IMPLEMENTATION CRITICAL SUCCESS FACTORS AND ACCOUNTING STANDARD CODIFICATION TOPIC 606 IMPLEMENTATION DYNAMICS: A CORRELATIONAL STUDY

by

Charles Tafon

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Dissertation

Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

This study examined implementation critical success factors and ASC 606 implementation dynamics. The study argued organizational dynamics that strengthen change responsiveness, absorptive capability, and organizational implementation context enhance ASC 606 implementation outcomes. The study was a timely response to outcries from the accounting scholarly and professional communities on the disturbing state of inertia and lackadaisical approach towards ASC 606 implementation that could possibly jeopardize its application. The study investigated relationships between implementation critical success factors and ASC 606 implementation outcomes to gain insights into mechanisms most likely to cause a change in implementation outcomes. The study adopted the ex post facto nonexperimental correlational quantitative method supplemented by moderated mediation analysis. Simultaneous linear regression was used to evaluate the extent to which implementation of critical success factors predict a myriad of ASC 606 implementation outcomes and evaluate mechanisms that cause a change in several implementation outcome levels. This novel approach predicated on an integrative theoretical framework comprising the institutional theory, change theories, and the normalization process theory studied ASC 606 implementation holistically and brought to fore several new perspectives on ASC 606 implementation concepts and principles that were nebulous before. Findings revealed three critical success factors significantly predicted ASC 606 implementation outcomes. In addition, ASC 606 normalization context and ASC 606 implementation outcomes mediated the effect of organizational implementation context on ASC 606 efficacy.

Keywords: ASC 606 implementation outcomes, implementation critical success factors, ASC 606 efficacy, ASC 606 normalization context, organizational implementation context

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Dedication

This research is dedicated to the loving memory of Emmanuel N. Titakeju, who encouraged this doctoral pursuit but passed on before the accomplishment could be celebrated.

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Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study

Not everything that is faced can be changed. But nothing can be changed until it is faced.

—James Baldwin, *Reader's Digest*, 1997

Accounting Standard Codification Topic 606 (ASC 606) is the novel standard regulating revenue recognition that was born out of a Financial Accounting Standard Board (FASB) and International Accounting Standard Board (IASB) joint project (Lemus, 2014). The new revenue recognition guidelines were introduced into U.S. GAAP in Accounting Standards Update 2014-09 as Topic 606, *Revenue from Contracts with Customers* (FASB, 2014). The effective dates for ASC 606 varied, and because it was expected to impact several critical functional areas of businesses (Tzuo, 2017), its implementation was described as a perfect accounting storm (Pombriant, 2017), and its application likened to walking on a minefield (Bogopolsky, 2019). This sea change in the revenue recognition universe necessitated significant systems change to cope with ASC 606 complexities. However, management's timorous responsiveness to these upheavals noticed in many organizations was believed would significantly impair ASC 606 implementation outcomes and consequently delegitimize organizations. Hence, this study was set out to investigate the relationship between implementation critical success factors (CSF) and ASC 606 implementation outcomes to gain insights into factors most likely to influence an organization's implementation footprint and to discover mechanisms most likely to cause a change in implementation outcomes.

The study adopted the ex post facto nonexperimental correlational quantitative method supplemented by mediation analysis, which is ideal for associational and mediation research questions and outcome research. This approach was different from the descriptive and exploratory approaches popularly adopted in related studies. The novel approach predicated on

an integrative theoretical framework comprising the institutional theory, change theories, and the normalization process theory studied ASC 606 implementation holistically and brought to fore several new perspectives on ASC 606 implementation concepts and principles that were unknown or nebulous. These new perspectives introduced new knowledge into the body of existing literature, filling identifiable gaps in the literature and permitting recommendation of best ex ante practices when contemplating implementation and pragmatic ex post implementation strategy approaches based on scientific evidence.

The research report comprised three sections: the foundation of the study, the project, and application to business practice. Section 1 discussed core elements that constituted the foundation of the study. The section was delineated into subsections that addressed each core element, namely, background to the problem, problem statement, purpose and nature of the study, research questions, hypotheses derived from the research questions, variables of interest, the research design and method, and the theoretical framework guiding the study. Supporting material that bolstered understanding of the study, such as the definition of terms and a discussion on the study's assumptions, limitations, and delimitations, were also integral parts of Section 1. The section culminated in a comprehensive review of academic and professional literature that illuminated how the research problem, the adopted theoretical framework, and variables of interest were perceived in literature. Section 2 discussed the project, which detailed the procedure adopted for accomplishing the research objective. Thus, Section 2 commenced with a restatement of the research purpose, followed by subsections that explicated the researcher's role, the research design and method, population and sampling, data collection and organization, and aspects of data analysis. Section 3 covered details about the application to professional practice and was organized into subsections that explained the research findings,

application to professional practice, and recommendations for further research. Section 3 also included a reflection wherein personal and professional growth resulting from the research and a Christian worldview perspective of the study were discussed.

Background to the Problem

A study conducted in 2016 suggested 67% of policies are not implemented with fidelity resulting in many program failures (Carucci, 2017). Implementation failures are attributed to social–behavioral barriers and uncertainties associated with complex transformations (Hidayatno et al., 2020). Barriers and uncertainties are surmountable by behavioral change initiatives (Fabrizio et al., 2014), and innovation-friendly cultures pivoted on robust organizational structures that adapt quickly to change (Jovana, 2019). Thus, change responsiveness and organization implementation structures have been identified as leading determinants of implementation outcomes (Fabrizio et al., 2014; Lyon et al., 2018; Puchalski Ritchie & Straus, 2019). However, in many organizations the state of inertia and noncommitment to ASC 606 implementation change initiatives was bewildering (Bogopolsky, 2019; Brasser et al., 2018; Conner, 2017; King, 2016). Bogopolsky (2019) cautioned unpreparedness could result in implementation missteps, which can endanger long-term survivability. However, in recognition of ASC 606 implementation challenges and certain technical issues raised by certain companies (Mueller, 2018), FASB embarked on a series of effective date deferrals to give organizations time to organize. ASC 606 was originally set to go into effect for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period, for public business entities, certain not-for-profit entities, and certain employee benefit plans. The effective date for all other non-public entities was set for annual reporting periods beginning

after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018 (FASB, 2014).

According to FASB (2015, BC 4), extensive outreach research spanning November 2014 to March 2015 investigating an unsolicited request for a deferral found a majority of stakeholders favored a deferral (BC 6). Thus, FASB endorsed the deferral of the effective date in ASU 2014-09, citing reasons ranging from the amendment of certain intellectual property licensing to want of specialized IT solutions capable of capturing ASC 606 data. The board decided for a one-year deferral for public entities and an additional one year for non-public entities (BC 7). However, due to the widespread effects that the COVID-19 hardship brought on businesses beginning early in 2020, in ASU 2020-05, FASB issued another limited deferral for entities that had not yet issued financial statements reflecting the new guidelines (FASB, 2020). Those organizations could choose to adopt the guidance for annual reporting periods beginning after December 15, 2019, and for interim reporting periods within annual reporting periods beginning after December 15, 2020 (BC 18). Another reason advanced for the deferral was the postponement, due to COVID-19 pandemic restrictions, of a round table meant to glean feedback from early public entity implementers on critical implementation highlights that could be disseminated to private entities to assist their implementation endeavors (BC 27).

Despite the long runway accorded organizations and measures to bring organizations up to speed with implementation issues, studies reported an inevitable implementation crisis in the United States (Atwood, 2015; Pelland, 2015). According to Peters (2018), of the nearly 4,000 companies subject to SEC oversight, only 32 (<1%) adopted early during the 2017 calendar year. Of the 32, only 10 chose the more encompassing full retrospective approach. One-third of the 32 early adopters received revenue recognition-related observations from SEC that implied

implementation flaws. This timid, and in some cases, chaotic response to ASC 606, resulted in an atmosphere of nervous apprehension in the scholarly accounting community, to the extent that articles trending in accounting journals, such as Dixon et al. (2017), King (2016), and Knachel (2016), sounded admonitions of unreserved conviction to C-suite executives. Studies with exceptionally long titles emphasizing the predicament also emerged. For example, Whitehouse (2016) captioned his paper:

> Accounting leaders need a wake-up call on revenue recognition: New revenue recognition standards will come into force within 18 months, but accounting leaders everywhere don't seem to be in a hurry to undertake the huge amount of work it will take to get ready. (p. title)

Pombriant (2017) described ASC 606 as an 800-pound gorilla that CFOs must deal with and asserted it was a perfect accounting storm, not faced by the accounting community since the 1990s. Bogopolsky (2019) likened ASC 606 to a field full of landmines likely to be tripped by CFOs who flouted implementation. Also, Mueller (2018) warned companies in industries where implementation readiness levels were extremely low with a captions "Don't be fooled: Changes to revenue recognition will affect engineering and construction entities" (p. title). These admonishments depicted the seriousness conferred ASC 606 implementation and the consequences of tardiness and implementation chaos. Early signs of chaotic implementation were detected in SEC's observation letters, and ASC 606 reported impact inconsistency.

Though Trainer (2019) conjectured ASC 606 impact may vary widely across organizations, impact variability reported within the same industry was bewildering, resulting in more questions than answers. For example, Starzee (2019) asserted an ASC 606 impact study on 13 of the largest construction/engineering firms revealed six reported considerable alterations to

how they reported revenue, while seven reported no change. Question about the veracity of such claims were some of the reasons behind this research. The study focused on understanding factors most likely to influence ASC implementation outcomes, and how those outcomes impact the organization.

Problem Statement

The general problem addressed was management's possible apathetic response in creating an enabling implementation context for a smooth transition to the new revenue recognition guidelines (ASC 606), resulting in possible ASC 606 implementation outcome impairment and potential loss of organizational legitimacy. Jattin and Ferreiro (2019) postulated financial reporting under ASC 606 is revolutionary and complex, necessitating changes in structures, processes, and the control environment. Arms and Bercik (2015) found that though managers and finance executives were aware of changes required for transitioning to ASC 606, they remained heedless of strategies for translating ASC 606 guidelines into implementation. According to Jonick and Benson (2018), a survey of 400 finance executives at KPMG's December 2015 Annual Accounting and Financial Reporting Symposium revealed that 71% of companies in the survey had yet to articulate a clear plan for implementing ASC 606. In an earlier study, Dixon et al. (2017) found that delayed and suboptimal ASC 606 implementation could result in material misstatement due to accounting systems failure, as well as material misstatement due to fraud. Hepp (2018) traced early challenges in implementing ASC 606 to the construction industry where complacency with antiquated industry-specific revenue recognition approaches threatened legitimacy and long-term survivability. The specific problem addressed was management's possible apathetic response in creating an enabling implementation context for a smooth transition to the new revenue recognition guidelines (ASC 606) within the

construction industry in the Mid-Atlantic United States, resulting in possible ASC 606 implementation outcome impairment and potential loss of organizational legitimacy.

Purpose of the Study

The purpose of this quantitative correlational study, supplemented by moderated mediation analysis, was to provide a deeper understanding of ASC 606 implementation dynamics through a comprehensive investigation into the bearing of implementation CSFs on ASC 606 implementation outcomes. Thus, the research focused on evaluating relationships between absorptive capacity, organizational agility, organizational implementation context, and ASC 606 implementation outcomes in companies within the construction industry in the Mid-Atlantic United States. In addition, the study investigated mechanisms that bolstered the effect of the relationship between implementation drivers and a myriad of ASC 606 implementation outcomes. These relationships, their moderation, and mediation provided new perceptions on the values of these predictor CSFs and evidence that their interaction with each other can be reengineered to produce positive impacts on various categories of ASC 606 implementation aftereffects. The knowledge obtained provided the basis for recommending best ex ante approaches for rolling out implementation and ex post strategy selection to enhance implementation. Many studies on ASC 606 implementation thus far have used descriptive and exploratory approaches to primarily study technical aspects, such as instantiating the procedure for recognizing revenue under the new standards, exploring the implementation rate, and investigating ASC 606 impact on reported revenue in designated companies and industries. To date, no study known to this researcher evaluated relationships between implementation CSFs and ASC 606 implementation outcomes, focusing on normative aspects and combining correlation and quantitative mediational method. This novel holistic approach in studying ASC

606 implementation phenomenon introduced new knowledge and thus filled identifiable gaps in the literature.

Research Questions

In an attempt to understand management's timorous steps in creating an enabling ASC 606 implementation environment, the researcher identified three CSFs and a few mechanisms that could possibly impact ASC 606 implementation outcomes. Through three research questions informed by theories and literature, the research queried the extent to which a combination of three implementation CSFs predicted ASC 606 implementation outcomes. To gain more insight into the ASC 606 implementation phenomenon, the moderating and mediating roles of a few mechanisms were also investigated to understand how they caused changes in selected outcome levels. First, Lyon et al. (2018) postulated that implementation outcomes vary considerably among organizations with high-quality routine implementation strategies, suggesting other factors play significant roles in influencing outcomes. In investigating outcomes variability within organizations with formal implementation strategies, studies found characteristics of the inner organizational environment in which implementation takes place substantially impacted innovation use (Lyon et al., 2018, p. 2). Other empirical findings suggested organizations that respond quickly to change produce better organizational outcomes (Nafei, 2016; Puchalski Ritchie & Straus, 2019). Likewise, organizations with the ability to discover and integrate new knowledge into organizational processes also report better organizational performance (Cohen & Levinthal, 1990; Easterby-Smith et al., 2008; Zahra & George, 2002). Against this backdrop, Research Question 1 in study 1 sought evidence of the extent to which ASC 606 implementation outcomes were predicted by a combination of organizational implementation context (OIC), organizational agility (OA), and absorptive capacity (ACAP). Research Questions 1A to 1C

sought to know the nature of the relationship between each predictor variable and ASC 606 implementation outcomes.

Second, studies found implementation outcomes impact service outcomes (Proctor et al., 2011), and service outcome (service delivery) quality depends on the individual and collective effort of people entrusted with normalizing innovation into an everyday routine (Gillespie et al., 2018; May & Finch, 2009). In quest of discovering if the effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization and ASC 606 implementation outcomes, Study 2 was designed based on Research Question 2. An extension of study 2 pivoted on Research Question 2A that queried whether the collective effort at normalizing ASC 606 was different at different levels of absorptive capacity and organizational agility.

Third, study 3 that hinged on Research Question 3 emerged from the assertion that organizations would be susceptible to material misstatement or fraud when ASC 606 efficacy is compromised (Dixon et al., 2017). Material misstatement and fraud are known threats to legitimacy and survivability as a result of their eroding effect on public trust (Lail et al., 2017). Agostini and Favero (2017) found financial statement fraud caused organizational demise and posited in the United States, there is a 75% probability of declaring bankruptcy within an average of 215 days of a fraud becoming public. Research Questions 3 was a vehicle for ascertaining the mediating effect of ASC 606 efficacy on the relationship between ASC 606 implementation outcomes and organizational legitimacy.

Based on the preceding and in cognizance of the specific research problem, the following research questions were posed.

RQ1: To what extent does a combination of three implementation CSFs—OA, ACAP, and OIC—predict ASC 606 implementation outcomes?

RQ1A: What is the relationship between organizational agility and ASC 606 implementation outcomes?

RQ1B: What is the relationship between organizational absorptive capacity and ASC 606 implementation outcomes?

RQ1C: What is the relationship between organizational implementation context and ASC 606 implementation outcomes?

RQ2: To what extent is the direct effect of organizational implementation context on ASC 606 efficacy mediated through ASC 606 normalization context and ASC 606 implementation outcomes?

RQ2A: To what extent does ASC 606 normalization context mediate the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility?

RQ3: To what extent does ASC 606 efficacy mediate the relationship between ASC 606 implementation outcomes and organizational legitimacy?

Hypotheses

Three hypotheses, stated in the null and alternative forms, were derived from the research questions.

H1o: There is no statistically significant evidence that a combination of three implementation CSFs predicts ASC 606 implementation outcomes.

H1a: There is statistically significant evidence that a combination of the three implementation CSFs predicts ASC 606 implementation outcomes.

$H1A_o$: There is no statistically significant relationship between organizational agility and ASC 606 implementation outcomes.

$H1A_a$: There is a statistically significant relationship between organizational agility and ASC 606 implementation outcomes.

Relationship to Research Question: H1A derived from RQ1A, which sought to measure the relationship between organizational agility on ASC 606 implementation outcomes.

Variables of H1A were organizational agility (independent variable) measured on a one to five Likert scale and ASC 606 implementation outcomes measured on a noncumulative continuous scale.

$H1B_o$: There is no statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcomes.

$H1B_a$: There is a statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcomes.

Relationship to Research Question: H1B derived from RQ1B, which was set out to evaluate how absorptive capacity is related to ASC 606 implementation outcomes.

Variables of H1B were absorptive capacity (independent variable) measured on a five-point Likert scale and ASC 606 implementation outcomes (dependent variable).

$H1C_o$: There is no statistically significant relationship between organizational implementation context and ASC 606 implementation outcomes.

$H1C_a$: There is a statistically significant relationship between organizational implementation context and ASC 606 implementation outcomes.

Relationship to Research Question: H1C emanated from RQ1C, which was set out to measure the relationship between organizational implementation context and ASC 606 implementation

outcomes. Variables of H1C were organizational implementation context (independent variable) and ASC 606 implementation outcomes. Organizational implementation context encompassed strategic implementation leadership, strategic implementation climate, and implementation citizenship behavior. All three subscales were measured on a five-point Likert scale. ASC 606 implementation outcome was the dependent variable.

$H2_o$: There is no statistically significant evidence that the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization context and ASC 606 implementation outcomes.

$H2_a$: There is statistically significant evidence the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization context and ASC 606 implementation outcomes.

$H2A_o$: There is no statistically significant evidence ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility.

H2Aa: There is statistically significant evidence ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility.

Relationship to the research question: H2 emanated from RQ2, which queried the mediating role of ASC 606 implementation outcomes and the moderating role of organizational agility and absorptive capacity. Based on Hayes' (2017) PROCESS conceptual model 7, the variables of H2 were organizational implementation context (independent variable), organizational agility and absorptive capacity (moderating variables), ASC 606 implementation outcomes and ASC 606 normalization context (mediating variables), and ASC 606 efficacy (dependent variable).

$H3_o$: There is no statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcomes and organizational legitimacy?

$H3_a$: There is statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcomes and organizational legitimacy?

Relationship to Research Question: H3 addressed RQ3, which focused on the mediating effect of ASC 606 efficacy on the relationship between ASC 606 implementation outcomes and organizational legitimacy. Based on Hayes' (2017) PROCESS conceptual model 4, variables of H3 were ASC 606 implementation outcomes (independent variable), ASC 606 efficacy (moderating variable), and organizational legitimacy (dependent variable).

Nature of the Study

This section discussed research paradigms, as well as various research designs and methods, and presented the argument in support of those deemed ideal and adopted for this study. The discussion commenced with a restatement of the research topic, "Implementation critical success factors and Accounting Standard Codification Topic 606 implementation dynamics: A correlational study." The restatement was done to keep the research topic in perspective while justifying its consonance with the research design and method. Recalling the research topic is consistent with Eriksson and Kovalainen's (2008) assertion that research questions crafted from the research topic inform the choice of the most adaptive methodology. However, research stipulation required a comprehensive discourse of core attributes of all available paradigms, research designs, and research methods in a bid to provide insights into attributes that were compatible or incompatible with the study, and that led to the decision to adopt or reject a paradigm, a design, and a method. Accordingly, with a clearly delimited purpose and research questions, this section discussed the special attributes of competing

paradigms, research designs, and research methods to make an unequivocal case for the appropriateness of those adopted for the research.

Discussion of Research Paradigms

This section discussed research paradigms and expounded on the philosophical underpinnings of competing paradigms. It also scrutinized incongruities in competing paradigms as the basis for justifying the researcher's affinity to pragmatism to the exclusion of all others. Research paradigms are beliefs and assumptions about reality and knowledge brought into the research that eventually guide how the research is conducted and outcomes construed (Creswell & Poth, 2018; Ryan, 2018; Sultana et al., 2019). Thus, philosophical assumptions made early in the study that were predicated on the researcher's ontology (view of reality), epistemology (perception of knowledge and how is it justified), axiology (values the researcher injects into the research), and methodology (the research process) eventually leave a paradigmatic footprint on the research (Creswell & Poth, 2018). Four fundamental research paradigms comprising positivism, postpositivism, constructivism, and pragmatism dominate social sciences research (Creswell & Plano Clark, 2011; Sultana et al., 2019) and impact the approach to the phenomenon, the motivation, and anticipated conclusions (Kankam, 2019). Consequently, familiarity with various research paradigms and justifying the decision to adopt or reject a paradigm are significant aspects of research (Kankam, 2019; Sultana et al., 2019). Attributes of the primary research paradigm are discussed below.

Positivism. Positivism emanated from rules entrenched in natural sciences and empiricism that emphasized three prominent notions encompassing absolute truth confirmed by science, empirically provable hypotheses, and unbiased value-free research (Giddings & Grant, 2007; Kankam, 2019; Pradoko, 2019; Robson & McCartan, 2016; Ryan, 2018). Positivists,

especially those who became known as the Vienna Circle, argued without physical observations and numerical data, claims to truth are nothing more than just conjectures and empirically meaningless (Kankam, 2019; Ryan, 2018). They argued because factors like spirituality and intuition are not easily discernable and measured, they cannot be proven (Ryan, 2018). Thus, ontologically, positivism recognizes the existence of a single absolute reality external to observation. Epistemologically, it suggested knowledge is only that which emanates from scientific sources and is obtained through empirical methods that can be replicated and generalized (Robson & McCartan, 2016; Sultana et al., 2019).

Axiology is alien in positivism because of the value-free assumption that argues the research and the researcher are totally independent. Due to the researcher's neutrality, they cannot add value to the research (Robson & McCartan, 2016; Sultana et al., 2019). Thus, positivists adopt the etic approach in researching, meaning the researcher assumes an outsider position, and because they seek causal law, they are predisposed to quantitative research methods (Sultana et al., 2019). Even though positivism has been held in many circles as the gold standard (Ardalan, 2019; Chua, 2019; Kankam, 2019), it has come under serious criticism, especially concerning its inappropriateness in capturing human thinking and guiding human phenomenon research (Giddings & Grant, 2007; Pradoko, 2019). Also, Chua (2019) posited the almost celestial status accorded positivism results in a diminution of research diversity, encouraging research that is unable to study complex and dynamic changes in practice, as well as moral questions surrounding practice. The etic approach dominating positivism is also not appropriate in human phenomenon research, where researchers sometimes insert themselves in the study and treat participants as fellow humans and not just objects in the research (Pradoko, 2019). Such an involvement permits the researcher to gain awareness not solely from the characteristics of the

object being observed but also from the observer's perspective (Robson & McCartan, 2016). Thus, unlike the positivist standpoint, facts and value are inseparable in human behavior studies (Ardalan, 2019; Robson & McCartan, 2016). Based on the preceding, positivism was considered incompatible with this researcher's worldview.

Postpositivism. Postpositivism was born out of criticisms of positivism and increasing anti-positivist sentiments in the 20th century (Kankam, 2019; Robson & McCartan, 2016). Though it was supposed to be an alternative to positivism, it inherited most of its tenets and continued to steer research using the same natural sciences wheels (Robson & McCartan, 2016). However, because it addresses some of the criticisms of positivism, it broadens the horizon of positivism by assuming a holistic approach to investigating real-world problems (Kankam, 2019). For example, the notion in positivism that the researcher and research participants are independent of each other is rebuffed in postpositivism with the suggestion that knowledge is not neutral but is socially construed (Kankam, 2019). Therefore, theories, hypotheses, the researcher's background, and values can significantly influence what is studied (Robson & McCartan, 2016).

Nonetheless, post-positivists recognize the prejudices these may create, and because they attempt to uphold objectivity, they recommend ways to protect it (Robson & McCartan, 2016). The post-positivists stance on truth is rather in sharp contrast with the positivistic view. According to postpositivist belief, reality exists, but it can always be fallible due to the researcher's intrinsic limitations (Robson & McCartan, 2016). Accepting evidence of fallibilism broadens the research paradigm by encouraging investigating phenomena through a juxtaposition of theory and practice that serve to enhance the investigation and encourage the researcher's motivations and commitment to the topic (Kankam, 2019). Unlike positivism, postpositivism can

be used in studying behavioral phenomena because of its assumption that truth emerges from dialogue, and valid knowledge claims are the results of consensus between conflicting interpretations and action options of members of a given committee (Kankam, 2019). Thus, sociopolitical factors such as power relationships and influences emanating from human groups, as well as scientific groups, influence knowledge formation and accepted beliefs (Robson & McCartan, 2016).

However, postpositivism has its downside. Significant roadblocks exist for real-world researchers opting for a postpositivist research paradigm to guide their study. For example, the degree of control and randomized procedures required by research design under postpositivism may be impossible to attain and unsuitable for certain real-world behavioral studies. Also, the researcher's role in experimental design may be repugnant to some (Robson & McCartan, 2016). Based on these shortcomings, postpositivism was not deemed the right paradigm for this researcher.

Constructivism. Constructivism is also known as constructionism and interpretivism. It emerged in the 18th century, fostered by an argument that distinguished the natural and social worlds and stated social organization and social experiences create perceptions of reality and truth (Ryan, 2018). Constructivists believe reality does not exist in its own right but emerges subjectively and is given meaning, objectified, stabilized, and institutionalized through human social interactions (Chua, 2019; Robson & McCartan, 2016). Constructivism emphasizes the importance of the individual rather than the group, which accounts for its rejection of a single universal reality or worldview. Instead, it recognizes multiple realities and worldviews assumed to emanate from how individuals construct and make sense of their world (Creswell & Poth, 2018; Kankam, 2019; Robson & McCartan, 2016; Ryan, 2018). Hence, the name interpretivism

symbolizes the interpretation given to the world by those experiencing it through social interactions, history, and cultural norms (Creswell & Poth, 2018; Robson & McCartan, 2016). These multiple subjective realities make it incumbent on the researcher to explore complexities of views rather than narrow meanings flowing from a few ideas (Creswell & Poth, 2018). In collecting and analyzing data, qualitative methods are frequently associated with this paradigm. Research predicated on this paradigm can face significant problems accessing the nature of reality due to its multifaceted nature, hence, the dominant use of interviews and observations (Creswell & Poth, 2018; Robson & McCartan, 2016). Based on the preceding, a few aspects of constructivism do not align quite properly with this researcher's worldview.

Pragmatism. Pragmatism originated in the United States in the early 20th century to fill the void created by belligerent views on social reality. It is predicated on practical ideas, and it cautions against excessive idealism and abstraction entrenched in philosophies (Scott, 2016). Pragmatism seeks meaning, and to pragmatists, the meaning ascribed to an idea depends on its practical implications (Kankam, 2019; Robson & McCartan, 2016; Scott, 2016). According to pragmatists, the truth that emerges from meaning is defined as that which works (Robson & McCartan, 2016). Thus, the pragmatist's approach to research inclines towards applying any philosophical or methodological approach that works best in a certain context, for an individual researcher, in investigating a specific problem (Huber & Harvey, 2016). This flexibility is possible because pragmatism does not owe allegiance to any one philosophy or reality (Scott, 2016). Pragmatic researchers deemphasize philosophizing ontology and epistemology and focus on finding answers to how and why something happened (Robson & McCartan, 2016; Scott, 2016). In seeking answers to the "how and why," pragmatism allows the researcher to tweak methodology in the most appropriate way to create compatibility between variables and units of

analysis to produce outcomes consistent with the value system (Teddlie, 2005). Pragmatists believe axiology significantly influences research and its conclusions, and because it is impossible to achieve complete objectivity or complete subjectivity, truth will always be fallible and tentative (Biddle & Schafft, 2015; Johnson & Onwuegbuzie, 2004).

The popularization of pragmatism is explained by the seriousness it confers on the existence of things, structures, mechanisms, and research outcomes, instead of being overly concerned with antecedent conditions as in positivism (Creswell & Poth, 2018; Huber & Harvey, 2016). According to Scott (2016), pragmatism confers onto the research problem a pivotal place and harnesses all appropriate methods that best answer the research questions and eventually help understand the problem. Scott continued to assert this methodological eclecticism is particularly relevant to real-world social research because it permits multiple data collection methods within the same study to enhance results. It also allows a broader view of the practical implications of the research and amplifies the significance of carrying out the study. Moreover, because pragmatic data are generated through and used in both intervention and assessment, the role of the researcher may also be perceived as a change agent. Based on the preceding, pragmatism is considered compatible with this researcher's worldview. Additionally, pragmatic research is driven by anticipated consequences, like those implied from management's constraints responsiveness in implementing ASC 606. Anticipated consequences permit researchers to commence with what they think is known and then, guided by personal values, look for consequences in anticipation of conclusions consistent with their value system (Robson & McCartan, 2016). The beauty of this pragmatism attribute is that it creates a window for the Christian researcher to introduce biblical and Christian axiological implications into the study.

Discussion of Designs

This study was conducted with a fixed design using quantitative methods. Specifically, a nonexperimental correlational design was used. The importance of research design cannot be overemphasized. Conducting research without a research design is likened to attempting to build a house without blueprints (Yin, 2018). Thus, a research design is a preconceived plan for conducting the study (Creswell & Poth, 2018). Research designs are broadly classified as fixed designs (influenced by positivist/postpositivist paradigms), flexible designs (influenced by constructivist paradigm), and mixed designs (influenced by pragmatist/postpositivist paradigms). The primary distinctive attributes of the three designs are briefly discussed below, followed by a closing augment for adopting the fixed design and why the flexible and mixed designs were not considered best suited for this research.

Fixed Designs. Fixed designs usually adopt the quantitative method, and as the name implies, the design is determined prior to conducting the research and known even before collecting data (Jovancic, 2020). According to Robson and McCartan (2016), fixed designs require long periods preparing and collecting data and even longer periods invested in fine-tuning and analyzing data. Fixed designs are used in evaluating phenomena using aggregates. Because data useful in fixed designs must have group properties, it is inappropriate to make inferences on individual behaviors from such datasets (Robson & McCartan, 2016). The researcher must adopt an etic approach in fixed designs to guard against influencing the result. Other issues relating to objectivity, validity, and reliability must be considered and appropriately integrated into the design. The primary characteristics of fixed designs are the objectivity and generalizability of findings. Thus, threats to objectivity and generalizability (external validity)

must be addressed (Robson & McCartan, 2016). The fixed design was deemed the best choice for this research.

Flexible Design. Flexible design has become prevalent because nearly all areas of social research now agree it is possible to carry out quality research from exclusively qualitative data (Robson & McCartan, 2016). Thus, certain types of studies and research questions (how and why something is happening) lend themselves only to flexible design. Flexible design is used to explore phenomena, and unlike in the fixed design where a predetermined design must be adopted at the inception of the study, the flexible design usually emerges and develops during data collection when the big picture and all perspectives of the study become obvious (Robson & McCartan, 2016). Thus, the name flexible emanates from the notion that the design is much the creation of the researcher, through adding or subtracting elements to or from what is known as flexible design traditions (e.g., case study, phenomenology, ethnography, narratives, grounded theory) (Robson & McCartan, 2016). Therefore, it is suitable for complex inquiry into participants' mindsets and behavior patterns (Jovancic, 2020). Unlike fixed design that deals only with aggregates to discover group patterns, qualitative data can be used to infer individual behavior (Robson & McCartan, 2016). According to Robson and McCartan (2016), the key characteristics of a flexible design are: it permits multiple data collection techniques, the study starts with a single idea that the researcher wishes to understand, the study is set out with the assumptions and characteristics of flexible design, the tradition must not be pure as other procedures can be integrated, data are analyzed using multiple levels of abstraction. The flexible design was not considered the best design for this research considering the nature of the research questions and the research purpose.

Mixed Design. The mixed design emerged in the 1990s (Johnson & Onwuegbuzie, 2004). The mixed-methods design was developed to breach the gap between fixed and flexible designs and therefore has been strongly influenced by pragmatism and postpositivism (Giddings & Grant, 2007). It is also referred to as a multi-strategy design because, aside from mixing methods, it may also adopt multiple strategies in answering the research questions (Robson & McCartan, 2016). Early critique referred to as the "incompatibility thesis" agued blending qualitative and quantitative methods in a single study is not possible because both are influenced by opposing paradigms. This argument no longer has a place in contemporary research since Howe (1988) produced evidence that mixing the two methods is not only good but there are cases where not mixing them would be unproductive. According to Denscombe (2008), as cited by Robson and McCartan (2016), key defining attributes of mixed designs are: the quantitative and qualitative methods exist within the same study, and the research design specifies the sequencing and priority that is accorded each method's data collection and analysis. It accounts for how the methods relate to each other or complement each other in the study, and it is predicated on the pragmatic philosophical ideology. Some advantages accruing from using the mixed design are the use of triangulation, its ability to offset the weakness of a single method, and producing a complete and comprehensive picture of the phenomenon (Robson & McCartan, 2016). Despite these attractive attributes the mixed design was not considered ideal for this research considering the research questions and the research purpose.

The Appropriateness of Fixed Design. The overarching theme of this study's research questions was how specific implementation CSFs and ASC 606 implementation outcomes covary. Based on the associational nature of the research questions and consistent with Morgan et al. (2013), the quantitative method with a fixed design was adopted. Moreover, because the

research was an evaluation study focusing on outcomes, the fixed design was considered the most appropriate (Robson & McCartan, 2016). Also, the nature of the investigated phenomenon required adopting theories that predict expected results. The fixed design made linking those theories to the phenomenon and developing a conceptual understanding of the phenomenon prior to the study straightforward and practicable. The combination of theories and conceptual understanding made it possible for variables to be identified and specified in advance and the procedure for the research predetermined. According to Robson and McCartan (2016), in a pragmatic sense, theories and conceptual understanding give the researcher a clear idea of mechanisms likely to be in operation and the context in which they will or will not operate. Another justification for the fixed design is that because the research studied implementation behavior at the organizational level, the fixed design, unlike the flexible design, made aggregating individual behaviors possible. With these considerations, the flexible and mixed methods were not deemed the best designs for this research. A flexible design would have been appropriate if the focus of the evaluation was on the process of the intervention. Equally, the mixed design would have been the best choice if focusing on both process and outcomes (Robson & McCartan, 2016).

The decision to adopt the fixed design was followed by deciding on the method. There are three broad methods associated with the fixed design: experimental, quasi-experimental, and nonexperimental methods. In business research, the choice always falls on the nonexperimental method due to complexities and ethical issues associated with achieving randomized allocation to experimental and control groups. Furthermore, Pawson and Tilley (as cited by Robson & McCartan, 2016) asserted randomized control trials are inappropriate for dealing with complex social issues because, aside from creating conflicting findings, its overbearing emphasis on

outcomes precludes approaches to understanding its influencers. Accordingly, it cannot explain why an intervention succeeded or failed. Robson and McCartan concluded that the randomized control trials requirement for experimental designs is historically inaccurate and comes with a myopic understanding of what constitutes evidence. Morgan et al. (2013) also asserted if the study proposes only attribute independent variables, the nonexperimental method is the only viable approach. Based on the preceding, the nonexperimental approach was considered the best for this research. However, there are three specific methods associated with the nonexperimental approach. The case for the best was delineated in the section discussing methods.

Discussion of Method

The research was conducted using quantitative methods. Evidence to answer associational research questions is best obtained through quantitative methods (Curtis, 2016; Morgan et al., 2013). Also, quantitative studies are based on theories and concepts predicated on deductive reasoning as a foundation for hypothesis testing (Sale et al., 2002). Conclusions reached through quantitative studies are drawn from a relatively larger sample size and data collected through highly structured questionnaires with a limited range of predetermined responses (Sale et al., 2002). The quantitative methodology is prevalent in the policy arena and implementation science because policymakers are interested in questions that show the superiority of one program over another or the effectiveness of policy implementation (Kastner et al., 2016). According to Gobo (2015), answering such questions requires quantitative evidence. Accordingly, the nature of research questions remains the single most important determinant of the research method (Robson & McCartan, 2016; Umstead & Mayton, 2018). Based on the preceding and in cognizance of this study's associational type research questions, the obvious appropriate research methodology was quantitative. Many similar studies have used

quantitative methods to measure the relationship between program implementation variables, especially in education, human services, and healthcare sciences. To mention a few, Abbott et al. (1998) used quantitative methods to investigate the effects of implementing modified teaching strategies in grades five and six on school-related outcomes. Aarons et al. (2009) used quantitative methods to study the impact of organization type and organizational support for evidence-based practice (EBP) on provider attitudes towards EBP and EBP use. Powell et al. (2017) measured the extent to which organizational context and strategy predict determinants of implementation. However, the question was: Which specific quantitative method would be most appropriate from the array available under the nonexperimental approach?

Specific Quantitative Methods. There are three types of quantitative methods associated with a fixed design and nonexperimental method: descriptive, causal-comparative, and correlational. Each is discussed briefly, followed by a justification for the appropriateness of the chosen method.

