statistics analysis. Finally, the data collected within the demographics section of the survey provided a full sample size without any incomplete surveys due to ineligibility. The next items that I examined related to the specific scales used to assess the data collected as they related to my conceptual model. All of the following survey items, in their original form, are presented in Appendix I.

### *Age*

Age was captured as a continuous variable using an input option within Qualtrics that allowed participants to self-report their age. The question within the survey instrument was stated as: "What is your age?" Then the participant provided their age by typing in the number of years. According to Michaels and Spector (1982), the role of age and tenure were strongly related to intentions of quitting (Michaels & Spector, 1982).

### *Gender*

The measure for gender was coded as 1 = Male, 2 = Female, and 3 = Other. The measurement for gender is categorical. Participants were able to select from one of the three options. Prior to use in the analysis, gender, because it is a categorical variable was dummy coded with the following convention:

Male = 1 0 0  
Female = 0 1 0  
Other = 0 0 1

All the other categorical variables in my model were dummy coded using similar schema. The other categorical variables include Race, Industry, Occupation, and Number of Employees. Dummy coding was conducted in SPSS and default reference groups were designated for each categorical variable. Below are the additional control variables used within my study which were also categorical with the exception of “Tenure”.

### *Race*

To measure race, I used seven coded options: 1 = Caucasian/White, 2 = Black/African American, 3 = Hispanic, 4 = Native American, 5 = Asian, 6 = Other, 7 = Do not wish to answer. Each of the options for race were categorical. Participants were able to select the most appropriate option related to their background.

### *Industry*

To establish the types of industry the participants work within I provided twenty coded options, each being categorically numbered 1 – 20 based on the item selected by the individual. The industries included within my survey were: 1 = Forestry, fishing,

hunting or agriculture support, 2 = Real estate or rental and leasing, 3 = Mining, 4 = Professional, scientific or technical services, 5 = Utilities, 6 = Management of companies or enterprises, 7 = Construction, 8 = Admin, support, waste management or remediation services, 9 = Manufacturing, 10 = Educational services, 11= Wholesale trade, 12 = Health care or social assistance, 13 = Retail trade, 14 = Arts, entertainment or recreation, 15 = Transportation or warehousing, 16 = Accommodation or food services, Information, 18 = Other services (except public administration), 19 = Finance or insurance, Defense or Government (Federal, State, Local). Because this control variable was categorical, I dummy coded these items into five new variables using the dummy codes: 1) Infrastructure; 2) Retail and Manufacturing; 3) Information and Entertainment; 4) Management; 5) Health, Education, and Government. To streamline the number categories for Industry, these values were recoded into the following five groups:

Industry\_Infrastructure (Infrastructure related sectors)

- Mining
- Utilities
- Construction
- Real estate or rental and leasing
- Admin, support, waste management or remediation services

Industry\_Ret\_Mfg (Retail and Manufacturing)

- Manufacturing
- Wholesale trade
- Retail trade
- Accommodation or food services
- Finance or insurance

Industry\_Info\_Ent (Information and Entertainment)

- Other services (except public administration)
- Information
- Arts, entertainment or recreation

Industry\_Mgmt (Management)

- Professional, scientific or technical services
- Management of companies or enterprises

Transportation or warehousing

Industry\_Health\_Ed\_Gov (Health, Education, and Government)

Educational services

Health care or social assistance

Defense or Government (Federal, State, Local)

Forestry, fishing, hunting or agriculture support

### *Occupation*

To record occupation, I provided nine categorical items (1 – 9). The occupation options were for occupation were as follows: 1 = Management, professional, and related, 2 = Service, 3 = Sales and office, 4 = Farming, fishing, and forestry, 5 = Construction, extraction, and maintenance, 6 = Production, transportation, and material moving, 7 = Technology or Telecommunications, 8 = Government or Military, Retired, 9 = Unemployed. In effort to minimize the number of categories, I recoded responses for occupation in three categories:

Occ\_Serv\_Supp (Service and Support)

Management, professional, and related

Service

Sales and office

Government or Military

Occ\_Infrastructure: (Infrastructure)

Construction, extraction, and maintenance

Production, transportation, and material moving

Technology or Telecommunications

Farming, fishing, and forestry

Occ\_Ret\_Unemp: (Retired or Unemployed)

Retired

Unemployed

### *Number of Employees*

The number of employees was used as proxy for the size of the organization where each respondent was employed. Categories for size ranged from 1 to 1,000 or more employees. There were 9 categorical items that respondents could choose from to reflect the number of employees at their current company. These 9 categories were recoded into three categories of small, medium and large:

Business\_Small 1 - 49 employees  
Business\_Medium 50 -249 employees  
Business\_Large >250 employees

### *Tenure*

Tenure, the length of time that an employee has worked for their respective organization, was captured as a continuous variable. The participant simply input the number of years that they had worked in the field for the associated survey item, “Years with current organization \_\_\_\_\_”.

### *Reliability*

To assess the reliability of the survey responses, Cronbach’s alpha is reported for each of the measurement items in the model (Table 8). All of the Cronbach’s alphas exceed the commonly accepted threshold of .70 (Sijtsma, 2009; Tavakol & Dennick, 2011). Alpha was introduced by Lee Cronbach in 1951 (Cronbach, 1951) to provide a measure of internal consistency for a given statistical test. According to Tavakol and Dennick (2011), Cronbach’s alpha is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011). Internal consistency is the extent to which all tested items measure the same and therefore should have the same inter-relatedness within the specific test

(Tavakol & Dennick, 2011). Further, Tavakol and Dennick (2011) suggest internal consistency should be tested to ensure validity before the follow-on statistical analysis occurs.

The scales in this research study were based on two scoring models. The Abridged Job Descriptive Index, BGSU and Abridged Job in General Scale was scored based on continuous measures with  $Y = 1$ ,  $N = -1$  and  $? = 0$ . When testing for reliability the Abridged Job Descriptive Index and Abridged Job in General Scale is generally tested as an aggregate (Stanton et al., 2002). For complete testing, I tested each of the dimensions separately and then in aggregate.

For the remaining multi-item measures, I use a seven-point Likert scale: Strongly Disagree (1), Disagree (2), Somewhat Disagree (3), Neither Agree to Disagree (4), Somewhat Agree (5), Agree (6), and Strongly Agree (7). The measurement for each multi-item resulted in a generally acceptable reliability as prescribed by the Cronbach alpha measure. Below in Table 9, a summary of the reliability results is presented. In chapter 4, further data analysis is provided including the reliability results for each multi-item measure.

*Table 9: Reliability Analysis*

Model Construct	Cronbach's Alpha	Number of Measurement Items	<i>SD</i>
Turnover Intentions	.924	5	9.751
Job Satisfaction (Aggregated)	.739	38	10.021
Performance Expectancy	.784	4	4.561
Effort Expectancy	.803	3	3.161
Facilitating Conditions	.873	5	5.763
Behavioral Intention	.849	3	3.551

### **Analysis**

To test the hypotheses within this study, I incorporated the use of hierarchical multiple regression analysis in order to assess whether TA moderated the effect of JS towards TI (Jaccard & Turrisi, 2003). Hierarchical regression involves theoretically based decisions for how predictors are entered into the analysis (Petrocelli, 2003). I chose to use this method because it allowed me to determine which variables were added and the order in which the variables were entered into the equation. All tests were performed using IBM SPSS software. Additionally, several steps have been performed for interpretation and analysis of the data. A preliminary analysis was also performed to identify missing and incomplete data (Creswell & Creswell, 2017).

This concludes chapter 3. The next chapter provides the research data analysis and results.

## CHAPTER 4: DATA ANALYSIS AND RESULTS

In this chapter, I present the results from the analysis of the hypothesized relationships between the constructs in my theoretical model. Additionally, this section provides details of the data cleansing and data aggregation techniques that were used, and descriptive information about the survey respondent sample. This description of the responses is complimented by an assessment of the reliability of the underlying measurement items for each model construct. I then discuss the results of the hierarchical multiple linear regression that was used in this study.

### **Preliminary Results**

I obtained 349 survey responses that consisted of 53 percent male, 46 percent female, and 1 response did not prefer to provide their gender. This response was later dropped from the analysis. My responses were from full-time employees between the age of 25 and 65.

This analysis provided eight control variables that were comprised of age, gender, race, employment sector, industry, occupation, number of employees, and tenure. The remainder of the survey consisted of thirty-four items. Below, I provide the results related to the demographics and the scales used with the study.

#### *Sample and Sample Size*

A random sample was used so that each individual had an equal probability of being selected from the population with the intention of obtaining a sample that was as representative as possible of the population of full-time employed workers in the U.S. (Creswell, 2009). The sample size was predominantly male (n=186, 53%) with a mean

age of 42. The participants' ages were between 25 and 65 years with 55% identifying as being White and 21% being African American. 62% worked for a private nonprofit organization and 11% noted other services as their industry. In Tables 10-11, I provide the responses related to Gender and Race.

*Table 10: Gender*

Gender	N	%
Male	186	53.30%
Female	162	46.42%
Do Not Wish to Answer	1	0.29%
Total	349	100%

*Table 11: Race*

Race	N	%
White	191	54.73%
Black	75	21.49%
American Indian	12	3.44%
Asian	28	8.02%
Native Hawaiian	2	0.57%
Other	25	7.16%
Do not wish to answer	4	1.15%
Selected Multiple – Excluded	12	3%
Total	349	100%

### *Industry*

My survey included twenty industry sectors for participants to choose from. The top three sectors in which participants worked were: Other services (except public administration) with a response of 11.46%; Health care or social assistance at 9.74%; and Manufacturing at 9.74% as well. Of particular interest, was the fact that many of the participants worked in a service-based industry, such as the restaurant industry (Table 12).