Descriptive Method. The descriptive method is used to obtain information about the current status of a phenomenon and subsequently describe its natural characteristics as they exist without manipulating any variable (Nassaji, 2015; Siedlecki, 2020). The method is more concerned with discovering "what" has happened rather than how or why something has happened (Nassaji, 2015). Thus, the descriptive method studies the characteristics of a population to identify a problem or discover the variation in characteristics or practice (Ivey, 2016; Siedlecki, 2020). Most descriptive studies intend to generate hypotheses rather than testing hypotheses. Consequently, a study can have as few as one variable, and even when multiple variables are used, there is no distinction between independent and dependent variables (Siedlecki, 2020). For example, in Kikuchi's (2009) descriptive research that studied leading

demotivating factors in Japanese classrooms, factors that demotivate students were the variables of interest. The method had no use for labeling independent or dependent variables because descriptive research questions are not answered with inferential statistics (Morgan et al., 2013). Data on a single variable are summarized and described in relation to their central tendencies, variability, or percentages in each category (Morgan et al., 2013). The descriptive method is used widely in education research (Atmowardoyo, 2018; Nassaji, 2015) and healthcare research (Ivey, 2016; Siedlecki, 2020). The descriptive method can be used in qualitative and quantitative studies (Atmowardoyo, 2018; Nassaji, 2015; Siedlecki, 2020). The descriptive method was not considered a viable method for this research because the study tested hypotheses and went beyond a mere description of a phenomenon. Eliminating the descriptive method limited the choice to causal comparative and correlational methods. The two are jointly discussed below because of their similarities.

***Causal Comparative and Correlational Methods*.** Causal comparative and correlational methods belong to the quantitative descriptive method category (Lenell & Boissoneau, 1996) to evaluate relationships between variables (Morgan et al., 2013; Umstead & Mayton, 2018). Thus, the two have striking similarities and some significant differences (Lenell & Boissoneau, 1996; Umstead & Mayton, 2018). Both study the relationship between attribute independent variables and dependent variables based on the nonexperimental approach (Morgan et al., 2013; Umstead & Mayton, 2018). They are both ex post facto (after the effect) research methods (Umstead & Mayton, 2018) because the researcher uses variables with preexisting attributes that cannot be manipulated (Morgan et al., 2013; Umstead & Mayton, 2018) to investigate the relationship between or among groups that predate the study (Umstead & Mayton, 2018). Additionally, because both methods use attribute independent variables and not active independent variables,

they are inherently incapable of inferring direct causation (Morgan et al., 2013; Umstead & Mayton, 2018).

The primary differences between the two are the number of variables, the number of groups being studied (Umstead & Mayton, 2018), and the nature of their research questions (Morgan et al., 2013). While the correlational method studies the relationship between two or more independent and dependent variables within a single group, the causal-comparative method, alternatively, compares two or more groups on a dependent variable, with the groups of interest being the independent variables (Umstead & Mayton, 2018). Additionally, while the research questions in the correlational method are associational, those in the causal-comparative method are different research questions (Morgan et al., 2013). Thus, the causal-comparative method investigates causal relationships by comparing two or more different groups (attribute independent variables) to demonstrate that groups differ on the dependent variable (Lenell & Boissoneau, 1996; Morgan et al., 2013; Umstead & Mayton, 2018). Because the causal-comparative method is used by researchers to investigate if differences between groups influence the dependent variable, the study may include treatment groups and control groups (Lenell & Boissoneau, 1996). However, unlike in experimental designs, the control group is not randomly allocated by the researcher but exists because of natural conditions that occurred in the past (Lenell & Boissoneau, 1996; Umstead & Mayton, 2018). A comprehensive description of the causal-comparative design is Kerlinger's (1994) definition cited in Lenell and Boissoneau (1996):

> Ex post facto [causal comparative] is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulatable. Inferences about

> relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables. (p. 60)

For example, a study investigating the effect of total quality management (TQM) on performance can be studied using causal-comparative design if the research question is posed as: Do organizations that adopt TQM differ from those that ignore TQM regarding their performance? The researcher will use appropriate difference inferential statistics such as *t*-test and analysis of variance (ANOVA) to test if aggregate average scores between groups differ. According to Lenell and Boissoneau (1996), difference inferential statistics will not reveal the full extent of the relationship between the independent and dependent variables. Thus, a researcher willing to obtain a bigger picture of the study will also use correlational statistics to test the relationship between TQM and organizational performance, assuming the difference in aggregate average score was statistically significant. Therefore, the causal-comparative method was deemed inappropriate for this study because the research questions were not different, and the study did not compare different groups.

The Appropriateness of Correlational Method. The correlational method intends to determine if changes in a variable (independent) are related to positive or negative changes in another variable (dependent) (Curtis, 2016; Umstead & Mayton, 2018). Morgan et al. (2013) posited correlational design is ideal for studies with independent variables with continuous measurement and many ordered levels. This method was the best choice for this research because the study was interested in knowing if changes in two or more implementation CSFs with many ordered levels cause a positive or negative change on ASC 606 implementation outcome within groups (construction industry). Since all the research questions are associational questions that naturally lend to correlation, regression analysis best addressed them (Curtis,

2016; Morgan et al., 2013; Umstead & Mayton, 2018). Thompson et al. (2016) distinguished two correlational methods: statistical-based (used in experimental method) and logic-based (used in nonexperimental method). Thompson et al. went on to explicate that although all parametric statistics yield correlational evidence, it is important to specify the sources of the evidence based on the method yielding the evidence. Accordingly, specifying the specific source (method) of correlational evidence in the design gives the researcher the opportunity to adopt strategies early in the study, consistent fixed design, to avert design limitations that may obfuscate results. Based on the research questions and consistent with the literature, this researcher found the logic-based correlational method appropriate for this research.

Summary of Nature of the Study

This section discusses various research paradigms, designs, and methods and explicates the rationale for the researcher's affinity to pragmatism. It also expounds on the rationale for adopting the fixed design and nonexperimental correlational quantitative method for this research. The decision for the fixed design was based on the associational nature of the research questions and the need to test hypotheses. The nonexperimental correlational method was informed by two features inherent in the research, comprising its ex post facto nature and the focus on attribute independent variables. The goal was to study how the independent variables covary with the dependent variables within groups in general.

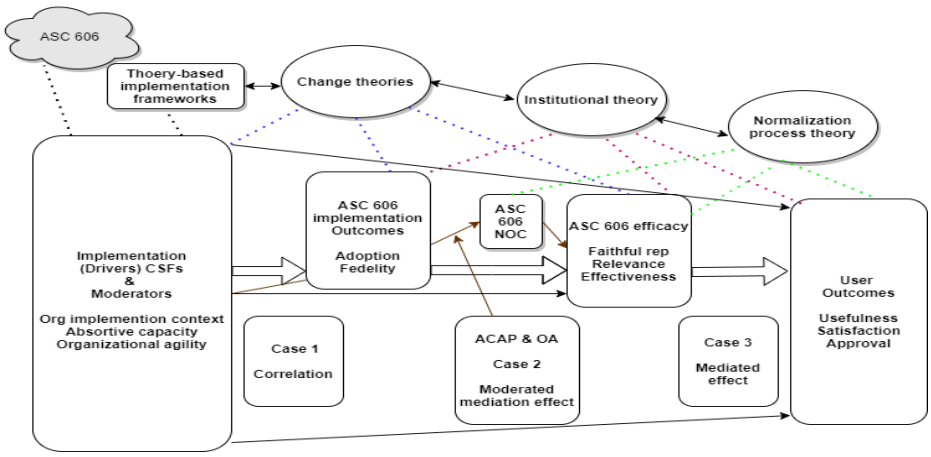
Theoretical Framework

This section unveiled the concept diagram and a narrative about the logical relationships among theories, variables, and actors implicated in the research problem. Together they constitute the theoretical framework (TF) that guided this study in understanding organizations' ASC 606 implementation footprints and how they impacted implementation outcomes. Grant and

Osanloo (2014) described the theoretical framework as a blueprint that guides the researcher in amalgamating epistemology and methodology into a coherent structure that addresses the research problem and data collection and analysis. The TF embodies definitions and concepts rooted in theories that expound the researcher's worldview on the research topic, the choice of variables, and the plan for carrying out the research (Grant & Osanloo, 2014). Therefore, the TF must align with the research problem and purpose and even more with the research questions (Grant & Osanloo, 2014). This alignment accounts for the importance accorded the discussion of relationships between theories and variables, and consistent with Grant and Osanloo, the discussion was conceived to clearly demonstrate how research questions are apprised by relevant theories. A recommended method of showing relationships is through a creative concept diagram (Grant & Osanloo, 2014). The concept diagram serves the dual purpose of mapping theories with variables and acting as a blueprint that establishes the linchpins and defines the structure of the investigation (Grant & Osanloo, 2014). Green (2014) also agreed the concept diagram captures the essence of the research by asserting it provides the rationale for the research questions and ensures coherency with the research purpose, design, and literature review. Figure 1 portrayed the concept diagram for this research and showed how theories coalesced and interrelated with variables.

Figure 1

Interrelationship Between Theories and Variables



Theories

A theory is a proven and generally accepted principle explaining certain aspects of the natural world that may constitute the basis of a practice (Ayers & Olander, 2013). In scholarly research, theories are used to develop a theoretical framework to shed light on a phenomenon by providing the analytical basis for understanding relationships between elements in the phenomenon (Ayers & Olander, 2013). Green (2014) described a theoretical framework as an organized and systematic set of interrelated statements (concepts) specifying the nature of relationships between variables in view of understanding a research problem. In that regard, this study proposed a theoretical framework based on three theories, seven variables, and principal actors implicated in the research problem. The rationale for adopting a multifaceted theoretical lens was based on the belief that one theory scarcely fully addresses complex phenomena (Hooker & Taft, 2016; Mazzocchi, 2019). This belief is consistent with Fernando and Lawrence's (2014) assertion that basing research on more than one theory results in a deeper understanding of a phenomenon. Rather than pitting the theories against each other, they must be applied complementarily, with one making up for the limitations of the other (Bertram et al.,

2015; Collin et al., 2009). However, the difficulty of finding appropriate theories within the accounting discipline to support accounting research is on record as an age-old dilemma (Mazzocchi, 2019).

Mazzocchi (2019) expounded in the 1960s, disciplinary research was driven by scientific theories and concepts embedded in the historical context of disciplines, and innovations within one discipline versus another accounted for the variety and quality of theories emerging within the discipline guiding its research. Though some inroads were made into research due to disciplinary theories, Mazzocchi postulated the greatest limitation of disciplinarity is the narrowing of the intellectual horizon, resulting in what has become known as *learned ignorami*, characterizing people who are experts in their disciplines but are unable to see beyond it. During that dispensation, scholarly accounting research made only small steps due to the want of theories and the reductionist nature of the few that existed (Dillard et al., 2004). More recently, the popularization of interdisciplinarity has enhanced research and knowledge by pooling theories through multidisciplinarity, interdisciplinarity, and transdisciplinarity (Aldemir & Uysal, 2017; Mazzocchi, 2019). However, selecting appropriate theories from the universe of theories requires a thorough literature review to assess compatibility and relevancy based on what is to be measured and how it will be operationalized (Ayers & Olander, 2013). Because theories may be too reductionist or very broad in scope and vary in quality (Ayers & Olander, 2013), the choice of theories must be predicated on their predictive and explanatory attributes, such that it can be expressed as a directional statement of a positive or negative relationship between two variables (Aksom & Tymchenko, 2020). With that in perspective and consistent with Nilsen (2015), this study adopted the institutional theory (INT) and change theories (CTs) from classical organizational theories and the normalization process theory (NPT) from implementation

science. The choice of these theories was predicated on the fact that the study focused on implementation outcomes, and according to Hooker and Taft (2016), impact theories such as CTs and NPT are more explanatory and predictive of determinants that facilitate change, and, therefore, congruent with implementation research evaluating the outcome. Each of the theories adopted to guide this study in explaining the ASC 606 implementation phenomenon embraced the theme emanating from the research problem and had attributes underscored in Aksom and Tymchenko (2020). The following paragraphs reviewed the primary attributes of each theory along with its relatedness to the research questions and variables of interest.

Institutional Theory. Neo-INT emerged from Meyer and Rowan's (1977) and DiMaggio and Powell's (1983) groundbreaking empirical evidence that organizations in a common field tend to adopt similar practices without regard to the consequences of those practices on efficiency (Aksom & Tymchenko, 2020; Suddaby et al., 2016). Scott (1987) traced the earliest variant of INT to ideas expressed by Philip Selznick in 1957. According to Scott, Selznick perceived institutionalization as a vehicle through which organizations become part of a natural community by embracing value and supplying intrinsic worth to a structure or process that before institutionalization was merely instrumental utility. Thus, INT explains structures and processes organizations adapt to conform with the institutional environment in which they operate (Aldemir & Uysal, 2017). It has been established that organizations do not survive only through being productive and profitable but also through institutionalizing themselves by responding to socially accepted norms (Aldemir & Uysal, 2017). Scott posited that by conforming to a set of institutionalized beliefs, organizations are rewarded with increased legitimacy, resources, and survival capabilities. Other variants of INT described it as an instrument for social order and shared reality. However, Neo-INT seeks to explain why

contemporary organizations are becoming increasingly homogeneous (Greenwood et al., 2014). This new institutional theory pioneered by DiMaggio and Powell introduced the concept of organizational isomorphism (Aldemir & Uysal, 2017).

According to DiMaggio and Powell (1983), structural changes occurring within organizations seem less driven by the need for efficiency and more by processes that make organizations homogeneous. The concept that captures increased homogenization is isomorphism. Isomorphism is the increased pressure on an entity in a population to resemble other entities facing similar social conditions. At the organizational level, the concept suggested that organizational characteristics are modified to conform with environmental characteristics. More recently, INT has also been used to explain change processes, focusing on how firms in an organizational field resist isomorphism by defying certain institutionalized pressure for conformity (Suddaby et al., 2016). According to Suddaby et al. (2016), within recent INT, studies have identified certain organizational actors who are less vulnerable to isomorphic pressure because of size, power, and boundaries enacted by structural and social positions.

This research studied the research problem through the lens of INT. As construction companies delayed ASC 606 implementation, INT helped understand if the delay was an attempt to defy institutionalization by, as Suddaby et al. (2016) put it, resisting the constraining factors of their organizational field due to size or their structural position in a social field. How that played with coercive isomorphism embodied in neo-INT and pressure from regulatory agencies predicted the eventual stance of construction companies. Through neo-INT, the study predicted construction companies' eventual implementation of ASC 606 not because they were convinced it offers better methods of revenue reporting for them but because social pressure was immense, and the consequence of non-compliance was dire. Additionally, construction organizations were

eventually forced into streamlining their implementation strategies. This is because isomorphism dislodges suboptimal practices in organizations by correcting organizational decision-makers' behaviors by coercing institutionalized responses to a problem (DiMaggio & Powell, 1983).

Change Theories. Literature attributes the origin of CTs to Kurt Lewin (Bakari et al., 2017; Burnes, 2015; Endrejat et al., 2017; Shirey, 2013), a social psychologist who was immersed in studying group dynamics (Shirey, 2013) to gain an understanding of how social conflicts are resolved through altering behavior (Bakari et al., 2017). Lewin's original postulation was premised on the understanding that behavior is a function of a group's environment. Thus, identifying forces driving or restraining behavior enhance understanding of why individuals, groups, and organizations behave the way they do and what needs to be repressed or invigorated to bring about change (Shirey, 2013). Many innovations have failed because of management's ineptitude in dealing with change associated with their implementation (Kumar Basu, 2015). Lewin's theory of change offers a framework for understanding and dealing with change to avoid pitfalls resulting from inadequate change responses (Shirey, 2013). According to Bakari et al. (2017), Lewin's three-step model for managing change is popular in change literature due to the mechanisms it offers leadership in managing intervention and employee behavior during organizational change. Lewin's three-step management model encompasses *unfreeze*, *change*, and *refreeze*. *Unfreeze* represents the stage at which the organization is open to embracing the change that is about to happen. Management support and persuasive messaging emphasizing the importance of the change are primordial requisites at this stage. *Change* is the stage at which the new practice is introduced. At this stage, the group must be sensitized with new procedures and tasks along with messages elucidating the benefits to staff and the organization.

Once the change is successfully embedded, the organization must *refreeze* through normalizing and institutionalizing the practice. A complementary study by Armenakis and Bedeian (1999) incorporated aspects of social learning theory to construct a similar three-step model comprising *readiness, adoption* and *institutionalizing*. *Readiness* is the stage where the organization overcomes resistance and prepares all departments for the change. It then adopts and institutionalizes the change. Lewin's and Armenakis' models are complementary because, according to Armenakis, *unfreezing* is achieved through creating change *readiness*. Once change readiness is created, it must immediately be followed by providing incentives, *adopting* the change, and *refreezing* the behavior once the change goals are met (Bakari et al., 2017). Change literature suggests an amalgam of restrainers and drivers that apply to any of the three stages and which this researcher considered in suggesting some variables of interest. Therefore, change theory improves knowledge of factors that restrain or drive change and facilitates predicting their effects on ASC 606 implementation outcomes. The three-step model for managing change also informed strategies required in introducing, embedding, and integrating ASC 606 processes.

Normalization Process Theory. NPT provides a profound understanding of what must be done at the *refreeze* stage of the change management model. According to Wood (2017), NPT provides insight into how practices are introduced and become activities within organizations (implementation), how the practice is routinized as part of individuals' and groups' daily activities (embedding), and finally, how embedded innovation remains relevant and sustainable over time (integration). Thus, innovation implementation, embedding, and integration are the mainstay of NPT and collectively provide a framework for "understanding how particular material practices are rendered as doable in specific institutional settings" (May & Finch, 2009, p. 535). NPT enhances predictions on the sort of context most favorable for a successful

innovation implementation (Hooker & Taft, 2016). Thus, NPT provides implementation scholars an empirical means of identifying factors that hamstring innovation and render embedding change in an organizational context problematic (May & Finch, 2009; McEvoy et al., 2019). More than that, NPT is used to understand how structures and other cognitive implementation resources are mobilized and what mechanisms cause variations in implementation outcomes (May et al., 2018). In addition, it serves as an instrument to improve intervention design and discover facilitating pathways to structures that enhance implementation and outcomes (Finch et al., 2018; McEvoy et al., 2019).

Elements of NPT are directly connected with aspects of the research problem and accordingly provide relevant guidance on investigating the phenomenon. Implementing ASC 606 is only the first step in the process that must culminate in rendering quality revenue reporting. Applying principles contained in ASC 606 effectively and efficiently depends on the quality of ASC 606 normalization. Thus, suboptimal normalization context may result in implementation infidelity making the practice ineffective and inefficient (Bertram et al., 2015). NPT permitted this researcher to identify mechanisms directly associated with enhancing ASC 606 normalization. The import of this process, especially in construction companies that exhibited initial implementation apathy, cannot be overemphasized. Because it could not be known if the apathy would be completely eradicated after ASC 606 implementation or would persist and disrupt everyday ASC 606 practice, management must be guided by NPT to ensure the latter is not the case. Studies such as Toye (2016) have emphasized the difference between implementation and practice. Toye asserted though a new practice may appear successfully implemented, it may not be appropriately and comprehensively utilized, thus eroding the effectiveness of the practice. Also, Wood (2017) postulated unless actions are taken early in the

change process to normalize a new practice, it can result in fracturing within the organization, with some subgroups becoming decenters. According to Wood, this may result in a situation where the new practice appears as successfully implemented and shows positive results during evaluation but are practically absent in everyday practice. This is the scenario emphasized in NPT, and its help in identifying mechanisms that can be manipulated to enhance normalization. Thus, the effectiveness of ASC 606 depends on how it is integrated into routines (normalized). NPT provides a framework for comprehending barriers and enhancers of normalizing (Toye, 2016).

Actors

Creswell et al. (2010) defined actors as the "source of an action regardless of its status as a human or non-human" (p. 2). In cognizance of this definition, the following actors were identified as implicated in ASC 606 implementation and normalization.

Construction Companies. These are sample organizations in the construction industry in the Mid-Atlantic United States.

Manager. The manager is the highest-ranking officer in a construction company responsible for taking major decisions and implementing the decisions of the board of directors. The manager sets the tone at the top for a change-embracing culture.

Chief Financial Officer. Their technical knowledge in accounting comes in handy in advising the CEO on specific ASC 606 platform changes. The embedding or normalization of ASC 606 falls within their purview.

Auditor. Their role in assessing risk and internal control is important in assessing changes in the control environment needed to accommodate the new guidelines.

IT Director/Manager. The IT manager is responsible for developing and maintaining the information technology system. This role is important in streamlining and configuring the IT system to capture and process ASC 606 data.

Legal Advisor. Their role is important in ASC 606 implementation because the timing of revenue recognition under the new guidelines depends on when contractual rights and obligations accrue to parties. They advise management about the terms involved in contracts and how they affect timing.

Accounting Staff. Making the embedded new practice everyday accounting work requires the commitment of all accounting personnel whose dedication to the new practice guarantees its sustainability over time.

Variables of Interest

Calder et al.'s (2021) simple yet compelling description of variables principally captured the focus of ex post facto outcome evaluation research. Calder et al. described variables as factors in empirical research that are experimentally manipulable or measurable to provide insight into how the state of one predicts the state of another. In other words, because the independent variable causes an effect on the dependent variable, it has been established that in the absence of the independent variable, the dependent variable will not change. Considering the principal focus of this research is ASC 606 implementation outcomes, it was crucial to identify factors embodied in theories that cause changes in outcomes. However, some research scholars, such as Price et al. (2010), posited so much goes into research, such as finding a research topic, reviewing research literature, crafting research questions, designing the study, obtaining institutional review board (IRB) approval, recruiting participants, producing the survey, identifying variables and much more, to end up measuring only one dependent variable or a

simple relationship. Not to waist such efforts, it is beneficial to investigate the effects of independent variables on more than one related dependent variables to gain more insight into the phenomenon. This can be done by just asking a few more questions that do not require significant additional resources. In this light, though this research's principal focus was on implementation CSFs and ASC 606 implementation outcomes, the researcher wanted to know how the independent variables also relate to ASC 606 efficacy and organizational legitimacy and mechanisms through which the independent variable cause changes in the dependent variables. Accordingly, the following were identified as variables of interest.

Organizational Implementation Context. OIC is the inner characteristic of an organization that is relevant to innovation implementation. The a priori assumption was that its state either enhances or inhibits innovation implementation. Thus, it was an independent variable in Study 1 and 2 and was measured through its three focused subscales: strategic implementation leadership, strategic implementation climate, and implementation citizenship behavior.

Absorptive Capacity. The organization's absorptive capacity determines the quality of implementation outcomes variables. ACAP assumed the status of the independent (predictor) variable in Study 1 and the moderating variable in Study 2. According to MacKinnon et al. (2011), if the relationship between an independent variable and dependent variable is variant at various levels of a third variable, then the third variable is a moderating variable. The a priori assumption was that organizations with optimal absorptive capacity would have optimal implementation outcomes, efficient ASC 606 delivery, and strong organizational legitimacy.

Organizational Agility. An organization's ability to be flexible and speedy in responding to turbulence in its external environment has become a critical success factor, which, according to Harraf et al. (2015), distinguishes high-performing organizations from those

floundering. Harraf et al. stated that agility measures responsiveness to an anticipated external stimulus that proves an organization's overall flexibility. Considering most companies in the construction industry were caught flatfooted in ASC 606 implementation brings into question their flexibility and change adaptability. OA was an independent variable in Study 1 and a moderating variable in Study 2.

ASC 606 Normalization Context. ASC 606 NOC is the totality of actions taken to normalize and embed ASC 606 into everyday routines. Normalization context represents practical changes made within an organization to accommodate a new practice. It must include developing skillsets and making resources available to staff. Therefore, innovation normalization includes accepting the new practice and making its delivery effective (Rapley et al., 2018). How well that is effectuated predicts the quality of service (ASC 606) delivery and, by extension, the organization's public acceptance. Thus, ASC 606 NOC is a mechanism that causes changes in outcomes variables. ASC 606 NOC was a mediating variable in Study 2.

606 Implementation Outcomes. ASC 606 IO is the extent to which ASC 606 was implemented with fidelity. Implementation outcomes have been used in implementation research as a dependent variable because when implementation is successful, it is hypothesized to optimize the balance between the innovation's quality and its cost (Fulop et al., 2016). However, it can also predict higher-level implementation outcomes (Proctor et al., 2011). The a priori assumption was that ASC 606 IO is likely to influence the overall efficacy of ASC 606 (quality revenue reporting). Therefore, it was assumed that both ASC 606 IO and ASC 606 efficacy have properties that permit them to predict each other. Thus, ASC 606 IO was a dependent variable in Study 1, a mediating variable in Study 2, and a predictor variable in Study 3.

ASC 606 Efficacy. ASC 606 efficacy is how well the implemented new practice does what it intends to do: minimize revenue recognition issues and improve the quality of revenue reporting. This related to the problem statement based on the a priori assumptions that ASC 606 efficacy enhances quality revenue reporting and thus has properties capable of causing a change in organizational legitimacy. ASC efficacy was a dependent variable in Study 2 and a mediating variable in Study 3.

Organizational Legitimacy. OL is public acceptance of an organization, the existence, values, and behavior of which appear to conform to socially accepted norms. Accordingly, organizational legitimacy involves four broad dimensions: environment, competition, accountability, and transactions (Vergne, 2010). This study measured OL following a reclassification that constricted OL dimensions into two proxies: social legitimacy and issue legitimacy (Chung et al., 2016). How this variable related to the research problem is based on the a priori assumption that both ASC 606 IO and ASC 606 efficacy enhance quality revenue reporting, a precursor of organizational legitimacy. OL was a dependent variable in Study 3.

Relationships Among Theories, Variables, and Actors

Grant and Osanloo (2014) asserted establishing a relationship between theories and variables is an important step in research because it guides the research and eliminates the temptation of incorporating variables that do not relate to the underpinnings of theories. Grant and Osanloo further posited evidencing the relationship between theories and variables early lends credence to the usefulness of the research findings. Additionally, a well-articulated relationship between theories and variables helps a reader understand how the research problem is situated in a theoretical context. Creswell et al. (2010) postulated the way realities are experienced and enacted by different actors explains the relationship between actors and

variables, which provides insight into roles that contribute to the research problem. Considering the preceding and multiple research findings linking implementation fidelity to program outcome (Duerden & Witt, 2012), this section expounds on the relationships among theories, variables, and actors. These relationships are based on the understanding that the implementation system and the new practice work together to produce the desired outcome (Bertram et al., 2015; Proctor et al., 2011). Therefore, components of the implementation system such as actors' characteristics, social structures of organizations, interorganizational relationships, actors' internal and external social contexts, and broader societal factors impact implementation, and their interrelatedness are even more impactful (Duerden & Witt, 2012). CTs, INT, and NPT were adopted to explain and predict these characteristics and help in analyzing ASC 606 implementation outcomes.

CTs explain organizational readiness (flexibility) to adapt to social dynamics, and flexible organizations are perceived as agile (Harraf et al., 2015). CTs were used to understand an organization's agility in implementing ASC 606 and effectuating changes necessary to normalize it. Additionally, CTs have been associated with an organization's absorptive capability (Duchek, 2015). How an organization absorbs new knowledge and uses it to commercial ends dictates its readiness to adapt and embrace change (Duchek, 2015; Vasconcelos et al., 2019). CTs also link leadership, especially transformational, to change readiness. Transformational leaders have the ability to alter behavior to create specific desirable conditions to achieve specific outcomes (Richter et al., 2016; Wong et al., 2013).

Similarly, INT has been used to explain similarities in organizational structures (Dillard et al., 2004). Therefore, organizational implementation context can be influenced by institutional dynamics that drive actors' responses to organizational policies, practices, and procedures. To a

greater extent, policies and practices become homogenized when actors' interpretations of reality are institutionalized, permitting practices of successful organizations to be mimicked, especially during periods of uncertainty (DiMaggio & Powell, 1983). Such mimetic isomorphism permits organizations to stay in lockstep with social norms and best practices, increasing organizational legitimacy (Csaszar & Siggelkow, 2010). Accordingly, INT is positively related to organizational implementation and normalization contexts that offered explanations for variations in ASC 606 implementation outcomes and ASC 606 efficacy. INT literature can also predict the behavior of late implementers.

Actors in construction companies were highly mimetic of the normalization practices of early adopters. The implementation and normalization strategies of early successful principal actors became institutionalized and benchmark models. Innovation implementation through mimicry is more effective and more likely to generate anticipated outcomes when expected users are similar. Similarities derived from institutionalization ensure that firms implementing the same set of practices achieve the same level of outcomes (Csaszar & Siggelkow, 2010). However, achieving the same level of outcomes may be impracticable because implementation fidelity is determined by the absorptive capability that varies between organizations. Last, theories provided tools for understanding the relationship between ASC 606 implementation outcomes and ASC 606 efficacy and how both are optimal under enhanced OIC and ASC 606 NOC conditions. In turn, optimal levels of ASC 606 IO and ASC 606 accounted for increased organizational legitimacy.

Summary of Theoretical Framework

This section unveils the concept diagram and discusses the three theories that together constitute the theoretical framework. The TF guided this study in understanding the research

problem and selecting variables of interest. The section culminates in a discussion of the relationships among theories, variables, and actors and their connection with the research problem.

Definition of Terms

To bolster the understanding of this study, the following terms connected to the ASC 606 implementation phenomenon were defined in the context of the research problem.

Absorptive capacity: an organization's capability to acquire, assimilate, transform, and exploit knowledge (Zahra & George, 2002).

Actors: all stakeholders in an organization involved in innovation implementation (Proctor et al., 2013).

ASC 606 implementation dynamics: interactions between actors that shape behavior patterns that impact implementation CSFs (Gunn & Eberhardt, 2019).

ASC 606 efficacy: the extent to which the implemented ASC 606 is achieving its objective, that is, accomplishing what it is supposed to do, also defined as the intended benefits arising from implementing ASC 606 (Fulop et al., 2016).

ASC 606 implementation outcomes: the degree to which an innovation is implemented with fidelity and sustained within an organization's ongoing stable operations (Proctor et al., 2010).

ASC 606 normalization context: an assemblage of characteristics and actions within an organization involving changes made to processes, the control environment, and IT solutions necessary in embedding ASC 606 guidelines into everyday revenue recognition routines (Knachel, 2016; May & Finch, 2009).

Implementation critical success factors: a few key areas where "things must go right" for an implementation agenda to succeed (Ram et al., 2013, p. 158).

Innovation: an idea, a practice, or object perceived as new by an implementer (Rogers, 2003).

Organizational agility: an organization's ability to anticipate change in its environment and proactively respond in a timely and efficient manner to consolidate its competitiveness (Cegarra-Navarro & Martelo-Landroguez, 2020; Nafei, 2016; Teece et al., 2016; Zitkiene & Deksnys, 2018).

Organizational implementation context: an assemblage of characteristics within an organization encompassing strategic implementation leadership, strategic implementation climate, and implementation citizenship behaviors that are intrinsically relevant to the objective of innovation implementation (Lyon et al., 2018).

Organizational legitimacy: the acceptance and endorsement of an organization by a segment of society large enough to ensure its effectiveness and survival (Derakhshan et al., 2019; Elsbach & Sutton, 1992; Etter et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions are basic ideas or beliefs considered true but without any empirical evidence, which exist to provide the basis for developing a study. According to Leedy and Ormrod (2016), assumptions are so fundamental in their absence, the research problem loses its substance and ceases to exist. Vogt and Johnson (2015) defined assumption either as (a) a statement held as truth, albeit temporary, made in prelude to conceiving a theory, comparing axioms or hypothesis, or (b) the condition under which statistical techniques yield valid results. Limitations, alternatively, are vulnerabilities in the study the researcher cannot control, which

place restrictions on the methodology and thus influence outcomes conclusion (Roberts, 2010; Ross & Bibler Zaidi, 2019; Simon, 2011). In most cases, any assumption made becomes a limitation of the study (Dusick, 2015). However, some typical areas of limitations in research include methodology constraints, sample size, response rate, length of the study, availability of resources, and time (Roberts, 2010; Wargo, 2015). Delimitations on their part are aspects the researcher can control (Dusick, 2015; Simon, 2011) and are intrinsic decisions the researcher makes to limit the scope of the study (Simon, 2011). The first delimitation is stating the problem (Simon, 2011), with others being the objectives, the research questions, variables of interest, theoretical framework, participant selection, study sample (Simon, 2011; Theofanidis & Fountouki, 2018), as well as boundaries set to constrict the study to a narrower topic and confining the study to a specific industry or delineated geographical area (Simon, 2011). Considering these insights, this study was based on the following assumptions, limitations, and delimitations.

Assumptions

This study was based on four assumptions: (a) bona fide responses to the questionnaire, (b) participants are homogeneous, like-minded, and have experienced the same ASC 606 implementation phenomenon, (c) variables are accurately defined and are measurable with a reliable and valid test, and (d) the theoretical framework accurately reflects the ASC 606 implementation phenomenon. The primary assumption was predicated on the belief that participants would respond to the questionnaire in a bona fide and honest manner. Biased responses may lead to wrong correlations and wrong conclusions. Such conclusions may affect the validity of the study. To mitigate biased responses, a pledge to uphold anonymity and confidentiality was formally made. In addition, participants were informed they were

participating of their free will and could withdraw from the study at any time. All questions were concise, unambiguous, and reasonably captured what the research intended to examine. Second, if participants were not homogenous and had not experienced the same ASC 606 implementation phenomenon, conclusions drawn from their responses could not accurately depict their reactions to the phenomenon, thus affecting reliability and validity. To mitigate disparities in participants' attributes, selection was based on commonality and shared experience criteria (Ivanoff & Hultberg, 2006).

Selecting participants belonging to the same industry, who qualified for their positions through similar education/training and professional certification and occupied identical positions in their various organizations were aspects that contributed to commonality and shared experience. Related to the second assumption was the representativeness of the sample size. If the sample size is not representative of the population, it may impede the generalizability of results creating issues with external validity (Ross & Bibler Zaidi, 2019). To mitigate the effects of this problem, 60 construction companies operating in the Mid-Atlantic United States were solicited to participate in the study. Their managers, chief financial officers, and accounting staff at the supervisory level were actual participants.

The third assumption focused on the definition of variables and their measurability. The researcher assumed variables were correctly operationalized, were measurable, and tested with reliable models that produced reliable and valid results. If variables are not well operationalized, the research may measure the wrong construct, which may affect reliability and validity. The effect of this assumption was mitigated by reviewing several peer-reviewed articles that guided the operationalization of variables. Reliability and validity of the test were ensured by adopting

reliable measurement scales, the most appropriate statistical test, and ensuring data had the right attributes and conformed to the statistical test assumptions.

The last assumption focused on the appropriateness of theories adopted to guide the study. The researcher assumed the underpinnings of adopted theories succinctly addressed and predicted the overarching phenomenon. If theories are not appropriate, conclusions based on them may be flawed. Because flawed conclusions affect the reliability of the study, the researcher ensured adopted theories were the right fit, and their selection was informed by authoritative implementation research literature such as Nilsen (2015). Additionally, up to three theories were adopted, so that insight into every angle of the phenomenon was covered (Collin et al., 2009; Fernando & Lawrence, 2014).

Limitations

The researcher envisaged six limitations comprising (a) response rate, (b) social desirability bias, (c) time and financial constraint, (d) the scope of operational definitions accorded variables and the reliability and validity of statistical tests, and (e) the inability to attribute causality. The first envisaged limitation was the response rate, described as the number of participants who responded to the questionnaire divided by the sample population expressed as a percentage. A low response rate may result in sampling bias, creating a methodological problem (Littman et al., 2010). This limitation was mitigated by using an Internet-based questionnaire found to produce quality responses at a relatively higher response rate (Hoonakker & Carayon, 2009; Tai et al., 2018). Non-responders were followed up with reminders consistent with Littman et al. (2010) and Olsen et al. (2012).

The second limitation concerned participants who could create social desirability bias by providing answers they know will put them in a favorable light and benefit the researcher,

instead of answers reflecting their genuine behavior (de Oliveira Maraldi, 2020; King & Bruner, 2000; Ross & Bibler Zaidi, 2019; Widmar et al., 2016). Nederhof (1985) explained social desirability "as a distortion of responses in a socially desirable direction" (p. 264). Social desirability bias affects the internal validity of a study (Nederhof, 1985; Ross & Bibler Zaidi, 2019) by creating false correlations between variables and suppressing or moderating relationships between variables (de Oliveira Maraldi, 2020; King & Bruner, 2000). Consistent with the recommendation in de Oliveira Maraldi (2020) and Ross and Bibler Zaidi (2019), social desirability bias was mitigated by using neutral questions and forced-choice items on self-administered questionnaires.

Two other limitations expected to influence the research design and result were the time available for the study and financial resources. The time allocated for completing the study was short, and the study was not funded to permit an elaborate investigation into all aspects of the phenomenon with a larger and more diverse population. The fourth limitation had to do with the definitions of variables. Variables can be too broadly or too narrowly operationalized to the extent outcomes and conclusions are affected. This limitation was minimized by adopting operational definitions from the literature.

Last, the correlational design does provide evidence of correlation, but the presence of correlation is not evidence of causation (Boyko, 2013; Morgan et al., 2013). Due to this intrinsic weakness, results from correlation could not be used to draw conclusions about causality. Thus, it is important to reiterate the study only provided evidence of correlation, moderation, and mediation and not causation. Considering these limitations, this researcher appropriately delimited the study to enhance the reliability and validity of the results.

Delimitations

This study restricted its investigation to correlation and mediation analysis of the ASC 606 implementation phenomenon on a sample of 60 companies randomly drawn from a population of 100 construction companies in the Mid-Atlantic United States. The choice of construction companies over other companies was based on early ASC 606 implementation hesitancy noticed in the construction industry. Implementation outcomes were operationalized based on the fidelity indicator alone, to the exclusion of seven others featuring in Proctor et al.'s (2011) implementation outcomes taxonomy. The notion that regulatory agencies impose indicators like acceptability, adoption, and appropriateness on the organization was the reason for their exclusion. The argument, alternatively, is how well a program was implemented (fidelity) and normalized depends on individual, organizational context, and capabilities, which make it a good gauge of success or failure. Data collection was confined to closed-ended responses, which are attractive to participants. Closed-ended measuring scales mitigated the effects of social desirability bias.