*Table 12: Industry*

Dummy Variable	Industry	N	%
Health/Ed/Govt.	Forestry, fishing, hunting or agriculture support	6	1.72%
Infrastructure	Real estate or rental and leasing	10	2.87%
Infrastructure	Mining	3	0.86%
Management	Professional, scientific or technical services	33	9.46%
Infrastructure	Utilities	4	1.15%
Management	Management of companies or enterprises	8	2.29%
Infrastructure	Construction	19	5.44%
Infrastructure	Admin, support, waste management or remediation services	5	1.43%
Retail & Mfg.	Manufacturing	34	9.74%
Health/Ed/Govt.	Educational services	32	9.17%
Retail & Mfg.	Wholesale trade	4	1.15%
Health/Ed/Govt.	Health care or social assistance	34	9.74%
Retail & Mfg.	Retail trade	19	5.44%
Info & Ent.	Arts, entertainment or recreation	6	1.72%
Management	Transportation or warehousing	12	3.44%
Retail & Mfg.	Accommodation or food services	9	2.58%
Info & Ent.	Information	20	5.73%
Info & Ent.	Other services (except public administration)	40	11.46%
Retail & Mfg.	Finance or insurance	21	6.02%
Health/Ed/Govt.	Defense or Government (Federal, State, Local)	27	7.74%
	Selected Invalid Number - Excluded	3	1%
	Total	349	100%

### *Occupation*

To record occupation, I provided ten options for the participant to select from on the survey. Responses ranged across each of the areas, however the top three occupations were: Management, professional and related with a 29.51% response; Service with a 22.06% response; Sales and office with a 14.33% response. The remaining occupations garnered a wide range of responses and can be viewed below in Table 13.

*Table 13: Occupation*

Dummy Variable	Occupation	N	%
Service & Support	Management, professional, and related	103	29.51%
Service & Support	Service	77	22.06%
Service & Support	Sales and office	50	14.33%
Engineering	Farming, fishing, and forestry	6	1.72%
Engineering	Construction, extraction, and maintenance	15	4.30%
Engineering	Production, transportation, and material moving	25	7.16%
Service & Support	Government or Military	1	0.29%
Retired/Unemployed	Retired	5	1.43%
Retired/Unemployed	Unemployed	36	10.32%
Engineering	Technology or Telecommunications	30	8.60%
	Selected Invalid Number - Excluded	1	0%
	Total	349	100%

*Number of Employees*

To better understand the size of the organizations where participants worked, I inquired about the number of employees within the organization. Number of employees ranged from 1 employee up to 250 or more employees. The largest percentage of respondents worked in companies with 250 (44.29% of respondents). Additional details and percentages of responses can be found below in Table 14.

*Table 14: Number of Employees*

Number of Employees	N	%
1-49	124	35.54%
50-249	61	17.48%
250-499	156	44.29%
Selected Invalid Number - Excluded	7	2.69%
Total	348	100%

On average the tenure for employees who participated in this survey was around 8.47 years. A consolidated table below provides the average response rate for the demographics section in Table 15.

Table 15: Survey Response Rate

Total Surveys Distributed	Surveys Successfully Completed	Incomplete Surveys	Survey Completion Rate	Survey Response Rate	Average Age	Gender	Race	Employment	Industry	Occupation	# of Employees	Tenure
349	349	0	100%	100%	42	Male 53%	White (55%)	Private Non-Profit 218 (62%)	Other Services 11%	Management or professionally related 30%	1,000 26%	8.47

### Data Cleansing

Prior to data analysis, identification of unusual cases was conducted to identify cases with extreme values. Unusual cases have the potential to skew the results of an analysis by inflating data. Hadi and Simonoff, (1993) explain that without identifying outliers, procedures suffer from masking and swamping problems and tests then lose their powers substantially (Hadi & Simonoff, 1993). Van den Broeck et al, (2005) provide in their seminal article on data cleaning, “many outliers are usually detected by perceived nonconformity with prior expectations, based on the investigator’s experience, pilot studies, evidence in the literature, or common sense (Van den Broeck, Cunningham, Eeckels, & Herbst, 2005).” p. 967 Furthermore, detection can even occur during an article review or after publication. It is recommended that whenever possible, data cleansing be implemented prior to completing the data analysis (Hadi & Simonoff, 1993; Van den Broeck et al., 2005).

#### *Unusual Cases*

To detect unusual cases in which responses could dramatically skew survey results, I performed an unusual case analysis in SPSS® ("Identifying Unusual Cases in a Medical Database," 2020). The unusual case analysis identifies potential outliers by assigning them to peer groups for comparison. In my particular application of the tool, a

total of 11 unusual cases were identified and subsequently filtered out of the dataset prior to the actual analysis of the data. Table 16 provides the case processing summary.

*Table 16: Case Processing Summary*

	N	% of Combined	% of Total
Peer ID 1	100	28.9%	28.7%
2	91	26.3%	26.1%
3	155	44.8%	44.4%
Combined	346	100.0%	99.1%
Excluded Cases	3		0.9%
Total	349		100.0%

The unusual case detection algorithm assigned potentially unusual cases to one of three peer groups for comparative purposes. Peer group 1 contained 100 observations, representing 28.7% of potentially unusual observations. Peer Group 2 contained 91 observations, representing 26.1% of potentially unusual observations. Peer Group 3 was comprised of 155 observations, representing 44.8% of the combined total of potentially unusual cases.

Unusual cases were then ranked according their respective anomaly index. The anomaly index is a ratio of the deviation of an observation to the average deviation of the group (Goldstein & Uchida, 2016). A large anomaly index is an indicator of above average deviation in an observation. For anomaly index values that are less than 1.5, cases are not considered to be unusual. For an anomaly index that exceeds 2, a case is considered to be potentially unusual because the deviation is approximately twice that of the average for the peer group (Goldstein & Uchida, 2016).

From the anomaly case index list, I noted that all of the values for the anomaly index associated with the 11 cases exceed 2.00. The anomaly index ranges from 2.002 to 3.055 with observation 203 having the highest anomaly index. This high anomaly index

flags observation 203 as potentially the greatest outlier in the dataset. See Table 17 for the Anomaly Case Index details.

*Table 17: Anomaly Case Index*

Case	Anomaly Index
203	3.055
69	2.875
9	2.759
301	2.451
66	2.258
347	2.244
178	2.237
38	2.218
202	2.116
190	2.034
119	2.002

I used next the Anomaly Case Peer ID List to evaluate the peer groups into which the unusual cases were grouped (Table 18). The case peer ID list is useful in determining which observations were assigned to one of the three peer groups derived from the case processing summary.

*Table 18: Anomaly Case Peer ID List*

Anomaly Case Peer ID List			
Case	Peer ID	Peer Size	Peer Size Percent
203	2	91	26.30%
69	2	91	26.30%
9	1	100	28.90%
301	1	100	28.90%
66	3	155	44.80%
347	2	91	26.30%
178	1	100	28.90%
38	3	155	44.80%
202	1	100	28.90%
190	2	91	26.30%
119	3	155	44.80%

Unusual cases were then evaluated to determine the estimated impact of each case (Table 19). To evaluate the estimated impact of each unusual case, I assessed the Variable Impact for each of the cases. The analysis for this study is based on a total of 6

variables (JS, EE, PE, FC, BI, and TI). A total of 6 variables means that the expected impact that a variable would have on the results is 1/6 or 0.1667. Each of the cases that were flagged as potentially unusual have a variable impact that exceeds 0.1667. Values for the variable impact of these 11 cases ranged from a minimum of 0.263 to a maximum of 0.753.

*Table 19: Anomaly Case Reason List*

Anomaly Case Reason List				
Reason: 1				
Case	Reason Variable	Variable Impact	Variable Value	Variable Norm
203	JS	0.739	36	7.88
69	JS	0.598	32	7.88
9	FC	0.263	6.6	3.86
301	EE	0.277	7	3.54
66	PE	0.275	4	2.34
347	JS	0.753	-16	7.88
178	JS	0.325	-36	-3.01
38	JS	0.654	30	2.33
202	BI	0.351	7	3.51
190	JS	0.614	28	7.88
119	EE	0.528	4	1.94

The reasons for each case being flagged as unusual were evaluated next. The Anomaly Case Reason List displays the variable for which the case was flagged and provides a comparison of the actual value of that variable for that case, the Variable Value, and a normalized or expected value, the Variable Norm, based on the other observations in the same peer group. Case 203, for instance, was flagged because of the JS variable which had an actual value of 36 when the average for other JS values in the same peer group was 7.88. Each of the remaining observations in that were flagged as unusual had dramatically different values between Variable Value and Variable Norm.

Each of the values for Variable Value were larger than the expected values in Variable Norm. Because of this, leaving these values in the dataset would have led to the inflation of average values for each of the variables identified in the reason list.

### *Missing Values*

While previewing the data, I observed several responses that had missing values. Missing values were left in the raw data file and measures for model constructs were aggregated in Microsoft Excel. Because of how Microsoft Excel treats missing values, the missing values were omitted from the calculation of the aggregated values for the model constructs. Cohen and Cohen (1983), discuss using existing values or a subset of existing values as a method to overcome missing data (Cohen, 1983). In short, the relationships may be understated as opposed to overstated.