Significance of the Study

This section was organized around four central themes: literature gap reduction, implications for biblical integration, benefit to business practice, and relationship to the accounting discipline. However, the overarching significance of this study was that its findings yielded significant benefits to society. Findings were used to recommend strategies for enhancing ASC 606 implementation outcomes and strategies to improve subsequent implementation endeavors. Implementing ASC 606 with fidelity should curb revenue recognition issues (Carmichael, 2019). According to Dimitrijevic (2015) and Lail et al. (2017), revenue recognition dishonesty has robbed society of wealth, caused a worldwide recession, and eroded

public trust in financial reporting and auditing. Increased pressure for transparency in financial reporting makes ASC 606 implementation quality a priority for management because of its association with organizational legitimacy. However, the primary significance of most research is to fill gaps in the literature. The first step in this research was searching the literature for gaps that provided the basis for establishing the research problem. A subsequent subsection addressed implications for biblical integration. Pattison (2018) argued both ways for the godliness and ungodliness of research, which rationalizes the ever-increasing appeal for Christian researchers to incorporate a Christian worldview into their research. This permits them to assess how their studies (theories and variables) are situated in scriptural literature and how their studies advance God's purpose for the universe and humans. The last subsection explicated the study's significance to business practice and its relationship to the accounting discipline.

Reduction of Gaps in Literature

This study's literature gaps research involved a preliminary literature review that discovered what has been learned and what is yet to be learned about the ASC 606 implementation phenomenon and implementation outcomes. The significance of filling that gap introduced new knowledge and added to the body of existing knowledge in the area of interest. The quantitative method enabled the researcher to find not only what was anticipated but also several new angles on ASC 606 implementation concepts and principles that were unknown or nebulous before. The correlational design enabled the researcher to make inferences on ASC 606 implementation enhancing and inhibiting factors that had not been made previously. The research approach was different from existing related studies that adopted the descriptive and exploratory approach and primarily focused on exploring structural and methodological change associated with recognizing revenue under ASC 606 guidelines (Arora, 2019; Conner, 2017;

Loyd, 2018; Lynch & Pryor, 2018; Sparger, 2017), studying the post-implementation impact on reported revenue (Atwood, 2015), and exploring the potency of ASC 606 in curbing revenue recognition fraud and abuse (Carmichael, 2019).

Accordingly, no study to date known to this researcher has directly investigated the association between ASC 606 implementation CSFs and ASC 606 implementation outcomes and makes inferences on ASC 606 implementation enablers and inhibitors. This research gap exists despite findings documenting inadequate responsiveness to ASC 606 implementation (Mueller, 2018), especially in construction companies (Hepp, 2018). Therefore, this study introduced new knowledge and added to the body of existing literature. The results of the study could also provoke additional studies into areas not covered in this study. For example, more quantitative studies are needed to answer questions raised about the suitability of ASC 606 in a legacy GAAP system. Such studies could investigate how the transition from rule-based to principles-based revenue recognition and ASC 606 inherent complexities are impacting ASC 606 efficacy.

Implications for Biblical Integration

Incorporating a Christian worldview into the research is an important acknowledgment of God's active engagement in the affairs of the world, as well as the rationality of man's thoughts and his capacity to engage in good and evil (Holmes & Lindsay, 2018). Keller and Alsdorf (2012) posited Christians are endowed with significant resources and equipped with an ethical compass and the power of the gospel that set them apart from others. When these attributes are applied in research, they illuminate the nature of things, distinguishing reality from falsehood, order from chaos, certainty from uncertainty, good from bad, all in a bid to guide action and explicate their impact on the purpose for human existence. Barna Group (2017) identified four nonbiblical competing worldviews, comprising new spirituality, secularism, postmodernism, and

Marxism. According to Barna Group, these worldviews have influenced Christians' beliefs about the way the world is and how it should be because they include fragments of similarities to some Christian teachings, but which nonetheless are inconsistent with biblical principles.

Therefore, research must be designed to consider the research problem holistically and provide answers to how the study advances God's purpose for the universe and humans. Consequently, the methodology and how results are interpreted and used must be significantly influenced by the researcher's worldview supplemented by the Christian worldview (Holmes & Lindsay, 2018). While many think integrating biblical aspects in purely academic research is untenable, the prevalence of pragmatism granting flexibility with methodology has made this feasible by easing the contention between conflicting schools of thought on this issue. In addition, unlike positivism, pragmatism does not dismiss value claims as meaningless but provides a way to rationally address them (Feinberg, 2012). However, Been (2015) called into question certain aspects of pragmatism that may be contrary to the Christian worldview. For example, pragmatists presume truth, in its real sense, is not found but made (Been, 2015). It is tentative and fallible (Johnson & Onwuegbuzie, 2004). Thus, interpretating research findings may be significantly different from a Christian and pragmatic viewpoint based on their different conceptualizations of truth. Therefore, the Christian researcher adopting a pragmatic paradigm must beware of aspects of pragmatism that violate biblical principles by avoiding the "everything goes" mentality adopted by some researchers adopting pragmatism (Hathcoat & Meixner, 2017).

To mitigate the effects of imminent disparities in epistemology, the researcher must ensure variables are not operationalized in a way that significantly departs from their biblical implications. With this background in focus, biblical literature is briefly reviewed to discover the biblical implications of ASC 606 implementation CSFs. This review is premised on Bible

teachings on fraud, laws, and the source of authority of those who enact laws that this researcher believes narrowly mirror the objectives of enacting and enforcing ASC 606.

Biblical teaching on fraud and cheating (revenue recognition malpractices) false witnessing (false audit reports) abounds (Exodus 20:15; Exodus 23:1; Isaiah 61:8; Proverbs 10:9; Psalms 62:10; Timothy 6:9-10). There are also teachings explaining how making rules and ethics to regulate behavior are consistent with biblical principles (Matthew 5:21–26; Mathew 5:27–30). God gave the first laws to humans (Exodus 20:1-17; Deuteronomy 5:6-21), and these have since provided the basis for most modern legal systems or social order. In addition, the Bible urges humans to submit themselves to governing authorities because God ordained their authority (Romans 13; Titus 3:1-2). This emphasizes the need for people and organizations to respect God's laws and laws instituted by organizations of authority. In acknowledging the role of project actors or leadership in general, and the resourcefulness of guidelines, Proverbs 11:14 affirms, "For lack of guidance a nation falls, but victory is won through many advisors" (New International Version Bible, 2011). In a commentary explaining Proverbs 11:14, the commentator explained a possible protection against bad decisions is to leave the decision-making to a council of renowned wise people. It further explained that when organizations proceed in haste and pride or by the whims of one person, corruption and disaster follow. However, when organizations heed a council of wise people, there is widespread *benefit* and *safety* (Let God be True, 2019). This speaks to authority and the importance of regulatory agencies (SEC), professional standard-setting organizations (FASB and IASB), and special purpose committees set up within organizations to oversee specific projects and the benefit of their actions to society in general and to organizations in particular.

Rules once made are not engraved in stone and can be changed or extended to accommodate contemporary issues. Jesus introduced and added a new law to those given to Moses (John 13:34; 1 John 2:8). Thus, changing or modifying rules/laws is consistent with Bible principles. For example, Revelation 21:5 makes it clear that God is not prepared to maintain the status quo but is committed to an entirely new order of creation. As the change agent in Christianity, Jesus rebuked those who were against innovation (Mark 2:21-22) and reproached the Pharisees by admonishing He had not come to add a few new rules and regulations to Judaism but has something entirely new to teach (Boa, 2005b). Thus, resisting or poorly implementing the new ASC 606 recommended by an authority ordained God violates secular and Christian norms. Ephesians 4:22 speaks to how an organization can prepare for change and normalize new norms that upgrade society by stating:

> You were taught, with regard to your former way of life, to put off your old self, which is being corrupted by its deceitful desires; to be made new in the attitude of your minds; and to put on the new self, created to be like God in true righteousness and holiness. (New International Version Bible, 2011)

Also, Isaiah 43:18-19 states, “Forget the former things; do not dwell on the past. See, I am doing a new thing! Now it springs up; do you not perceive it? I am making a way in the wilderness and streams in the wasteland” (New International Version Bible, 2011). This refinement of things addresses innovation and urges people and organizations to adjust to the change. Agility and the ability to recognize and make use of new knowledge, represented by organizational agility and absorptive capacity variables, also have biblical implications. For example, the biblical literature related to both variables explains, “The heart of the discerning acquires knowledge, for the ears of the wise seek it out” (New International Version Bible, 2011, Proverbs 18:15). With these

justifications, it can be surmised that this study's theories and variables are consistent with scriptural literature.

Benefit to Business Practice and Relationship to Accounting Discipline

Organizations that use the recommendations derived from this study's results for post-implementation evaluation will gain insights into the positive and negative elements of their implementation performance, which can help them enhance subsequent implementation endeavors. Optimized ASC 606 implementation quality may contribute to preventing financial statement restatements and frequent SEC deficiency letters. Restatements and deficiency letters suggest management errors/fraud and vulnerabilities in the control environment (Hirschey et al., 2015; Plumlee & Yohn, 2015). Because restatements or SEC deficiency letters are regarded as bad news, often resulting in negative stock prices and raising concerns about management's integrity (Hirschey et al., 2015), there is an incentive to implement ASC 606 with fidelity to enhance implementation outcomes.

The relationship between this study and the accounting discipline can be inferred from two perspectives: the role of accountants in ASC 606 implementation and ASC 606 acting as a damage control apparatus for the accounting profession.

a) The accounting official's role in implementing and normalizing ASC 606 in their organization is extremely important. Implementing ASC 606 is within the purview of top management, making the chief financial officer (CFO) and the internal audit executive important team members. Also, the financial management division is implicated in the years posterior to adopting ASC 606 because of the exigency of ASC 606 transition disclosures required by the SEC (Dixon et al., 2017). Whether the accountant is internal to the organization or external to it (external auditor), his engagement with the

implementation of ASC 606 cannot be overemphasized. The public company accounting oversight board, in October 2015, released Staff Audit Practice Alert No. 15, *Matters Related to Auditing Revenue from Contracts with Customers* (Public Company Oversight Board, n.d), intended to guide auditors in auditing revenue from contracts with customers. According to Dixon et al. (2017), though the staff practice alert is intended for auditors, it also alerts financial management and audit committees on what auditors will be looking at when evaluating pre-adoption transition disclosures, implementation, and related ICFR matters in connection with upcoming year-end audits. In sum, this study is related to the accounting cognate and because of the far-reaching ramifications of ASC 606 implementation, it is also related to other top management functions such as CEO, CCO, and IT director.

b) ASC 606 implementation is a damage control apparatus for the accounting profession. The hope that a well-implemented and normalized ASC 606 will contribute to restoring the damaged reputation of the profession is another connection of the study and discipline. Accounting professionals, especially those in academia, have expressed hopes ASC 606 implementation will help in mitigating revenue recognition anomalies (Carmichael, 2019) so that the afflicted reputation of the accounting profession (Jizi et al., 2016; Lail et al., 2017) can be restored.

Summary of Significance of the Study

This subsection discusses the significance of the study, highlighting the significance to the society and significance relating to the primary objectives of literature gap reduction, implications for biblical integration, benefits to business practice, and relationship to the accounting discipline. The section explicates society benefits from improved revenue reporting,

which derives from optimized ASC 606 implementation outcomes. The benefit of the study to business practice is also explained, emphasizing optimized ASC 606 implementation will reduce financial statement restatement and SEC deficiency letters that suggest management errors leading to a damaged reputation and reduced stock value. Assertions on the relationship between the study and the accounting cognate are expounded. The section also explains that a review of scriptural literature provides evidence of the consistency of adopted theories and variables with biblical principles, which provides the basis for drawing conclusions about the study's connection with God's plan for the universe and His people.

Review of Professional and Academic Literature

This literature review is structured to provide an understanding of the relationship between organizational implementation CSFs and ASC 606 implementation outcomes. The study adopts the integrative literature review (ILR). Other literature review approaches such as descriptive, meta-analysis, and critical analysis were all considered inappropriate. Unlike the rejected approaches, ILR immerses the reviewer in the study and permits them to critique and synthesize related literature in an integrated manner that facilitates developing new frameworks and perspectives on a topic (Khoo et al., 2011; Torraco, 2016). Thus, ILR goes beyond a mere collection of existing evidence of the research question to encompass evidence-based guidelines for research and practice (Nakano & Muniz, 2018). The scope of this literature review is broad because not much has been written on the topic in accounting research.

Consequently, the search examined analogous research in other disciplines such as health science and education, consistent with the recommendation in Boote and Beile (2016). Such an extensive and interdisciplinary search is important because while it reports findings of existing literature, it also sets out to critically explore the research methods used in a variety of studies to

gain an understanding of the validity of claims (Boote & Beile, 2016). Also, the only real means of acquiring knowledge in a research area beyond coursework is the dissertation literature review (Boote & Beile, 2016).

The literature review methodology for this study complied with the conventional five stages, comprising search, review, summarize, classify, synthesize, and write. First, the search was conducted in Scopus, Elsevier's abstract and citation database. The search was conducted using several variants of keywords of the elements to be reviewed. Scopus allowed the researcher to check articles for quality by interrogating numerical quality metrics such as *h*-index, SiteScore, and SCImago Journal Rank. Once related articles were identified in Scopus, they were assessed through the Liberty University library and Google Scholar. Searches were also made directly in the Liberty University library and Google Scholar. One of the criteria of a good literature review is coverage, which is deemed the exhaustiveness of relevant studies to be included in the review. The notion of relevance suggests some studies are excluded from the continuum of search results based on certain elimination criteria. Exclusion is consistent with Lather's (1999) assertion that literature review is not necessarily exhaustive but rather situated. Second, the studies included in the review were evaluated and summarized in the form of annotated bibliographies. Third, studies were classified according to themes (Robey, 2019) and methodology. Fourth, the studies were synthesized to gain a new perspective on literature (Lather, 1999; Torraco, 2016). Fifth, writing was organized following a predetermined conceptual structure.

Though research reveals most doctoral dissertation literature review chapters are structured to comprise an introduction, a body, and a conclusion (Kwan, 2006), there is no definitive rule on how to organize it, that is, what to include in the body (Khoo et al., 2011).

Nakano and Muniz (2018) asserted because the first purpose of the literature review is to illuminate theories adopted for the study's arguments, theories must feature prominently in the study and be discussed in detail in the body of the literature review. Also, Torraco (2016) suggested consideration for topics and subtopics to be incorporated into literature review should be predicated on relationships captured in the conceptual framework or model. Based on these recommendations, this literature review was divided into two sections. The first section reviewed professional literature, principally expounding the business practice, ASC 606 guidelines, and the problem. The second section reviewed academic literature on elements contained in the theoretical framework. This section culminated in a conclusion in the form of a summary of the section and key findings.

The Business Practice

The business practice leading to the research problem is not about what is happening but rather what is not happening. Management's quiescence associated with ASC 606 implementation includes lack of diagnostics to determine how ASC 606 will impact revenue reporting, lack of ASC 606 implementation planning, impulsive belief on ASC 606 impact on financial statement, and procrastination in anticipation for another deferral. Yeaton (2015) asserted, though the first formal ASC 606 adoption date was not due until December 2016, organizations needed to start preparing in advance, addressing issues related to changes in policy and processes that will be needed to capture the wide array of data useful in applying ASC 606. Tysiac and Murphy (2015) warned that though deferrals are expected, organizations should not relent in their implementation endeavors because implementation is expected to be complex and challenging. They stated that because implementation takes time, the best strategy is setting up steering committees, developing execution plans and timelines, and studying contract terms. As

cited by Whitehouse (2016), Wes Bicker, a deputy chief accountant at SEC, said the enormity of the task facing all organizations is not lost on SEC. However, organizations are advised to establish a robust process for ascertaining ASC 606 requirements, to determine how they will interpret and apply them, and to be aware that current systems may not be up to the task. Mueller (2018) found many organizations are taking ASC 606 preparation lightly and admonished they are doing so at their peril. He went on to propose two immediate actions. First, organizations must start working with their CFOs to understand ASC 606 and how it will impact them. Second, evaluate if existing software can manage ASC 606 data. He warned that attempting to handle ASC 606 data manually would be a task of herculean proportion.

Despite these warnings, a survey involving CFOs of U.S. technology organizations revealed that 58% had not yet familiarized themselves with the new standards seven months after they were issued (Tysiac & Murphy, 2015). Also, after the first year's deferral, a 2015 PwC survey of 335 respondents found that many organizations do not understand how ASC 606 will affect them, and 38% did not believe ASC 606 will have any significant effect on financial statements (Jonick & Benson, 2018). A December 2015 KPMG poll of nearly 450 financial reporting executives revealed 64% of them were yet to establish a clear ASC 606 implementation plan (Amato, 2015). Likewise, in 2016 Deloitte reported many organizations had not commenced a formal assessment process for implementing ASC 606 (Jonick & Benson, 2018). In a news article published in CRN Buyer, Pombriant (2017) said it is likely many in the accounting world had not even heard of ASC 606 or IFRS 15 before reading the article. With that in perspective, the primary principles of ASC 606, its five-step revenue recognition approach, and FASB's implementation recommendations are reviewed in the following subsections.

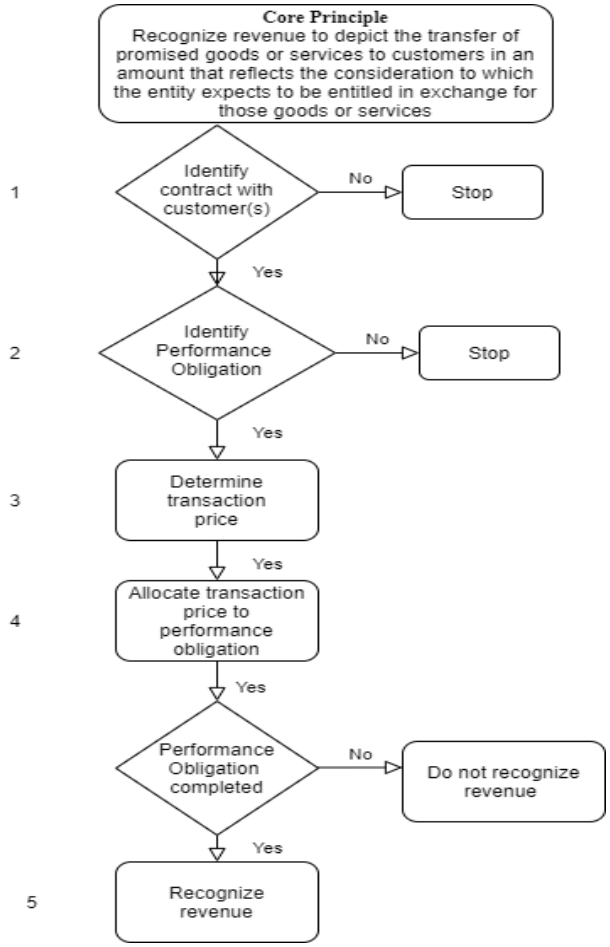
Understanding ASC Topic 606. FASB (2014) alluded to the importance of revenue numbers in assessing an entity's financial performance and the inadequacies and inconsistencies in U.S. GAAP and IFRS in addressing revenue-generating transactions. According to FASB, previous revenue recognition guidance in U.S. GAAP was broadly conceived, comprising a variety of revenue requirements for specific industries or transactions, which sometimes resulted in divergencies in accounting for similar transactions. The situation was even more ominous in IFRS due to scant guidance on major revenue areas such as accounting for multiple-element transactions. The FASB and IASB joint project on revenue recognition was intended to achieve the following objectives: (a) remove inconsistencies and weaknesses in revenue requirements; (b) provide a more robust framework for addressing revenue issues; (c) improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets; (d) provide more useful information to users of financial statements through improved disclosure requirements; and (e) simplify the preparation of financial statements by reducing the number of requirements to which an entity must refer (FASB, 2014).

The result of the joint project was FASB's ASC Topic 606 and IASB's IFRS 15, both entitled *Revenue from Contracts with Customers*. Revenue from contracts with customers is a five-step principle-based contractual model for revenue recognition.

Core Principles and Steps in Revenue Recognition. ASC 606 anchors on the core principle that "an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services" (FASB, 2014, p. 2). The contractual underpinning of the principle obligates entities to recognize revenue by complying with five successive principled-based steps (FASB, 2014) portrayed in Figure 2 and expounded below.

Figure 2

ASC 606 Five-Step Revenue Recognition Flowchart



Notes. The five steps of revenue recognition under ASC 606.

Step 1: Identify the Contract(s) with the Customer. A contract is a legally binding agreement between two or more parties that creates enforceable rights and obligations. An entity should apply the requirements to each contract that meets the following criteria: (a) approval and commitment of the parties, (b) identification of the rights of the parties, (c) identification of the payment terms, (d) the contract has commercial substance, and (e) it is probable that the entity will collect the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer (FASB, 2014).

Step 2: Identify the Performance Obligations in the Contract. FASB (2014) defines performance obligation as a promise incorporated in a contract with a customer to transfer a good to the customer or perform a service. A promise of more than one good or service in a contract requires that each distinct good or service or series of distinct goods or services is regarded as a separate performance obligation. The criteria for determining if the good or service is distinct are (a) the good or service is capable of being distinct, meaning the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer and (b) the good or service is distinct within the context of the contract. The promise to transfer the good or service is separately identifiable from other promises in the contract. Thus, any good or service that is not distinct should be combined with other promised goods or services until the entity identifies a distinct bundle of goods or services.

Step 3: Determine the Transaction Price. FASB (2014) described the transaction price as the amount of consideration an entity expects to be entitled in exchange for promised goods or services to a customer, excluding amounts collected on behalf of third parties. FASB sets out certain rules to guide an entity in determining the transaction price, especially considering the effects of:

(a) variable consideration, if the contract amount is variable, and when such should be included in the transaction price. The transaction price can be estimated using the expected value (probability-weighted) or the most likely amount, depending on which results in the best measure of the consideration;

(b) constraining estimates of variable consideration. An entity should include some or all estimated variable considerations in the transaction price only if it determines a reversal of

accumulated recognized revenue will be unlikely when the uncertainty associated with the variable consideration is subsequently resolved;

(c) the existence of a significant financing component. An entity should adjust the promised amount of consideration for the effects of the time value of money if the timing of payments results in a significant benefit of financing over time. An entity should consider various factors in assessing whether a financing component exists and is significant to a contract. A financing component does not exist if the entity expects at contract inception that the period between payment and the transfer of the promised goods or services will be one year or less;

(d) noncash consideration. If a customer promises consideration in kind, such noncash payment should be measured at fair value. Where fair value cannot be reasonably estimated, it should measure the consideration indirectly by referencing the standalone selling price of the goods or services promised in exchange for the consideration. If the noncash consideration is variable, the guidance on constraining estimates of variable consideration should be applied;

(e) consideration payable to the customer. When consideration is owed to a customer, the entity should account for the amount owed as a reduction of the transaction price or as a payment for a distinct good or service (or both). If the consideration payable to a customer is a variable amount and accounted for as a reduction in the transaction price, the guideline on constraining estimates of variable consideration applies.

Step 4: Allocate the Transaction Price. For contracts having several performance obligations, allocate the transaction price to each performance obligation in an amount equivalent to the consideration expected from satisfying each performance obligation. The appropriate consideration to each performance obligation is determined by the standalone selling price at contract inception. Where it is difficult to discern a standalone selling price, it must be

estimated. When the transaction price includes a discount, apply the discount to the appropriate performance obligation rather than on the bundle and accordingly apply any changes to the transaction price on the same basis as at contract inception. Consideration for satisfying performance obligation should be recognized as revenue, or as a reduction of revenue, in the period in which the transaction price changes (FASB, 2014)

***Step 5: Recognize Revenue When (or as) the Entity Satisfies a Performance Obligation*.** FASB (2014) requires revenue recognition only when performance obligations are satisfied by transferring a good or service. Goods or services are considered transferred when the property passes to the customer. Therefore, for each performance obligation, an entity should determine when the property in the goods passes to the customer over time and creating an asset such as a work-in-progress or at a specific point. When the property in the goods passes to the customer over time, revenue is also recognized over time by consistently applying a method of measuring the performance obligation's progress towards completion by using either output methods or input methods.

The Scope and Implementation Methods. The revenue recognition standard affects all public, private, and not-for-profit entities that either contract with customers to transfer goods or services or contract to transfer nonfinancial assets unless those contracts are within the scope of other standards such as leases and insurance contracts. Financial instruments guarantee (other than product or service warranties) and nonmonetary exchanges between entities in the same line of business to facilitate sales to customers or potential customers are outside the scope of ASC 606. Entities have the option of using either a full retrospective or modified retrospective method in adopting ASC 606 guidelines.

Full Retrospective Approach. Peters (2018) explicated the full retrospective approach is comprehensive and results in the benefit of facilitating an "apples-to-apples" comparison of financial statement numbers both before and after adoption. Consequently, it is more challenging to implement, requiring far more resources and skills. Peters likened the challenge to needing to restate three years' worth of earnings and posited the full retrospective approach necessitates determining the cumulative effect of adopting the guidelines from the beginning of the first historical period presented, and then recast revenue and expenses for all prior periods presented in the year of adoption of the new standard (p. 4). The full retrospective approach has the benefit of a cleaner transition and leaving a historical footprint of financial data of antecedent financial periods. However, it requires significant time and effort since the recasting to prior periods will change the revenue recognized and the other "direct effects of a change" as defined in ASC 250: Accounting for Changes and Error Corrections (FASB 2014; Peters, 2018).

Modified Retrospective Approach. ASC 606-10-65-1(h) explains the modified retrospective approach. A minimalistic approach allows the organization to apply ASC 606 to all new contracts initiated on or after the effective date and to contracts with outstanding obligations as of the effective date. Thus, an entity recognizes the cumulative effect of initially applying the guidelines as an adjustment to the opening balance of retained earnings (FASB, 2014; Peters, 2018). When this method is used, the guideline in the Accounting Standards Update (as amended by ASU 2016-12) must be applied to either (a) incomplete contracts (i.e., those contracts for which all (or substantially all) of the revenue has not been recognized in accordance with prior revenue guidance) as of the date of initial application, or (b) all contracts as of, and new contracts after, the date of initial application (FASB, 2014).

Enhanced Disclosure Requirements. Yeaton (2015) explained the expanse of disclosure requirements specified within ASC 606. ASC 606 dramatically broadens current revenue recognition disclosure requirements to enhance information related to the nature, timing, and uncertainty of revenue from contracts with customers and related cash flows. Accordingly, disclosures must be structured to incorporate qualitative and quantitative information on contracts with customers and the extent to which judgments were applied. Also, any assets recognized from the cost of obtaining or fulfilling contracts must be disclosed consistent with ASC 606-10-50-1 and Subtopic 340-40-25-5. The standard further specifies expanded disclosure requirements concerning the disaggregation of revenue into categories affected by economic factors (e.g., disclosing revenues by product category, type of market, type of customer).

Implementation Issues and Subsequent Amendments. Upon issuing the new revenue standards, FASB and IASB set up a joint revenue transition resource group (TRG). The purpose of the TRG is not to issue guidelines but to seek and provide feedback on potential issues related to implementing the new revenue standards. By analyzing and discussing potential implementation issues, the TRG has helped the boards determine whether to take additional action, such as providing clarification or issuing other guidelines, largely because of feedback provided by the TRG after the issuance of the initial accounting standards update. According to FASB, the following updates clarify or amend certain aspects of Topic 606 but do not change the core principle of the guidelines in Topic 606:

1) On August 12, 2015, the board issued Accounting Standards Update No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*.

2) On March 17, 2016, the board issued Accounting Standards Update No. 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*.
3) On April 14, 2016, the board issued Accounting Standards Update No. 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*.
4) On May 9, 2016, the board issued Accounting Standards Update No. 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*.
5) On December 21, 2016, the board issued Accounting Standards Update No. 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*.
6) On June 3, 2020, the board issued Accounting Standards Update No. 2020-05, *Revenue from Contracts with Customers (Topic 606) and Leases (Topic 842): Effective Dates for Certain Entities.*

FASB reiterated the amendments in these updates affect entities with transactions included within the scope of ASC 606. The scope of ASC 606 includes entities that engage in transferring goods or services (that are an output of the entity's ordinary activities) in exchange for consideration. The amendments to the recognition and measurement provisions of ASC Topic 606 also affect entities with transactions included within the scope of Topic 610, Other Income. According to Tysiac and Murphy (2015), some proposed amendments are designed to simplify implementation, much more than just clarifying or adding specificities. Amendments related to transition, sales taxes, and performance obligations at the contract level together

reduce the challenges implementing the original standard posed. However, implementation effectiveness is dictated by a pragmatic implementation program.

Implementation Blueprint. Preparing for this groundbreaking revenue recognition standard can be daunting, and instead of bathing in effecting date deferrals, organizations should take advantage of the additional time to evaluate the potential changes in financial statements, information systems, processes, and controls (Arms & Bercik, 2015; Jonick & Benson, 2018; Knachel, 2016; Tysiac & Murphy, 2015; Yeaton, 2015). According to Thorn and Carson (2017), AICPA's Financial Report Center (FRC) has developed an implementation blueprint for enhancing ASC 606 implementation. The FRC blueprint enjoins management to adhere to the following: (a) designate the team responsible for overseeing implementation; (b) evaluate how the changes will impact the organization's accounts for different types of revenue streams/contracts. Consider how the new standard will impact current performance metrics and compensation plans. Work with an auditor to discuss the completeness and accuracy of your analysis; (c) determine the implementation method, full or modified retrospective approach, (d) determine changes that may be needed within systems and/or software applications to facilitate revenue recognition under the new standard; (e) determine what interim disclosures may be required prior to the adoption date; (f) develop an implementation plan to incorporate the above steps and find resources to help train your professional staff to ensure effective and efficient implementation; and (g) educate the company's audit committee, board of directors, users, etc., about the changes they can expect in the organization's financial statements.

Malinoski (2018) proposed a six-step implementation procedure for construction companies that includes:

1) evaluating the company's different revenue streams and various contracts;

2) assess the impact of each contract type and inventory contracts;
3) perform gap analysis;
4) developing a roadmap or plan for implementation;
5) execute the plan; and
6) performing ongoing management and controls.

However, ascertaining the extent to which a new practice is implemented according to its original protocol is facilitated by rolling out the practice using a tested implementation framework (Moullin et al., 2020).

The Problem

Literature going back to the early 20th century suggests both academia and accounting practitioners acknowledge revenue recognition as a chronic contentious accounting dilemma (Liang, 2001). Revenue is a vital metric that informs capital markets about the performance and prospects of organizations and thus has mechanisms that are unscrupulously manipulated for earnings management (Caylor, 2010; Chandra et al., 2018; FASB, 2014; Rasmussen, 2013; Zha Giedt, 2018). Accordingly, regulating revenue recognition has been entrenched in the agenda of standards-setting bodies in the United States and internationally for over a century (Bukics, 2000; Wagenhofer, 2014). In the United States, all revenue recognition regulatory models from, and between early directives issued by the American Accounting Association in 1964 and releases of the Emerging Issues Taskforce (EITF) in 2000 fell short in addressing complex transactions and customer contracts featuring in the business models of contemporary organizations (Wagenhofer, 2014). A persistent shortcoming in revenue recognition regulatory models led to realizing the enormity of the problem and the need for collaboration between standards-setting leaders, to wit, FASB and IASB, in developing new, converged, and robust

guidelines. That collaboration gave birth to ASC Topic 606 and IFRS 15, referred to as *Revenue from Contracts with Customers* (FASB, 2014). Since the announcement of the first effective date for implementing ASC 606, many studies have investigated the preparedness of organizations across different industries (Jonick & Benson, 2018). Those studies revealed that many organizations are yet to articulate a clear ASC 606 implementation strategy (Amato, 2015; Atwood, 2015; Lynch & Pryor, 2018; Pelland, 2015; Peters, 2018; Tysiac & Murphy, 2015).

However, studies differ on the reasons for the delay. For example, Whitehouse (2016) asserted the delay is largely attributable to other time-sensitive projects organizations have on their agenda, and for some, it is just an utter lack of ASC 606 implementation expertise. Other researchers, such as Jonick and Benson (2018) and Lynch and Pryor (2018), attributed the delay to the difficulty of U.S. organizations accustomed to rule-based accounting to adopt a principle-based accounting standard that departs significantly from the underpinnings of rule-based U.S. GAAP. According to Lynch and Pryor, implementing an accounting system based on judgments can be difficult and complex. That organizations are requesting additional guidance from FASB is a testament to the U.S. organization's steep learning curve. Also, engineering and construction companies that have basically been contented with industry-specific standards raised industry-specific concerns with FASB. Though five of the issues raised have been addressed favorably, two are yet to be addressed, and the uncertainty associated with their treatment disincentivized engineering and construction companies, drastically slowing down implementation initiatives in construction companies in the United States (Hepp, 2018; Mueller, 2018).

Theories and Theory-Based Implementation Frameworks

The literature suggests significant benefits to be gained in using theories, frameworks, and models to guide innovation implementation (Moullin et al., 2019, 2020; Nilsen, 2015).

Evidence also suggests suboptimal application of theories, implementation frameworks, and models during implementation is associated with impaired implementation viability and success, and waste of resources due to missteps in implementation (Blanchard et al., 2017; Moullin et al., 2020). Three theories and four theory-based implementation frameworks are reviewed in this section to permit an assessment of how they explain and contribute to innovation implementation.

Institutional Theory (INT). With a focus on isomorphism, INT is the product of first-generation neo-institutionalism (Aksom & Tymchenko, 2020). The neo-institutionalism trend brought to the fore new perspectives on organizational conformism (Greenwood et al., 2014). This movement was pioneered by Meyer and Rowan (1977), DiMaggio and Powell (1983), and Tolbert and Zucker (1983). Between the late 1970s and early 1980s, these scholars triggered a series of inquiries into the similarities of organizations (Aksom & Tymchenko, 2020; Greenwood et al., 2014). They postulated organizations must compete for social success (power and legitimacy) as much as for economic success and, in a bid to remain relevant, are exposed to isomorphic mechanisms that tend to increase the degree of resemblance among peer organizations in due course. Their groundbreaking studies caused a significant paradigm shift from old institutionalism that, according to Greenwood et al. (2014), focused on understanding contingency and collectivism through postulations on management systems (Burns & Stalker, 1961), organizational structure (Pugh et al., 1963), and organizational design (Galbraith, 1977). Greenwood et al. (2014) continued to elucidate that the emergence of neo-institutionalism was not predicated on challenging this contingency focus but rather to recalibrate focus.

Accordingly, the first-generation INT shifted emphasis from an organization's technical environment to its institutionalized environment, with Meyer and Rowan arguing that the choice

of organizational design and practices may not be in response to functional efficiency but rather in response to prescriptions deemed appropriate by resource providers. Building on Meyer and Rowan (1977), DiMaggio and Powel (1983) furthered the argument by postulating pressures from an institutionalized environment and from collective rationality among organizational actors result in the homogeneity of forms in an organizational field. Organizational homogeneity is captured in the organizational isomorphism concept, which explains how organizations gain legitimacy through acquiescing to rules, norms, and practices of an organizational field (DiMaggio & Powell, 1983). Organizational adjustments made through compliance result in the homogeneity of organizational forms and practices (Woolthuis & de Jong, 2017), thus making the concept of organizational isomorphism the mainstay of INT. Studying organizational isomorphism has provided significant insight into organizations' response to environmental pressure, as well as empirical evidence to support the postulation that organizations in the same organizational field adopt similar practices, even at the expense of efficiency due to isomorphic pressures (Aksom & Tymchenko, 2020; Brandtner & Suárez, 2021; DiMaggio & Powell, 1983; Tolbert & Zucker, 1983; Woolthuis & de Jong, 2017; Zhang & Hu, 2017). According to DiMaggio and Powell (1983), organizational actors making rational decisions are cocooned in an environment that constrains their ability to change further in later years. Thus, early adopters of innovations are driven by a desire to improve, and as the innovation is diffused, a threshold is reached beyond which adoption provides legitimacy rather than improves performance.

INT has been used to explain innovation performance (Zhang & Hu, 2017), knowledge transfer (Nakanishi, 2014), and policy adoption (Brandtner & Suárez, 2021). Zhang and Hu (2017) found that close cooperation among cluster enterprises improves innovation performance. However, greater isomorphism among cluster enterprises causes inertia and inhibits learning to

the extent that when the institutional environment changes, they lack sufficient elasticity to respond. Nakanishi (2014) found that though private organizations tout economic benefit and public good as the basis for innovation diffusion, knowledge transfer is significantly the result of coercive isomorphism. The results of these recent studies continue to buttress DiMaggio and Powell's (1983) argument that isomorphic forces, stronger than economic and efficiency factors, cause organizations within it to conform to a socially constructed environment to achieve a fit and be recognized and legitimized.

DiMaggio and Powell (1983) defined organizational isomorphism as a constraining process that forces an organization in a population to resemble other organizations that face the same set of environmental conditions. In explaining the sources and predictors of isomorphism, DiMaggio and Powell suggested organizations do not only compete for resources and customers but also for political power and institutional legitimacy. This suggestion gives rise to two types of isomorphism: competitive and institutional isomorphism. Competitive isomorphism assumes a rational system that "emphasizes market competition, niche change, and fitness measure" (DiMaggio & Powell, 1983, p. 150). While competitive isomorphism is important in understanding how free competition influences early innovation adoption, it does not fully capture the behavior of a modern organization and thus must be studied in conjunction with the institutional perspective of isomorphism. DiMaggio and Powell (1983) identified three mechanisms through which institutional isomorphic change occurs.

Mechanisms of Isomorphism. The three mechanisms of institutional isomorphic change are coercive, mimetic, and normative isomorphism. Coercive isomorphism derives from political influence and the problem of legitimacy. Mimetic isomorphism is a response to uncertainty in the external environment, and normative isomorphism is associated with professionalization.

Though the three mechanisms are not empirically distinct and are interwoven in real-life settings, they are caused by different conditions and result in different outcomes (DiMaggio & Powell, 1983). A brief review of the three mechanisms follows.

Coercive Isomorphism. Coercive isomorphism is perceived as formal or informal pressure exerted on organizations by a focal organization upon which the other organizations depend and by cultural expectations in the society within which organizations function (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) suggested such pressures may be felt as formal or informal forces, persuasion, societal expectation, or an invitation to join a coalition. In either a formal or informal situation, institutional rules, social values, and norms influence innovation implementation and changes in organizational structures (Nakanishi, 2014). Also, organizations adopt change in conformity to government directives and regulations, such as implementing a common accounting rule to meet legal requirements that qualify organizations to bid for government contracts or access funding. Citing Meyer and Rowan (1977), DiMaggio and Powell asserted that as government agencies and other influential organizations expand their scope of control, organizational structures increasingly come to reflect rules institutionalized and legitimated by and within the state.

Consequently, organizations within an organizational field turn to be more homogeneous as they are increasingly organized around rituals of conformity to wider institutions (Brandtner & Suárez, 2021; Deephouse, 1996; Jeyaraj & Zadeh, 2020; Puttick, 2017; Tolbert & Zucker, 1983; Woolthuis & de Jong, 2017). DiMaggio and Powell continued to assert that pressure may emanate from sources outside government agencies and the state. For example, subsidiaries adopt standard operating procedures and legitimated rules and structures compatible with the policies and practices of their parent organizations. Direct imposition of rules and infrastructures

may come from charity organizations and monopolies, such as the common pressure exerted on user companies by telecommunication companies to use a particular operating system. Consequently, coercive isomorphism will most likely occur and increase homogeneous practices when organizations depend on other organizations by law, corporate governance, or monopolies (Nakanishi, 2014). Allemand et al. (2014) found a relationship between legislations on women's quota on the board and coercive isomorphism. Their study revealed women quota legislation has increased female representation on the board of directors of many organizations in legislating countries making their boards similar.

***Mimetic Isomorphism*.** When there is uncertainty in the environment due to uncertain goals or practices, organizations that are not sure of how to proceed tend to imitate the action of organizations they think are successful and legitimate (DiMaggio & Powell, 1983). An example of mimetic isomorphism cited by DiMaggio and Powell (1983) is the imitation of Japanese (Toyota) production systems by American manufacturers. Because there may not be any business relationship between the successful organization being imitated and the imitating organization, no influence is exerted, and the successful organization may not be aware it is being imitated (DiMaggio & Powell, 1983). Thus, the practice of the trailblazer is diffused unintentionally and informally, sometimes through employee mobility and employee turnover or expressly by consulting firms or industry trade associations. When organizations mimic successful organizations, the goal may be to enhance efficiency, but also, the organization hopes the ritual will demonstrate their willingness to adopt the innovation and thus enhance their legitimacy (DiMaggio & Powell, 1983).

A few studies have empirically tested DiMaggio and Powell's mimetic isomorphism. For example, Depoers and Jérôme (2019) found tax disclosure and increased pressure for fiscal

transparency represent a great source of uncertainty for organizations, and organizations tended to manage that uncertainty by aligning their disclosure policy with those of industry peers. In an empirical study, Fernhaber and Li (2010) found that new ventures in doubt about international entry and subsequent performance tended to imitate the internationalization exhibited by industry firms. In another empirical study investigating the effects of mimetic isomorphism on corporate charitable contributions behavior of firms under unusual uncertain conditions, Galaskiewicz and Wasserman (1989) found that under those conditions, organizations tended to mimic the behavior or adopt the preferences of elites and other organizations in their environment.

***Normative Isomorphism*.** Normative isomorphic organizational change stems from professionalization. Professionalization is the collective effort of members of an occupation to define the conditions and methods of their work and establish a cognitive base and legitimation for their occupational autonomy (DiMaggio & Powell, 1983, p. 152). Employees in regulated professions tend to abide by ethics and professional conduct prescribed by the profession more so than being loyal to the organizations, as was traditionally the case several decades ago. Thus, professional practices are subject to the same coercive and mimetic pressures as are organizations (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) identified two sources of normative (professional) isomorphism. The formal education and cognitive base conferred on employees by universities and professional certification, and by trade associations. While colleges and training centers are sources of organizational norms for executives and rank and file staff, professional and trade associations are the bodies that define and promulgate prescriptive norms on organizational and professional behavior. Thus, the two create a pool of virtually substitutable persons with similar orientations and personalities who perform like roles in various organizations (DiMaggio & Powell, 1983).

Another bucket of normative isomorphism is the filtering of personnel. According to DiMaggio and Powell, within many organizational fields, filtering is a process through which organizations hire from firms within the same industry with firms with identical promotion practices. Accordingly, career tracks at entry-level and management positions are regulated in a way that personnel who attain managerial status are virtually homogenous. New employees who escape the filtering process, for some reason, are onboarded and subjected to widespread on-the-job socialization that enhances their similarity to other employees (DiMaggio & Powell, 1983). Two studies that have tested normative isomorphism cited in Hambrick et al. (2004) are Mezias (1990) and Glynn and Abzug (2002). Mezias found that adopting new financial reporting methods is influenced by bringing in new managers who had previous experience to the novel method elsewhere. Glynn and Abzug reviewed over 1600 corporate name changes and found organizations undeniably conform to institutional pressures in embarking on changes in corporate identity. Though the isomorphic mechanisms explain how isomorphic changes occur, they do not predict which organizational fields are most likely to be homogeneous in structure, process, and behavior necessitating a study of isomorphic change predictors.

***Isomorphic Change Predictors*.** DiMaggio and Powell (1983) crafted 11 hypotheses classified under organizational level and field level predictors as empirical evidence that contextual forces influence the degree of homogeneity within an organizational field and thus predict variability in the extent to and the rate at which organizations in a field change to become more like their peers. Though the hypotheses have come under serious criticism by scholars such as Hambrick et al. (2004), who posited, contrary to DiMaggio and Powell's assertion, that organizations are becoming more homogeneous, many, and perhaps even most, industries

became more heterogeneous over the period 1980 to 2000 under the conditions that DiMaggio and Powell asserted will increase homogeneity.

According to Hambrick et al. (2004), DiMaggio and Powell's (1983) theory is as much one of heterogenization as of homogenization, and in the closing decades of the last century, in the American corporate landscape at least, it was heterogenization that prevailed. Nonetheless, the DiMaggio and Powell study remains authoritative and has endured as the theoretical underpinning for many studies that consider isomorphic changes and predictors in organizational settings (Wu et al., 2013). According to DiMaggio and Powell, since institutional isomorphism results in homogenization, the best predictor of isomorphic change is a decline in variation and diversity, measured by lower standard deviations of the values of selected indicators in a set of organizations (p. 155). Of DiMaggio and Powell's 11 hypotheses predicting isomorphic change, only 2 belonging to the field level are relevant to this study, consistent with DiMaggio and Powell's assertion that the key predictors would vary with the nature of the field and the interests of the researcher (p. 155). Nakanishi (2014) used only one of these predictors in their study of isomorphic knowledge transfer in the international civil aviation domain. The two hypotheses are stated and briefly reviewed below.

The greater the extent to which an organizational field is dependent upon a single (or several similar) source of support for vital resources, the higher the level of isomorphism. A highly centralized source of resources for organizations causes homogenization because organizations use the same methods prescribed by suppliers to access resources and use the resources in similar manners. This hypothesis is congruent with the ecologists' argument that the number of organizational forms is determined by the distribution of resources in the environment and the terms on which resources are available.

The greater the extent to which the organizations in a field transact with government agencies, the greater the extent of isomorphism in the field. This argument stems from elements of public/private-sector transactions. Government agencies routinely prescribe industry standards for an entire organizational field, requiring compulsory adoption by all qualifying organizations (DiMaggio & Powell, 1983). Thus, the frequency of interaction with government agencies, and higher levels of exposure to government regulations, increase the rate at which organizations tend to resemble each other as they attempt to comply with the same rules and policies (Nakanishi, 2014). Though government agencies are perceived as the source of isomorphism, they too are subject to isomorphism from other organizations, such as international conventions sponsored by certain international organizations (Nakanishi, 2014). Thus, isomorphic pressure can originate from both government and international sources. An organization, the activities of which are the subject of international regulation, will be similar to local organizations and organizations outside the national borders. However, some current studies have developed other notions of INT that depart from DiMaggio and Powell.

Second-Generation Neo-Institutionalism. Scott (1987) started a debate on a postulation that institutionalization alone is insufficient to fully explain organizational behavior and better positioned as complementary to exchange or efficiency perspective. This argument paved the way for second-generation neo-institutionalism (Aksom & Tymchenko, 2020) and a litany of studies critiquing DiMaggio and Powel's (1983) *Iron Cage* findings (Woolthuis & de Jong, 2017). Aksom and Tymchenko (2020) pointed out ideas forming the basis of second-generation neo-INT stem from the studies of Oliva (1991), Leblebici et al. (1991), Seo, and Creed (2002), and Scott (2008). The studies, for example, Oliva, put forth the argument that organizational responses to institutional pressures depend not only on the pressures being exerted but also on

the willingness and ability of organizations to comply (Woolthuis & de Jong, 2017). The other studies castigate the first-generation INT for being too narrow and oblivious to issues of agency, changes, and heterogeneity (Aksom & Tymchenko, 2020). Based on institutional and resource dependency theory, Oliver (1991) developed an integrated predictive framework of strategic responses to isomorphic pressure varying from manipulation to acquiesce based on the premise that external pressures cannot be fully responsible for organizational behavior.

From the integrative predictive framework, Oliver established a relationship between external pressures and internal logic and capabilities and predicted that organizations will not acquiesce and thus seek room for agency if: (a) rules are contested and are weakly monitored and enforced and (b) if institutionalized prescriptions clash with internal goals and operations (Woolthuis & de Jong, 2017, p. 5). This ideational synthesis has changed the trajectory of INT by introducing the notions of organizational logic, institutional entrepreneurship, and embedded agency and their enhancing effects on isomorphic pressure resistance (Suddaby et al., 2016). Thus, the second-generation INT focus on (a) explaining how organizations resist isomorphic pressure and engage in divergent change, (b) explaining how organizational fields change in ways that defy long-standing normative pressures for conformity, and (c) seeking answers through the paradox of embedded agency, which questions where new ideas come from, if institutionalized norms and pressures are so cognitively ingrained and dominating (Suddaby et al., 2016).

However, more recent studies have waged significant criticism on the second-generation neo-INT emphasizing embedded agency is not congruent with INT because it provides a structural solution to a cognitive problem (Suddaby et al., 2016). Also, Aksom and Tymchenko (2020) argued though some scholars are willing to accept the superiority of institutional entrepreneurship, embedded agency, and institutional logic over organizational isomorphism, a

careful reading into what constitutes a good theory would fail to consider any of them as theories. Therefore, incorporating them in INT would reduce INT into an institutional change theory resulting in loss of its robustness in making explanatory and predictive directional statements about a phenomenon. According to Aksom and Tymchenko, none of the postulations made within the second-generation neo-INT offer specific justifications and predictions about ways organizations introduce institutional change or cope with divergent institutional change. Consequently, this research must look elsewhere for more robust CTs capable of explaining how to manage change imposed by institutionalized environments.

Change Theories. The CTs chosen to guide this study and reviewed in this section include Kurt Lewin's (1951) three-steps change process, John Kotter's (1995) eight-stage change model, Lippitt's (1958) seven-step change model, and Rogers' (2003) five-step theory of innovation diffusion. Many organizations have adopted change management as a strategic practice for altering people's behavior to achieve desired business outcomes (Shirey, 2013; Weiner, 2009). Change outcomes hinge on leadership that readies the organization for change by addressing contextual factors associated with resistance (Burnes, 2015; Wentworth et al., 2020) and the organization's absorptive capability level (Becker et al., 2005). Poor change management is suggested because new program implementation success rates are abysmal at 30% or less (Burnes, 2015; Rafferty et al., 2013; Weiner et al., 2008; Wentworth et al., 2020). Thus, planned change and organizational readiness for change concepts have emerged as the spine of most CTs (Weiner et al., 2008; Weiner, 2009).

Organizational readiness for change consists of deliberate efforts to prepare organizational members psychologically and behaviorally so that their collective effort can be harnessed to move the organization from its present state to a desirable future state to achieve the

desired outcome (Weiner et al., 2008). However, organizational members always want to maintain the status quo as a sense of security and consequently resist new routines (Burnes, 2015). Routines are basic components of organizational behavior constituting a repository of organizational capabilities (Becker et al., 2005). Change theorists, especially Kurt Lewin, have suggested that organizations to change what they are doing and how they are doing it, they must first unfreeze the organization by changing current mindsets (Weiner et al., 2008, p. 382). The following paragraphs discuss prominent CTs.

Lewin's Three-Step Change Process. The change theory proposed by Kurt Lewin has dramatically influenced the way organizations deal with change resulting from organizational shift and innovation adoption (Bakari et al., 2017; Shirey, 2013). Lewin's theory of planned change emerged from his forced field analysis (FFA; Endrejat et al., 2017; Shirey, 2013) and group dynamics (Burnes, 2015; Endrejat et al., 2017). FFA sought to identify the totality of coexisting factors that act on individuals in their living space (environment) and to use the information to guide action (Endrejat et al., 2017; Shirey, 2013). According to Endrejat et al. (2017), Lewin identified driving forces, considered incentives that promote change, and restraining forces that oppose the driving forces. Lewin additionally identified habits that undermine pro-environmental behavior and classified them as a major source of restraining force. Lewin's FFA later metamorphosed into the three-stage theory of planned change, comprising unfreezing, transition, and refreezing, that he proposed for managing change (Bakari et al., 2017; Shirey, 2013).

According to Shirey (2013), the theory is most suitable for top-down change approaches where senior management and other management actors drive change. It has been proven practical and simple to understand and use. However, Lewin's change theory has been criticized

for its simplicity, as well as its quaint linearity and its static perspective underpinning (Shirey, 2013). Some studies asserted change in many situations is nonlinear and dynamic. Thus, the rational-linear model proposed by Lewin cannot appropriately explain or predict the complexity and unpredictability of change (Shirey, 2013). In a recent study, Burnes (2020) rebuffed criticisms of Lewin's change process, claiming the model is a well-developed approach to changing human behavior, and its criticisms cannot be credible. He argued the model is not simplistic, not linear, not prescriptive, and does comprise a naturally occurring sequence. Instead of criticizing Lewin, some scholars have directed their energy into expanding on his work to improve approaches to planned change (Mitchell, 2013).

Kotter's Eight-step Change Model. Kotter's eight-step change process includes four steps that coincide with Lewin's unfreezing stage. Kotter's eight-step change leadership model is one of the most widely recognized change management models (Grobler et al., 2019; Pollack & Pollack, 2015) because it emphasizes leadership and views change as top-led (Pollack & Pollack, 2015). According to Kamara (2018), the Kotter model provides a holistic approach to realizing lasting change as it advocates building a strong, enduring impetus for change that will inspire people and drive ensuing supportive activities (p. 75). The model's eight stages include:

1) establish a sense of urgency,
2) form a powerful guiding coalition,
3) create a vision,
4) communicate the vision,
5) empower others to act on the vision (also called removing obstacles),
6) plan and create short term wins,
7) consolidate improvements and produce still more change, and

8) institutionalize new approaches (Kotter, 1995).

Kotter's model has come under some criticism. For example, Wentworth et al. (2020) asserted Kotter's implementation stage has been criticized for providing insufficient explicit guidelines on implementation. Hughes (2016) criticized the model for being a-theoretical, and the stages are not based on any empirical findings. According to Hughes (2016), because the model is not based on empirical research, the eight-step formula is merely a conjecture, lacking empirical evidence of each step's effectiveness, ordering, outcomes evaluation, or perceived outcome sustainability (p. 452).

Lippitt et al.'s Seven-step Planned Change Model. Lippitt et al.'s model, while building on Lewin's model, created the phases of change theory (Barrow et al., 2020) focused on the change agent rather than on the change process (Danals, 2011; Udod & Wagner, 2018). The phases of change comprised the following seven stages:

1) becoming more aware of the need for change;
2) develop a relationship between the system and change agent;
3) define a change problem;
4) set change goals and action plans for achievement;
5) implement the change;
6) staff accept the change; stabilization; and
7) redefine the relationship of the change agent with the system.

Thus, the model is a cyclical process intended to continually improve the change process by exploring the organizational situation after stabilizing the change (Al-Haddad & Kotnour, 2015). The phases of change are blueprints guiding the change agent in exploring and diagnosing the organizational situation, subsequently planning the change actions, applying the change, and

finally, stabilizing and evaluating the change (Al-Haddad & Kotnour, 2015). Therefore, the Lippitt model is useful in understanding the role of change agents as they circumnavigate the organization through the various phases of change (Randolph, 1981).

Rogers' Five-step Theory of Innovation Diffusion. Diffusion is a change model that focuses on individual decision-making and is now more generally applied to organizations (Ashley, 2009). Rogers' (2003) theory of innovation diffusion is a novel lens for understanding how and why innovations are adopted by people, groups, or organizations and the rate and pattern of adoption (Mascia & Mills, 2018). Accordingly, diffusion studies feature three distinct processes: presentation of innovation to the society, acceptance by the society, and integrating the accepted innovation into preexisting structures (Kim, 2015). An innovation is an idea, a practice, or object perceived as new by an implementer, and diffusion is a social process of communicating an innovation through certain channels over time among members of a social system (Rogers, 2003). The theory of innovation diffusion explains three variables that shape the rate and pattern of adoption, including innovation characteristics, adopter characteristics, and the social and ecological system surrounding the innovation and the adopters (Rogers, 2003).

Several variables influence adoption within each set, explaining the rates and process, rather than the extent, through which a practice is adopted (Etzion, 2014; Mascia & Mills, 2018). The primary driver of change in the diffusion process is the innovation (Ashley, 2009). Thus, adoption time is considered the dependent variable in diffusion studies. However, when complex organizations are the adopters, subsequent implementation is better understood through measuring change (Dearing & Cox, 2018). Rogers' theory of innovation diffusion encompasses an innovation-decision process that, when integrated into another change model, informs change actors about how to effectively initiate change (Kim, 2015). The social process of innovation

diffusion includes (a) the social system through which the innovation moves, (b) the communication channels of that system, (c) the time it takes for an innovation to spread through the social system, and (d) the adoption of the innovation by the intended recipients (Ashley, 2009).

Rogers (2003) grouped adopters into five categories depending on their adaptation responsiveness. The primary categories comprising early adopter, early majority, late majority, and laggards are based on their degree of innovativeness and acceptance time. The theory postulates the rate of adopting an innovation is predicated on four innovation attributes, comprising its relative advantage, its compatibility, its complexity, its observability, and trialability (Rogers, 2003). Since Rogers, implementation evaluators have attempted to use the diffusion process as a unique set of focal points for understanding change (Ashley, 2009). According to Ashley (2009), innovation diffusion theory can be value-added to evaluators because insights into the diffusion process can increase the evaluation scope. Such an optimized scope can bring to fore factors determining intervention adoption, the patterns underlying intervention spread, and the determinants influencing intervention adoption in a local context. However, Damanpour and Schneider (2008) posited many studies have evaluated innovation adoption myopically, which may obfuscate results. According to Damanpour and Schneider, while many studies agree and perceive innovation adoption as a multi-step process, many empirical studies have operationalized it as an event or outcome and measured its adoption as a dichotomous decision.

Through arguments in the literature that antecedents of innovation may have a different effect at different points in the adoption process, Damanpour and Schneider (2008) incorporated widely accepted phases of innovation adoption comprising, *initiation*, *adoption decision,* and

implementation, and examined their antecedents in a sample of approximately 1200 local government organizations in the United States. In recognition that innovation diffusion is also multidimensional (influenced by factors within several dimensions), Damanpour and Schneider incorporated environmental, organizational, and individual (organizational leader) factors to develop and test hypotheses on the degree to which factors within each dimension affect the three phases of innovation adoption. Previous studies had focused on factors within the organization only. Using regression analysis, the results confirmed their expectation that the external environment, organizational factors, and leadership each account for unique variance in the initiation, adoption decision, and innovation implementation.

Normalization Process Theory. NPT emerged from the normalization process model (NPM) that was introduced as a theoretical model in healthcare to assist clinicians and researchers to understand and evaluate factors that inhibit and promote the translation of complex healthcare interventions into practice (Finch et al., 2015; McEvoy et al., 2014; Sutton et al., 2018). NPT developed from NPM when empirical evidence surfaced to confirm that while NPM could identify promoting and inhibiting factors, it lacked the potential to explain or predict how organizations understand, engage in, and support new routines (Finch et al., 2015; McEvoy et al., 2014). May and Finch (2009) attested NPT can be traced to Merton's (1957) middle-range theory, which explained how relevant practices are implemented and embedded in daily life by scrutinizing and clarifying specific sets of actual behaviors and relations. However, NPT is the result of the work of several medical sociologists, who in 1998 began empirical research intended to understand how innovation is embedded into the daily activities of groups and organizations (Wood, 2017). Thus, NPT's early application was focused on *e*-healthcare, but its philosophies have since been extended into other disciplines, including psychology, sociology,

business, healthcare management (Finch et al., 2015), and information systems development (Sooklal et al., 2011).

According to Finch et al. (2015), prior to the emergence of NPT, literature invariable associated implementation failures with slow professionals' behavioral change, neglecting to consider other viable predictable socio-organizational reasons. Though understanding implementation failure from the lens of change responsiveness has contributed significantly to understanding implementation, many complex influencers in practice are not directly associated with individual behavior (Finch et al., 2015). Finch et al. posited new practices are absorbed and become doable due to convoluted interactions between characteristics of the practice itself, individual actions of those involved in the process, and physical and social aspects of the implementation environment (p. 2). Thus, four constructs, comprising *coherence, cognitive participation, collection action,* and *reflective monitoring,* have been developed to increase knowledge of these dynamics by focusing on processes through which new practices become normalized (Finch et al., 2015, 2018; Gillespie et al., 2018; Peng et al., 2020; May & Finch, 2009).

Sutton et al. (2018) posited that the four constructs explain how actors make sense of a practice. Each construct highlights the work change actors accomplish as they work around the practice. Sutton et al. explained that each core construct further comprises four other subconstructs that explore different aspects of implementation in greater detail. According to Peng et al. (2020), barriers to innovation normalization, such as unwillingness to fully participate in the intervention program, heavy workload, lack of training, and supervision to deliver the intervention, can be mapped against the four NPT constructs to understand and explain effects. Studies, such as Rapley et al. (2018), have improved the robustness of NPT by proposing

quantitative and qualitative instruments that can be used in assessing, monitoring, or measuring factors likely to affect normalization from the perspective of implementation participants.

Another perspective of embedding (normalization), especially on accounting change, is elucidated in a series of studies by Hyndman and Liguori (2016), Hyndman and Liguori (2018), and Hyndman et al. (2019). Hyndman and Liguori (2018) posited the way organizational actors perceive and discuss innovation has a positive relationship with responses to it and its implementation. They postulated legitimation strategies applied in discussing and understanding change affect change outcomes, which they conceptualized as change embedding. Also, Hyndman et al. asserted change outcome is either actors' ex post legitimation or de-legitimation. As such, legitimation strategy is applied to obtain desired outcomes. Legitimation strategy uses *account*, defined as actors' rhetoric about the utility of a new practice that justifies its routinization. Accordingly, embedding and routinizing an innovation requires new arrangements and positive actors' rhetoric portraying it as an appropriate response to a phenomenon, yielding more utility than previous practices (Hyndman et al., 2019).

Literature suggests actors' accounts are predicated on five possible discursive legitimation strategies: authorization, rationalization, normalization, moralization, or narrativization (Hyndman & Liguori, 2016, 2018; Hyndman et al., 2019). Authorization is legitimation obtained through the authority of tradition, custom, law, and management executives. Rationalization relates to legitimation obtained through claims of the new practice's utility. Normalization legitimates thorough contrasting *retrospective* (similar cases, events, or practices in the past) or *prospective* (new cases, events, or practices to be expected) practices, making the practice of interest something *normal*.

Moralization refers to legitimation by reference to specific value systems. Narrativization is legitimation expressed through storylines that justify acceptable, appropriate, or preferential behavior (Hyndman et al., 2019). In the case of a radical change, such ASC 606 implementation, authorization, rationalization, and normalization should be the primary discursive strategies for embedding and routinization because, as Hyndman et al. (2019) posited, rationalization primarily focuses on the advantage, objective, or end-result that a specific course of action can produce. Authorization is management rhetoric focused on talking employees into the new practice and support in terms of resources for embedding the change. Without a change in actors' beliefs, the impact of accounting system change is likely to be impaired.

Theory-Based Implementation Frameworks. Traditional approaches to implementing innovation motivated by nothing more than just the caprices of purveyors or management have been found to be unsatisfactory (Metz et al., 2015). Because ineffective program implementation may delegitimize and cripple an organization, there is growing interest in strategies that actualize innovations with high fidelity and efficacy (Metz et al., 2015; Proctor et al., 2013). Accordingly, the field of implementation research, also known as dissemination and implementation science, has advanced significantly during the past two decades in response to the need to address context and factors critical to implementation success (McCreight et al., 2019; Peters et al., 2013). The emergence of many frameworks from several angles of implementation research has resulted in underscoring a set of multilevel elements theorized as impacting implementation outcomes (Chaudoir et al., 2013). Consequently, emphasis has shifted from standalone implementation strategies to more encompassing and holistic approaches offered by implementation frameworks (Meyers et al., 2012). Using theoretical implementation frameworks opens new avenues for advancing generalizable implementation knowledge (Moullin et al., 2020).

Moullin et al. (2020) described frameworks as "graphical or narrative representations of the factors, concepts, or variables of a phenomenon" (p. 2). Moullin et al. continued to point out in implementation science, the phenomenon of interest is typically implementation. Peters et al. (2013) asserted the word implement emanates from the Latin word *implere*, meaning to fulfill or to carry out. This background significantly informed the broad meaning accorded implementation in implementation research. Glasgow et al. (2019) defined implementation as using strategies to adopt and integrate interventions and change practice patterns within specific settings (p. 1275). Peters et al. defined it as the scientific inquiry into questions concerning implementation, the act of carrying a policy, program, or individual practice into effect. Damschroder et al. (2009) defined implementation as "the constellation of a process intended to get an intervention into use within an organization" (p. 3). Accordingly, implementation research focuses on the actors linked to the innovation and not knowledge production (Peters et al., 2013). Actors include managers and teams using the innovation, practitioners, people influenced to change their behavior, and communities impacted by the innovation.

To ensure buy-in that enhances implementation, it is important to involve actors in all phases of research and implementation, rather than just targeting them for dissemination (Peters et al., 2013). Thus, recent studies have investigated research and implementation and found the broader context into which an innovation is introduced significantly impacts its embedding into routine practice (*Society of Clinical Psychology*, https://www.div12.org/implementation/overview/). Using one or a combination of implementation frameworks is a pragmatic way of rolling out an innovation, and empirical evidence exists suggesting they significantly enhance dissemination and implementation from both the purveyor's and the implementer's perspectives (Damschroder et al., 2009; Matlock et

al., 2020; Moullin et al., 2019, 2020; Nilsen, 2015; Odom et al., 2014; Pollastri et al., 2020; Proctor et al., 2013). King et al. (2020) described implementation frameworks as broad theory-based domains associated with the adoption, implementation, and maintenance of innovation. Matlock et al. (2020) asserted that using an implementation framework may help organizations discover multilevel challenges and opportunities that impede or enhance adherence to mandated programs.

Three broad implementation frameworks exist, structured as process frameworks (e.g., describing and/or guiding the process of translating innovations or policies into practice), determinant frameworks (e.g., analyzing drivers of implementation outcome), and outcome frameworks (e.g., evaluating implementation efforts) (Moullin et al., 2020; Nilsen, 2015). However, most process frameworks are nothing more than models prescribing a gamut of steps to be followed in the implementation process (Nilsen, 2015). In that light, the broad-based, theory-oriented frameworks are the determinants or evaluation frameworks (Chaudoir et al., 2013; Nilsen, 2015). The broad-based frameworks are not only prescriptive but act as compasses for guiding the translation of research into practice, with a built-in mechanism to enhance sustainability and evaluate outcomes (Matlock et al., 2020; Meyers et al., 2012).

Determinant Frameworks. These frameworks identify, describe, and classify determinants into barriers or enablers of implementation outcomes. In a study, determinants are considered independent variables and the implementation outcome as the dependent variable. Some determinant frameworks also depict the relationship between variables (Nilsen, 2015). According to Nilsen (2015), the overarching goal of this type of implementation framework is to provide insight into implementation determinants so that actors can use the knowledge to streamline implementation and explicate impact on the outcome or retrospectively interpret the

outcome. Prominent determinant frameworks related to this study and reviewed in this section are the consolidated framework for implementation research (CFIR) (Birken et al., 2017; Damschroder et al., 2009; Kirk et al., 2016) and the active implementation framework (Bertram et al., 2015; Blanchard et al., 2017; Hamid et al., 2020; Pollastri et al., 2020).

***Consolidated Framework for Implementation Research*.** Damschroder et al. (2009) described the CFIR as a meta-theoretical framework imbued with a continuum of standardized implementation-related constructs applicable across the universe of implementation research. The 39 constructs found in a typical CFIR are categorized under 5 principal domains, interacting with each other in a reach and complex manner to influence implementation and implementation effectiveness positively or negatively. CFIR hinges on a conceptualized assemblage of constructs upon which hypotheses of specific change mechanisms and their interrelationships can be developed and tested. However, it does not explain the interaction between the constructs (Damschroder et al., 2009). The five CFIR domains are the intervention characteristics, the inner settings, the outer settings, the individuals involved, and the process.

Intervention Characteristic. A comprehensive analysis of intervention characteristics is expounded in Damschroder et al. (2009) and summarized here. Intervention characteristics explain the new practice's source, legitimacy, quality, and relative advantage. The new practice may come from within the organization or develop externally. The source is critical and impacts implementation. However, even before implementation, an organization must adopt the new practice; otherwise, it ends up as a poor fit, resisted, and requiring an effective approach to motivate actors to enforce its implementation. Other intervention characteristics influencing implementation are (a) adaptability, (b) trialability, (c) complexity, d) design, and (e) the cost of the practice and its implementation.

Adaptability is the extent to which the new practice can be retooled to meet the specificities of the organization. Adaptability depends on the distinctiveness and separability of the core component and the peripheral adaptable component. A component analysis must be conducted to determine the possibility of isolating and refining peripheral components without impairing implementation fidelity (Carroll et al., 2007). Trialability is the possibility to test-run the new practice on a small scale and quickly undo implementation. This is done to determine the functionality of the practice and to allow stakeholders to familiarize themselves and create competencies. Complexity is the degree of difficulty associated with implementing the practice, or the extent of disruptiveness implementing the new practice will have on the organization's processes. Design and packing are perceived as the brilliance in bundling and presenting. The final characteristic is the cost of the new practice and its implementation. This is often compared against the benefit of the intervention to determine if investing in the new practice is worth it.

Outer Setting. Damschroder et al. (2009) identified four constructs that characterize the outer setting: user needs and resources, cosmopolitanism, peer pressure, and external policies and incentives. User needs are the extent to which an organization is user-centered, discerned from the degree to which user needs, as well as barriers and enablers to meet those needs, are accurately known and prioritized by the organization. Accordingly, user-centered organizations are more disposed to implementing change in a timely and effective manner to enhance organizational implementation outcomes. Cosmopolitanism is the degree to which an organization is embedded in the network of similar organizations. Such networking increases an organization's social capital, described as the quality and extent to which an organization's networking results in a shared vision and information sharing. Organizations with optimized social capital are more likely to implement new practices with minimal delay. Peer pressure

emanates from peer organizations that the focal organization feels affinity or competes with. Thus, organizations sometimes feel mimetic or competitive pressure to implement a new practice basically because it trends in the industry (Damschroder et al., 2009). External policies and incentives include strategies employed by external organizations and government agencies, with a direct interest in a new practice to disseminate a practice. It may take the form of penalties for non-compliance, pay-for-implementation, guidelines, and recommendations, or benchmark practice (Damschroder et al., 2009).

Inner Setting. Damschroder et al. (2009) expounded the inner setting refers to the level of influence and interaction between constructs. The constructs include structural characteristics pertaining to the age, size, and maturity of departments. Certain constructs have been found to be positively associated with implementation, such as low turnover and diversity of knowledge within teams. Others, such as over-centralization, have a mixed influence on implementation. Other constructs influencing implementation are communication, organizational culture, and implementation climate.

Process. The implementation process is a social process intended to operationalize innovation by using change strategies (May et al., 2009; Pfadenhauer et al., 2017). Metz et al. (2015) described the implementation process as a dynamic, multistage, iterative nonlinear process comprising four typical management functions: planning, engaging, executing, and evaluating. The primary objective of planning is to design a course of action and outline the steps to implement the practice with occasional actions at specific points meant at correcting, refining, or expanding the original activity (Pfadenhauer et al., 2017). Engaging is selecting the right people and setting teams to oversee the implementation. Executing is conducting the implementation based on the plan, while evaluating is the process of obtaining feedback about

the implementation progress using preconceived measurement criteria. Process models can be used to guide planning (Damschroder et al., 2009).

In a framework analysis study intended to discover the extent to which the original CFIR in Damschroder et al. (2009) has been used in a meaningful way, Kirk et al. (2016) found, within the 26 studies that met the inclusion criteria, that of the 429 studies that cited Damschroder et al. confirmed CFIR has been applied widely and for a variety of objectives but with many focusing on implementation. They also found that CFIR is mostly applied during implementation or post-implementation to identify barriers and enablers to implementing a new practice. Only two studies in their investigation used the CFIR prior to innovation implementation to collect useful data to inform future implementation efforts. Kirk et al. referred to this restricted application as a potential missed opportunity because studies that applied CFIR prior to implementation identified barriers, fine-tuned implementation strategy, and adapted the new practice as a precursor for implementation (p. 10). Also, using CFIR to discover implementation obstacles before a program is rolled out on a large scale gives the organization room to retool the implementation plan. Though only half the studies investigating the use of CFIR in Kirk et al. investigated the relationship between CFIR constructs and implementation outcome, they all concluded a relationship exists between CFIR constructs (determinants of implementation) and implementation outcomes and effectiveness.

***Active Implementation Frameworks*.** Active implementation frameworks (AIFs) are a set of frameworks that emerged from a systematic review and synthesis of the implementation research findings carried out by the National Implementation Research Network in 2005 (Blanchard et al., 2017; Fixsen et al., 2009; Metz et al., 2015). According to the Active Implementation Research Network (AIRN), the potency of AIFs in making testable predictions

in practice derives from mechanisms and strategies incorporated into five components, namely, usable innovation, implementation stages, implementation drivers, improvement cycles, and implementation teams (Blanchard et al., 2017). Since their inception in 2005, AIFs have been found successful in guiding the implementation of several new practices (Blanchard et al., 2017; Pollastri et al., 2020).

Blanchard et al. (2017) posited AIFs are based on the success formula, which is the notion that desired implementation outcomes are the product of an effective innovation (what needs to be done), effective implementation (how it will be done and by whom) and enabling contexts (where it will thrive). Whenever one component is missing from the equation, implementation effectiveness or outcomes will be impaired (p. 923). The AIFs perceive implementation as a process, not a one-off event, involving a string of recursive decisions, supports, and actions directed at achieving the benefits of a program (Blanchard et al., 2017; Fixsen et al., 2009; Pollastri et al., 2020). A typical implementation process takes about two to four years to complete and is spread out into four stages. Each stage involves activities that must be completed, and the full range of implementation stages serves as a roadmap for implementation. The activities within each stage of implementation often overlap, with some activities still occurring and impacting new activities in the next stage, making the stages nonlinear (Blanchard et al., 2017; Fixsen et al., 2009). The AIFs components are briefly reviewed below.