Additionally, in an effort to minimize the impact of missing values, I calculated z scores for each variable (Mazza & Enders, 2014). According to Baraldi and Enders (2010), with missing data, an individual squared z-score is computed using whatever data are available for that item, and the fit for the entire sample and then is simply a weighted sum of the individual fit values. Thus, maximum probability estimates the parameters without removing the data and without filling in the data by using other methods (Baraldi & Enders, 2010).

### **Descriptive Statistics and Correlation Coefficients**

Descriptive statistics were used to analyze the independent and dependent variables in the study. The descriptive statistics analysis includes the mean and standard deviation for the control variables, the independent variable, and the dependent variable,

and the moderating variables. Table 20 reports the results from the descriptive statistics analysis. Observations included the control variables starting with Age: Mean (M) = 42.62 with a Range of 40 across N = 349 responses with a standard deviation of 10.862.

*Table 20: Demographic Data*

	Descriptive Statistics				
	Range	Mean	Std. Deviation	Skewness	Kurtosis
Age	40	42.620	10.862	0.152	-1.04
Male	1	0.533	0.500	-0.133	-1.994
Female	1	0.464	0.499	0.144	-1.991
Other	1	0.003	0.054	18.682	349
Race_White	1	0.547	0.498	-0.191	-1.975
African American	1	0.215	0.411	1.394	-0.057
Hispanic	1	0.034	0.182	5.133	24.485
Native American	1	0.080	0.272	3.104	7.678
Asian	1	0.006	0.076	13.153	171.977
Other	1	0.072	0.258	3.337	9.185
Not Reported	1	0.012	0.107	9.219	83.47
Infrastructure	1	0.118	0.322	2.386	3.715
Retail and Manufacturing	1	0.249	0.433	1.164	-0.649
Information and Entertainment	1	0.195	0.397	1.548	0.397
Management	1	0.155	0.362	1.918	1.687
Health Education Government	1	0.281	0.450	0.98	-1.046
Service and Support	1	0.745	0.437	-1.129	-0.73
Infrastructure	1	0.235	0.425	1.256	-0.426
Retired & Unemployed	1	0.017	0.130	7.461	53.971
1 - 49 Employees	1	0.355	0.479	0.607	-1.641
50 - 249 Employees	1	0.175	0.380	1.72	0.964
> 250 Employees	1	0.450	0.498	0.202	-1.97
Tenure	31	8.242	7.455	1.23	0.69
Zscore(JSAggregate)	7.556	0.000	1.000	-0.367	2.354
Zscore(TI)	3.098	0.000	1.000	-0.003	-1.267
Zscore(PE)	5.289	0.000	1.000	-0.984	1.274
Zscore(EE)	4.760	0.000	1.000	-1.065	0.854
Zscore(FC)	4.853	0.000	1.000	-0.792	0.194
Zscore(BI)	5.073	0.000	1.000	-1.291	1.779
JS_PE	12.82	0.293	1.057	0.605	12.961
JS_EE	14.99	0.276	1.140	1.44	14.73
JS_FC	16.14	0.344	1.100	1.17	20.336
JS_BI	15.97	0.270	1.199	1.757	20.84
Valid N (listwise)					

Bivariate Correlations were expected to be significant between JS and TI similar to previous studies (Judge, 1993). Additionally, I anticipated that there would be correlation between JS and the moderating variables: PE, EE, FC, and BI. I provide the

Bivariate Correlations in Table 21. Notably, there were two unanticipated correlations between PE and TI, as well as FC and TI.



### *Variation Inflation Factors*

In the framework of variation inflation factors (VIF), Hair et al, (2011) recommends, “*eliminating an indicator to relax multicollinearity problems (1) if the level of multicollinearity is very high (as indicated by a VIF value of 5 or higher), (2) if this indicator’s formative measurement model coefficient (outer weight) is not significantly different from zero, and (3) the remaining indicators sufficiently capture the domain of the construct under consideration (Hair, Ringle, & Sarstedt, 2011, p. 147).*”

Some items had significant correlation, therefore VIFs were a concern. The range for VIF’s varied between Occupation with 1.060 and Age at 1.599. Specifically, Age had the highest VIF at 1.599 and Tenure had the second highest VIF at 1.400. To deal with this, I used the z scores of the variables in the model. The z scores accomplish two things 1) less inflated values than the averages of multiple items and 2) reduce VIFs (Hair, Black, Babin, Anderson, & Tatham, 1998; Hair, Ringle, & Sarstedt, 2011). All of the VIF values in this analysis are below the commonly accepted threshold of 10 that was established by (Hair et al., 1998; Hair et al., 2011).

The next section provides details surrounding the analysis done to understand the data and results. I provided the type of analyses and the results which either support or do not support my hypotheses.

### *Hierarchical Multiple Regression Analyses*

I used a hierarchical multiple regression analysis to examine the data collected, with the intention of explaining the moderation between the independent and dependent variable after accounting for all other variables (McCoach, 2010). This analysis allows

for the use of predictors at the lower level as well as the higher level to explain the variance in the dependent variable (McCoach, 2010). Shaw (1999) provided a similar study where positive affect moderated JS and TI by using a hierarchical regression to examine the interaction prediction (Shaw, 1999). Within Shaw's (1999) study, entering the interaction term after the control variable and JS resulted in a significantly predicted turnover intentions. Similar to Shaw (1999) I entered the moderator variable after the control variables.

For each regression model, age, gender, race, employment sector, industry, occupation, number of employees, and tenure were controlled for at Step 1. Aggregated JS (Zscore), the independent variable, was entered into the model at Step 2. The Zscores for PE, EE, FC, and BI were entered at Step 3. The interaction terms (PExJS, EExJS, FCxJS, and BIxJS) were then entered into the model at Step 4.

### *Results from Regression Analysis*

My research question sought to examine whether TA moderates the relationship between JS and TI. Model 1 demonstrates that of the control variables, only Age was statistically significantly associated with TI ( $\beta = -.233, p < .001$ ). Model 1 was significant ( $F=1.718, p < .05$ ) with an Adjusted  $R^2$  of 0.039. This finding suggests that age is negatively associated with TI. TI is likely to be higher among lower age groups. While not directly hypothesized, this finding illustrates the effect that age may have on the relationship between JS and TI. Age might serve as a buffer to increased TI when JS is low.

Model 2 consisted of the control variables used in Model 1 with the addition of the dependent variable JS. Model 2 tested the direct effect between JS and TI. JS was

found to be inversely associated with TI ( $\beta = -.185, p < .01$ ). As JS decreases, TI increases. Model 2 was statistically significant ( $F = 2.25, p < .01$ ) with an increased Adjusted  $R^2$  of .068.

Model 3 incorporated the addition of the four moderating variables PE, EE, FC, and BI. Model 3 was significant ( $F = 2.614, p < .001$ ) with an increased Adjusted  $R^2$  of 0.102. Age ( $\beta = -.211, p < .001$ ) and JS ( $\beta = -.145, p < .05$ ) remained statistically significantly associated with TI. Model 3 also resulted in the identification of two associations that were not directly hypothesized as part of this study. PE ( $\beta = .188, p < .05$ ) and FC ( $\beta = -.285, p < .01$ ) were both demonstrated to be associated with TI. Oddly, PE was shown to have a positive association with TI, meaning that as PE increases, TI also increases. FC was negatively associated with TI, meaning that as FC increases, TI decreases.

As also observed in Model 3, the variables PE and FC each demonstrated statistically significant associations with TI. As previously noted, these relationships were not part of the original hypotheses for this study. PE was demonstrated to be positively associated with TI ( $\beta = .188, p < .05$ ). FC was negatively associated with TI ( $\beta = -.284, p < .01$ ). These findings will be discussed in greater detail Chapter 5 of the dissertation.

Model 4 expanded upon Model 3 with the addition four interaction effects, PExJS, EExJS, FCxJS, and BIXJS. Model 4 was statistically significant ( $F = 2.762, p < .001$ ) with an Adjusted  $R^2$  of 0.127. Significant associations were observed with TI and each of the following variables, Age ( $\beta = -.201, p < .001$ ), JS ( $\beta = -.193, p < .01$ ), FCxJS ( $\beta = .363, p < .01$ ), and BIXJS ( $\beta = -.338, p < .01$ ). Model 4 supported three of the five hypotheses proposed in this study, H<sub>1</sub>, H<sub>4</sub>, and H<sub>5</sub>. Hypotheses H<sub>2</sub> and H<sub>3</sub> were not

supported. PE was not demonstrated to moderate the relationship between JS and TI ( $\beta = .064, p = .308$ ). Similarly, EE was not demonstrated to moderate the relationship between JS and TI ( $\beta = -.062, p = .583$ ).

Age is negatively associated with TI. There is a negative effect between JS and TI. FC moderates the relationship between JS and TI. As FC increases, the relationship between JS and TI improves. As FC decreases, the relationship between JS and TI weakens. The relationship between JS and TI is also moderated by BI. The moderating effect of BI, however, is negative. When BI is low, the association between JS and TI is improved. When BI is high, the association between JS and TI is more negative.

As also observed in Model 4, the variables PE and FC each demonstrated statistically significant associations with TI. As previously noted, these relationships were not part of the original hypotheses for this study. PE was demonstrated to be positively associated with TI ( $\beta = .219, p < .01$ ). FC was negatively associated with TI ( $\beta = -.232, p < .05$ ). A summary of each of the regression models is provided in Table 22.