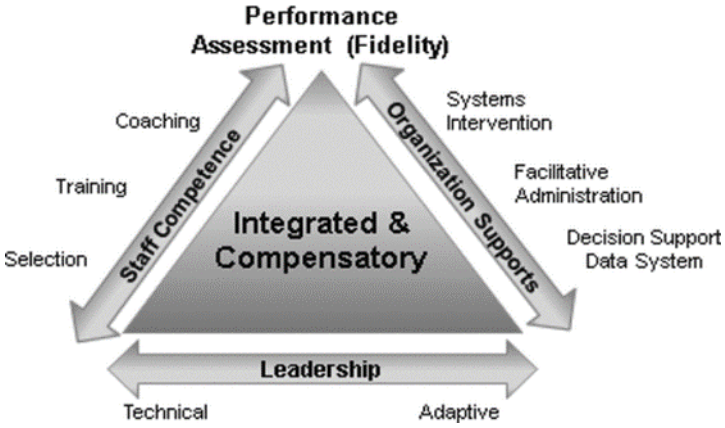
Usable Innovation. This is the first and umbrella component of AIFs, which characterizes the quality of the new practice in consideration for implementation. To be ready and deemed implementable, a new practice must fulfill the following four criteria set out in Fixsen et al. (2009): (a) A clear description of the program, including its philosophy, values, and

principle that provide guidance for all decisions, processes, and activities. It must also include a clear criterion that defines the population for which the program is intended and the benefits to target users; (b) a clear description of essential functions or core intervention components; (c) it must include operational definitions of essential functions and descriptions of the core steps and activities that permit a program to be teachable, learnable, and doable in real-world practice in a way that guarantees consistency among professionals; (d) it must be capable of being assessed in terms of its effectiveness and the performance of practitioners. Such performance assessment must relate to the program philosophy, values, principles; essential functions; and core activities specified in the practice profiles. The performance assessment (fidelity) must correlate highly with intended program outcomes.

Implementation Drivers. The choice of implementation drivers is based on the synthesis of successfully implemented practices and programs found in the literature in conjunction with current best practices (Fixsen et al., 2009).

Figure 3

Implementation Drivers



Notes. Implementation drivers diagram showing how leadership exploits competency and organizational drivers to achieve fidelity and program outcomes. From "Active implementation frameworks for successful service delivery: Catawba County child wellbeing project," by Metz, A., Bartley, L., Ball, H., Wilson, D., Naoom, S., & Redmond, P., 2015. *Research on Social Work*

Practice, *25*(4), 415–422. https://doi.org/10.1177/1049731514543667. Copyright by SAGE Publications, 2015.

Implementation drivers, depicted in Figure 3, are the engine of change and act as the building blocks of the structure needed to facilitate organizational and systems change (Metz et al., 2015). There are two categories of implementation drivers: competency drivers and organization drivers. At the base of the two drivers, as shown in Figure 3, is leadership supports, considered in many studies as a third driver. Leadership influences the other two drivers dynamically and interactively to produce high fidelity and sustainability (Metz et al., 2015). Competency drivers are used to develop competencies among actors by introducing new ways of work learned through training and coaching. Thus, the three subcategories of competency drivers are training, coaching, and selection. Selection is particularly important because the specific skills of actors enrolled in the program must align with the exigencies of the innovation.

Organization drivers are developed by management to change organization practices, processes, and support systems to create an enabling environment for effective implementation. Sub-organization drivers include system intervention, facilitative administration, and decision support data systems. Leadership must provide both adaptive support (convoking groups to identify problems, agreeing on how to approach solutions, detecting progress towards resolution) and technical support (setting goals, managing time and effort, solving problems of known dimensions) that are required in initiating system change. However, the leadership must rely on the expertise of team members in identifying technical challenges and introducing changes in systems to support practice (Hamid et al., 2020). Leadership also coordinates the various implementation stages.

Implementation Stages. The AIFs explain four stages of active and effective innovation implementation.

Exploration. At the exploration stage, the organization first determines the innovation/organization fit based on the usability of the innovation (Hamid et al., 2020). Once the fit is determined to be appropriate, management proceeds to determine needs and readiness, creating readiness if there is a want (Hamid et al., 2020). Implementation readiness is characterized by an organization's change capability, implementation capability, and resource availability (Blanchard et al., 2017; Pfadenhauer et al., 2017; Pollastri et al., 2020). At this stage, possible impediments to implementation such as funding, staffing, referrals, and system changes are evaluated, ensuring the activities culminate in a pragmatic implementation plan to facilitate the kickoff of initial implementation (Blanchard et al., 2017; Pollastri et al., 2020). An implementation driver framework can be used to identify the infrastructure and supports necessary to ensure the capacity to implement the practice, and the implementation team framework can also be used to identify and appoint the right individuals to direct the implementation throughout all its stages (Blanchard et al., 2017; Hamid et al., 2020).

Installation. At this stage, the organization acquires the required resources and makes necessary infrastructure changes, making use of implementation drivers (Hamid et al., 2020). Resources include the right staff used in forming the right teams and assigned to the appropriate implementation stages. The implementation team partners with purveyors, consultants, and intermediary organizations to ensure the competencies required are available (Fixsen et al., 2009; Hamid et al., 2020; Pollastri et al., 2020). It is also important to create systems for improving staff confidence, such as training, coaching, data systems, and facilities for communicating performance and feedback (Fixsen et al., 2009; Pollastri et al., 2020). Implementation drivers are essential capabilities and infrastructure that impact an innovation's accomplishments. They represent core mechanisms needed to initiate and sustain departmental and organizational-level

change (National Implementation Research Network, n.d). The objective of the installation stage is to set up teams, complete preparation, and secure resources needed to move implementation to the next step (Pollastri et al., 2020).

Initial Implementation. This is the stage where the innovation is launched, and staff are allowed to learn and pilot-test the practice for the first time (Hamid et al., 2020; Pfadenhauer et al., 2017). Initial attempts at using the practice will be clumsy, resulting in frustration and the temptation to return to the antecedent practice, thus necessitating effective use of implementation drivers (Hamid et al., 2020). Thus, initial implementation constitutes the most fragile and challenging stage, requiring summoning the right implementation drivers such as change management, quality improvement strategies, and organizational-level support (Pollastri et al., 2020). The mantra for initiating implementation is "get started, then get better." Even when initial implementation is successful, the practice may not continue as originally implemented, making sustainability an important component (Wiltsey Stirman et al., 2012). Fixsen et al. (2009) included sustainability as another stage, thus alluding to six stages instead of the traditional four recommended by the National Implementation Research Network. Other studies, such as Blanchard et al. (2017) and Pollastri et al. (2020), considered sustainability as part of the full implementations stage.

Full Implementation. Full implementation is deemed attained when new learnings become practice, and 50% or more of the target population uses the practice with fidelity and acceptable quality. Full implementation takes about 2 to 4 years to be achieved, and the 50% criterion is the benchmark established by AIRN (AIRN, n.d). When full implementation is achieved and sustained, management should be particularly sensitive to new policies and procedures that can adversely impact the fidelity of using the new practice. Accordingly,

throughout the life of the practice, management must continue to monitor the degree to which policies and procedures hinder sustenance (National Implementation Research Network, n.d.). Other frameworks, such as the practical robust implementation sustainability model (PRISM) that have sustainability infrastructure integrated into the structure to enhance long-term maintenance (Matlock et al., 2020), can be worthy alternatives.

Improvement Cycles. Improvement cycles are used to evaluate and address problems arising from environmental changes. Environmental changes that impact implementation may emanate from changes in the economy or social expectations. Other problems may include changes in working conditions, salary expectations, staff turnover, and leadership changes. These factors destabilize the hospitability of the implementation environment, necessitating constant evaluation and improvement of competency and organization drivers and leadership proactiveness to achieve desired outcomes (AIRN, n.d.).

Implementation Teams. Implementation team members include actors with special expertise regarding the innovation, who use and teach implementation best practices. They also initiate and manage organizational and system change. These actors, usually three to five experts, developed the overarching implementation strategy, identified and fine-tuned implementation drivers, and collaborated with the chief executive to make things happen to achieve desired outcomes (AIRN, n.d.).

Evaluation Frameworks. Evaluation frameworks are used in analyzing the extent to which current implementation practices are consistent with best practices or standard implementation protocols (Moullin et al., 2020; Pollastri et al., 2020). Thus, evaluation frameworks analyze implementation practice to identify factors within the implementation process with evaluation attributes. These factors are analyzed to determine the success or failure

of implementation (Nilsen, 2015). Accordingly, the suboptimal use of the implementation framework in the real-world results in difficulties in making correct conclusions about implementation fidelity and, by extension, implementation outcome (Blanchard et al., 2017; Moullin et al., 2020). Though a plethora of evaluation frameworks have emerged in implementation science (Pollastri et al., 2020), the most cited in the literature relevant to this study reviewed below include research effectiveness adoption, implementation and maintenance (RE-AIM), and PRISM.

Reach, Effective, Adoption, Implementation, and Maintenance. RE-AIM was developed about two decades ago to evaluate the public health impact of interventions (Glasgow et al., 2019; Kennedy et al., 2021). RE-AIM is characterized by an unequivocal emphasis on problems, their scope, and steps in the design, dissemination, and implementation process that drive or hinder success in attaining anticipated population-based impact (Glasgow et al., 2019). The popularity of RE-AIM has extended its application into school-based interventions (Estabrooks et al., 2003; Kennedy et al., 2021) and other intervention areas (Glasgow et al., 2019). From a RE-AIM framework perspective, each element of the implementation strategy can be planned and evaluated, thus providing information about the extent to which each element contributed to the intervention's goals (Pineda et al., 2021). RE-AIM comprises five dimensions—reach, effectiveness, adoption, implementation, and maintenance—that have been used to evaluate different interventions (Estabrooks et al., 2003; Glasgow et al., 2019; Kennedy et al., 2021; Pineda et al., 2021; Shaw et al., 2019). The RE-AIM dimensions are briefly reviewed below.

Reach. From the purveyor's point of view, *reach* involves methods used to enroll participants, and the number of participants actually enrolled compared against the population

(Glasgow et al., 2019). In the case of ASC 606, Reach is equivalent to calls for public comments and ensuing public consultations after the first exposure draft (FASB, n.d.). At the organizational level, reach can be interpreted in many ways. For example, organizations may intend to reach actors who are likely to perform different roles within a specific program. Thus, reach should be designed to encapsulate all essential actors engaged in delivering or receiving services (Shaw et al., 2019). Glasgow et al. (2019) postulated reach can be improved through a recruitment program to ensure the right actors (skills) are available to the organization during implementation.

Effectiveness. Outside the laboratory and in most social sciences, *effectiveness* has been conceptualized as the diagnosis carried out to determine the intervention's positive and negative effects on the organization's operations and predetermined outcomes (Shaw et al., 2019). Pineda et al. (2021) conceptualized effectiveness as an organization's perception or assessment of the innovation. Thus, negative perceptions raised by organizations or actors must be noted and addressed because they will determine the organization's adoption behavior. (Pineda et al., 2021).

Adoption. With innovations or programs imposed on organizations, *adoption* may be conceptualized differently from the typical number of organizations that have adopted the innovation (Shaw et al., 2019). In this case, Shaw et al. postulated adoption should intend to study how the adoption process and specific program details differ between organizations. In this case, it may be necessary to investigate how benchmark organizations are being mimicked and if the imitating organization has the resources, especially human capital, to mimic the practice. Adoption, in this case, will be the extent to which peer mentorship has been successful (Shaw et al., 2019).

Implementation. Implementation is perceived as the degree to which an organization or its actors apply elements of the innovation with fidelity, including consistency and time of delivery (Glasgow et al., 2019; Kennedy et al., 2021; Shaw et al., 2019).

Maintenance. Most studies that have used RE-IAM to study intervention did not measure maintenance due to difficulty in measuring it (Pineda et al., 2021). However, maintenance can be conceptualized as the sustainability of the program. In institutionalized settings, it is the extent to which the program becomes institutionalized or part of the organization's everyday routine (Glasgow et al., 2019).

Practical, Robust Implementation and Sustainability Model. Woodbridge et al. (2014) stated the PRISM framework is useful in assessing how a novel program interacts with actors to impact program reach, adoption, implementation, efficacy, and sustainability. Matlock et al. (2020) also described PRISM as an intuitive framework that focuses on key factors that measure implementation success and emphasizes fit among a new practice, its implementation strategy, and the link between context and outcome. Trinkley et al. (2020) postulated PRISM is an amalgamation of the process model, an evaluation framework, and a determinant framework into one framework that comprehensively explains the interaction among an innovation and stakeholders and organizational and external factors. Thus, it is an extensive yet simplified framework directly tied to real-world pragmatic implementation outcome sustenance. Trinkley et al. continued to explicate the comprehensiveness of PRISM, asserting PRISM as a process. The model addresses the stages of implementation. As a determinant framework, it addresses key factors that may influence implementation success. As an evaluation framework, it provides criteria for assessing success. As a comprehensive framework, PRISM agglomerates pre-

implementation planning and design, implementation operations, post-implementation evaluation, and all groups or levels of influences within and external to the organization.

Matlock et al. (2020) and Nilsen and Bernhardsson (2019) corroborated the comprehensiveness of PRISM with Matlock et al. asserting it reached out to all phases of implementation, including initiation, planning, implementation, evaluation, and dissemination, thus enhancing implementation outcomes. PRISM is a hybrid framework developed using concepts from the popular RE-AIM framework, quality improvement, and theory of innovation diffusion to address almost all aspects of implementation and achieve the RE-AIM outcomes (Feldstein & Glasgow, 2008; Matlock et al., 2020; McCreight et al., 2019; Woodbridge et al., 2014). As seen in Figure 4, two PRISM contextual factors interact actively with higher-level intervention elements to influence RE-AIM outcomes. The higher-level intervention elements are organization perspective and multilevel internal and external stakeholders. The contextual factors are the external environment, implementation and sustainability infrastructure, and the recipient (McCreight et al., 2019; Trinkley et al., 2020). An explanation of how the PRISM intervention elements and the contextual factors can influence the RE-AIM outcome is shown below.

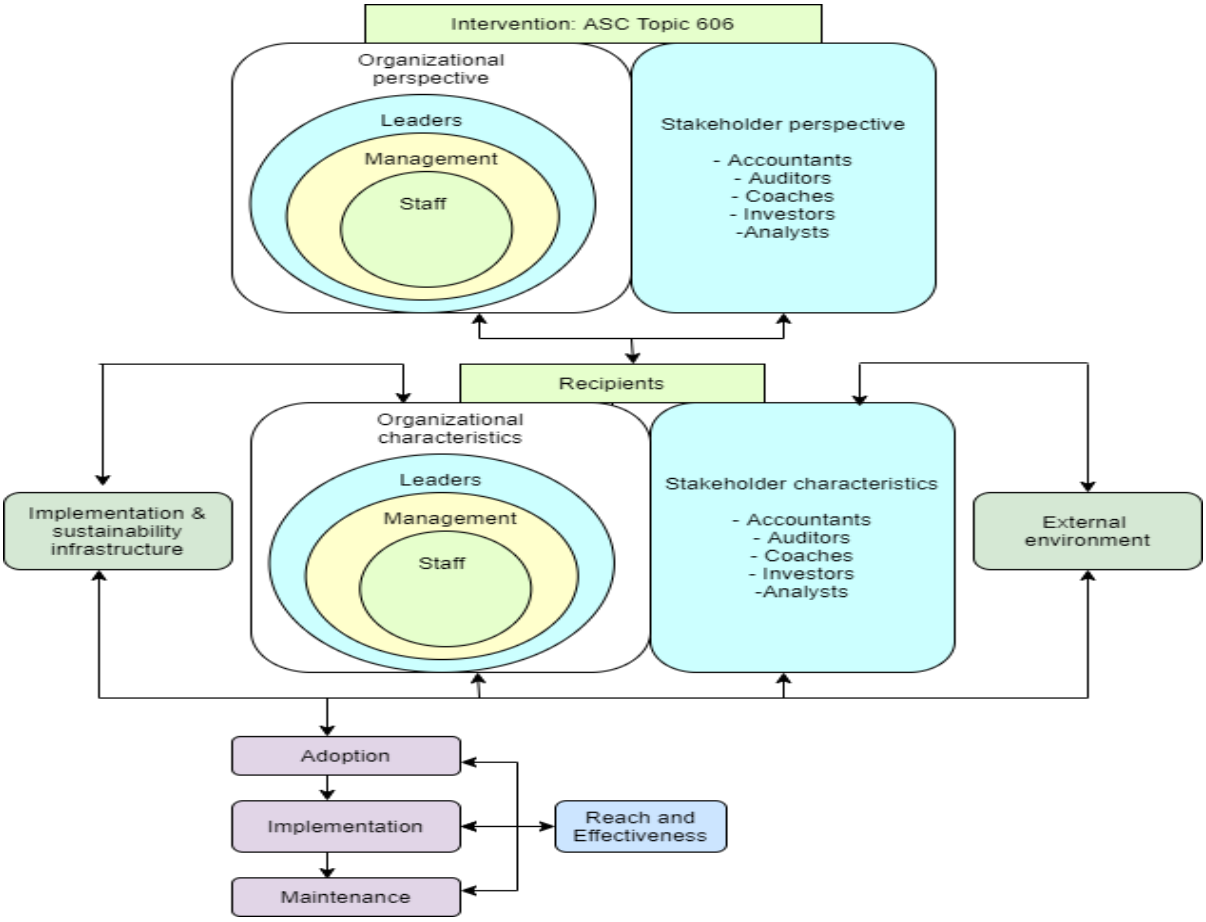
Intervention: Organization Perspective. For an intervention to be successful, it must have evidence of attributes, such as effectiveness, the capability to bridge a gulf in existing practice, be simple and inexpensive to implement, and beneficial to the public. However, in addition to evidence of these attributes, it must first and foremost not be hostile to the organization's mission and change structure (Trinkley et al., 2020). Trinkley et al. confirmed the findings of an earlier study by Damanpour and Schneider (2008) that investigated the correlation between innovation characteristics, manager attributes, and innovation adoption in public

organizations. Damanpour and Schneider found three fundamental innovation characteristics in the literature that significantly influence implementation decisions: compatibility, relative advantage, and complexity.

Intervention: Stakeholder Perspective. A new practice is more likely to succeed if user-friendly and available to a wide array of professionals with different demographics (Klein et al., 2001), is user-centered, and addresses key public concerns, not merely professional issues (Trinkley et al., 2020). Adams et al. (2013) also asserted that perceived usefulness and perceived ease of use impact adoption behavior. In another related observation, Woodbridge et al. (2014) made conjecture for a practice to be routinized and sustained, the innovation must be entrenched in an organization's behavior ecology and be congruent with its leadership design, environment, culture, and processes.

Figure 4

The PRISM Framework



Notes. PRISM framework. Adapted from "A Practical, Robust Implementation and Sustainability Model (PRISM) for integrating research findings into practice," by Feldstein, A. C., & Glasgow, R. E. (2008). *The Joint Commission Journal on Quality and Patient Safety 34*(4). https://doi.org/10.1016/S1553-7250(08)34030-6. Copyright 2008 by Elsevier Inc. Adapted with permission.

Recipients: Organizational Characteristics. Successful innovations have cohesive and clearly communicated goals, with considerable management support. An implementation strategy is formulated in a collegial manner with input obtained from every managerial level, including the C-suite, mid-level management, and operational staff (Trinkley et al., 2020).

Recipients: Multilevel Stakeholder Characteristics. Because service innovation is intended to meet an external user's needs, the nature of service innovation is best understood

through the relationship between provider and user (Walker, 2007). Thus, professionals' (providers') attitudes towards how the innovation is offered may either act as a barrier or enabler of implementation (Walker). According to Matlock et al. (2020), when providers welcome the innovation as a superior alternative to carrying out the profession, implementation is likely to be successful. Additionally, pressure from beneficiary stakeholders (users) emanating from the acceptance or cynicism of the innovation also influences outcomes (Matlock et al., 2020).

External Environment. Regulatory and pressure groups exert pressures on organizations for best practice or benchmark behavior, affecting the organization's implementation outcome. There is heightened external pressure for professions to be more user-centered.

Implementation and sustainability infrastructure. Organizations with an implementation team and coaches will continue to monitor and improve implementation even after full implementation are more likely to sustain and maintain a new practice (Fixsen et al., 2009). According to Fixsen et al., long-term coaching provides "craft" information and advice, inspiration, and opportunities to practice and use skills specific to the innovation (p. 534). Also, an organizational context that provides resources and nurtures implementation through ongoing assessment and feedback systems facilitates implementation sustenance and enhances outcomes (Lyon et al., 2018; Trinkley et al., 2020; Wiltsey Stirman et al., 2012).

Variables of Interest

The variables of interest for this study were identified based on the notion of implementation CSFs underscored in studies such as Abdelmoniem (2016), Epizitone and Olugbara (2019), Ram et al. (2013), and Shatat (2015). These studies define CSFs as a few things that must go well to ensure success. CSFs have been applied in a series of activities where the one thing that is sought the most is a result (Jasin et al., 2019). It has consequently been

applied in enhancing service quality and manufacturing (Dora et al., 2013), project management (Gunasekera & Chong, 2018), supply chain performance (Ansari et al., 2019), operational and organizational performance (Ariyachandra & Frolick, 2008), employee performance and customer satisfaction (Jasin et al., 2019). Scholars concerned about the abysmal implementation success rate of many projects have suggested the need for identifying and stimulating implementation CSFs to boost implementation success (Abdelmoniem, 2016; Epizitone & Olugbara, 2019).

This study searched the extant literature to discover implementation CSFs that would most likely enhance ASC 606 implementation outcomes. Four CSFs with measurable and predictive attributes were identified. Their selection was informed by findings of Chaudoir et al. (2013), Damschroder et al. (2009), Durlak and DuPre (2008), and Nilsen (2015). Chaudoir et al. conducted a systematic literature review of 125 full-text peer-reviewed articles to identify articles reporting measures designed to assess constructs that predict innovation implementation. Damschroder reviewed 19 implementation theories and frameworks to discover implementation outcome drivers in diverse organizational settings. Durlak and Dupree reviewed 500 studies, including meta-analyses and quantitative studies, investigating predictors of implementation outcomes. Nilsen studied different categories of theories, models, and frameworks in implementation science and proposed a taxonomy to foster cross-disciplinary discourse and implementation researchers' choice and application of relevant approaches. Findings from these studies played a significant role in advising the selection of organizational-level implementation CSFs as variables for this study. The review that follows encapsulates and elucidates scholarly assertions and postulations of the predictive and explanatory attributes of these variables as far as innovation implementation and outcomes studies are concerned.

Organizational Agility. According to Appelbaum et al. (2017), it is unquestionable that refusing to adapt to environmental change comes at a much higher price of imminent failure. Asil and Farahmand (2019) also asserted many studies associate organizational failure with inattention to changes in the dynamic environment. These realities have popularized research in and practice of organizational agility to the extent it has been weaponized by many to combat environmental turbulence (Ojha et al., 2020; Zitkiene & Deksnys, 2018) and to enhance organizational survival (Asil & Farahmand, 2019; Nafei, 2016; Wahyono, 2018). OA has also been associated with other concepts such as organizational readiness to change (Puchalski Ritchie & Straus, 2019; Weiner, 2009). Agility methods originated from software development and manufacturing and have since been applied to other business operations, such as supply chain, human resource, IT, knowledge management, and market orientation (Zitkiene & Deksnys, 2018). As a result, many scholars defined it narrowly to reflect these functional areas (Zitkiene & Deksnys, 2018).

Because of its importance, the principles of agility have been espoused in studying phenomena in the organizational context (Wendler, 2013), necessitating a more encompassing definition to reflect its impact on the entire organization. The theme emanating from organizational-level agility perceives it as an organization's ability to anticipate change in its environment and proactively respond in a timely and efficient manner to consolidates its competitiveness (Cegarra-Navarro & Martelo-Landroguez, 2020; Nafei, 2016; Teece et al., 2016; Zitkiene & Deksnys, 2018). The ability to fluidly respond to change requires flexibility and capabilities (Cegarra-Navarro & Martelo-Landroguez, 2020; Teece et al., 2016). Teece et al. (2016) posited agility and flexibility can be used interchangeably, a point they justified with Weber and Tarba's (2014) definition of agility as the organizational capability to remain flexible

in the face of new developments. Attafa et al. (2012) differentiated agility and flexibility, asserting agility is a more encompassing capability that includes flexibility and perceived flexibility as an enabler of agility, emphasizing the speed element. The other element of agility is innovation. According to Zitkiene and Deksnys (2018), the concept of speed and innovation as the key elements of organizational agility first appeared in Lu and Ramamurthy's (2011) study wherein they defined agility as "an organizational capability to deal with unexpected changes in the environment via rapid and innovative responses, which help to take advantage of those changes" (p. 117). Other studies, such as Cai et al. (2018), adopted this concept and went on to emphasize the importance of the speed requirement for agility, in terms of response and implementation, and the innovation requirement, in terms of the quality and substance of the response (Zitkiene & Deksnys, 2018). However, scanning the environment for change and the degree of flexibility, proactivity, innovativeness, and quality responses are predicated on an organization's capability, which according to Zitkiene and Deksnys (2018), are the core underpinnings of OA.

To understand OA, several studies developed frameworks that dealt with its different aspects. One school of thought used the enabler and capability framework, which suggest agile organizations need a set of enablers and capability to respond to change. Another school of thought used the practice framework to identify things organizations do in their daily practice that make them agile. The third school of thought used the sense-response, which sees OA through the lens of abilities—the ability to scan the environment for opportunities and the ability to act in a timely and efficient manner (Zitkiene & Deksnys, 2018). Zitkiene and Deksnys built on these schools of thought to develop an organizational-level agility conceptual model encompassing agility drivers, agility enablers, agile capabilities, and agility practice.

The conceptual model provides insights into how agile drivers orchestrate organizational adaptation once a change in the environment is sensed and recognized. Decision-makers assess the impact of the current situation seeking answers to the following questions: What resources does the organization have to address the changes in the environment? Does the organization have the necessary abilities to utilize those resources and adapt to the changes? (Zitkiene & Deksnys, 2018). After the assessment, decision-makers must respond to the environment drivers by deploying enablers and capabilities. The response is represented by action or practice, leading to an outcome, such as a procedural change (Zitkiene & Deksnys). Zitkiene and Deksnys associated three response capabilities, comprising reconfiguration, learning, coordination, and cooperation capabilities with dynamic capability. In the present study, the more encompassing absorptive capability explains agile capabilities.

Absorptive Capacity. The relationship between employees' innovation use and innovation implementation outcome is mediated by the organization's absorptive capacity (Aliasghar et al., 2019). The concept of absorptive capacity, described as the organization's ability to value, assimilate, and apply new knowledge, was first introduced by Cohen and Levinthal between 1989 and 1990 (Harris & Yan, 2018; Volberda et al., 2010; Zahra & George, 2002). Absorptive capacity became popular because of its interconnectedness with dynamic capability, organizational learning, and knowledge management (Easterby-Smith et al., 2008), its relationship with the learning culture or knowledge-friendly culture (Harrington & Guimaraes, 2005), and its transdisciplinarity and richness in improving innovation and learning capacity by taking advantage of the universal knowledge reservoir (Volberda et al., 2010). According to Matusik and Heeley (2016), since the inception of absorptive capacity, it has been cited more than 500 times across many disciplines, provoking reconceptualization and expansion of the

original construct. The concept has metamorphosed from explaining the benefits of knowledge and opportunities to innovate emanating from an organization's internal research and development activities to embracing an organization's ability to improve more generally as it espouses knowledge from its external environment (Harris & Yan, 2018; Howell, 2019; Lakemond et al., 2016; Matusik & Heeley, 2016).

The original absorptive capacity suggested its level is path-dependent on an organization's accumulated prior knowledge, with prior knowledge considered a prerequisite for recognizing the value of new information, assimilating it, and applying it to commercial ends (Cohen & Levinthal, 1990). Though the significance of prior knowledge continues to be mentioned in newer studies (Harrington & Guimaraes, 2005), a bibliometric analysis by Volberda et al. (2010) argued there is a neglected set of organizational antecedents, such as organizational structure, reward systems, and human resource management practices and policies that significantly influence absorptive capacity. Also, other reconceptualizations of Cohen and Levinthal's absorptive capacity introduced new notions, such as knowledge governance (Lakemond et al., 2016), the process perspective, and adaptive capability (Zahra & George, 2002). Knowledge management argues absorptive capacity must go beyond acquiring external knowledge to embrace developing organizational procedures to govern the acquired knowledge. This is because the exploiting and commercializing phase are likely to fail in the absence of a plan internalizing the acquired knowledge (Lakemond et al., 2016).

Zahra and George (2002) reconceptualized absorptive capacity as a dynamic capability and introduced a model that splits absorptive capacity into two dimensions, each comprising two subsets. The dimensions and their subsets are potential absorptive capacity (knowledge acquisition and assimilation) and realized absorptive capacity (knowledge transformation and

exploitation). The notion of capability dimensions was based on their conjecturing that organizations may acquire and assimilate knowledge but lack the capability to transform and exploit it to commercial ends.

Based on their reconceptualization, Zahra and George (2002) proposed a new definition of absorptive capability as "a set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organizational capability" (p. 186). Zahra and George postulated the four capabilities captured in their definition (i.e., acquire, assimilate, transform and exploit) represent four dimensions of absorptive capacity, and though they play different roles, they are complementary in explaining how absorptive capacity can influence organizational outcomes. Thus, their definition departs from previous studies in two ways. First, it conceptualizes absorptive capacity as a dynamic capability embedded in an organization's routines and processes that can be analyzed to understand an organization's knowledge pool and how it flows to create and sustain competitive advantage. Second, the definition suggests the four capabilities that make up absorptive capacity are intertwined and build on each other to produce a dynamic capability. Zahra and George posited to better understand their postulations, the difference between ordinary capability and dynamic capability must be clarified. They described capability as strength in functional activities such as production and marketing, and dynamic capability as a strategic resource used for effecting organizational change and essentially a pathway to organizational evolution and development (Zahra & George).

Since Zahra and George's (2002) absorptive capability reconceptualization, many scholars have adopted the variant in exploring various aspects of knowledge creation and utilization (Wang et al., 2017). By reconceptualizing and deploying the organization's

knowledge-based assets, studies postulate that organizations with high absorptive capacities would be more responsive to change and flexible and efficient in redesigning operational capabilities necessary to attain new goals (Harrington & Guimaraes, 2005; Wang et al., 2017). However, Todorova and Durisin (2007) critiqued Zahra and George and contended the variant failed to logically build on Cohen and Levinthal's original contribution. Addressing gaps and ambiguity in Zahra and George, Todorava and Dusrisin claimed Zahra and George overlooked links between the contingent factors and absorptive capacity, neglected directions of influence, and omitted a contingent factor. Accordingly, to develop their own construct, Todorava and Dusrisin reintroduced the notion of recognizing the value of knowledge from the original study.

Drawing from learning theories, they argued the new subset in Zahra and George's (2002) model known as knowledge transformation does not sensibly fit as the step after knowledge assimilation but appropriately represent an alternative process linked to assimilation by multiple paths. They asserted this line of reasoning invalidates the notion of potential and realized absorptive capacity and proposed each of the four capabilities is significant, requiring a balanced development of all four knowledge capabilities. They introduced power relationships to add to the other contingencies influencing absorptive capacity outcomes. The rest of this section is structured to review the absorptive capability process from Cohen and Levinthal (1990) and Zahra and George (2002) and selected contingent factors that influence absorptive capability from Zahra and George (2002), Todorova and Durisin (2007), and Vega-Jurado et al. (2008).

Absorptive Capacity Process. Knowledge to support innovation may come from the international level, national level, industry level, or organizational level. At the organizational level, most innovation emanates from borrowing rather than inventing. Accordingly, the ability to scan external sources frequently for new knowledge is a critical component of innovative

capability (Cohen & Levinthal, 1990). Building on the work of Cohen and Levinthal, Zahra and George (2002) proposed an interactive four-step process in building adaptive capacity through components of organizational capacity. The steps involved in the process include capabilities of knowledge acquisition, knowledge assimilation, knowledge transformation, and knowledge exploitation.

Knowledge Acquisition. Knowledge acquisition is the organization's capacity to identify, evaluate, and acquire externally generated knowledge important to its operations (Zahra & George, 2002). Cohen and Levinthal (1990) emphasized the importance of prior knowledge in evaluating the usefulness of the new knowledge, asserting the new knowledge may constitute a set of learning skills organized and expressed in much the same way as the existing knowledge. In such a situation, experience gained from one learning role may impact and enhance performance on another ensuing learning role. Continuing improvements in learning roles constitute a kind of knowledge transfer described as "learning to learn" (p. 130). Though the notion of learning to learn has been criticized and termed a misnomer because improved performance can be attributed to an accumulation of prior knowledge rather than an ability to learn, it nonetheless explains the importance of prior knowledge for learning. However, the significance of prior knowledge diminishes when attention is taken away from research and development as a source of knowledge to interorganizational transfer, where the similarity between organizations is what is relevant for learning (Volberda et al., 2010).

Knowledge Assimilation. Knowledge assimilation is an organization's routines and processes that facilitate analyzing, processing, interpreting, and understanding externally sourced knowledge. Externally sourced knowledge may come with heuristic approaches to learning that significantly depart from approaches employed by the firm, resulting in a prolonged delay in

comprehending and applying the knowledge (Zahra & George, 2002). Cohen and Levinthal (1990) asserted delay in assimilation may be mitigated by the capability of the interface, gatekeeper, between the organization and the external source of knowledge, or the interface between subunits in the organization. Cohen and Levinthal postulated that the interface function may be bestowed on several individuals in various roles or be centralized. However, when the expertise of most individuals within the organization varies significantly from that of external purveyors, gatekeeping becomes a relatively centralized role. For example, when the external knowledge is complex, technical, and threatens internal assimilation, a gatekeeper facilitates by scrutinizing the environment, translating technical jargon into comprehendible language, and explaining minute details to the adopting group. An organization with clear communication channels extending to the external environment facilitates this process (Harrington & Guimaraes, 2005). Alternatively, if external information is closely familiar to current practice and easily assimilable, the gatekeeper's role becomes redundant (Cohen & Levinthal, 1990), and the process progresses to transformation.

Knowledge Transformation. Knowledge transformation is an organization's capability to recognize, decode, and integrate external knowledge into the existing knowledge pool (Zahra & George, 2002). The process is facilitated by the organizations' capability in enhancing routines that enable fusing prior knowledge with newly sourced and assimilated knowledge (Huang et al., 2018; Noblet et al., 2017; Zahra & George, 2002). Zahra and George (2002) described the transformation as a bisociation process that helps organizations develop new methodologies or change existing processes. According to Noblet et al. (2017), the goal of transformation is enhanced by the organization's ability to use internalization or conversion to retool, upgrade, or suppress knowledge. Huang et al. (2018) used the concept of organizational forgetting to explain

how suppressing undesirable knowledge enhances the absorptive capacity. Organizational forgetting is a planned process of discarding old logic to make room for a new logic.

Huang et al. (2018) posited variations in an organization's knowledge base are caused by knowledge impairment (forgetting) and knowledge addition (absorption), resulting in a new balance. Accordingly, organizational forgetting is a mechanism for forgetting obsolete knowledge and a driver for creating space and facilitating the embeddedness of new knowledge. The effect of forgetting is associated with the ability to prepare the ground for absorptive capacity. The relationship between organizational forgetting and absorptive capacity is explained by the complexities of the external environment, which cause businesses that do not forget obsolete practices to lose the dynamism vital to implement innovation. Thus, an organization's planned forgetting behavior is a significant logical sequence towards organizational learning and a necessary process for knowledge transformation. However, Todorova and Durisin (2007) argued that knowledge transformation is not a standalone step after assimilation but an alternative to assimilation. This is particularly true when it is impracticable to alter new practices to fit the existing knowledge structures. Therefore, the new knowledge will not be assimilable, requiring instead that the cognitive structures of the individuals themselves, plus existing processes, must be transformed to adapt to the new practice they cannot assimilate.

Knowledge Exploitation. Exploitation is the capability to streamline routines that permit organizations to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge in their operations (Zahra & George, 2002). Thus, the emphasis is on routines that permit the firm to exploit knowledge. Organizations can develop knowledge serendipitously, without systematic routines. However, the presence of such

routines provides structural, systemic, and procedural mechanisms that allow firms to sustain knowledge exploitation over a prolonged timeframe (Zahra & George).

Contingent Factors. Zahra and George's (2002) reconceptualization identified three contingent factors that moderate antecedents, components, and outcomes of absorptive capacity. The contingent factors include activation triggers, social integration, and appropriability regimes. Todorova and Durisin (2007) expanded on Zahra and George's contingent factors and introduced power relationships as another contingent factor. In yet another study focused on the determinants of absorptive capacity, Vega-Jurado et al. (2008), in addition to social integration mechanisms, introduced organizational knowledge and formalization as the primary determinants of absorptive capacity.

Social Integration Mechanisms. According to Zahra and George (2002), social integration mechanisms minimize the barriers between assimilation and transformation, thereby enhancing absorptive capacity. Vega-Jurado et al. (2008) asserted social integration mechanisms are instrumental in disseminating knowledge within an organization and, at the same time, facilitating the amalgamation of new knowledge with existing skills. Vega-Jurado et al. continued to explicate social integration mechanisms can be formal or informal depending on their degree of systematization but usually take the form of job rotation, quality circles, and problem-solving methodology. Todorova and Durisin (2007) posited that easing the barrier between assimilation and transformation is only part of the significance of social integration mechanisms. They claim the moderating effect of social integration most likely impacts every component of absorptive capacity resulting in either a positive or a negative impact, depending on specific exigencies, such as the type of new knowledge and the type of knowledge processes. Todorova and Durisin postulated social integration influences different processes in different

ways. According to the weak-tie theory, distant and infrequent relationships (weak ties) efficiently disseminate new knowledge by linking otherwise disconnected individuals and groups. Contrary to Zahra and George's claim that only strong ties positively influence absorptive capacity, Todorova and Durisin posited weak ties can positively influence the absorption of new knowledge.