Table 22: Regression Analysis Results

Variables	Model 1		Model 2		Model 3		Model 4	
	$\beta$	Sig. (P)	$\beta$	Sig. (P)	$\beta$	Sig. (P)	$\beta$	Sig. (P)
<b>Control Variables</b>								
Age	-0.233	.000***	-0.218	.000***	-0.211	.000***	-0.201	.000***
Gender – Female	-0.068	.114	-0.071	.223	-0.073	.206	0.082	.155
Gender – Male	0.048	.410	0.022	.710	0.016	.776	0.030	.596
Race_White	-0.036	.815	-0.039	.797	-0.089	.550	-0.125	.396
African American	0.068	.597	0.055	.664	0.030	.811	0.016	.899
Hispanic	0.043	.559	-0.045	.532	-0.059	.408	-0.073	.305
Native American	0.043	.646	0.047	.615	0.025	.789	-0.004	.966
Asian	0.020	.736	0.022	.702	-0.001	.988	0.005	.927
Other	-0.033	.717	-0.036	.689	-0.050	.569	-0.059	.503
Not Reported	-0.048	.496	-0.073	.299	-0.079	.252	-0.083	.227
Infrastructure	-0.066	.304	-0.043	.503	-0.059	.350	-0.047	.453
Retail & Mfg.	0.062	.342	0.060	.350	0.058	.361	0.051	.419
Information & Ent.	0.024	.717	0.042	.512	0.044	.493	0.040	.524
Management	-0.001	.987	0.006	.920	0.029	.633	0.034	.580
Service and Support	0.008	.886	-0.006	.911	0.003	.961	0.014	.804
Retired & Unemployed	-0.033	.569	-0.066	.257	-0.079	.165	-0.069	.222
1 - 49 Employees	0.185	.305	0.138	.438	0.171	.331	0.161	.355
50 - 249 Employees	0.150	.092	0.143	.101	0.153	.075	0.146	.087
Tenure	0.077	.649	0.044	.791	0.103	.528	0.099	.543
<b>Independent Variable</b>								
Job Satisfaction (JS)			-0.185	.001**	-.145	.014*	-0.193	.002**
<b>Moderating Variables</b>								
Performance Expectancy (PE)					0.188	.011*	0.219	.007**
Effort Expectancy (EE)					-0.032	.724	-0.038	.695
Facilitating Conditions (FC)					-0.284	.004**	-0.232	.021*
Behavioral Intention (BI)					0.042	.633	-0.036	.701
<b>Interaction Effects</b>								
PE x JS							0.064	.308
EE x JS							-0.062	.583
FC x JS							0.363	.004**
BI x JS							-0.338	.002**
R	0.304		0.351		0.407		0.446	
R <sup>2</sup>	0.092		0.123		0.166		0.199	
Adjusted R <sup>2</sup>	0.039		0.068		0.102		0.127	
$\Delta R^2$	0.092		0.031		0.042		0.033	
F	1.718*		2.25**		2.614***		2.762***	

Standardized regression coefficients shown

\*significant at .05 level ( $p < .05$ )

\*\* significant at .01 level ( $p < .01$ )

\*\*\* significant at .001 level ( $p < .001$ )

### Interaction Plots of Significant Moderating Effects

My analysis revealed two significant interactions, one attributed to FC and the other attributed to BI. The moderating effect of FC on JS → TI can be observed in Figure 6. Higher levels of FC enhance the relationship between JS and TI. Low levels of FC weaken the relationship between JS and TI. This result supports H4: *The relationship between JS and TI is moderated by FC; higher levels of FC enhance this relationship and lower levels of FC weaken this relationship.*

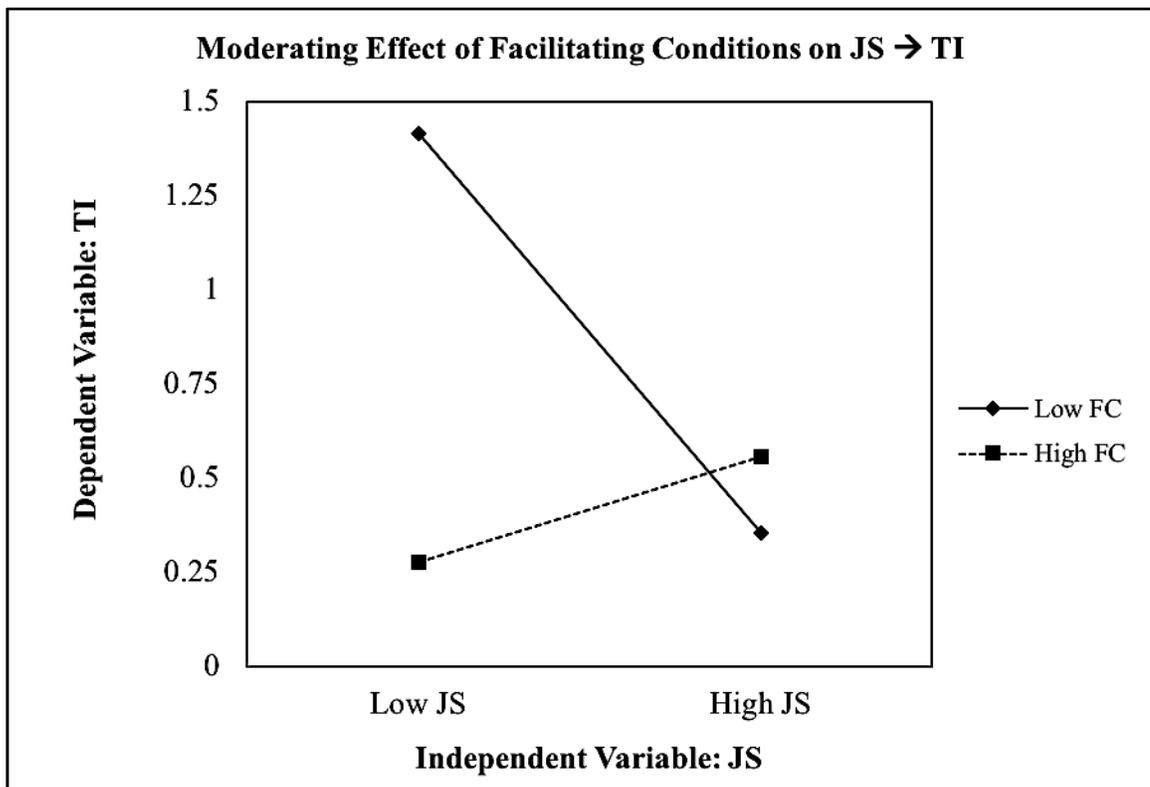


Figure 6: Moderating Effect of Facilitating Conditions on JS x TI

Similarly, the moderating effect of BI on JS → TI can be observed in Figure 7. Higher levels of BI weaken the relationship between JS and TI. Low levels of BI improve the relationship between JS and TI. This result partially supports H5: *The relationship*

between employee JS and TI is moderated by BI; higher levels of BI enhance this relationship and lower levels of BI weaken this relationship. While BI does, in fact, moderate the relationship between JS and TI, the direction of this interaction effect is counterintuitive. Hypothesis H5 proposed that the direction of this interaction effect would be positive. The analysis, however, reveals that the direction of this interaction effect is negative. In Chapter 5, I provide additional discussion of this finding.

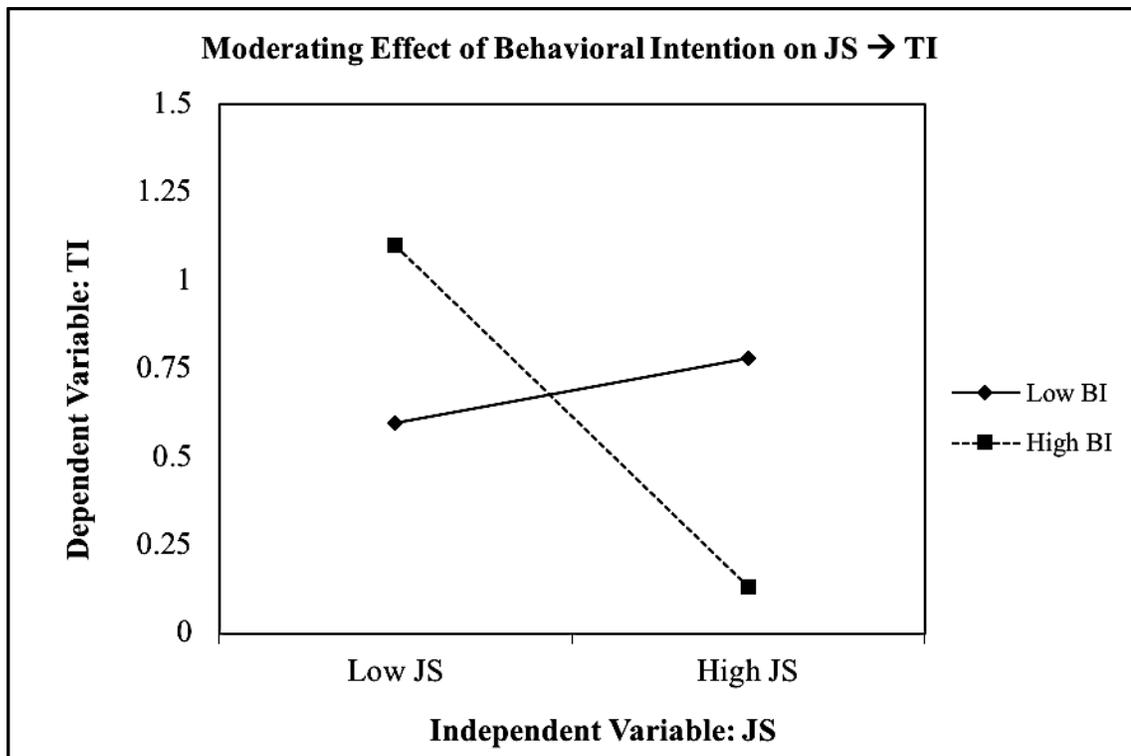


Figure 7: Moderating Effect of Behavioral Intention on JS x TI

Finally, the main research question sought to examine whether TA moderates the relationship between JS and TI. The results indicate that TA partially moderates JS and TI.