Power Relationship. Todorova and Durisin (2007) introduced power relationships into contingent factors to improve understanding of why some organizations pick and choose available new knowledge and why some organizations are better at exploiting external new knowledge than others. The intimated power relationship influences the absorption of new knowledge and moderates valuing and exploiting new knowledge. Power relationships are described as relationships that necessitate the use of power and other resources by an actor to obtain their preferred outcomes. Thus, power relationships may exist within the organization and outside the organization with stakeholders (Todorova & Durisin, 2007). Within the organization, power relation influences knowledge exploitation through management support (Díaz-Reza et al., 2018; Helfat & Martin, 2015; Wynen et al., 2020) and allocation of resources (Newman & Sabherwal, 1996). Inspired by the dynamic capability theory, Helfat and Martin (2015) asserted dynamic managerial capabilities are proficiencies by which managers build, integrate, and reconfigure organizational resources and competencies.

Accordingly, they are the capacity of managers to create, extend, or modify the organization's resource base. Dynamic management capabilities may impact an organization's internal settings and its external environment. Emphasis on the significance of dynamic managerial capabilities stems from senior management's power in influencing learning, assimilation, reconfiguration, and transformation as the environment evolves. Todorova and

Durisin (2007) posited because intraorganizational power relationships can facilitate or prevent exploiting new knowledge, and internal power relationships moderate the impact of transformation or assimilation of new knowledge, the power system inside an organization should continually be evaluated and, where necessary, reconfigured to facilitate resource allocation and to be generally innovation-friendly.

Formalization. According to Vega-Jurado et al. (2008), formalization is the extent to which procedures, rules, and instructions govern organizational processes. It depicts the degree to which behaviors are programmed by formal, explicit rules. Formalization eradicates the usefulness of interdepartmental communication and coordination by creating an organizational memory that permits routinized actions in specific situations. However, a drawback of formalization is that at high levels, it may result in negatively impacting flexibility and spontaneity of staff to respond in crisis situations, reduce creativity, and inhibit innovation (Vega-Jurado et al., 2008). Its positive and negative influences on absorptive capacity are reflected in its ability to increase the efficiency of knowledge acquisition through a plan or framework that takes into consideration the specificities of the organization. Alternatively, it may impair the transformation and exploitation of knowledge if the new knowledge is of a highly intellectual dimension, requiring creative decisions and flexibility (Vega-Jurado et al.).

Nakanishi (2014) investigated the notion that an organization's decision to acquire or transfer knowledge is based on motivation, suggesting organizations transfer or acquire knowledge intentionally and freely. However, the studies found in many situations, the organization is not at liberty to choose because the new knowledge, such as new laws, regulations, and norms, is imposed by social institutions. This line of argument emphasizing an organization's decision to acquire and use new knowledge may be predicated on environmental

influences rather than the organization's own intentions and is consistent with postulations that knowledge acquisition and use may be influenced by institutional isomorphism (Aizawa, 2018; Jeyaraj & Zadeh, 2020; Puttick, 2017).

Organizational Implementation Context. The need to develop psychometric measures that capture key organizational context determinants that act as precursors of effective implementation has become popular in the literature (Lyon et al., 2018). The surge in studies in this domain is largely attributed to the limitation of most implementation frameworks to capture context (Pfadenhauer et al., 2017) and the relationships among individual and organizational concepts needed to comprehend how these factors coalesce to influence implementation and thus inform strategy selection and sequencing (Powell et al., 2017). Williams et al. (2020) asserted in addition to investigating how constructs within implementation frameworks relate to each other and to implementation outcome, further studies testing the effects of changes in these variables on implementation outcome are imperative. Notwithstanding, most trailblazing studies on organizational environment focused on the organization's molar environment that captured the totality of the organization's ecology and the metrics of which feebly related to performance outcomes (Ehrhart et al., 2014; Lyon et al., 2018; Williams et al., 2018).

Emphasis has shifted to strategic environments that address granular components of the organization's inner setting most proximal to specific outcomes (Ehrhart et al., 2014; Lyon et al., 2018; Powell et al., 2017). One of these environments is the OIC (Lyon et al., 2018). Understanding the OIC begins with understanding how context is conceptualized. According to Nilsen and Bernhardsson (2019), though most implementation frameworks alluded to context, its definition within the framework is obscured. Even those who attempt a definition elected to use terms such as inner and outer settings rather than context. Context is an amalgam of

circumstances or distinctive factors actively in play in the environment or setting that is supposed to host the implementation of the proposed change (Nilsen & Bernhardsson, 2019). When a context is introduced into organizational implementation, OIC is then perceived as a subcategory of constructs of the inner setting relevant to influencing front-line professionals' mindset towards effective innovation implementation. Through OIC, management communicates what it perceives as pertinent actions, policies, practices, and processes for implementing innovation. Key OIC constructs include strategic implementation leadership, strategic implementation climate, and implementation citizenship behavior.

***Strategic Implementation Leadership*.** Lyon et al. (2018) described strategic implementation leadership as a subset of general leadership that fosters specific behaviors that enhance or impede innovation implementation. Strategic implementation leadership encompasses behaviors categorized under four dimensions comprising being knowledgeable about the innovation being implemented, being proactive and anticipatory in problem-solving, coaching and training staff participating in the implementation process, and persevering through the turmoil of the implementation process (Aarons et al., 2017; Lyon et al., 2018). Certain leadership styles, such as transformational and transactional leadership, have been found to be compatible with these dimensions and help promote organizational change. Transformational leadership inspires and motivates employees to follow a plan of action and perform above and beyond (Aarons et al., 2017; Guerrero et al., 2017), while transactional leadership influences behavior through promised reward (Aarons et al., 2017).

Transformational leadership attributes are conveyed through a leader's articulation of values, goals, choices, modeling, and communicating relevant information, which become a template for staff when weighing options and making decisions (Guerrero et al., 2017).

According to Lyon et al. (2018), meta-analyses found strategic leadership enhances organizational change, consistent with current research findings confirming an association between strategic leadership and an organizational climate in enabling innovation implementation. Guerrero et al. (2017) conjectured leadership impacts innovation implementation, explicating leaders initiate adoption decisions, craft implementation strategies and activities, secure necessary resources, build change capacity, provide performance feedback, and scan and create an enabling implementation climate.

Strategic Implementation Climate. Unlike the molar organizational climate that orients all aspects of the organization, a strategic climate focuses on specific constructs in the environment that produce specific outcomes (Aarons et al., 2017; Ehrhart et al., 2019; Klein et al., 2001; Lyon et al., 2018). Meta-analyses have confirmed climates on safety, service, and justice have a strong positive relationship with accidents, customer satisfaction, and fairness factors, respectively (Ehrhart et al., 2014; Torres et al., 2020). Accordingly, implementation climate has taken center stage as a pivotal construct in implementation research since its inception in 1996 in Klein and Sorra's theory of innovation implementation (Jacobs et al., 2014).

Strategic implementation climate is defined as "the shared meaning organizational members attach to the events, policies, practices, and procedures they experience and the behaviors they see being rewarded, supported, and expected" (Ehrhart et al., 2019, p. 2). Implementation climate, in conjunction with congruence between the innovation and the organizational members' values, predicts the consistency and quality of an employee's use of a new practice (Jacobs et al., 2014). Thus, strategic implementation climate intends to foster a conducive organizational context for translating an innovation into practice in an organization, using mechanisms that enhance employees' perceptions of the value of successful innovation

implementation (Ehrhart et al., 2014). The level of strategic implementation climate depends on how leaders communicate and demonstrate implementation values and how employees interpret management's support and reward.

Evidence from a mix of qualitative and quantitative studies suggests an association between implementation climate and high-quality innovation use. Accordingly, implementation climate has been discussed in conjunction with the diffusion of innovations and has also been incorporated into the CFIR framework (Jacobs et al., 2014; Klein et al., 2001). Williams et al. (2018) postulated that molar climate and implementation climate interrelate in their roles in innovation implementation to the extent that strategic implementation climate only results in positive contemporaneous and long-term implementation outcomes when accompanied by a positive molar climate that supports innovation. Williams et al. (2018) continued to assert even with high levels of strategic implementation climate, employees are less inclined to engage in strategically focused behavior prioritized by the organization if the strategic implementation climate is not accompanied by a positive molar climate that supports employees' wellbeing.

***Implementation Citizenship Behavior*.** Organ et al. (2006) defined organizational citizenship behavior (OCB) as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (p. 3). According to Ehrhart et al. (2015), OCB is positively associated with managerial performance evaluations, actual performance, sales team effectiveness, production quality, and health care outcomes. Alternatively, OCB is negatively related to turnover and intention to quit. Somech and Khotaba (2017) linked other constructs, such as justice climate and team psychological capital (e.g., hope, optimism, collective efficacy, resilience), to citizenship behavior. They posited that team psychological capital is a construct of

shared psychological state of members. Teams with high levels of psychological capital are convinced good things happen at work and believe they create their success and can overcome failure.

Accordingly, such a shared psychological mindset is critical in fostering positive attitudes and behaviors that enhance OCB. However, when the behavior is focused on implementation versus general OCB, it results in staff supporting the use of a new practice, supporting co-workers in its delivery, and staying informed about changes in routines and procedure (Torres et al., 2020). Implementation citizenship behavior (ICB) is conveyed by an employee's commitment to the core protocol prescribed for carrying out a new practice. ICB is perceived as employee behavior that goes above and beyond the formal job requirements to support innovation implementation (Lyon et al., 2018; Somech & Khotaba, 2017; Torres et al., 2020). ICB are most effective during the implementation phase by actively exhibiting discretionary supportive behavior. During the sustainment phases, it can also be effective to support colleagues' use of innovation and keep them informed about new updates and feedback (Ehrhart et al., 2015; Lyon et al., 2018).

In sum, positive OIC, with its three domains, strategic implementation leadership, strategic implementation climate, and ICB, enhance innovation implementation. However, for the innovation to produce the purveyor's desired outcome, it must be adopted, embedded, and sustained through what May and Finch (2009) referred to as the normalization process. To put this scenario into perspective, the difference between implementation and adoption must be clarified. Implementation refers to the process of installing and organizing an innovation and providing staff with the training and resources to use it effectively. Alternatively, adoption involves having the entire organization embrace the innovation, routinize it into daily workflows,

and become more effective at solving the problem the innovation is designed to eradicate. Thus, it is as important to consider the normalization context as is the implementation context.

ASC 606 Normalization Contexts. When implementers of an innovation are not involved in creating the innovation but are compelled to adopt it, solutions may be perceived as distant and divorced from the contexts and the intricacies of practice, resulting in some degree of skepticism. This creates a situation where the innovation exists in strategic plans, reported successfully implemented in evaluation reports but are absent in everyday practice (Wood, 2017). ASC 606 normalization can be studied from two perspectives with interwoven concepts. They are the NPT approach and organizational change readiness approach. Normalization is the process of translating an innovation into everyday practice through two distinct adoption processes: embedding (making the innovation everyday practice) and sustaining the practice (integration; May & Finch, 2009). May and Finch defined innovation normalization as a combination of the daily activities of actors that may include novel or changed ways of thinking, acting, and organizing, through which the innovation is routinized and embedded in existing social processes, knowledge, and practices. May and Finch proposed four generative mechanisms that facilitate normalizing an innovation. The mechanisms include coherence, cognitive participation, collective action, and reflective monitoring.

Coherence. Coherence brings into perspective work that defines and organizes the objects of a new practice and whose embedding is shaped by factors that drive or constrain actors' apprehension of a practice as meaningful (May & Finch, 2009). Such apprehension has led some scholars to suggest implementing ASC 606 will result in significant changes in structures, accounting subsystems, processes, IT solutions, and the control environment (Jonick & Benson, 2018; Knachel, 2016; McKee, 2015). In their study entitled "Preparing for ASC 606

implementation," Arms and Bercik (2015) sounded the significance of an early start in preparing for the upcoming changes, commencing with assessing each contract and revenue stream and ensuring the right talent is available to implement the necessary changes while still maintaining the company's day-to-day operations.

Moran (2016) recommended some steps in ASC 606 implementation and normalization, citing determining the impact of the standard on operations and developing a strategic implementation plan, developing new procedures, changing accounting subsystems, and adopting new techniques of capturing data. Also, McKee (2015) warned healthcare organizations about the consequences of delayed implementation, asserting ASC 606 will require modification to existing processes and systems and proposed a five-step implementation process including (a) appointing key actors to an implementation task force, (b) determining likely implementation date and developing key action timeline, (c) determining whether adoption will be a retrospective restatement or cumulative effect, (d) identifying key adoption decisions and starting to gather data to make informed decisions about them, and (e) modifying systems and processes as needed for adoption.

These recommendations are consistent with Wood's (2017) assertion that when an innovation is introduced into an organization before it is activated, actors concerned with the innovation need to understand the nature of the proposed change and the processes involved in operationalizing it. NPT distinguishes phases of implementation requiring four critical roles (i.e., differentiation, communal specification, individual specification, and internalization). Differentiation involves identifying how the innovation deviates from current practice. Communal specification deals with making sure key actors concerned with implementing the new practice have the means to develop a shared understanding of the objectives and potential

benefits. The individual specification ensures actors individually understand their personal roles and the nature of the new practice to gain an understanding of how their roles will change and fit into the adoption process. Internalization brings everything and all actors together to understand the benefits and importance of the new practice can be achieved (May & Finch, 2009; Wood, 2017).

Cognitive Participation. After making sense of the new practice and understanding the full dimension of its ramifications, the next step is to enlist actors to develop and sustain a community of practice around the change process (Wood, 2017). Thus, cognitive participation is work that promotes users' acceptance and legitimation of a practice through participants' commitment (Finch et al., 2018). The importance of enlisting actors in normalizing ASC 606 implementation was accentuated in McKee's (2015) recommendation of appointing actors to an ASC 606 implementation task force and Knachel's (2016) suggestion of creating a cross-functional project team with expertise in accounting, information technology, legal, sales, processes, and controls. Accordingly, relevant participants must be identified and conferred the responsibility to propagate the innovation so that the new practice emanates from active users rather than from a distant source (Wood, 2017). Knachel (2016) continued to postulate ASC 606 normalization is enhanced by enlisting the right actors and providing appropriate training and resources to accounting staff and everyone involved in negotiating and reviewing customers' contracts. Therefore, human resource must have a significant role in identifying actors with the right skillset and establishing a motivation program that sustains high morals among the adoption team (Dixon et al., 2017).

Collective Action. Collective action refers to how and the degree to which actors are able to endorse the intervention in practice and how this endorsement is connected to the allocation of

skills and resources in the organization and to existing practices and rules (Burau et al., 2018). Routine embedding is contingent on actions that define and operationalize a practice. These actions may reshape behaviors or activities, introduce artifacts, or restructure relationships and context. It must involve shared goal-directed action. Goal orientation may be any one of resistance, subversion or reinvention, affirmation, or compliance (May & Finch, 2009). These ideas are similar to the transfer of research into practice through change readiness.

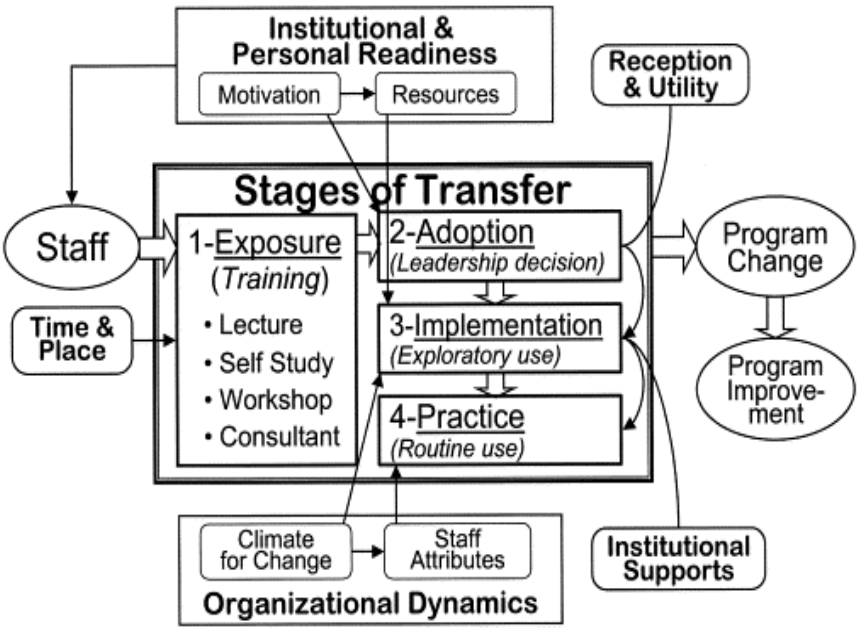
Many scholars have theorized innovation and new knowledge transformation into everyday practice hinges on OCR (Greenhalgh et al., 2004; Lehman et al., 2002; May & Finch, 2009; Riley-Tillman et al., 2005; Seggewiss et al., 2019; Simpson, 2002). Greenhalgh et al. (2004) postulated since the route from considering an innovation to successfully routinizing it is a nonlinear process typified by many shocks, impediments, and unpredictable events, system readiness becomes highly relevant to the early stages of implementation. Thus, they suggested eight elements likely to impact routinization: organizational structure, leadership, and management, human resource issues, funding, intraorganizational communication, interorganizational networks, feedback, and adaptation. Simpson (2002) posited transferring knowledge into practice goes beyond dissemination methodology and staff training to encompass organizational and contextual considerations that influence adoption and use. Because innovation transfer is a much more complex process focusing on efforts to induce change in practice or policy formation, it requires a systematic approach to improve its success.

Scholars have suggested innovation diffusion, resource adequacy, motivational issues, barriers to adoption, specific changes associated with adoption, and general organizational change are all factors critical for the transformation (Simpson, 2002). Simpson (2002) continued to assert there is consensus in the literature that transferring new knowledge into practice

depends more on organizational attributes than how the knowledge is disseminated. Accordingly, organizational factors, such as leadership attitudes, staff resources, organizational stress, regulatory and financial pressures, management style, and tolerance for change all play roles in the process. Inspired by organizational behavior and change research findings suggesting personal attributes of program leadership, staff supervisors, organizational climate, and institutional resources significantly influence innovation utilization, Simpson (2002) developed a program change model, shown in Figure 5, that explicates the composites of OCR.

Figure 5

Program Change Model for Transferring Research to Practice



Notes. Program change model showing stages of knowledge transfer sandwiched by institutional and personal readiness and organization dynamics. From "A conceptual framework for transferring research to practice" by D. Dwayne Simpson, 2002, *Journal of Substance Abuse Treatment*, *22*(4), p. 175 (https://doi.org/10.1016/S0740-5472(02)00231-3). Copyright 2002 by Elsevier Inc. Reprinted with permission.

Lehman et al. (2002) adopted Simpson's (2002) program change model and Texas Christian University's OCR assessment instrument to develop a more encompassing OCR to represent the most relevant variables for studying innovation embeddedness through change that can be applied in most disciplines. Their initiative was guided by recent literature explicating technology transfer, training transfer, organizational development and change, and organizational climate. They theorize OCR consists of three dimensions. Motivational readiness is usually triggered by a need for program improvement, training needs, internal or external pressure for change from staff and regulators, respectively. Institutional resources refer to facilities' availability, qualified staff, training resources, access to equipment such as computers, and e-communication. Staff attributes depict the staff perception of the opportunities for growth and

the level of confidence in their work, their ability to adapt to change, and their response to influences from supervisors. Organizational climate refers to positive aspects in an organization's climate (context) such as clarity of mission and goals, group cohesion and cooperation, and openness to change. Lehman et al. used these dimensions to describe the psychometric and structural properties of the OCR and to shed light on similarities and differences in how management and staff characterize their programs.

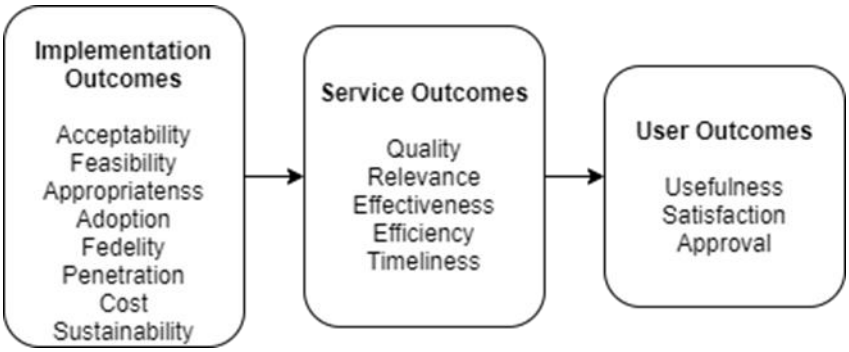
ASC 606 Implementation Outcomes. Even though studies have defined implementation outcomes and proposed assessment techniques, consensus on both is still unresolved more than a decade since the subject gained prominence in the literature (Chaudoir et al., 2013; Khadjesari et al., 2017; Proctor et al., 2011). Proctor et al. defined implementation outcome as the effect of deliberate and goal-directed actions to implement new treatments, practices, and services. However, because implementation outcome is different from service or program outcome, which may be mediated by implementation outcome (Fulop et al., 2016; Proctor et al.), it is important each implementation study defines implementation outcome in its context (Khadjesari et al., 2017).

The rule of thumb is implementation outcome must be defined to reflect: (a) implementation success, which is a prerequisite for the effectiveness of program and quality of service; (b) proximal indicators of implementation processes; and (c) provide important intermediate outcomes for service or program outcomes (Proctor et al., 2011). Accordingly, Proctor et al. developed an implementation outcome taxonomy comprising seven indicators, any one of which may be used in assessing implementation outcomes. The proxies include feasibility, acceptability, appropriateness, adoption, penetration, fidelity, implementation cost,

and sustainability. Figure 6 shows the impact of implementation outcomes on service outcomes and user outcomes.

Figure 6

Impact of Implementation Outcomes on Service and User Outcomes



Notes. Implementation outcome taxonomy and its impact on service and user outcome. Adopted from "Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda," by Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M., 2011. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*(2), 65–76. https://doi.org/10.1007/s10488-010-0319-7. Copyright by Springer Nature. CC BY-NC 2.0.

Fulop et al. (2016) reiterated the importance of a nuanced approach when evaluating innovation implementation outcomes. They developed a diagrammatic framework that categorizes key components of major system change and how they might interact to produce an outcome. Other studies limit implementation outcome to adoption, fidelity, and sustainability (Fulop et al.; Geerligs et al., 2018). According to Proctor et al. (2011) and Schoenwald et al. (2010), fidelity has been used more to measure outcomes than other implementation outcome indicators. Capin et al. (2018) alluded the concept of fidelity first emerged in the work of behavioral psychology researchers when Frank Moncher and Ronald Prinz proposed the first pragmatic guidelines for enhancing treatment fidelity in 1991. Capin et al. went on to explicate the guidelines, among other things, encouraging researchers to (a) operationalize treatment, (b) create manuals and train implementers for treatment delivery using them, (c) provide ongoing

supervision to treatment implementers, (d) measure adherence to treatment through outside observations, and (e) use fidelity data to interpret research findings. Building on these original ideas, health science researchers, with the coordination of the National Institutes of Health, expanded the concept to include new definitions and best practice recommendations for improving healthcare intervention outcomes (Capin et al., 2018). Though other nomenclatures have been used in place of treatment fidelity, including intervention integrity, intervention fidelity, and implementation fidelity, their meaning does not differ, and they each accentuate the notion of delivering an intervention the way it was intended (Robins et al., 2019).

Due to the importance of intervention outcomes, there has been an exponential increase in the attention given to implementation fidelity (treatment fidelity) in the past three decades in health science, education, and other practices (Capin et al., 2018). This heightened attention is emblematic of treatment fidelity requirements imposed on studies sponsored by agencies, such as the National Institutes of Health, U.S. Department of Education, National Association of School Psychologists, as well as the imperative of treatment fidelity measurement for peer-reviewed publications (Capin et al.). However, the literature reveals despite these requirements and agreement among researchers about the consequences of treatment fidelity on studies' validity, many implementation studies do not report treatment fidelity data (Borrelli, 2011; Capin et al.; Sanetti et al., 2020). This is very worrying knowing treatment fidelity has been found to be a significant predictor of program/intervention outcomes (Capin et al.). Thus, assessing implementation fidelity is crucial in implementation outcome studies (Sanetti et al.), and studies bereft of implementation fidelity data cannot claim a change in the dependent variable is caused by a change in the independent variable (Capin et al.; Robins et al., 2019; Sanetti et al.).

Proctor et al. (2011) defined fidelity as "the degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended by the program developers" (p. 69). Fidelity is conceptualized as a multidimensional construct that includes *adherence* (i.e., content or steps delivered), *quantity* (i.e., exposure or dosage), *quality* (i.e., how well intervention was delivered, participant responsiveness), and *process* (i.e., how delivered, program differentiation; Proctor et al.; Sanetti et al., 2020; Schoenwald et al., 2010). Adherence is the extent to which the program is used as intended while avoiding procedures in proscribed alternatives (Proctor et al.; Schoenwald et al., 2010). Treatment differentiation is the extent to which treatments or actions applied in a particular case differ from one another on critical dimensions. The treatment differentiation construct is a crucial consideration for ASC 606 implementation fidelity. Prior to the FASB/IASM converged conceptual accounting framework, the overly rule-based FASB accounting conceptual framework posed a unique dilemma for accounting practitioners as they had to choose between which accounting rules to use rather than applying the best theoretically sound accounting principle (Pike & Chui, 2012). Though this was good for adherence, the absence of flexibility (judgment) impaired the quality of financial statements because management was obligated to structuring accounting transactions that met the letter of the rule (adherence criterion) but not the intent of GAAP (Pike & Chui). This is consistent with some scholars' argument that treatment fidelity, denoting strict adherence to protocol, may impede flexibility and prevent applying tailored treatment where a situation requires it (Simmons et al., 2014).

Adopting the principle-based ASC 606 permits treatment differentiation (judgment) consistent with the best principle for treating each transaction. However, judgment should be sound and unbiased, and to achieve that, the notion of treatment competence comes into focus.

Treatment competence is the level of skill and judgment used in executing the treatment or action (Schoenwald et al., 2010). The validity of judgment is predicated on the practitioner's skill set obtained through education and training that informed the judgment (Borrelli, 2011). Thus, the overall system (implemented program) or each treatment (transaction) can be evaluated in terms of adherence, competence, and differentiation (Sanetti et al., 2020; Schoenwald et al.), as well as quality, exposure, and participant responsiveness (Sanetti et al., 2020). The relationship between treatment fidelity and intervention efficacy abounds in the literature. For example, Leeuw et al. (2009) asserted the absence of treatment fidelity assessment can significantly obscure conclusions about treatment effectiveness. Leeuw et al. went further to explicate that if a treatment is found to be effective, it may be due to unknown contaminants, whereas in the case of an ineffective treatment, the possibility that the treatment was implemented raggedly cannot be ruled out. Also, Simmons et al. (2014) posited several studies found treatment fidelity significantly useful in providing confidence in outcome efficacy.

ASC 606 Intervention Efficacy. Intervention efficacy is the extent to which an adopted innovation is achieving its objective (e.g., accomplishing what it is supposed to accomplish; Fulop et al., 2016). ASC 606 efficacy is synonymous with what the literature described as intervention outcome and associated with dimensions such as quality of service, service outcomes, and cost-effectiveness (Fulop et al.). Intervention efficacy is significantly influenced by implementation outcomes (Fulop et al.; Proctor et al., 2011). Thus, successfully implemented programs result in improved service, positive staff outcomes, and increased cost-effectiveness (Geerligs et al., 2018). ASC 606 efficacy is perceived using the quality dimension, consistent with Achim and Chis' (2014) postulation that the value of financial reporting is generally determined by its quality. This postulation brings to the fore the notion that some information is

better and more reliable in terms of communicating what is expected to be communicated. However, there have been disparities in defining what constitutes quality (Achim & Chis), to the extent, the converged portion of the FASB and IASB conceptual framework had to introduce the concept in Chapter 1: The Objective of General-Purpose Financial Reporting and Chapter 3: The Qualitative Characteristics of Useful Financial Information (FASB, 2010; Gornik-Tomaszewski, 2018).

ASC 606 intervention efficacy is perceived according to how well revenue numbers conform to the spirit of Chapters 1 and 3 of the conceptual framework for financial reporting. According to FASB (2010).

> The objective of general-purpose financial reporting is to provide financial *information* [emphasis added] about the reporting entity that is *useful* [emphasis added] to existing and potential investors, lenders, and other creditors *in making decisions* [emphasis added] about providing resources to the entity. (p. 1)

Three important phrases that denote quality—information, useful, and decision making—stand out in this objective statement. Gołębiowski (2019) posited information is all potentially useful sets of knowledge and meta-information, gathered and maintained over time by organizations that enable its use for economic agents. Thus, to qualify as information, a fact must be a truthful reflection of reality, be useful, available, easy to understand, and most importantly, subject to quality. Achim and Chis (2014) also asserted that the usefulness of information can be interpreted from its quality. While acknowledging no single generally accepted definition of financial reporting quality, Achim and Chis cited two definitions that capture the usefulness and decision-making constructs. As cited by Achim and Chis, Biddle et al. (2009) defined financial information quality as “the precision with which financial reports convey information about the

firm's operations, in particular cash flow, to inform equity investors," and Jonas and Blanchet's (2000) definition as "the full and transparent financial information that is not designed to obfuscate or mislead users" (p. 354). These definitions are consistent with FASB (2010) and IASB's (2018) stipulation that to be useful, financial information must not only represent relevant phenomena but must also faithfully represent the substance of the phenomena that it purports to represent. Consequently, the conceptual framework hinges on two fundamental qualitative characteristics (relevance and representational faithfulness) and four enhancing characteristics: comparability, verifiability, timeliness, and understandability (Achim & Chis, 2014; FASB, 2010; Gołębiowski; IASB, 2018). A brief review of the fundamental characteristics follows.

Relevance. The value relevance concept pertaining to financial information hinges on the premise that strategic decision-making is informed by financial information that depicts the actual performance of the organization (Osazevbaru, 2020) and is reflected in the stock prices of listed companies (Georgescu et al., 2014). Relevant financial information can make a difference in the decisions made by users if it has predictive value, confirmatory value, or both (FASB, 2010; IASB, 2018). Predictive value is when information can be used to predict possible future outcomes, while confirmatory value provides feedback about past or previous evaluations. Accordingly, for accounting information to be relevant, it must have the power of providing the public information about past events or be useful in correcting past decisions based on the ex post reality, as well as providing information useful in predicting future outcomes (Achim & Chis, 2014).

Representational Faithfulness. The information must be represented in a way that faithfully depicts the real-world economic phenomenon it purports to represent. Thus, to be

useful, financial information not only must represent relevant phenomena, but it also must faithfully represent the phenomena that it purports to represent (FASB, 2010; IASB, 2018). The information must be complete, neutral, and free from error to be a perfectly faithful representation.

Complete. Complete depiction includes all information necessary for a user to understand the phenomenon being depicted, including all necessary descriptions and explanations (FASB, 2010; IASB, 2018). The "completeness" concept should also be useful in guiding resource allocation and assessing management's stewardship.

Neutral. A neutral depiction avoids bias in selecting or presenting financial information (FASB, 2010; IASB, 2018). A neutral depiction is not slanted, weighted, emphasized, deemphasized, or otherwise manipulated to increase the probability that users will receive financial information favorably or unfavorably. However, neutral information is not perceived as information with no purpose or influence on behavior.

Free from Error. Free from error means the information is devoid of errors or omissions in the description of the phenomenon, and the process used to produce the reported information has been selected and applied with no errors in the process. In this context, free from error does not suggest perfectly accurate in all respects (FASB, 2010; IASB, 2018).

The usefulness of financial information is enhanced if it is comparable, verifiable, timely, and understandable. These enhancing qualitative characteristics may help determine which of two ways should be used to depict a phenomenon if both are considered equally relevant and faithfully represented (FASB, 2010; IASB, 2018). Therefore, the enhancing characteristics bolster the fundamental characteristics and provide a means of classifying information into the more useful and less useful categories (Axelsson, n.d.).

***Comparability*.** Information about a reporting entity is more useful if it can be compared with similar information about other entities, with similar information, and over different periods. Thus, comparability enables users to identify and understand similarities and differences among items (FASB, 2010; IASB, 2018).

***Verifiability*.** Verifiability is important because it helps assure users of the existence and faithful representation of economic phenomena. Verifiability means that different knowledgeable and independent observers could reach the same conclusion, although not necessarily complete agreement, that a particular depiction is a faithful representation (FASB, 2010; IASB, 2018).

***Timeliness*.** Timeliness is the availability of information to decision-makers in time to influence their decisions. Generally, the older the information is, the less useful it is. However, some information may continue to be timely long after the end of a reporting period because, for example, some users may need to identify and assess trends (FASB, 2010; IASB, 2018).

***Understandability*.** Classifying, describing, and presenting information clearly and concisely makes it understandable. Recently, studies have focused on the readability of financial information, and even the SEC came up with the Plain English Initiative that emphasizes the use of short sentences and less complex words to improve the traditional readability and understandability of financial information (Loughran & McDonald, 2014; Tschopp et al., 2018). Readability is defined by Loughran and McDonald as the extent to which individual investors and analysts can assimilate valuation-relevant information from financial disclosure. Tschopp et al. asserted readability plays a significant role in how financial information is perceived, and Henderson (2020) found that information overload in financial reports accounts for low readability and understandability. However, some phenomena are inherently complex and cannot

be made easy to understand. Consequently, users are advised to seek the aid of an advisor to understand information about complex economic phenomena (FASB, 2010; IASB, 2018).

Organizational Legitimacy. Organizational legitimacy is described as public approval of organizations and their goals and actions (Derakhshan et al., 2019; Etter et al., 2018). An organization is deemed legitimate when endorsed and supported by a segment of society large enough to ensure its effectiveness and survival (Elsbach & Sutton, 1992). A widely cited definition of organizational legitimacy in the literature is that contained in Suchman (1995, p. 574) as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Xiu et al., 2019, p. 106). To survive, an organization must adhere to institutional requirements imposed by government or regulatory agencies (Kılıçoğlu & Yılmaz Kılıçoğlu, 2021), or be congruent with required or elective organizational practices in its organizational field (Xiu et al., 2019), and pass the evaluation of regulatory agencies, as well as those of social observers (Derakhshan et al., 2019; Etter et al., 2018). Thus, the objective of the value of organization legitimacy is dominated by converging organizational practices on the commonly shared institutional dimensions that characterize an organizational field (Xiu et al.). Therefore, organizational legitimacy is dominated and typified by institutional theory (Chung et al., 2016; Deephouse & Carter, 2005; Finch et al., 2015; Xiu et al.). Chung et al. and Deephouse and Carter explained organizational legitimacy can be studied using two theories, institutional theory and resource-based theory. Institutional theory is used when studying regulative legitimacy. Regulative legitimacy is derived from recognizing governments and professional associations as authorities in an industry so that to be legitimate, organizations must adopt operating strategies that meet regulations or industrial standards.

Alternatively, studying legitimacy from a resource-based point of view is an amalgam of ways of recognizing the influence of regulative legitimacy, but also the importance of "normative legitimacy" and "cognitive legitimacy" (Chung et al., 2016, p. 405). Chung et al. went on to explain organizations obtain normative legitimacy by adhering to societal norms and expectations, as well as acting in ways that the public believes are consistent with the industry's operations. Cognitive legitimacy derives from providing a necessary service, irrespective of the organization's practices. Nonetheless, these forms of legitimacy are jointly considered when evaluating organizational legitimacy (Deephouse & Carter, 2005). In a quantitative study differentiating and evaluating organizational legitimacy and reputation, Deephouse and Carter (2005) found a positive relationship between isomorphism and legitimacy and explained organizations conforming to commonly used strategies, structures, and practices appear rational and prudent to the social system and, therefore, are generally considered acceptable. Deephouse and Carter further explained these shared commonalities emerge as organizations within an industry mimic each other to access best practices. Best practice may be imposed by authoritative agencies such as state and regulatory agencies and professional organizations. With such strong incentives to comply, organizations with contrary behaviors violate social norms, legal expectations, and theories of organizing and fall out of favor with the system.

In a related single case study using narratives, Kuruppu et al. (2019) explored how an organization in a very sensitive environmental industry manages legitimacy through actions with salient stakeholders and/or through external reporting. Xiu et al. (2019) also studied the relationship between organizational identity and organization legitimacy and posited in an environment where institutional pressure is strong, organizations follow the strategy of acquiesce to achieve high legitimacy and high identity and the strategy of compromise to achieve high

legitimacy and weak identity. According to Xiu et al., organizations that use the strategy of compromise are likely those that adopt a passive response to external pressure due to deficient capabilities or other incentives and adopt just enough institutional practice to avoid delegitimization. However, research on organizational legitimacy has focused predominantly on organizations and how they acquire and manage legitimacy, neglecting individual perception, which is the rudimentary source of legitimacy (Finch et al., 2015). Collectively, individuals exert great influence on laws, norms, and cognitive categories of social systems. Thus, individuals are the micro-level foundation of legitimacy, and their perceptions offer a great measure of legitimacy (Etter et al., 2018; Finch et al.). Applying this new approach, studies such as Finch et al. and Jahn et al. (2020) incorporated research from psychology and marketing and conceptualized legitimacy as an attitude. Finch et al. (2015) defined it as "an attitude that is influenced by an individual's personal belief system consisting of global values and domain-specific beliefs" (p. 266).