Table 23 below provides a summary of the hypotheses tested, and the results associated with each. Three of my hypotheses were supported and two hypotheses were not supported. Hypothesis 1 - JS and TI as I had predicted would be supported given the extensive empirical research completed on the interaction between these two variables (Judge, 1993). Hypothesis 2 – JS and TI moderated by PE was not supported. Hypothesis 3 – JS and TI moderated by EE was not supported. Hypothesis 4 – JS and TI moderated by FC was supported. Hypothesis 5 – JS and TI moderated by BI was supported, but the interaction was actually negative instead of positive.

*Table 23: Summary of Hypotheses and Results*

<b>Hypothesis</b>	<b>Variables</b>	<b>Hypothesis Description</b>	<b>Supported (Yes/No)</b>
<b>Main Effect</b>			
H1	JS and TI	Higher levels of employee JS are negatively associated with employee TI.	Yes
<b>Moderating Effects</b>			
H2	PE x JS	The relationship between JS and TI is moderated by PE; higher levels of PE enhance this relationship and lower levels of PE weaken this relationship.	No
H3	EE x JS	The relationship between JS and TI is moderated by EE; higher levels of EE enhance this relationship and lower levels of EE weaken this relationship.	No
H4	FC x JS	The relationship between JS and TI is moderated by FC; higher levels of FC enhance this relationship and lower levels of FC weaken this relationship.	Yes
H5	BI x JS	The relationship between JS and TI is moderated by BI; higher levels of BI enhance this relationship and lower levels of BI weaken this relationship.	Yes; but the relationship is inverse

This concludes chapter 4. The next chapter provides discussions points, limitations and recommendations. I provide a conclusion recapping this study to emphasize the importance of continued research in this field and exploration of TA, JS, and TI.

## CHAPTER 5: DISCUSSION AND CONCLUSION

Despite the well-established relationship between JS and TI (Judge, 1993) understanding the role of TA as a moderator has had limited exposure amongst academia and research. This dissertation attempted to explore whether or not TA moderates the relationship between JS and TI. I found two significant moderating effects, with the first being FC showing moderation of the relationship between JS and TI and the second being BI also resulting in moderation of the relationship between the JS and TI. I was unable to find significant support for a moderation effect attributable to EE or PE. Therefore, I was able to provide only partial support for TA moderating the relationship between JS and TI.

### **Discussion**

I proposed a theoretical model in this study based on the use of TA (measured by PE, FC, and BI) as the moderator, JS as the independent variable, and TI as the dependent variable. The main objective of this study was to better understand whether TA moderates JS and TI. I noted that there is minimal evidence of past studies exploring the area of technology and JS and TI. However, there is a need to better understand the impact that JS has on TI within the workplace as it describes employee satisfaction and intent to turnover during a time period in which we see more requirements and expectations for increased technology acceptance.

Regarding JS, there have been some studies that have addressed the effects of JS on the acceptance and use of technology. Research to date, explores various alternative models, but does not explicitly claim that these models moderate JS and TI. In searching for potential options to test this theory, I explored UTAUT (Venkatesh et al., 2003),

TAM (Davis et al., 1989), and the Theory of Planned Behavior (Ajzen, 1991), but was not able to identify research that specifically focused on TA as a moderator of the association between JS and TI.

However, this research does extend Venkatesh's (2003) UTAUT research along with work motivation theory by using constructs from UTAUT (Venkatesh et al., 2003) as moderators to JS and TI. My research provided that FC and BI do moderate JS and TI. This model is unique in that it adopts the UTAUT model (Venkatesh et al., 2003) by using it to moderate the relationship between JS and TI.

Previously, I noted that Schullery (2013) acknowledged that JS is uniquely different across different age groups and earlier models rarely include this important variable. The gap in research specific to age and JS was specifically addressed within my study, where age was found to be significant (Schullery, 2013). In this regard, my research extends Schullery's (2013) theory whereby the current generation and future generations should be clearly examined because of the unique differences that occur over time as job environments change and individual's motivations change.

Scholars have suggested more research needs to be done to understand the moderating effects of the relationship between JS and TI. Earlier in my research I noted that Judge stated, "*Carsten and Spector (1987), in a meta-analysis of 47 studies, estimated a corrected correlation between JS and turnover of -.26 (the 95% confidence interval did not include 0)*" (Carsten & Spector, 1987; Judge, 1993). Given the sampling error only accounted for only 21% of the variance in correlations across studies, the authors determined there is opportunity for significant moderator effects (Carsten & Spector, 1987; Judge, 1993). As Judge (1993) along with Carsten and Spector (1987),

provided within their findings, the potential exists and was proven within my study that other variables do interact with JS in predicting turnover (Carsten & Spector, 1987; Judge, 1993). This result was observed with FC moderating the relationship between JS and TI. Similarly, BI moderated the association between JS and TI. Of particular interest, I found that PE had a direct influence on TI. I also found a direct influence on TI by EE which was not originally part of my research.

My belief is the responses and results may be a result of the unique aspects of the Job Descriptive Index, BGSU (2009) survey instrument used. This survey was very difficult to score. I believe a streamlined survey would provide different and more conclusive results. This survey method may be easy for the participant but for the researcher it proved to be very complicated when trying to assess the scores.

Related to the direct effect between PE and TI, I believe that this may be in part because an employee may see their performance being lower or higher as it relates to technology. While H<sub>2</sub> was the hypothesis related to PE as a moderator on the relationship between JS and TI was not supported, I find it interesting that this was an unexpected finding separate from my original hypothesis. I believe an employee who readily knows technology may be more likely to leave if technology is not present within the business. Contrary to this result as well, I believe that this might also occur if an employee has little technology experience and they join an organization that readily uses technology to perform their job duties, they may be more likely to quit because they see this as a performance inhibitor.

The other finding which was not originally expected was FC had a direct influence on TI. This also was not part of the original hypothesis, H<sub>4</sub>. My assumption is

that this occurrence resulted from instances in which an employee likely felt that if an organization facilitated the use of technology and they were comfortable already with using technology, then they might likely have less of an intent to quit. Alternatively, if an employee felt a company was not going to facilitate the use of technology, then they may also have an inclination to quit as they may not necessarily be the most apt at learning new technologies, they may need training or guidance.

Pertaining to the supported hypotheses, H<sub>1</sub>, H<sub>4</sub>, and H<sub>5</sub>, I believe these were all supported because we are entering into an era in which we need technology in order to do our jobs. Without technology, we would likely not be as productive as we currently are. I suspect the relationship was strengthened or weakened when FC or BI was used as a moderator on JS and TI because they were functioning as predictors to an employee's willingness to use technology and the impact that plays on JS and TI. Further, understanding the interdependence between the variables within UTAUT may also have played an underlying role. The constructs used were applied because they aligned well with the role of TA in the workplace and predict whether an employee will use the technology provided to them. This study had a consistent result across all tests where the one control variable, age, was significant. With this factor in mind, it would be safe to assume the age of an individual is a control variable which influences the moderating effect of TA on the relationship between JS and TI. In other words, younger generations who have more experience with newer technologies may be more likely to be influenced by the lack or prevalence of technology in the work setting. Given the results, more research in the area of moderating the relationship between JS and TI is required and discussed in the next section.

### *Review of the Study*

The purpose of this study was to answer the call for more empirical testing surrounding the moderating impact that organizational TA has on the relationship between JS and workforce turnover intentions TI. A deeper understanding of the relationships between TA, JS, and TI may result in important organizational outcomes such as increased recruiting and retention rates for incoming generations such as Millennials and Generation Z that are entering the workforce. Further, a greater understanding of the areas these generations of workers believe are important may increase their JS and ultimately lower TI. I posit that business leaders should recognize whether their organization is providing the type of workplace that attracts desirable workers. Thus, considering the correlation between TA and JS may identify results showing increases or decreases in JS depending on the level of TA within the firm.

I conducted a survey through Qualtrics that resulted in (n = 349) responses. The entire survey included a total of 44 survey questions. One survey question was used a control variable to record the participant's employment sector and was similar to another control variable question about industry. This question was not included in the final results. There were 6 questions directly associated with TA which also were not included in my final results because they were not part of the UTAUT model and were included for future research. There were 4 questions which were part of the Social Influence scale which I also did not include because it was not part of my original study but will be included in future research. The total questions scored was 33.

Of the 33 survey questions, 7 were assigned to gather details about the participants demographics. I included 6 questions to score JS which were from the

Abridged Job Descriptive Index BGSU and the Abridged Job in General Scale (Stanton et al, 2002). I used the Intentions to Quit scale from Wayne et al (1997) to obtain scores for TI. Lastly, the remaining TA questions which totaled 16 were broken out into four constructs taken from the UTAUT model to obtain scores for TA (Venkatesh et al., 2003). Those constructs were PE, EE, FC, and BI. PE included 4 survey questions. A total of 4 questions specifically addressed EE. For FC I included 5 survey questions. Last, I included 3 survey questions around BI.

My main research question inquired whether TA moderates JS and TI. I used a moderated regression analysis to examine the data and explain the results. Based on the results of my analysis, TA does partially moderate JS and TI. Below I provide further explanation for this finding.

H<sub>1</sub>, JS and TI had a positive relationship. This was predicted based on extensive empirical research on the interaction between these two constructs (Judge, 1993). My examination provided that there was correlation between JS and TI as well as a statistical significance which aligns with previous research.

H<sub>2</sub>, JS and TI moderated by PE was not supported. There was no correlation found between these constructs. However, as it pertained to PE, there was a direct effect between JS and PE which explained the variance in TI which was a newly observed result and not part of my original research objectives. In reviewing past literature little has been established pertaining to the direct effect between JS and PE. In particular Judge et al (2001), noted that the correlation between satisfaction and performance is not the focus of the vast majority of studies that have shown a correlation between the constructs and performance is generally reviewed as job performance versus expectancy

(Judge, Thoresen, Bono, & Patton, 2001). This result may be in part due to the expectation of the participant to see their performance be positively or negatively affected by the use of technology and therefore, they may or may not be more inclined to quit their job. This is a unique finding which garners being mentioned and should later be further explored.

H<sub>3</sub>, – JS and TI moderated by EE was not supported. There was not a statistically significant result related to JS and TI being moderated by EE, nor was there correlation. Additional researched should be conducted to explore for additional observations. Venkatesh et al (2003), provided their research on the basis of age and gender moderating EE and the intention to use technology. Venkatesh et al (2003) note the effect of EE on intention is more significant for women and older workers (Venkatesh et al., 2003). The reason for there not being any significant result for this hypothesis may be due to more of the respondents not seeing TA as requiring effort to learn or use. Based on this observation, the potential for additional observations is worth future research.

H<sub>4</sub>, A positive relationship was found during the examination of FC moderating the relationship between JS and TI resulting in this hypothesis being supported. When reviewing FC through the lens of Venkatesh et al (2003), there was only significance when examined in combination with age and experience. This result and also the result found from my research would align and I believe that this finding may be in part because employees are more willing to learn and use technology if the organization is willing to facilitate and provide access to it. Additionally, TI was directly influenced by FC which was a newly observed result and not part of my original research objectives.

Therefore, my findings extend beyond UTAUT and provide for additional opportunities of exploration.

H<sub>5</sub>, JS and TI moderated by BI was supported. There was a statistically significant result when BI moderated the relationship between JS and TI. I also observed correlation between the constructs which further explained that BI moderated the relationship between JS and TI. This hypothesis was likely supported because the use of technology depends on the employee or user. If their intention is to use it, then the result should be an influence on the relationship between JS and TI. If the user doesn't anticipate using the technology, there will still be a moderation effect if the intention of the company is for them to use it to do their job, thus still enhancing or weakening the relationship between JS and TI. Again, these constructs have not previously been studied and therefore finding past research to compare my results to prove to be difficult. In retrospect, the UTAUT model provided the appropriate foundation for my research to be built upon given the uniqueness of my research.

In summary, three of my hypotheses were supported and two hypotheses were not supported. I also contribute two new observations  $EE \rightarrow TI$  and  $BI \rightarrow TI$ , which were not originally part of my research.

### **Contributions**

This dissertation's contributions are broken down into two main areas. The first area of contribution is by using TA as a moderator to explain the relationship between JS and TI. I used UTAUT which was introduced by Venkatesh et al. (2003) as the initial constructs to establish my model. This research uses TA as a moderator to predict the relationship between JS and TI. To date, no identifiable research has used the UTAUT

model or TA to moderate this relationship, leaving this as a considerable contribution within the area of TA, JS, and TI.

The second contribution is divided up into three extensions of the literature and UTAUT. Extension C2.1 highlights two of my supported hypotheses. H4 – further explains that by using the FC variable from the UTAUT model to moderate JS and TI was supported and offers an extension of Venkatesh et al (2003). H5 – confirms that using the variable BI as a moderator to JS and TI is another extension and use of the UTAUT model (Venkatesh et al., 2003). Extension C2.2 was not originally part of my study but provided an unexpected result where the variance in TI was explained by a direct effect between JS and PE along with JS and EE. Extension C2.3 provides more support for Schullery (2013) research where age is a significant factor related to JS and TI.

### *Contribution One*

As mentioned previously, Shaw (1999) provided a study where positive affect moderated JS and TI by using a hierarchical regression to examine the interaction prediction (Shaw, 1999). Within Shaw's (1999) study, entering the interaction term after the control variable and JS resulted in a significantly predicted turnover intentions. I posit that by utilizing the variables within the UTAUT model, the relationship between JS and TI will be moderated.

I theorized that the acceptance of technology explains the relationship between JS and TI. Within my study, TA was not a single variable that could be used to provide moderation. Rather, the research model included 4 constructs (PE, EE, FC, and BI), that represented TA. As noted within Venkatesh et al (2003), the UTAUT model was

established to provide user behavior intentions and not to moderate JS or TI. However, the constructs of the model when extended can be used as moderation variables. For instance, Creswell noted, “*moderating variables are often new variables constructed by a researcher by taking one variable and multiplying it by another to determine the joint impact*” (Creswell, 2009). p. 51 Within my study, I have used several of the UTAUT variables to identify whether moderation occurs positively between JS and TI.

Additionally, TA is often considered an antecedent (Lu, Papagiannidis, & Alamanos, 2019). This would explain why not more literature or research is available regarding the use of TA as a moderating variable. However, it is now common in the workplace to use some form of technology to perform work. This assumes that without technology the level of satisfaction would become lower and therefore an employee’s intentions to leave would become higher. Based on the notion that TA has generally been seen as an antecedent, using it as a moderator provides an important extension to its application moving forward.

### *Contribution Two*

The second contribution realized from my study provided three areas of the literature in which were extended. I observed direct effects from two of the constructs within my model. C2.1 PE was demonstrated to have a significant direct effect on TI. C2.2 EE also had a significant direct effect on TI as well. These two contributions further extend the literature in the context of JS and TI. Past research regarding PE, such as Moore and Benbasat’s (1991) research in the area of relative advantage provided that PE is the degree to which using an innovation is perceived as being better than using the

previous technology (Moore & Benbasat, 1991). Another area closely related to this findings is Thompson et al.'s (1991) job-fit construct which has been used to explain PE. Their research provided the capabilities of a system enhance an individual's job performance (Thompson et al., 1991). However, again their study doesn't extend past theory to provide additional methods pertaining to the direct effect of PE on TI.

The direct effects observed on TI by PE and EE contributes to existing literature by establishing a new lens through which to evaluate TI. This is of particular interest given that no readily identifiable previous research was found regarding TI being directly influenced by either PE or EE.

C2.3 In keeping with the extension of literature, the third extension relates to the area of age. In all four of my hierarchical regression models, age was significant. This extends existing literature and supports the notion that age or generation differences are significant when researching TA, JS, and TI (Morris et al., 2005; Schullery, 2013; Venkatesh, 2006). Additionally, this supports literature that suggests that JS is uniquely different between generations whereas earlier models of JS may not have included important variables which pertain to the current generation and future generations (Schullery, 2013).

### **Implications**

This study provided new insights for employers and scholars about the relationship between JS and TI using the UTAUT model constructs of PE, EE, FC, and BI. This study found that the moderating effect of FC enhanced the relationship between JS and TI when higher levels of FC were present. Moderation was significant between the relationship between JS and TI when FC was introduced. This means that depending

on whether higher or lower levels of FC are present, the relationship between JS and TI will either be strengthened or weakened. Therefore, employers should consider facilitating the acceptance of technology.

The second area of insight relates to BI providing a moderating effect between the relationship of JS and TI. Again, I found the introduction of BI provided significant moderation between the relationship of JS and TI. The takeaway from this was that by introducing higher levels of BI, the interaction between JS and TI is more negative. Should lower levels of BI be introduced as a moderator, then the result would be a less negative interaction between JS and TI. Thus, employers should consider looking at their workers intention to use technology within their workplace. This will ultimately provide insight into whether or not there is an enhanced relationship or whether a weakened relationship between JS and TI.

There was only one control variable that resulted in a significant correlation and this control variable was age. The remaining control variables did not provide any predictive results when incorporated into the model analysis. Finally, this study did not find any evidence that JS and TI would be enhanced or weakened when using additional control variables such as gender or tenure.

Finally, the UTAUT model combines explanatory power for the individual models which provide key moderating influences consisting of PE, EE, FC, and BI (Venkatesh et al., 2003). Parsimonious structure can be retained while advancing the model to incorporate moderation between JS and TI which previously has not been explored. This opportunity provides a challenge to future researchers to explore this

model to enhance and continue to expand the UTAUT model into new areas of research similar to this study.

### **Limitations and Future Research**

Nearly all research has limitations which provides for follow-on studies. This study is no different and, as such, I found there were multiple limitations which provide for follow-on research opportunities.

The first observation was that my sample was limited to US-based employees who worked full-time. Further expansion and diversification across the globe will provide additional clarity into regional trends and future opportunities. Within this same context, technology may not be as developed in some regions, thus limiting the results. Strategically identifying a balanced approach to regions who are technology advanced and regions lacking technology will provide a stronger data set to be analyzed.

Second, my sample size was limited to an age range from 25 – 65. It would be beneficial to identify whether there is evidence of younger generational interests in technology and the workplace as it pertains to JS and TI. Further research should be conducted to expand the sample to age 18 and above.

Third, additional variables might be considered as part of a future study on the role of technology and its moderating effect on JS and TI. Many areas were not included in this study but could provide significant results when examined. For instance, organizational commitment to TA could provide a significant impact on JS and TI. Another consideration might be an organizations cultural predisposition to innovation adoption and implementation of new technologies.