According to Jahn et al. (2020), postulating attitude as a belief gives a new perspective to legitimacy because it considers the beliefs on which individuals base their legitimacy judgment. Finch et al. (2015) found that industry credibility is a significant belief positively associated with industry legitimacy. They identified three domain-specific beliefs associated with information sources: an individual's assessments of the industry's credibility, mass media, and non-government organizations with strong opinions against certain societal injustices. Building on Finch et al., Jahn et al. took it a notch further by asserting credibility itself is influenced by individuals' perceptions of drivers of organizational actions, otherwise known as *attributed motives.* They claimed because such assessments are difficult, if not impossible, to verify by individuals, it is appropriate to consider attributed motives as beliefs. Their study went ahead to

distinguish between extrinsic and intrinsic motives. Extrinsic motives are an organization's pursuit of external rewards such as financial incentives emanating from strategic, stakeholder, and egoistic motives. While intrinsic motives are altruistic commitment to a social cause. Jahn et al. theorized individual legitimacy judgments of organizations as attitudes affected by two beliefs: corporate credibility and attributed motives.

These new perspectives permit legitimacy to be measured using models that predict individual judgment on an organization's credibility (Finch et al., 2015; Jahn et al., 2020) and attribute motives (Jahn et al., 2020). These models use the news media (Etter et al., 2018; Finch et al., 2015) and opinions of NGOs to measure organizational legitimacy (Finch et al., 2015). Conventional measures of organizational legitimacy (feedback from governmental and regulatory agencies) failed to fully capture the plurality of judgments because factoring citizens' input into the institutional evaluation was not always possible (Etter et al., 2018). Through news media and social media, people can continually debate and evaluate organizations' behaviors and credibility (Etter et al., 2018). The rise of social media is even more significant because, unlike news media, whose editorial boards can stifle citizens' voices, social media allows citizens to bypass the gatekeeping role of editorial boards and engage in more democratic expressions that can contribute to insights into the creation of legitimacy in a "normative context" (Etter et al., 2018, p. 3). The significance of public opinion has compelled organizations to search for creative and novel ways to gain legitimacy, especially through corporate social responsibility rhetoric (Castelló & Lozano, 2011). Corporate social responsibility rhetoric reveals the kind of ethical-political belief system an organization adopts and even though it does not prove the organization fully subscribed to them, at least it leaves an investigator with a clue about the organization's perspective on its value and obligation to society (Castelló & Lozano).

Related Studies

Moran (2016) recommended some steps in ASC 606 implementation and normalization, comprising determining the impact of the standard on operations and developing a strategic implementation plan, developing new procedures, changing accounting subsystems, and adopting new techniques of capturing data. Also, McKee (2015) warned healthcare organizations about the consequences of delayed implementation, asserting ASC 606 will require modification to existing processes and systems and proposed a five-step implementation process including (a) appointing key actors to an implementation task force, (b) determining likely implementation date and develop key action timeline, (c) determining whether adoption will be a retrospective restatement or cumulative effect, (d) identifying key adoption decisions and starting to gather data to make informed decisions about them, and (e) modifying systems and processes as needed for adoption. Some studies have suggested implementing ASC 606 will result in significant changes in structures, accounting subsystems, processes, IT solutions, and the control environment (Jonick & Benson, 2018; Knachel, 2016; McKee). Hepp (2018) studied early challenges in implementing ASC 606 and found construction companies among the least prepared in implementing the new standard. Davern et al. (2019) investigated the implementation of AASB (IFRS 15) to ascertain implementation challenges and the cost and benefit of implementing a new standard from Australian preparers' perspectives.

Summary of Literature Review

This ILR was structured to be the basis for this study and accordingly commenced with introductory sections elucidating the business practice and the problem and establishing a relationship between them in the process. The business practice was identified as essentially what organizations are supposed to be doing that they are not doing. The literature revealed

though organizations are aware of the intricacy of ASC 606 and the extraordinary system change it warrants; nonetheless, they have remained indifferent and, in some cases, proceeded with timorous steps to create an ASC 606 ecosystem. This nonchalance is expected to compromise ASC 606 implementation, which according to literature, will result in impaired ASC 606 implementation outcomes and ASC 606 efficacy.

Considering these insights, this researcher carried out a comprehensive literature review focused on theories and variables that constitute the underpinnings of the theoretical framework. Literature validated earlier expectations that INT, CTs, and NPT can provide the lens through which an organization's ASC 606 implementation footprint can be understood. The INT introduces the notion of the institutionalized environment and explains how isomorphic pressure results in changes in structure and practice in organizations, not because of efficiency but of conforming to social and rational norms that confer legitimacy. CTs explain strategies adopted by organizations to alter employees' behavior to accommodate change emanating from the external environment to achieve desired business outcomes. The NPT compliments INT and CTs by explaining how change is embedded, routinized, and sustained. The predictive properties of these theories helped in informing the choice of seven variables of interest.

The literature supported claims that organizational agility is related to organizational change and can influence innovation outcomes. According to the literature, more agile organizations adapt quickly to change. Also, an organization's ability to adopt an innovation and normalize the practice depends on the organization's absorptive capability. The literature also found that organizations with higher levels of absorptive capacity adopt innovations quicker and normalize the practice in a timely and seamless manner. Literature suggests many studies have perceived implementation outcomes through implementation fidelity and intervention efficacy

dimensions. Thus, many studies concluded programs that are implemented following the purveyor's implementation protocol are successfully implemented and result in enhanced implementation outcomes. Many studies also concluded optimized implementation outcomes are related to improved service quality and organizational legitimacy. Thus, this literature review has elucidated how the business practice, the ASC 606 phenomenon, theories, and variables of this study are perceived in the literature.

Summary of Section 1 and Transition

In Section 1, several elements of this research related to the foundation of the study were discussed. The background to the problem expounded the events that led to the research problem, and the problem statement alluded to hesitancy in ASC 606 implementation noticed in many organizations impairs ASC 606 implementation outcomes. Therefore, the purpose of the study was to investigate the relationship between some ASC 606 implementation CSFs and ASC 606 implementation outcomes to gain insights into factors that enable or inhibit implementation, with the objectives of filling identified gaps in the literature, and to make recommendations to enhance implementation endeavors. To achieve these objectives, the study adopted the ex post facto correlational quantitative method, which is discussed in the nature of the study, along with a discussion of alternative methods that were not adopted and the rationale for their incongruity. Three associational research questions were crafted from which three corresponding hypotheses ensued. A brief discussion of the research questions and hypotheses, stated in the null and alternative forms, was conducted under their respective subsections. The section on theoretical framework expounded three theories that guided the study, comprising the INT, CTs, and the NPT.

To bolster the understanding of the study, as well as to ensure reliability and validity, key

terms were defined in the context in which they were used in the study, and certain assumptions, limitations, and delimitations were implied with discussions on actions adopted to mitigate their effects. Key assumptions included expectations of bona fide answers to the questionnaire, homogeneous and like-minded participants, the effectiveness of theories to adequately explain the phenomenon. Key limitations discussed were the response rate, social desirability, time and financial constraints, and the inability to infer causation. Key delimitations discussed included constricting ASC 606 implementation outcomes to fidelity only and limiting the study to construction companies in the Mid-Atlantic United States. Section 1 culminates in a comprehensive integrative review of professional and academic literature, encompassing a review of the business practice, the problem, theories, and variables.

The foundation of the study is followed by Section 2, which is structured to discuss several aspects that brought the research project into focus. The principal components of the research project included a restatement of the purpose statement, a discourse on the researcher's role, the research methodology, participants, population and sampling, data collection and organization, data analysis, and reliability and validity. Restating the research purpose is a recommended practice because it helps the researcher be mindful of the research purpose while planning their role, selecting participants, deciding on the methodology, and any other matter related to the project. Section 2 accordingly features these project fundamentals.

Section 2: The Project

Truth has nothing to do with the conclusion but everything to do with the methodology.

—*Stefan Molyneux*

This section elucidated the method used in accomplishing the objective of the study. Consequently, the section began with a restatement of the research purpose that kept it in focus while considering how the research was conducted. The section was accordingly organized into subsections explicating the researcher's roles, the research method, the research participants, population and sampling, data collection and organization, data analysis, and steps taken to ensure reliability and validity. The section ends with a brief summary and transition statement.

Purpose Statement

The purpose of this quantitative correlational study, supplemented by moderated mediation analysis, was to provide a deeper understanding of ASC 606 implementation dynamics through a comprehensive investigation into the bearing of implementation CSFs on ASC 606 implementation outcomes. Thus, the research focused on evaluating relationships between absorptive capacity, organizational agility, organizational implementation context, and ASC 606 implementation outcomes in companies within the construction industry in the Mid-Atlantic United States. In addition, the study investigated mechanisms that bolstered the relationship between predictor CSFs and a myriad of ASC 606 implementation outcome aftereffects. These relationships, their moderation, and mediation provided new perceptions on the values of these implementation drivers and evidence that their interaction with each other, when reengineered, produced positive impacts on various categories of ASC 606 implementation outcomes. The knowledge obtained provided the basis for recommending best ex ante approaches for rolling out implementation and ex post implementation strategies.

Many studies on ASC 606 implementation thus far have used descriptive and exploratory approaches to primarily study technical aspects, such as instantiating the procedure for recognizing revenue under the new standards, exploring the implementation rate, and investigating ASC 606 impact on reported revenue in designated companies and industries. No study known to this researcher to date has evaluated relationships between implementation CSFs and ASC 606 implementation outcomes, focusing on normative aspects and combining correlation and quantitative mediation method. This novel holistic approach in studying the ASC 606 implementation phenomenon introduces new knowledge and thus fills identifiable gaps in the literature.

Role of the Researcher

Consistent with Robson and McCartan (2016), the researcher's preliminary role included finding a research focus by choosing an area of interest, scanning the literature for the background, and identifying the research problem. The researcher then crafted the working research topic that encapsulated the focus (Robson & McCartan, 2016) through thematizing (Fink, 2000). According to Fink, thematizing is the process of seeking answers to questions concerning what is to be studied, the reason for the study, and how to carry out the study. Answers to these questions constitute the spine of the research and thus bring to fore ideas about the working research topic (Fink; Robson & McCartan). Subsequent roles involved designing the study, collecting and analyzing data, and presenting the findings in a comprehensive research report (Fink). In quantitative correlational studies, the researcher's role in data collection is theoretically assumed to be limited (Simon, n.d.).

This assumption stems from the understanding that participants are not influenced by the researcher in perfect quantitative research, and the researcher's presence is almost

inconsequential (Simon, n.d.). However, the researcher's role is apparently palpable in other technical areas, such as designing the study, which Robson and McCartan (2016) insisted must be gotten right before embarking on collecting data (p. 74). In this research, the researcher (a) completed the Collaborative Institutional Training Initiative (CITI), (b) chose the most appropriate design and method, and (c) applied and obtained IRB approval to conduct this research that poses no greater than minimal risk to participants.

The researcher developed a plan to solicit participants, administer the questionnaire, and convert responses into data. Additionally, based on the specificities of variables and hypotheses, the researcher determined the most appropriate survey instrument, scales for measuring variables, and statistical tests used in analyzing data. The researcher also avowed to uphold the integrity of research by avoiding what has been termed questionable research practice (Lancet, 2017). Research integrity goes beyond protecting human subjects to encompass academic integrity that fosters trustful and collaborative relationships researchers hold with one another (Aubert Bonn et al., 2017; van den Hoven & Krom, 2020). In this regard, this researcher avoided willful deceptions, such as fabrication, falsification, and plagiarism. This was achieved by applying the China Association for Science and Technology five-step code cautioning authors to be the true authors of their work. The code was recommended as a guide by Professor Mark Israel, a senior consultant at Australasian Human Research Ethics Consultancy Services (Graf, 2017). Following the recommendation, this researcher personally designed the study, conducted the research, and wrote the report. This researcher submitted the work, revised the report himself, and sought professional proofreading that did not alter the intellectual contents. Thus, the researcher adhered to all ethical and institutional standards to enhance the trustworthiness and integrity of the research.

Research Methodology

The methodology is an integral part of the research, to the extent methodology theorists emphasize the validity of findings is contingent on the quality of the methodology (Farrington, 2003) and the appropriateness of the design (Nkwake, 2015). Farrington (2003) asserted a study's methodological quality is interpreted through a validity typology that comprises statistical conclusion validity, internal validity, construct validity, external validity, and descriptive validity. Farrington asserted that the purpose of the validity typology is to identify threats to inferences so that a design that eliminates or, at least, mitigates them can be adopted. Areas most vulnerable to threats include sampling, sample size, pretreatment outcome measurement, variable measurement, hypothesis testing, and statistical analysis (Farrington, 2003). However, while considering validity, it is also important to consider ethical issues, feasibility, and appropriateness of the method and design viz à viz the research questions (Nkwake, 2015). Discussions of how these considerations influenced this study's methodology follow.

Discussion of Design

This study adopted the nonexperimental fixed design. The fixed design is the most appropriate for evaluation studies that focus on the outcome, especially when a theoretical framework was used to make predictions about the phenomenon (Robson & McCartan, 2016). This proposition is consistent with Abutabenjeh and Jaradat's (2018) assertion that the choice of the research design should be dictated by the purpose of the study. Abutabenjeh and Jaradat expounded that when a researcher wishes to investigate relationships between independent and dependent variables, the fixed design is the most appropriate because the design is used to discover changes in the dependent variable and helps explain the changes.

In their argument for studying relationships between context, mechanisms, and outcome instead of the effectiveness of programs, Pawson and Tilley (1994) suggested ethnography as an appropriate design for such studies. Farrington (2003) contended the appropriateness of ethnography. Farrington asserted fixed design using quantitative instruments is the best in testing theories and hypotheses that are most likely to be implicated in such studies. Also, other researchers, such as Morgan et al. (2013) and Robson and McCartan (2016), have resounded the compatibility of fixed designs with associational research questions due to their quantitative predisposition.

Discussion of Method

The study adopted the quantitative correlational method. The correlational method is ideal for addressing associational research questions, and because the study made use of attribute variables that were not manipulated, the nonexperimental ex post facto method was most suitable (Morgan et al., 2013; Umstead & Mayton, 2018). Nkwake (2015) shed more light on the importance of the quantitative methodology in evaluation research. Nkwake asserted that the method permits the researcher to investigate the problem by dividing it into measurable or common categories applicable to all study participants. Accordingly, the quantitative method permits adopting standardized measures that facilitate fitting responses into predetermined response categories. Nkwake continued to theorize because the quantitative method relies on numerical data and seeks prediction and generalization of findings, it is suitable when: (a) the research intends to establish statistically significant conclusions about a population by studying a representative sample, (b) the researcher plans to establish causality, which requires the use of precise measurements and manipulation of variables, (c) the measurement of variables of interest are clearly operationalized and represented by numerical values, (d) the researcher intents to test

existing conceptual or theoretical framework of relationships among variables of interest, and (e) it is feasible to adopt and implement a highly structured research methodology that is predetermined and adhered to throughout the research process. Apart from point "b" above, all the other attributes are consistent with the purpose of this research and thus made the quantitative method the most appropriate for this study.

Operationalization and Categorization of Variables

The seven variables of this study were classified as independent, moderating, mediating, and dependent, based on the output level being studied. Consistent with LaFountain and Bartos (2002), these variables were operationalized to reflect their observable conditions and measurement specific to the ASC 606 implementation phenomenon. The variables and their measurement attributes are categorized in various tables.

Organizational Implementation Context. OIC is the extent to which specific factors within the organization's internal environment, such as strategic implementation leadership, strategic implementation climate, and ICB, drive innovation implementation (Lyon et al., 2018). This was an independent variable comprising the following subscales.

Strategic Implementation Leadership (SIL). SIL is the degree to which leaders' cultivated behaviors enhance innovation implementation (Lyon et al., 2018). This variable was a subscale scored on a five-point. The data type was scale/normal.

Strategic Implementation Climate (SIC). SIC is the degree to which the organization creates a strategic climate that enhances innovation implementation. The SIC scale measured focused climate and attributes like supportive, recognition, selection, and openness (Lyon et al., 2018). The SIC categories were scored on a five-point scale. Thus, the data type was scale/normal.

Implementation Citizenship Behavior (ICB). ICB depicts the extent to which actors exceed normal expectations and go above and beyond to support innovation implementation (Lyon et al., 2018). This study used two categories (helping others and keeping informed). All items were scored on a five-point Likert scale. The data type was scale/normal.

Organizational Agility. This is an independent/moderating variable. OA is the degree of an organization's responsiveness to changes in its environment (Harraf et al., 2015). OA measured an organization's flexibility and speed in the three agility dimensions, including awareness agility, decision-making agility, and action agility. Under each dimension, survey, questions were scored on a five-point Likert scale. The data type was scale/normal.

Absorptive Capacity. ACAP was an independent/moderating variable. It was operationalized as an organization's ability to acquire, assimilate and use new knowledge for commercial ends (Zahra & George, 2002). ACAP's three dimensions, discover, integrate, and commercialize knowledge, were measured. Scores were on a five-point Likert scale. The data type was scale/normal.

ASC 606 Normalization Context. ASC 606 NOC was categorized as a mediating variable, ASC 606 NOC was operationalized as the extent to which ASC 606 embedding environment is in harmony with changes required (Knachel, 2016; May & Finch, 2009). Each item on its measurement scale was scored on a five-point Likert scale. The data type was scale/normal.

ASC 606 Implementation Outcomes. ASC 606 IO was categorized as a mediating/dependent variable that explains the extent to which ASC 606 was implemented as recommended in the original protocol or as intended by the program developer (Proctor et al., 2011). Its lone measurement proxy was fidelity, a multidimensional construct that encompasses

adherence (i.e., steps in implementation), quantity (i.e., full or partial implementation), and quality (i.e., how well the innovation was adopted; Sanetti et al., 2020). It was measured using the noncomparative continuous scale. The data type was interval.

ASC 606 Efficacy. ASC 606 efficacy was operationalized as the extent to which ASC 606 produces quality revenue recognition numbers. It was categorized as a mediating/dependent variable and scored on continuous scales. Its data type was interval.

Organizational legitimacy. In this study, OL was operationalized as regulators and observers' collective judgment of an organization based on assessments of its compliance with general norms (social legitimacy) and financial reporting norms (issue legitimacy). It was categorized as a dependent variable and measured at the industry level on a continuous scale. The data type was interval.

Hypotheses Description and Test

The rationale for using a specific statistical test for each hypothesis in this study is expounded below.

H1 emanated from RQ1, which asked if a combination of three implementation CSFs predict ASC 606 IO. H1 was stated in the null and alternative forms as:

H1o: There is no statistically significant evidence that a combination of three implementation CSFs predicts ASC 606 implementation outcome.

H1a: There is statistically significant evidence that a combination of three implementation CSFs predicts ASC 606 implementation outcome.

This complex hypothesis was decomposed into three hypotheses also stated in the null and alternative forms.

H1Ao: There is no statistically significant relationship between organizational agility and ASC 606 implementation outcome

$H1A_o$: There is a statistically significant relationship between organizational agility and ASC 606 implementation outcome.

$H1B_o$: There is no statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcome.

$H1B_a$: There is a statistically significant relationship between an organization's absorptive capacity (ACAP) and ASC 606 implementation outcome.

$H1C_o$: There is no statistically significant relationship between organizational implementation context and ASC 606 implementation outcome.

$H1C_a$: There is a statistically significant relationship between organizational implementation context and ASC 606 implementation outcome.

RQ1, from which H1 and its subordinate hypotheses were derived, is a predictive research question. The most appropriate statistic for these types of questions and hypotheses is multiple regression (Morgan et al., 2013). Another rationale for multiple regression is that the regression model also produces a correlation matrix showing the relationship sought in RQ1A to 1C (Morgan et al., 2013).

$H2_o$: There is no statistically significant evidence the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization context and ASC 606 implementation outcomes.

$H2_a$: There is statistically significant evidence the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 implementation outcome and ASC 606 normalization context.

This hypothesis was derived from RQ2 structured to determine the extent to which the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 implementation outcomes and ASC 606 normalization context. H2 was tested using multiple regression and the bootstrapping routine integrated into Hayes' (2017) PROCESS macros. Specifically, process conceptual model 7 was used.

$H2A_o$: There is no statistically significant evidence ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility.

$H2A_a$: There is statistically significant evidence ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility.

H2A derived from RQ2A, which was to discover the extent to which ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility. H2A was tested using multiple regression and the bootstrapping routine integrated into Hayes' (2017) PROCESS macros. Specifically, process conceptual model 7 was used.

$H3_o$: There is no statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcome and organizational legitimacy.

$H3_a$: There is statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcome and organizational legitimacy.

H3 derived from RQ3 that sought to understand the extent to which ASC 606 efficacy mediates the relationship between ASC 606 implementation outcomes and organizational

legitimacy. H3 was tested using multiple regression and the bootstrapping routine integrated into Hayes' (2017) PROCESS macros. Specifically, PROCESS conceptual model 4 was used.

Participant Pool

Though this research's sample encompassed construction companies, the active participants were individuals occupying different positions in construction companies who experienced the ASC 606 implementation phenomenon and were thus in a position of providing data that could be used in understanding their organizations' ASC 606 implementation footprints. Thus, the participants comprised managers, chief financial officers, accounting personnel at supervisory levels, and independent certified public accountants.

Population and Sampling

A study's population is the aggregate of persons or subjects a researcher wishes to study, while the sample frame is a list of names of all persons or subjects in the population. Alternatively, the sample is the portion or subset of persons or subjects drawn from the sample frame (Lowry, 1979; Taherdoost, 2016). Thus, a sample frame can be a list or other population records from which the sample is drawn at each stage of the sampling process (Lowry; Taherdoost). It can also be a map designating the area from which the sample will be drawn (Lowry; Stasny, 2015). Decisions on population and sampling should be measured because population and sampling significantly impact the external validity of research results (Erba et al., 2018; Lowry). External validity is the extent to which results can be generalized to the entire population (Lowry; Robson & McCartan, 2016).

Consequently, external validity threats are categorized as population validity, dealing with generalizations to populations (Lowry) or ecological validity, which is the relevancy of research variables and conclusions to the population or real-world situations (Lowry; Robson &

McCartan). These insights laid the groundwork for identifying the population and determining the sample from which appropriate data for answering the research questions were procured. Thus, the subsections below provide more information on population and sampling specific to this study, emphasizing the sample frame, the sampling method, and the sample size.

Discussion of Population

The population for this research encompassed top-ranking construction companies operating in the Mid-Atlantic United States. The construction industry is classified in the North American Industry Classification System as number 23 and described as comprising establishments primarily engaged in the construction of buildings or engineering projects (U.S. Census Bureau, n.d.). Companies refer to both LLCs and listed corporations, and Mid-Atlantic refers to a U.S. region defined in this study. Though the composition of states making up the Middle Atlantic region varies from government agency to government agency, this study adopted the composition defined in Wikipedia and World Atlas.

Figure 7

Map of Mid-Atlantic United States

Notes. Map of Middle Atlantic United States as defined by Wikipedia and World Atlas. Available in the public domain.

Accordingly, the Mid-Atlantic region of the United States, as portrayed in Figure 7, comprises seven states and the District of Columbia: New York, New Jersey, Pennsylvania,

Delaware, Maryland, Virginia, and West Virginia (Wikipedia Contributors, 2021; World Atlas, 2018). The suitability and choice of the Mid-Atlantic region for this study were informed by a number of factors. An article describing the Mid-Atlantic region by Kathy Weiser (2020) in Legends of America fancifully asserted, "if New England provided the brains and dollars for 19th-century American expansion, the Middle Atlantic States provided the muscle" (para. 1). This statement alludes to the region's early concentration and long history of extractive industries, as well as its legacies of early water-powered industrialization (Longhurst, 2012). As a gateway into America for immigrants in the 17th century, the Mid-Atlantic created mechanisms that facilitated the admixture of people and, later, the diversity in culture and industry (Longhurst, 2012; Meyer, 2003). This diversity became the hallmark of American industrialization and the impetus for America's economic development (Meyer, 2003). According to Longhurst (2012), Frederick Jackson's, an American historian renowned for the frontier thesis, description of Mid-Atlantic as "typically America" is still valid today because its demographic, culture, and businesses reflect the theme of all of America. Though other regions of the United States have witnessed an increase in the presence of heavy industry, the Mid-Atlantic region remains a powerhouse of U.S. construction and engineering and offers a population with excellent conditions for investigating issues in the construction industry. Thus, conclusions of a research on the companies that constitute the universe of construction and engineering companies in the Mid-Atlantic can justifiably be generalized to other regions of the United States. However, since most research hardly covers the entire population, a representative sample was determined from which the data were collected.

Discussion of Sampling

Since it is not possible, in many circumstances, to access and study all the subjects in a population, research is possible because there is consensus that a portion or subset of the population can be studied and the result generalized to the population (Robson & McCartan, 2016; Taherdoost, 2016). The role of sampling in research cannot be overemphasized. According to Onwuegbuzie and Collins (2017), regardless of the appropriateness of the research questions, the research design, and data collection procedures, if sampling is inappropriate, generalizability could be impaired. Considering the preceding, this study adopted the most appropriate methods recommended in the literature for sampling design. In addition, cost and time factors were factored into the decision to study only a sample of the population. In the following paragraphs, the sampling method, the sampling frame, and the desired sample size are expounded.

Discussion of Sampling Method. The sampling method adopted for this study was probabilistic sampling. Specifically, the simple random sampling (SRS) procedure was used. SRS permitted every subject in the sample frame an equal opportunity of being selected (Robson & McCartan, 2016). Statistically, SRS is a set of *n* subjects derived from *N* population where all possible subjects in *N* were equally likely to become *n* (Glen, 2021). SRS belongs to the probability sampling category that is considered most appropriate for the quantitative research methodology (Lee & Baskerville, 2003; Onwuegbuzie & Collins, 2017). The sampling process was accomplished using Research Randomizer, a free online tool available to researchers seeking a simplified but effective SRS instrument. The advantage of random sampling is its representativeness, which guarantees findings from its data typify the population of interest (Onwuegbuzie & Collins). The sample's representativeness of its population permits the researcher to make statistical inferences about the population, thus making generalizability

possible (Robson & McCartan, 2016). Additionally, SRS helps mitigate bias, increasing validity (Robson & McCartan). However, SRS's vulnerability is the cost associated with obtaining the sample, and the likelihood estimators may produce a high standard error (Taherdoost, 2016).

Discussion of Sampling Frame. The sample frame for this research was a list of 100 top-ranking construction companies in the Mid-Atlantic United States published in Engineering News-Record and supplemented by a list of construction companies in New York published by Zicklin School of Business, Baruch College's NYCdata. The decision to establish a sample frame from top-ranking companies in the population is a restriction technique to mitigate the effects of cofounding factors (Cox et al., 2009). Even after establishing a sample frame, researchers have always been challenged by accessing participants (de Mello et al., 2015). Accordingly, researchers have used several creative approaches, such as Internet-based sampling that provides large pools of participants with the potential of increasing the sample size (Robson & McCartan, 2016). Some studies have sourced their samples from crowdsourcing tools, LinkedIn groups, and soliciting participants through social media platforms (de Mello et al., 2015). The most popular Internet-based source of sample frame remains consumer researchers and data marketing firms with the potential of reaching millions of participants across many countries through their dedicated websites and electronic mailing lists (Kosseim et al., 2014; Robson & McCartan). Recent legislation has facilitated a data company's ability to share data, easing restrictions on data sharing (Kosseim et al., 2014). The decision to ease restriction on data sharing is predicated on the idea that data sharing helps researchers generate the statistical power needed to reject the null hypothesis. Correctly rejecting the null hypothesis prevents Type II error and enhances translating research findings into practice (Kosseim et al.). Thus, procuring a list from a reliable data sourcing company is a prevalent and ethically resourceful approach in

ensuring all subjects of the population are captured by the sample frame. The sample frame for this research was obtained from somewhat similar platforms dedicated to construction and engineering news and data.

Discussion of Desired Sample and Sample Size. The sample size and its estimation are critical aspects of the research design for financial/logistics reasons, as well as results legitimacy (Adcock, 1997; Lenth, 2001). No wonder the concept has been getting more attention in the literature, with many different estimation approaches being proposed (Kim, 2015). The appropriate sample size minimizes the risk of sampling error and bias. Though there is agreement in the literature that a larger sample size decreases likely error in generalizing (Robson & McCartan, 2016), scholars have warned about too large a sample size (Taherdoost, 2016). According to Taherdoost (2016), the benefit increases at a diminishing rate as the sample size increases. Also, Sullivan (n.d.) posited though the sample size should be large enough to adequately answer the research questions, there is no justification, at least based on economic and logistics considerations, for using a larger sample size if a smaller one can adequately serve the purpose. To determine the sample size, several parameters must be predetermined. The total population must be known, the margin of error (ME), the confidence level, and the standard deviation must be determined. In addition, the *Z*-score corresponding to the confidence level must be determined from the *Z*-score table. When all parameters are available, the modified Cochran formula below can be used in determining the sample size.

$$\text{Sample size} = \frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

e represents the ME, signifying the level of risk the researcher is willing to accept. The recommended level for social research is 5%.

P is the standard deviation indicating how much variation is expected from responses. Because this may be difficult to determine, the rule of thumb is to set it at 50%, which is a worst-case scenario that the actual deviation is not expected to meet.

Z is the *z*-score corresponding to the confidence level. It is the confidence level on the accuracy of results revealed by the survey. At the 95% confidence level recommended for this study, the *z*-score was 1.96.

Using the population of 100 top-ranking construction companies in Mid-Atlantic USA, the sample size was calculated as follows

$$\frac{\frac{1.96^2 \times 0.5(1-0.5)}{0.05^2}}{1+\left(\frac{1.96^2 \times 0.5(1-0.5)}{0.05^2 \times 100}\right)}$$

$$\frac{\frac{3.8416 \times 0.25}{0.0025}}{1+\left(\frac{3.8416 \times 0.5}{0.25}\right)}.$$

$$\frac{384.16}{4.8416}$$

Sample size = 79.3456 rounded up to 80

However, for ease, the sample size can also be determined from a sample size estimator table such as Table 1 by using parameters set for this study, such as 95% confidence interval and 5% ME. The table also reveals a sample size of 80 corresponding to a population of 100 at a 95% confidence level and 5% ME.

Table 1

Sample Size Estimator Table

Population size (N)	Variance of Population Size at $P = 0.5$					
	Confidence level = 95% Margin of error			Confidence level = 99% ME		
	5%	3%	1%	5%	3%	1%
50	44	48	50	48	49	50
100	80	91	99	87	95	99
300	169	234	291	206	256	295
600	234	384	565	314	452	578
800	260	457	738	362	557	763
1000	278	516	906	398	647	943
2000	322	696	1655	497	957	1784
5000	357	879	3288	583	1342	3838
10,000	370	964	4899	620	1550	6228
25,000	378	1023	6939	643	1709	19,944
50,000	381	1045	8057	652	1770	12,413
100,000	383	1056	8762	656	1802	14,172
250,000	384	1063	9249	659	1821	15,489
1,000,000	384	1066	9513	660	1831	16,244

Notes. Sample size estimator table at 95% and 99% confidence level with 5%, 3%, and 1% margin of errors (Gill & Johnson, 2002).

Summary of Participants, Population, and Sampling

This section discusses various aspects of participants, population, and sampling. The section expounds that the population was top-ranking construction companies in the Mid-Atlantic United States. The sample size was 80 drawn from the sample frame using the SRS method. Furthermore, the section explains that the participants were individuals occupying various positions in construction companies.

Data Collection and Organization

This section discusses data, a central and critical element on which every research is based. Robson and McCartan (2016) characterized the centrality of data with the mantra “no data-no project” (p. 403). Thus, the researcher developed a plan that elaborated tasks associated

with data collection and analysis. This section discusses the plan and other data collection and analysis aspects, as well as steps taken to ensure reliability and validity.

Data Collection

This study collected seven quantitative data sets, each representing a variable of interest. The data were collected from participants in the research sample, comprising accounting staff at the supervisory level, CFOs, managers, and independent public accountants. The accounting staff members were selected to participate in the study based on the researcher's intimation that as ASC 606 implementation team members, accounting staff members are better placed in assessing both management's endeavors in creating the implementation context in which they operate as well as the environment itself. Another reason for involving accounting staff was to check responses provided by hierarchy. Consequently, if managers were to assess ASC 606 implementation proxies alone, it is unlikely the data generated will be objective (Shea et al., 2014). Alternatively, data sets on organizational agility, organizational absorptive capacity, and ASC 606 implementation outcomes were also provided by all participants. Agility and absorptive capacity are individual capabilities measured at the organizational level. Managers are better placed in assessing these capabilities, but the staff members were also given the opportunity to assess their own capability level. The next data sets on ASC 606 normalization context and ASC 606 implementation outcomes were obtained from all participants.

Instruments. The research instrument adopted for this quantitative correlational study was the survey. A survey was chosen over other prevalent instruments, such as interviews and observations mostly used in qualitative studies (Zohrabi, 2013). Accordingly, the research used closed-ended questionnaires that could easily be converted into quantitative data (Zohrabi). The questionnaires were self-administered and were consequently unambiguous with succinct

instructions to participants. The clarity of instructions and questions helped mitigate a common defect of surveys, a misunderstanding between respondents and the researcher (Zohrabi). The following paragraphs shed more light on the peculiarity of this study's survey.

Survey. The surveys contained closed-ended questionnaires administered through the Alchemer platform (formerly SurveyGizmo). The survey instrument comprised seven sections, each designed to collect data on a variable. Section 1 contained questions meant to obtain data on OIC. The survey used an assessment scale proposed by Lyon et al. (2018). The scale has three subscales measuring: (a) SIL, (b) organizational implementation climate, and (c) OCB. The organizational implementation context scale was tailored to accommodate the specificity of this study. The scale is in an open-access article with the copyright held by Creative Commons. The survey is appended to this report as Appendix C Section 1.

Section 2 of Appendix C was designed to capture data on organizational agility. An assessment scale proposed by Nafei (2016) was used. The scale is in an open-access article that grants free and unrestricted permission to reproduce. The copyright is held by Creative Commons (n.d). The scale measures flexibility and speed in three organizational agility dimensions, namely, awareness agility, decision-making agility, and action agility. Questions were scored on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Section 3 of Appendix C was designed to obtain data on absorptive capacity. An assessment scale proposed by Büchel and Sorell (2012) was used. The scale measured absorptive capacity through its three knowledge constructs: discover, integrate, and commercialize. All questions were scored on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). IMD, Business School for Management and Leadership, the copyright owner of this assessment scale,

was contacted for permission to use the scale, and their permission is appended to this report as Appendix D.

Section 4 of Appendix C was meant to capture ASC 606 normalization context data. ASC 606 normalization context was assessed using the organizational readiness for implementing change (ORIC) psychometric assessment tool proposed by Shea et al. (2014) based on Weiner's organizational theory (Geerligs et al., 2021). The scale is in an open-access article distributed under the Creative Commons (n.d) attribution license, permitting unrestricted use. The waiver is available at Creative Commons (n.d). The survey adapted for this study is similar to that used in Geerligs et al., assessing two constructs: commitment to implement and implementation effectiveness.

Section 5 contained questions that provided data for ASC 606 efficacy. The survey on ASC 606 efficacy captured data on two proxies: relevance and faithful representation. The measuring scale comprising items scored on a continuous scale was adapted from Rashid (2020). Permission to use this scale was granted by the author and was attached to this report as Appendix E. Section 6 was devoted to capturing data on organizational legitimacy. The survey that measured two proxies, social and issue legitimacy, was scored on a continuous scale. Social legitimacy dealt with adherence to general norms, while issue legitimacy dealt with adherence to specific revenue reporting issues that enhance organizational legitimacy. These proxies were assessed using a scale proposed by Chung et al. (2016). Permission to use this scale was attached to this report as Appendix F. Section 7 was designed to assess ASC 606 implementation outcomes using one of Proctor et al.'s (2011) proxies. The lone proxy, fidelity, was similarly used in Sanetti et al. (2020). Because this was an outcome variable, and the statistical test requires its data to be interval, the researcher used a slightly different approach in measurement.

The assessment tool comprised a single question to be measured on a noncomparative continuous scale (Eriksson et al., 2001).

Data Organization

The questionnaires were structured such that responses were made by checking optically readable boxes. Responses entered in this manner are easily transformed into data, thus preventing intermediary data entry. This approach to organizing data has been extolled for simplifying data capturing and preventing additional data categorization that could lead to errors (Robson & McCartan, 2016). Additionally, the data were cleaned using the scatterplot in SPSS. This procedure was useful in identifying and investigating deviated points standing oddly from the general pattern (Robson & McCartan). After cleaning the data of undesirable elements and the correct number of valid surveys determined, the data were entered into a data file and arranged in rows and columns, ensuring variables were in columns and observations in rows. The data were saved as a ".sav" file type, the extension compatible with the IBM SPSS software. Because the cleaned-up data were an important resource for the study, several copies were made and stored in PC hard drives and the cloud.

Summary of Data Collection and Organization

In this section, the data collection plan, the survey and instruments that were used, as well as the organization of data, have been discussed. The study collected seven data sets representing the seven variables using a survey instrument divided into four sections. The survey respondents were managers, CFOs, accounting staff, and public accountants. The section also discussed data organization, underscoring data capturing, cleaning, and storage.

Data Analysis

This subsection was devoted to a brief recall of variables, and their classification, a discussion on descriptive statistics, the proposed statistical tests, and the alternative test should assumptions for the primary tests be markedly violated. To facilitate the presentation and understanding of variables, data analysis was discussed as it pertains to the three studies that made up this research. Each study represented a research question.