Fourth, the Abridged Job Description Index, BGSU (2009) created several issues. One example is that the responses require the survey participant to respond to descriptive words within each of the six questions. This can become tiring for a survey participant given the total words they end up responding to is 38. The second issue surrounds the scale and measurements. Throughout the various attempts to measure the items, when validating the reliability, the alphas were very low for each individual dimension. Using an alternate scoring method may have slightly improved the results. For this study, the use of a negative scoring convention (Yes = 1, No = -1, ? = 0 ), created a negative alpha which violates the expected range for alpha of 0 to 1. Aggregating JS resulted in the alpha being within the acceptable range at a .739, which was acceptable. To mitigate this in the future, I would likely look at additional scales to use which might provide alternate results. For example using a different JS scale such as: the Minnesota Satisfaction Questionnaire (MSQ), the Job Satisfaction Survey (JSS), and the Faces Scale might result in differing responses (Spector, 1997). The MSQ measures job satisfaction has 20 sections and has a long form with 100 questions (five items from each section) and a short form with 20 questions (one item from each section (Spector, 1997). The JSS is a 36-item questionnaire that measures nine areas of job satisfaction. Lastly, the Faces Scale of job satisfaction, one of the first scales used widely, measured overall job satisfaction with just one item which participants respond to by choosing a face.

Researchers should consider looking into mediating effects versus moderating effects for the relationship TA has between JS and TI. This approach might establish a stronger connection than moderation. In some cases, using mediation or moderation becomes difficult to determine. In fact, the mid-way through my research there was a

point where I began to consider whether I needed to apply mediation to my model. I opted to stick with my original approach, however, mediation may in turn result in a more defined result. Given that mediation is typically used to determine the extent to which a variable influences the outcome through one or additional mediator variables. Moderation on the other hand, establishes whether the effect of a variable interacts with a moderator variable providing an outcome.

Another limitation was that there was a limited view of specific industries within my research. At the most, 40 responses were from “other services except public administration”, with 34 responses for “Health Care or Social Assistance”, and 34 responses for “Manufacturing”. Further focus on these areas might provide different results. For example, understanding TA as it pertains to moderating IT employees within healthcare may substantiate a relationship between JS and TI. Many opportunities exist within the healthcare domain to study the role of TA. Baudier, Ammi, and Lecouteux (2019) argue that a better understanding of employees’ motivations contributes to improving the adoption rate of these technologies (Baudier, Ammi, & Lecouteux, 2019). A recent study by Baudier et al. (2019) suggests that “*by introducing the Internet of Things in the workplace as part of their HR strategy, companies may derive a competitive advantage from their workforce* (Baudier et al., 2019).” p. 89 Their research contributed to existing studies by establishing the acceptance of technology within the workplace or healthcare facility. However, there were some limitations to their research which align well with extending my research model and providing a longitudinal study the evolution and acceptance of technology. Nonetheless, many opportunities exist within various industry domains to study the influence of TA on JS and TI.

Lastly, in reviewing motivation models and future workplace motivators, expanding areas beyond technology acceptance such as technology diffusion and technological commitment might continue to contribute to the area of technology as a motivator within the workplace. Testing whether previous motivation theories such as Herzberg's Motivation Theory (Herzberg et al., 2017) or Maslow's Hierarchy of Needs (Maslow, 1970) may be relevant if tested using the same construct but different scales better aligned to each of these theories. Likewise, it would be interesting to find out whether these motivation theories might be relevant within this model.

Overall, my research appears to be just the tip of the iceberg. Employers would benefit from understanding how this area will impact their future workforce and potentially attract desirable workers. At the same time, retaining existing employees and preventing turnover provides multiple benefits as well as also mitigates loss of continuity and minimizing employee churn. Technology in the workplace also provides flexibility in working spaces and allows for remote and teleworking options as well. The next generation of workers will not only expect technology to be widely used within an organization, but they will likely request it be implemented and leave if it is not. Many options exist for continuing to extend this research beyond my study.

### **Conclusion**

The proposed model provides a means to understand whether TA moderates the relationship between JS and TI. In addition, understanding the factors contributing to behavioral intent may potentially be used in advance of system development to predict reporting systems acceptance.

As I mentioned earlier within my paper, Millennials and subsequent generations expect there to be a strong presence of technology and innovation within the workplace (Fry, 2018). As I have suggested throughout this study failure to better understand how TA impacts the workforce could potentially cause low JS and eventually TI. I suggest that in order to stabilize the workforce, a better understanding of workers view within the areas of technology is critical to being successful.

As has been mentioned before, technology continues to change how we perform work in our everyday activities. Understanding the influence that TA has on JS and TI will assist in developing a desirable work environment and improving work engagement. Firms that are seeking to gain an advantage on the future workforce should continue to explore the role technology has within their work environment. This study only begins to unfold the moderating role technology plays within the relationship between JS and TI. Ultimately workforce motivation may see great improvement with unique visionary attention to what appeals to job seekers and continuing investment into innovation and newer technology may improve retention thus lowering TI. Alternatively, technologically advanced organizations will outpace their competition and nudge out the stragglers. Anticipating technological advances will bridge organizational environments and work tasks driving more automation and eliminating the need for antiquated tools. Generations accustomed to technology will be drawn more to agile workplaces where technology simplifies the work being done and provides more flexibility and time to be creative.

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## APPENDICES

### Appendix A: Survey Instrument – Turnover Intentions

**Turnover Intentions:**

Intentions to Quit (Wayne, Shore, & Liden, 1997)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

<p>1. I am actively looking for a job outside [your company/organization] name.</p>	<p><input type="checkbox"/> Strongly Agree  <input type="checkbox"/> Agree  <input type="checkbox"/> Somewhat Agree  <input type="checkbox"/> Neither agree nor Disagree  <input type="checkbox"/> Somewhat Disagree  <input type="checkbox"/> Disagree  <input type="checkbox"/> Strongly Disagree</p>
<p>2. As soon as I can find a better job, I'll leave [your company/organization].</p>	<p><input type="checkbox"/> Strongly Agree  <input type="checkbox"/> Agree  <input type="checkbox"/> Somewhat Agree  <input type="checkbox"/> Neither agree nor Disagree  <input type="checkbox"/> Somewhat Disagree  <input type="checkbox"/> Disagree  <input type="checkbox"/> Strongly Disagree</p>
<p>3. I am seriously thinking about quitting my job.</p>	<p><input type="checkbox"/> Strongly Agree  <input type="checkbox"/> Agree  <input type="checkbox"/> Somewhat Agree  <input type="checkbox"/> Neither agree nor Disagree  <input type="checkbox"/> Somewhat Disagree  <input type="checkbox"/> Disagree  <input type="checkbox"/> Strongly Disagree</p>
<p>4. I often think about quitting my job at [your company/organization].</p>	<p><input type="checkbox"/> Strongly Agree  <input type="checkbox"/> Agree  <input type="checkbox"/> Somewhat Agree  <input type="checkbox"/> Neither agree nor Disagree  <input type="checkbox"/> Somewhat Disagree  <input type="checkbox"/> Disagree  <input type="checkbox"/> Strongly Disagree</p>
<p>5. I think I will be working at another company five years from now. (r)</p>	<p><input type="checkbox"/> Strongly Agree  <input type="checkbox"/> Agree  <input type="checkbox"/> Somewhat Agree  <input type="checkbox"/> Neither agree nor Disagree  <input type="checkbox"/> Somewhat Disagree  <input type="checkbox"/> Disagree  <input type="checkbox"/> Strongly Disagree</p>

## Appendix B: Survey Instrument – Job Satisfaction

**Job Satisfaction:**

Abridged Job Descriptive Index BGSU and Abridged Job in General Scale (Stanton et al., 2002)

1.	<p>Work on Present Job: Think of the work you do at present. How well do each of the following words or phrases describe your work?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes your work N for “No” if it does not describe it ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Fascinating <input type="checkbox"/> Satisfying <input type="checkbox"/> Good <input type="checkbox"/> Exciting <input type="checkbox"/> Rewarding <input type="checkbox"/> Uninteresting*</p>
2.	<p>Pay: Think of the compensation you get now. How well does each of the following words or phrases describe your present pay?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes your pay N for “No” if it does not describe it ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Barely live on income* <input type="checkbox"/> Bad* <input type="checkbox"/> Well paid <input type="checkbox"/> Underpaid* <input type="checkbox"/> Comfortable <input type="checkbox"/> Enough to live on</p>
3.	<p>Opportunities for Promotion Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes your opportunities for promotion, N for “No” if it does not describe them ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Good opportunities for promotion <input type="checkbox"/> Opportunities somewhat limited* <input type="checkbox"/> Dead-end job* <input type="checkbox"/> Good chance for promotion <input type="checkbox"/> Fairly good chance for promotion <input type="checkbox"/> Regular promotions</p>
4.	<p>Supervision Think of the kind of supervision that you get on your job. How well does each of the following words or phrases describe this?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes the supervision you get on the job N for “No” if it does not describe it ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Praises good work <input type="checkbox"/> Tactful <input type="checkbox"/> Influential <input type="checkbox"/> Up to date <input type="checkbox"/> Annoying* <input type="checkbox"/> Knows job well</p>
5.	<p>People on Your Present Job Think of the majority of people with whom you work or meet in connection with your work. How well does each of the following words or phrases describe these people?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes the people with whom you work N for “No” if it does not describe them ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Boring* <input type="checkbox"/> Slow* <input type="checkbox"/> Responsible <input type="checkbox"/> Smart <input type="checkbox"/> Lazy* <input type="checkbox"/> Frustrating*</p>
6.	<p>Job in General Think of your job in general. All in all, what is it like most of the time?</p>	<p>In the blank beside each word or phrase below, write: Y for “Yes” if it describes your job for “No” if it does not describe it ? for “?” if you cannot decide</p>	<p><input type="checkbox"/> Good <input type="checkbox"/> Undesirable* <input type="checkbox"/> Better than most <input type="checkbox"/> Disagreeable* <input type="checkbox"/> Makes me content <input type="checkbox"/> Excellent <input type="checkbox"/> Enjoyable <input type="checkbox"/> Poor*</p>

\* Please note that the starred items are the reverse-coded items

## Appendix C: Survey Instrument – Technology Acceptance

**Technology Acceptance:**

Diffusion of Innovations (Patterson et al., 2005)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	New ideas are readily accepted here.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	This company is quick to respond when changes need to be made.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	Management here are quick to spot the need to do things differently.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
4.	This organization is very flexible; it can quickly change procedures to meet new conditions and solve problems as they arise.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
5.	Assistance in developing new ideas is readily available.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
6.	People in this organization are always searching for new ways of looking at problems.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix D: Survey Instrument – Performance Expectancy

**Performance Expectancy:**

(Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1989, 1992; Moore & Benbasat, 1991; Venkatesh et al., 2003)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	I would find various types of technology useful in my job.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	Using technology enables me to accomplish tasks more quickly.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	Using technology increases my productivity.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
4.	If I use the technology within my company, I will increase my chances of getting a promotion/raise.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix E: Survey Instrument – Effort Expectancy

### **Effort Expectancy:**

(Davis et al., 1989; Moore & Benbasat, 1991; Thompson et al., 1991; Venkatesh et al., 2003)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	My interaction with technology would be clear and understandable.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	It would be easy for me to become skillful at using technology within my workplace.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	Learning to operate technology is usually easy for me.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix F: Survey Instrument – Facilitating Conditions

**Facilitating Conditions:**

(Compeau & Higgins, 1995; Compeau et al., 1999; Davis et al., 1992; Thompson et al., 1991; Venkatesh et al., 2003)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	I have the resources necessary to use organizational technology.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	I have the knowledge necessary to use organizational technology.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	Learning to operate technology is usually easy for me.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
4.	Specialized training for my organization’s technology systems is available to me if needed.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
5.	Using my organization’s technology fits into my work style.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix G: Survey Instrument – Behavior Intention

### **Behavioral Intention:**

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	I intend to use the technology system in the next 6 months.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	I will always try to use some type of technology system in my daily life and at work.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	I plan to continue to use some type of technology system in the future.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix H: Survey Instrument – Social Influence

**Social Influence:**

(Ajzen 1991; Davis et al. 1989; Fishbein and Azjen 1975; Mathieson 1991; Taylor and Todd 1995a, 1995b; Thompson et al. 1991; Moore and Benbasat 1991; Venkatesh et al. 2003)

Likert Scale: Strongly Disagree (1) – Strongly Agree (7)

1.	People who influence my behavior think that I should use technology to accomplish tasks.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	People who are important to me think that I should use technology to accomplish tasks.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
3.	The senior management at my organization has been helpful in the use of technology to accomplish tasks.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
4.	In general, the organization has supported the use of technology to accomplish tasks.	<input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Somewhat Agree <input type="checkbox"/> Neither agree nor Disagree <input type="checkbox"/> Somewhat Disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

## Appendix I: Survey Instrument - Control Variables

### Control Variables

#	Survey Question	Response
1.	What is your age	_____ years of age.
2.	Gender?	<input type="checkbox"/> Male (1) <input type="checkbox"/> Female (2) <input type="checkbox"/> Other (3)
3.	What is your race?	<input type="checkbox"/> White (1) <input type="checkbox"/> Black/African American (2) <input type="checkbox"/> Hispanic (3) <input type="checkbox"/> Native American (4) <input type="checkbox"/> Asian (5) <input type="checkbox"/> Other (6) <input type="checkbox"/> Do not wish to answer (7)
4.	Where are you employed?	<input type="checkbox"/> Private-for-Profit company, business or individual, for wages, salary or commissions (1) <input type="checkbox"/> Private-Not-for-Profit, tax-exempt, or charitable organization (2) <input type="checkbox"/> Local Government employee (city, county, etc.) (3) <input type="checkbox"/> State Government employee; 5-Federal Government employee (4) <input type="checkbox"/> Federal Government employee (5) <input type="checkbox"/> Self-employed in own Not Incorporated business, professional practice, or farm (6) <input type="checkbox"/> Self-employed in own Incorporated business, professional practice, or farm (7) <input type="checkbox"/> Working without pay in family business or farm (8)
5.	Which of the following industries most closely matches the one in which you are employed?	<input type="checkbox"/> Forestry, fishing, hunting or agriculture support (1) B5 <input type="checkbox"/> Real estate or rental and leasing (2) B2 <input type="checkbox"/> Mining (3) B1 <input type="checkbox"/> Professional, scientific or technical services (4) B4 <input type="checkbox"/> Utilities (5) B1 <input type="checkbox"/> Management of companies or enterprises (6) B4 <input type="checkbox"/> Construction (7) B1 <input type="checkbox"/> Admin, support, waste management or remediation services (8) B1 <input type="checkbox"/> Manufacturing (9) B2 <input type="checkbox"/> Educational services (10) B5 <input type="checkbox"/> Wholesale trade (11) B2 <input type="checkbox"/> Health care or social assistance (12) B5 <input type="checkbox"/> Retail trade (13) B2 <input type="checkbox"/> Arts, entertainment or recreation (14) B3 <input type="checkbox"/> Transportation or warehousing (15) B4 <input type="checkbox"/> Accommodation or food services (16) B2 <input type="checkbox"/> Information (17) B3 <input type="checkbox"/> Other services (except public administration) (18) B3 <input type="checkbox"/> Finance or insurance (19) B2 <input type="checkbox"/> Defense or Government (Federal, State, Local) (20) B5  Buckets: B1) Infrastructure, B2) Retail & Mfg., B3) Info & Ent., B4) Mgmt., B5) Health, Ed., & Govt.
6.	Please indicate your occupation:	<input type="checkbox"/> Management, professional, and related (1) B1 <input type="checkbox"/> Service (2) B1 <input type="checkbox"/> Sales and office (3) B1 <input type="checkbox"/> Farming, fishing, and forestry (4) B1 <input type="checkbox"/> Construction, extraction, and maintenance (5) B2 <input type="checkbox"/> Production, transportation, and material moving (6) B2 <input type="checkbox"/> Technology or Telecommunications (10) B2 <input type="checkbox"/> Government or Military (7) B1 <input type="checkbox"/> Retired (8) B3 <input type="checkbox"/> Unemployed (9) B3  Buckets: B1) Service and Support, B2) Engineering, B3) Retired / Unemployed
7.	How many employees work in your establishment?	<input type="checkbox"/> 1-4 (1) <input type="checkbox"/> 5-9 (2) <input type="checkbox"/> 10-19 (3) <input type="checkbox"/> 20-49 (4) <input type="checkbox"/> 50-99 (5) <input type="checkbox"/> 100-249 (6) <input type="checkbox"/> 250-499 (7) <input type="checkbox"/> 500-999 (8) <input type="checkbox"/> 1000 or more (9)
8.	Years with current organization	_____ Enter number of years.

## Appendix J: Consent to Participate in A Research Study



Belk College of Business  
9201 University City Boulevard, Charlotte, NC 28223-0001

### Consent to Participate in a Research Study

Title of the Project: Does Organizational Technology Acceptance Moderate Job Satisfaction and Turnover Intentions?

Principal Investigator: Sharon Lewis, University of North Carolina Charlotte  
Faculty Advisor: Dr. Reggie Silver, DrPH, University of North Carolina Charlotte

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to give you key information to help you decide whether or not to participate.

- The purpose of this study is to understand how people are motivated at work.
- You must be age 18 or older to participate in this study.
- You must be employed full-time.
- You are asked to complete a survey asking a series of questions about what motivates you. The questions are not sensitive or overly personal.
- It will take you about 20 minutes to complete the survey.
- We do not believe that you will experience any risk from participating in this study.
- You will not benefit personally by participating in this study. What we learn about how people are motivated may be beneficial to others.

Your privacy will be protected and confidentiality will be maintained to the extent possible. Your responses will be treated as confidential and will not be linked to your identity. Survey responses will be stored separately with access to this information controlled and limited only to people who have approval to have access. We might use the survey data for future research studies and we might share the non-identifiable survey data with other researchers for future research studies without additional consent from you.

Participation is voluntary. You may choose not to take part in the study. You may start participating and change your mind and stop participation at any time.

If you have questions concerning the study, contact the principal investigator, Sharon Lewis by email: [slewis89@uncc.edu](mailto:slewis89@uncc.edu). You can also contact my dissertation advisor Dr. Reginald A. Silver, DrPH, DBA Program Director, Clinical Professor of Business Information Systems and Operations Management at [rsilver5@uncc.edu](mailto:rsilver5@uncc.edu).

If you have further questions or concerns about your rights as a participant in this study, contact the Office of Research Compliance at (704) 687-1871 or [uncc-irb@uncc.edu](mailto:uncc-irb@uncc.edu).

You may print a copy of this form. If you are 18 years of age or older, have read and understand the information provided and freely consent to participate in the study, you may proceed to the survey [Click I Agree, Next, Continue, etc.]