The Variables

In addition to sociodemographic variables comprising age, gender, race, educational status, and longevity in current position, the study used seven principal variables classified differently in each of the three study areas. The reason advanced for categorizing variables differently in specific study areas was the awareness that most implementation frameworks, especially determinants frameworks, are multilevel and thus underscore the fact that the status of implementation determinants (variables) changes at different levels of the implementation outcome taxonomy (Nilsen, 2015; Proctor et al., 2011). Thus, in this study, the status of a variable changed as the researcher investigated different aspects of ASC 606 implementation outcomes and ASC 606 implementation outcomes aftereffects. This approach is consistent with Nilsen's emphasis on adopting a system approach in studying implementation outcomes. The system approach ensures relationships within and across all levels, and different roles of determinants are studied. Accordingly, to capture all aspects of the implementation phenomenon, this research was divided into three sub-studies. Each sub-study represents a research question investigating a different outcome level in which variables assumed distinct roles that might have been different from the role in a previous outcome level (sub-study). The following paragraphs explain the roles of variables in each of the three sub-studies.

Study 1: Predicting ASC 606 IO from Implementation CSFs. The variables considered in study 1 are absorptive capacity (independent variable), organizational agility (independent variable), organizational implementation context (independent variable), and ASC 606 implementation outcomes (dependent variable). These variables, depicted in Table 2, were used to answer the first overarching research question. According to Morgan et al. (2013), such complex associational research questions should be disintegrated into a set of questions to facilitate analysis and improve comprehension. Thus, research questions 1A to 1C resulting in hypotheses 1A to 1C, were derived. These subordinate RQs and hypotheses were meant to discover the relationship between each predictor variable and ASC 606 implementation outcomes.

Table 2

Study 1 Variable Type and Measurement Level

Variable	Variable Type	Measurement
Absorptive capacity	Independent	Scale
Organizational agility	Independent	Scale
Organization implementation contexts	Independent	Scale
ASC 606 implementation outcome	Dependent	Scale

Study 2: Moderated Mediation Effects on ASC 606 Efficacy. This study is based on Proctor et al.'s (2011) assertion that implementation success is a prerequisite for program outcomes. They differentiated three levels of outcomes: implementation outcomes, program outcomes, and users' outcomes. The quality of implementation outcomes impacts users' outcomes and is often mediated by program outcomes. Thus, variables involved in study 2 included organization implementation contexts (independent variable), absorptive capacity (moderating variable), organizational agility (moderating variable), ASC 606 normalization context (mediating variables), ASC 606 implementation outcomes (mediating variable) and ASC

606 efficacy (dependent variable). These variables presented in Table 3 were used in answering RQs 2 and 2A.

Table 3

Study 2 Variables and Measurement Level

Variable	Variable Type	Measurement
Organizational implementation contexts	Independent	Scale
Absorptive capacity	Moderating	Scale
Organizational agility	Moderating	Scale
ASC 606 normalization contexts	Mediating	Scale
ASC 606 implementation outcome	Mediating	Scale
ASC 606 efficacy	Dependent	Scale

Study 3: The Mediating Effect of ASC 606 Efficacy on OL. Study 3 investigated the degree to which ASC 606 efficacy mediates the relationship between ASC 606 implementation outcomes and organizational legitimacy. Accordingly, variables involved in the study comprised ASC 606 implementation outcomes (independent variable), ASC 606 efficacy (mediating variable), and organizational legitimacy (dependent variable). These variables are classified in Table 4.

Table 4

Study 3 Variable Type and Measurement Level

Variable	Variable Type	Measurement
ASC 606 implementation outcome	Independent	Scale
ASC 606 efficacy	Mediating	Scale
Organizational legitimacy	Dependent	Scale

Descriptive Statistics

Several descriptive statistics were conducted to check data quality and assumptions for the desired inferential statistics. The check was conducted through what is referred to as

exploratory data analysis (EDA). EDA must first be conducted before any descriptive or inferential statistics can be performed (Morgan et al., 2013). This approach allowed one to check for outliers missing values, observe relationships between variables, and obtain demographic information (Morgan et al.). Additionally, EDA permitted checking the extent to which the data met normality and other assumptions for the desired test. Normally distributed scores must first be present to describe, summarize, and compare scores (Morgan et al.; Robson & McCartan, 2016). Thus, EDA tools were exploited, such as box plots and frequency distribution curves that check outliers and skewness. Because this was a correlational study, another important descriptive statistic exploited was the scatter plot. The scatter plot is a graph depicting the relationship, and the strength, between two variables (Morgan et al.;, Robson & McCartan). After EDA, descriptive statistics were conducted to help in understanding the sample. Descriptive statistics revealed the means, standard deviations, variances, and skewness of variables. In addition, *Z*-values and Kolmogorov-Smirnov and Shapiro-Wilk test of normality were also computed. Relevant information gleaned from measures of central tendency were mean scores. Alternatively, relevant information gleaned from measures of variability included range, standard deviation, variance, and standard error.

Hypotheses Testing

H1 was tested using multiple regression. H1 derived from the overarching RQ1 recalled here as: To what extent does a combination of three implementation CSFs predict ASC 606 implementation outcome?

$H1_o$: There is no statistically significant evidence that a combination of three implementation CSFs predicts ASC 606 implementation outcome.

H1a: There is statistically significant evidence that a combination of three implementation CSFs predicts ASC 606 implementation outcome.

Three subordinate associational research questions, RQ1A, RQ1B, and RQ1C, were crafted from the primary question. RQs 1A to 1C ask if a relationship exists between the three independent variables (IV), organizational agility in 1A, absorptive capacity in 1B, and organizational implementation context in 1C, and the dependent variable (DV), ASC 606 implementation outcomes. RQ1A to RQ1C resulted in three undermentioned secondary hypotheses.

$H1A_o$: There is no statistically significant relationship between organizational agility and ASC 606 implementation outcome.

$H1A_a$: There is a statistically significant relationship between organizational agility and ASC 606 implementation outcome.

$H1B_o$: There is no statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcome.

$H1B_a$: There is a statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcome.

$H1C_o$: There is no statistically significant relationship between organizational implementation context and ASC 606 implementation outcome.

$H1C_a$: There is a statistically significant relationship between organizational implementation context and ASC 606 implementation outcome.

The inferential statistic used in testing these hypotheses was multiple regression. The mean of ASC606 IO was regressed on the means of OA, ACAP, and OIC using the model:

$$\text{ASC606 IO} = \beta 0 + \beta_1 \text{ OA} + \beta_2 \text{ ACAP} + \beta_3 \text{OIC} + \epsilon$$

The choice of multiple regression is informed by the complexity of the overarching research question. According to Petchko (2018), multiple regression permits the researcher to predict an outcome from several predictor variables while at the same time assessing the strength of the relationship between the outcome (the dependent variable) and the predictor variables. Thus, in addition to the regression statistics, the researcher obtained bivariate and Pearson correlations in a matrix (Morgan et al., 2013). Moreover, through multiple regression, an estimate of the relative weight by which each independent variable caused a change in the dependent variable was provided by the beta (Robson & McCartan, 2016). The choice of multiple regression was also predicated on the level of measurement of variables. The dependent variable's measurement level was expected to be interval, and all independent variables were expected to be scale/normal. These data attributes satisfied the condition for using multiple regression (Morgan et al.). However, the researcher had to watch out for assumptions for multiple regression.

Darlington and Hayes (2017) listed three assumptions for regression and categorized them into primary and secondary assumptions. They stated linearity is a primary assumption that cannot be violated. Thus, all independent variables must have a linear relationship with the dependent variable (Cohen et al., 2015; Darlington & Hayes). Other assumptions are there must be no multicollinearity (the independent variables must not be highly correlated with each other), homoscedasticity (the variance of the error term must be equal for all independent variables), and normal distribution of data (Darlington & Hayes). Another assumption based on sample size is that for each predictor variable, there must be at least 20 observations for a researcher to have reasonable effect size and power (Green, 1991). Based on Green's postulation, this study required a minimum sample size of 60 for effective multiple regression analysis.

H2 and H2A were derived from RQ2 and RQ2A. RQ 2 sought evidence of the mediating effects of ASC 606 NOC and ASC 606 IO on the relationship between OIC and ASC 606 efficacy, and RQ2A enquired about the extent to which ASC 606 NOC mediates the effect of OIC on ASC 606 efficacy differently due to different levels of ACAP and OA. Thus, H2 and H2A were stated as (null form only):

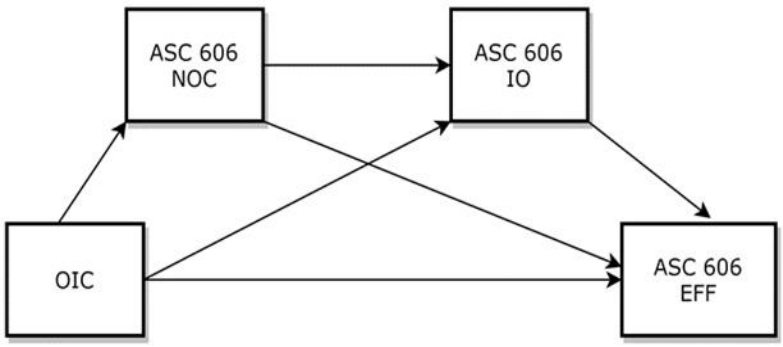
$H2_o$: There is no statistically significant evidence the direct effect of OIC on ASC 606 efficacy is mediated through ASC 606 normalization context and ASC 606 implementation outcome.

$H2A_o$: There is no statistically significant evidence ASC 606 normalization context mediates the effect of OIC on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility. Variables involved in H2 were organization implementation context (independent variables), ASC 606 normalization context and ASC 606 implementation outcomes (mediating variables), and ASC 606 efficacy (dependent variable).

H2 was tested with multiple regression, complemented by the bootstrap approach with 5000 samples in Hayes' (2017) process conceptual model 6 displayed in Figure 8.

Figure 8

Hayes' Process Conceptual Model 6



Note. Hayes' (2017) process conceptual model 6 for H2 depicting the mediating effects.

The three indirect paths depicted below were determined by a regression model that traced all possible paths from the independent variable to the dependent variable through at least one moderator (Hong et al., 2019).

- OIC → ASC606 NOC→ ASC606 EFF;
- OIC → ASC606 IO → ASC606 EFF;
- OIC → ASC606 NOC → ASC606 IO → ASC606 EFF.

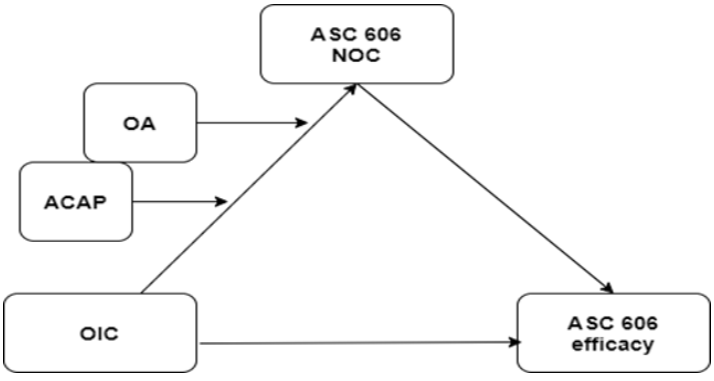
The paths translated into the following three regression equations (Hong et al., 2019; Taylor et al., 2008).

- $M1 = \beta 01 + \beta 1X + \varepsilon_1$;
- $M2 = \beta 02 + \beta 2M1 + \beta 5X + \varepsilon_2$;
- $Y = \beta 03 + \beta 4X + \beta 3M2 + \beta 6M1 + \varepsilon_3$.

H2A, alternatively, involved OIC (independent variable), absorptive capacity (moderating variable), organizational agility (moderating variable), and ASC 606 efficacy (dependent variable). H2A was tested using the bootstrap routine with 5000 samples incorporated in multiple regression, specifically using Hayes' (2017) process conceptual model 7 depicted in Figure 9.

Figure 9

Hayes' Process Conceptual Model 9 with Double Moderators



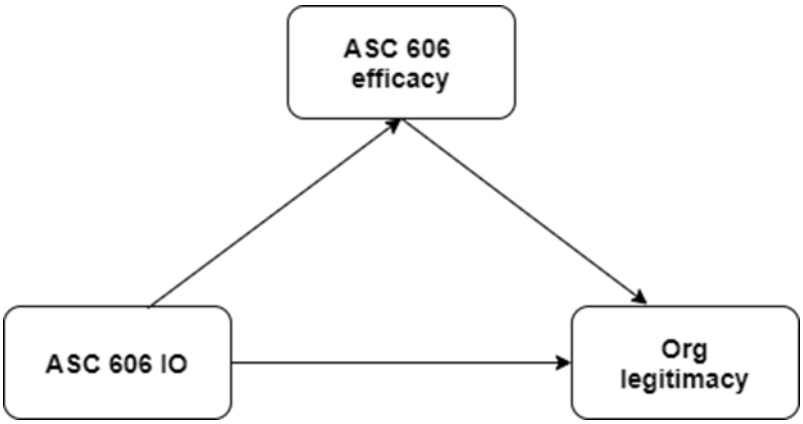
Note. Hayes' (2017) process conceptual model 9 for H2A.

The choice of bootstrap with 5000 samples was predicated on the growing prevalence of the approach in testing mediation and moderation (Teixeira & Palmeira, 2016) and the findings of studies such as Taylor et al. (2008) that compared various methods of analyzing mediation and concluded that the bootstrap approach is the benchmark.

H3 directly responds to RQ3 that sought to understand the degree of the mediating effect of ASC 606 efficacy on the relationship between ASC 606 implementation outcome and organizational legitimacy. Variables involved in H3 were ASC 606 implementation outcomes (independent variable), ASC 606 efficacy (mediating variable), and organizational legitimacy (dependent variable). H3 was tested using the bootstrap routine in multiple regression, specifically using Hayes' PROCESS conceptual model 4 portrayed in Figure 10.

Figure 10

The Mediation of the Relationship Between ASC 606 IO and OL



Note. Hayes' (2017) process conceptual model 4 for H3 depicts the mediating effect of ASC 606 efficacy on the relationship between ASC 606 IO and organization legitimacy.

Summary of Data Analysis

In this subsection, various aspects related to data analysis were discussed. Hypotheses for the study and their corresponding research questions were recalled. The test for each hypothesis and the rationale for its appropriateness were expounded. In sum, H1 and its subordinate

hypotheses, H1A to H1C, were tested using multiple regression. H2 and H3 were tested using the bootstrapping routine in multiple regression using Hayes' (2017) PROCESS macros.

Reliability and Validity

This section discusses steps taken by the researcher to enhance the rigor and trustworthiness of the research. Rigor and trustworthiness are communicated through expounding (a) reliability, the extent of consistency of surveys and tests and their ability to produce similar results in different circumstances, and (b) validity, the extent to which a construct is measured with precision (Heale & Twycross, 2015), or the precision with which the findings accurately reflect the data (Noble & Smith, 2015; Roberts et al., 2006). The following paragraphs expound on steps taken to ensure reliability and validity in this study.

Reliability

To ensure reliability, this researcher adopted, where possible, existing measurement scales with tested reliability. Scales used for OIC, OA, ASC606 EF, and OL were tested reliable scales. OIC assessment scale revealed CFI and TLI greater than 0.95. All individual subscales revealed internal consistency between 0.81 and 0.98. In addition to CFA, enough evidence supports the reliability and construct validity of all three subscales and OIC in general (Lyon et al., 2018). The reliability of the OA scale is depicted by a Cronbach alpha on all items greater than 0.89, which is considered excellent and provided evidence of the scale's internal consistency (Nafei, 2016). The financial reporting quality index used for assessing ASC606 efficacy reported a Cronbach alpha coefficient of 0.947, indicating very high reliability (Rashid, 2020). Beest et al. (2009) used this scale and confirmed high reliability and validity. The ORIC scale adopted to assess ASC606 NOC is accepted worldwide for its reliability and convenience (Adelson et al., 2021). Its acceptability is evidenced by the original English ORIC scale

translation into several European languages and is widely validated as reliable (Adelson et al., 2021).

The reliability of scales for ACAP and ASC 606 IO are not reported. For scales with no known reliability and validity, the onus for proving reliability and validity was on this researcher. Thus, the Cronbach alpha test and EFA were conducted for these scales and all other scales to ensure adaptations made for this study did not affect their reliability. This is consistent with Morgan et al. (2013), who advised that even when an assessment scale has been tested in other studies and found reliable, the study adopting it must test its reliability based on its own data set. Consequently, Cronbach alpha was used to assess the internal consistency of all scales, especially as most of the surveys are Likert scales that have multiple subscales, which must be summed to obtain a composite score. The Cronbach alpha is most appropriate for testing these types of scales (Morgan et al.).

Validity

Validity is a difficult construct to prove (Morgan et al., 2013). However, to ensure data were valid and accurately measured variables, this study relied on content evidence. According to Morgan et al., content evidence is the judgment on whether the contents of a survey instrument reasonably represent the concept being measured. This assessment depends on judgment and logic because of the absence of a test that can measure it. However, EFA can be used to provide evidence of internal structure, especially where the variable being measured has several subconstructs measuring several aspects of the variable. EFA measures the extent to which the clustering of items (factors) is supported by theory. This is referred to as factorial evidence (Morgan et al.). Though this study conducted EFA for most of the instruments clustering items, the researcher relied once again on the reported validity of these adopted scales.

Summary of Section 2 and Transition

Section 2 of this report discussed various aspects that constituted the methodology. Therefore, the research purpose was recalled, and the role of the researcher expounded. The section also contained discussions on participants, population, and sampling. The section underscored that the study participants were managers, CFOs, and accounting personnel of 60 sample companies drawn from a sample frame of top-ranking construction companies in the Mid-Atlantic United States. Data collection and organization, as well as data analysis, were also discussed. In these areas, the discussions revealed seven data sets representing the seven variables of interest were collected using survey instruments with closed-ended questionnaires scored on Likert scales. The subsection on data analysis recalled the hypotheses and explained the research questions they derived from. Explanation of the test for each hypothesis revealed that multiple regression was used to test hypotheses 1A to 1C. The bootstrap routine in Hayes' (2017) PROCESS macros was used to test hypotheses 2 and 3. The section culminated in a discussion on steps taken to ensure reliability and validity by adopting tested assessment scales. Section 3 was devoted to presenting findings, application to professional practice, recommendations for further study, and reflection.

Section 3: Application to Professional Practice

Everyone is entitled to his own opinion but not his own fact.

—Daniel P. Moynihan

The study was a timely response to the outcry from the accounting scholarly and professional communities on the disturbing state of inertia and lackadaisical approach towards ASC 606 implementation change initiatives that was thought could possibly jeopardize its application (Bogopolsky, 2019; Brasser et al., 2018; Conner, 2017; King, 2016). The novel approach used in studying the research problem has narrowed the knowledge gap and contributed significantly to the literature. Accordingly, the study was set out to investigate factors that impede or enhance ASC 606 implementation. Seven variables informed by literature and theories were identified and used in evaluating relationships, moderation, and mediation between ASC 606 implementation drivers and a myriad of ASC 606 implementation outcomes. The research was divided into three sub-studies, each addressing a research question and focused on a hypothesis. Study 1 investigated the extent to which preidentified implementation CSF (OIC, ACAP, and OA) predicted ASC 606 implementation outcomes. In addition, it evaluated relationships between CSFs with ASC 606 implementation outcomes. Multiple linear regression was used to test these hypotheses, and results revealed that OIC and ACAP significantly predicted ASC 606 implementation outcomes. OIC contributed more to the prediction (b = .60) and ACAP, slightly less (b = .54). OA did not significantly contribute to predicting ASC 606 implementation outcomes (b =.32, p =.377). However, the correlation matrix revealed all three variables were significantly positively correlated with ASC 606 implementation outcomes, with the strongest correlation reported by organizational implementation outcomes (r =.60) and absorptive capacity (r = .54). Organizational agility had a slightly smaller correlation (r = .32).

Study 2 was set out to investigate the extent to which ASC 606 normalization context and ASC 606 implementation outcomes mediated the direct effect of organizational implementation context on ASC 606 efficacy. In addition, the study extended its inquiry by investigating whether ASC 606 normalization context mediated the effect of organizational implementation context on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility. The bootstrap approach with 5000 samples in Hayes' PROCESS macros model 7 and 9 respectively were used to test the hypotheses. Results revealed both ASC 606 normalization and ASC 606 implementation outcomes significantly mediated the effect of organizational implementation context on ASC 606 efficacy. Second, the interaction between organizational implementation context and absorptive capacity was statistically significant, which implied absorptive capacity moderated the effect of organizational implementation context on ASC 606 normalization. One percent changes in ASC 606 efficacy were accounted for solely by different absorptive capacity levels. Alternatively, the interaction between organizational implementation context and organizational agility was not statistically significant, meaning organizational agility was not responsible for variations in ASC 606 efficacy. Therefore, only a partial moderated mediation was found, most of it coming from absorptive capacity. It was also found that at low and average absorptive capacity levels, the effects were statistically significant, but at extremely high levels of absorptive capacity, the variance in ASC 606 efficacy was negligible and not statistically significant.

Study 3 sought evidence of the mediating effect of ASC 606 efficacy on the direct effect of ASC 606 implementation outcomes on organizational legitimacy. Regression analysis, specifically the bootstrap approach with 5000 samples in Hayes' PROCESS macro model 4, was used in analyzing the data. Organizational legitimacy was regressed on ASC 606 efficacy and

ASC 606 implementation outcomes. Findings revealed both the direct and indirect effects were statistically significant. This meant ASC 606 implementation outcomes predicted both ASC 606 efficacy and organizational legitimacy, and ASC 606 efficacy significantly mediated the relationship between ASC 606 implementation outcomes and organizational legitimacy.

Presentation of Findings

This research was conducted to evaluate relationships that might exist between certain implementation CSFs, such as absorptive capacity, organizational agility, organizational implementation context, and ASC 606 implementation outcomes in companies within the construction industry in the Mid-Atlantic United States. In addition, the study investigated mechanisms that bolster the effect of the relationship between the most predominant implementation driver, organizational implementation context, and a myriad of ASC 606 implementation outcomes. An integrated survey instrument was used to measure seven principal variables to answer the three research questions. The questions focused principally on understanding the extent to which absorptive capacity, organizational agility, and organizational implementation context predict ASC 606 implementation outcomes. In addition, some secondary questions were posed to investigate mechanisms mediating the effects of some predictor variables and outcome variables. Hayes' PROCESS macro version 3.5 embedded in multiple linear regression in IBM SPSS version 28.00 was used to measure relationships and evaluate mediation and moderated mediation.

Participants Demographics

Table 5

Demographics

Characteristics	*n*	%
Gender		
Male	133	62.1
Female	79	36.9
Transgender	2	0.9
Ethnicity		
Asian	4	1.9
Black/African American	27	12.6
White	161	75.2
Hispanic/Latino	19	8.9
American Indian/Alaska Native	1	0.5
Other	2	0.9
Education		
Graduated high school	49	22.9
Associate degree	28	13.1
Bachelor’s degree	75	35.0
Master’s degree	57	26.6
Doctorate	5	2.3
Job role		
Manager	60	31.3
CFO	60	28.0
Independent CPA	35	13.1
Accounting staff	59	27.6
Longevity in current role		
0 to 12 months	12	5.6
1 to 3 years	42	19.6
4 to 7 years	81	37.9
7 to 10 years	51	23.8
10 years and above	28	13.1
Age		
18-24	8	3.7
25-34	56	26.2
35-44	104	48.6
45-54	40	18.7
55-64	5	2.3
65-74	1	0.5

Participants were from a sample of 60 randomly drawn construction companies in the Mid-Atlantic United States. To qualify for the survey, participants had to be a team member either responsible for implementing, performing ASC 606 tasks, or auditing. Thus, 214 (89%) participants of a total of 240 invited through the Alchemer survey platform responded with complete data and were thus included in the analysis. From Table 5, 62% of participants identified as male and 36% as female. Seventy-five percent identified their race as White, 12% Black/African American, 8.9% Hispanic/Latino, 1.9% Asian, 0.5% American Indians, and 0.9% other. Regarding education, 35% held a bachelor's degree, 26.6% had a master's degree, 22.9% had a high school diploma, 13.1% had an associate degree, and 2.3% had a doctorate. 31.3% of participants were managers, 28% CFOs, 13.1% auditing CPAs, and 27.6% accounting staff at the supervisory level. 37.9% had a longevity of 4 to 7 years in their current positions, 23.8% 7 to 10 years, 19.6% 1 to 3 years, 13.1% above 10 years, and 5.6% between 0 and 1 year. Regarding age. 48.6% were between the ages of 35 and 44, 26.2% between 25 and 34 years, 18.7% between 45 and 54 years, 3.7% between 18 and 24, 2.3% between 55 and 64 years, and 0.5% between 65 and 74 years.

Internal Consistency Reliability

Cronbach's alphas were computed to assess whether data from each item in the questionnaire formed a reliable scale for the variable. The results of Cronbach's alphas depicted in Table 6 showed alphas for organizational implementation context (.91) absorptive capacity (.88), ASC 606 normalization context (.91), and organizational legitimacy (.87). These alphas are greater than .70, the recommended minimum (Cronbach, 1951). Thus, the alphas for organizational implementation context, absorptive capacity, and ASC 606 normalization context indicated the items constituted scales with good internal consistency reliability. The alphas for

organizational agility (.67) and ASC 606 efficacy (.57) were rather low, indicating minimally adequate reliability. However, low alphas are sometimes attributed to the paucity of items on the scale rather than the quality of items in measuring a construct (Morgan et al., 2013).

Table 6

Reliability and Cronbach's Alphas

Variable	Variable Label	Cronbach's Alpha	No. of Items
Org implementation context	OIC	.91	32
Organizational agility	OA	.67	15
Absorptive capacity	ACAP	.88	25
ASC 606 implementation outcome	ASC606 IO*	—	1
ASC 606 normalization context	ASC606 NOC	.91	14
ASC606 efficacy	ASC606 EFF	.57	6
Organizational legitimacy	OL	.87	13

Note. *ASC606 IO was not computed being a one-item scale.

Descriptive Statistics and Sample Characteristics

The chosen statistical tests, simultaneous linear regression analysis, and Pearson's correlation required the sample data to be approximately normally distributed (Morgan et al., 2013). Three methods were applied to ascertain whether data were approximately normally distributed: skewness and kurtoses *z*-values, Kolmogorov-Smirnov and Shapiro-Wilk test of normality, and visual analysis of histograms, normal Q-Q plots, and box plots. This multilayer check, recommended by Mishra et al. (2019), was meant to guard against shortcomings of statistical tests, such as Kolmogorov-Smirnov and Shapiro-Wilk, that sometimes are not sensitive enough at low sample sizes or overly sensitive to large sample sizes (p. 70). The first guideline applied in determining approximately normally distributed data was observing skewness. If skewness' absolute value is less than one, the data are considered at least approximately normally distributed (Morgan et al.). In Table 7, all variables reported absolute skewness values less than one.

Table 7

Descriptive Statistics

Variable	*N*	Range	Min	Max	*M*	*SD*	Var	Skewness	Std. Error
OIC	214	2.09	2.53	4.63	3.5879	.43743	.191	−.123	.166
OA	214	1.00	2.00	3.00	2.5561	.33843	.115	−.288	.166
ACAP	214	1.56	3.12	4.68	3.8649	.35238	.124	.054	.166
ASC606 NOC	214	2.21	2.71	4.93	3.7874	.48576	.236	−.174	.166
ASC606 IO	214	4.00	5.00	9.00	7.00	1.000	1.000	.038	.166
ASC606 EFF	214	2.57	4.14	6.71	5.5060	.47077	.222	.103	.166
OL	214	4.00	3.54	7.54	5.6848	.88332	.780	−.087	.166
Valid *N* (listwise)	214								

Next, the *z*-value of each variable was calculated by dividing the skewness by the corresponding standard error. When the *z*-value is between −1.96 and +1.96 for a moderate sample size, skewness is assumed to be not significantly different from normal (Mishra et al., 2019). Table 8 shows all variables reported a *z*-value between ±1.96.

Table 8

Z-value for Variables

Variable	Skewness	Standard Error	Z-value
OIC	−.123	.166	−0.74
OA	−.288	.166	−1.73
ACAP	.054	.166	−0.32
ASC606 NOC	−.174	.166	−1.05
ASC606 IO	.038	.166	−0.23
ASC606 EFF	.103	.166	−0.62
OL	−.087	.166	−0.52

Last, EDA was performed to produce a statistical test of normality, as well as histograms, Q-Q plots, and box plots for each variable for numerical and visual analysis. The Kolmogorov-Smirnov and Shapiro-Wilk tests of normality presented in Table 9 and diagrams in Appendix I

revealed different results. Because this study's sample was greater than 50, the result of the Kolmogorov-Smirnov test was the one analyzed. The null hypothesis for the test states data are taken from a normally distributed population. Thus, the null hypothesis is accepted when the *p*-value is not significant and data are deemed approximately normally distributed (Mishra et al., 2019). Because the results of most variables, in exception of OIC (p = .200) and OL (p = .079), were statistically significant, OA (p =.001), ASC606 IO (p = .001), ACAP (p = .017), ASC 606 NOC (p = .023), ASC606 EFF (p = .018), suggesting data were not approximately normally distributed, visually assessing histograms and plots was also conducted to confirm results of earlier tests portraying approximately normally distributed data.

Table 9

Kolmogorov-Smirnov and Shapiro-Wilk Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*df*	Sig.	Statistic	*df*	Sig.
OIC	.050	214	.200*	.987	214	.040
OA	.096	214	.001	.914	214	.001
ACAP	.068	214	.017	.982	214	.008
ASC606 NOC	.066	214	.023	.986	214	.031
ASC606 IO	.181	214	<.001	.903	214	<.001
ASC606 EFF	.068	214	.018	.987	214	.045
OL	.058	214	.079	.984	214	.018

Notes. *This is a lower bound of the true significance. a. Lilliefors significance correction.

A visual analysis of histograms, Q-Q plots, box plots, and histograms of each variable (see Appendix I) suggested that all variables are normally distributed. The scatter plot, normal P-P plot of regression standardized residual of variables projected by the Kolmogorov and Smirnov test as not being approximately normally distributed were particularly studied. Going by these instruments, organizational agility and ASC 606 implementation outcome reported slight skewness but not enough to be significantly different from an approximately normal distribution.

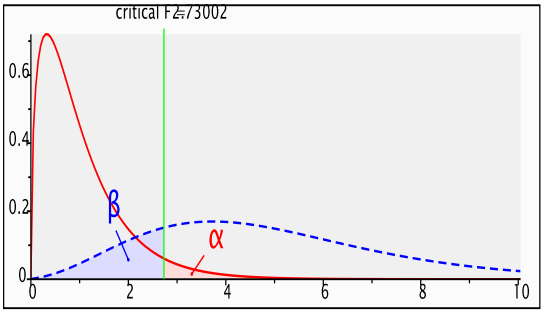
The rest were deemed approximately normally distributed. The scatter plot revealed all data points fit in a rectangle and were between the appropriate range of −3 to +3 on both axes.

Hypotheses Testing

This subsection focused on testing each of the three hypotheses proposed for this research. After ascertaining data are at least approximately normally distributed, the proposed primary parametric tests were used. The null hypothesis was rejected at the 95% confidence interval ($p \leq .05$), leaving the researcher only a 5% chance of committing type 1 error, that is, rejecting the null hypothesis when it was actually true. In addition, G*Power was used in ensuring the effect size, power, and sample size, provided the right parameters for rejecting the null hypothesis. Using Cohen's (1988) 0.15 recommendation for a medium effect size for linear regression with a projected regression model with predictors and a required power of .80, the plots in Figures 11 and 12 were obtained.

Figure 11

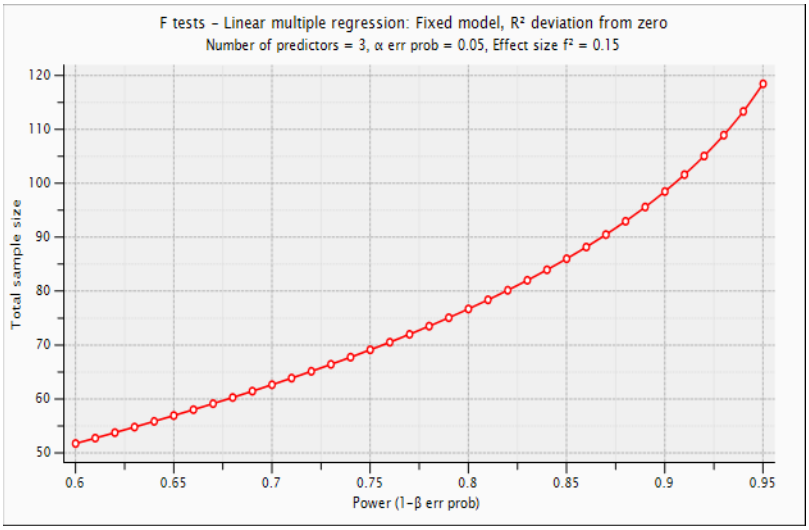
Critical F Value and Region of Rejection



Notes. The critical *F* test is set at 2.73. Based on the G*Power result, to pick up a medium effect size of .15 and a power of .80, the study needed a sample of 77 participants. The study had 214 active participants and had enough power to prevent a type 1 error.

Figure 12

Sample Size Slope at .80 Power



Study 1. Study 1 evaluated the predictiveness of three implementation CSFs, comprising organizational implementation context, organizational agility, and absorptive capacity of ASC 606 implementation outcomes. In addition, it evaluated the relationship of each of the implementation CSFs against ASC 606 implementation outcomes. Hypotheses 1 and 1A to 1C are restated below, and their data analyzed.

Hypothesis 1. $H1_o$: There is no statistically significant evidence that a combination of three implementation CSFs (i.e., organizational implementation context, organizational agility, and absorptive capacity) predicts ASC 606 implementation outcomes.

The predictor variables were organizational implementation context, organizational agility, and absorptive capacity, while the dependent variable was ASC 606 implementation outcome. The data for each variable in the hypothesis were checked using several parameters for approximately normal distribution. Organizational implementation context passed the skewness, *z*-value test, Kolmogorov-Smirnov normality test. Visual examination of histograms and plots also confirmed at least approximately normal distribution. Organizational agility, absorptive

capacity, and ASC 606 implementation outcomes passed the skewness and *z*-value tests but failed the Kolmogorov-Smirnov normality test. However, a visual examination of the histogram, box plots, normal Q-Q plots, and normal P-P plots showed a slight skewness, not enough to rule out an approximately normal distribution. In addition, Cook's (1977) statistic was calculated (see Appendix G), and no value exceeded one, meaning there were no outliers.

Simultaneous multiple regression was performed to evaluate the best prediction of ASC 606 implementation outcomes among three implementation CSFs. The ANOVA statistic was statistically significant, $F(3, 210) = 65.59$, $p = .001$, indicating the model fit the data. The means, standard deviations, and intercorrelations can be found in Table 10. The model summary revealed an $R^2 = .48$, indicating 48% of the ASC 606 implementation outcome variance was accounted for by the three predictors. According to Cohen (1988), this was a large effect. However, only the predictions of organizational implementation context, $t(3, 210) = 7.9$, $p < .001$ and absorptive capacity, $t(3, 210) = 6.9$, $p < .001$ were statistically significant. Organizational agility did not contribute significantly to the prediction, $t(3, 210) = .89$, $p = .377$. The standardized coefficient betas presented in Tables 11 and 12 suggested organizational implementation context contributed more (45%), and absorptive capacity contributed slightly less (37%) to predicting ASC 606 implementation outcomes.

Table 10

Means, Standard Deviation and Intercorrelation

Variable	M	SD	OIC	OA	ACAP
ASC 606 IO	7	1	.60	.32	.54
OIC	3.59	.44	—	.41	.36
OA	2.56	.34		—	.26
ACAP	3.86	.32			—

Note. $p < .001$

Table 11

Coefficients for Predictor Variables

Variable	*B*	*SE*	*β*	*t*	*P*
OIC	1.019	.129	.446	7.873	<.001*
OA	.143	.162	.048	.885	.377**
ACAP	1.053	.152	.371	6.932	<.001*
Constant	−1.097	.617			

Notes. * $p < .001$, ** not significant, $p = .377$

Table 12

Coefficient and Collinearity Statistics

	Unstand Coeffs		Stand Coeffs			Collinearity Statistics	
Variables	B	SE	*β*	*t*	Sig.	Tolerance	VIF
OIC	1.019	.129	.446	7.873	<.001	.767	1.304
OA	.143	.162	.048	.885	.377	.822	1.217
ACAP	1.053	.152	.371	6.932	<.001	.857	1.166
Constant	-1.097	.617					

Note. a. dependent variable: ASC606 implementation outcome.

***Results*.** In evaluating whether a combination of three implementation critical success factors—organizational implementation context, organizational agility, and absorptive capacity—predict ASC 606 implementation outcome, assumptions for normality were met and reported earlier. Multiple linear regression was used, which regressed the mean of ASC 606 implementation outcomes on the means of organizational implementation context, organizational agility, and absorptive capacity. Collinearity statistics in Table 12 revealed tolerance values less than .9 (Field, 2013), indicating the independent variables were not highly correlated. Also, the intercorrelation statistics in Table 10 revealed intercorrelation values less than .7, which indicated they were not highly correlated. Cook's (1977) statistic was calculated, and no value exceeded one, meaning there were no outliers. The assumption for homoscedasticity was also met. Results revealed organizational implementation context, $t(3, 210) = 7.9$, $p < .001$ and

absorptive capacity, $t(3, 210) = 6.9$, $p < .001$ significantly predicted ASC 606 implementation outcome. Organizational agility, $t(3, 210) = .89$, $p = .377$ did not predict ASC 606 implementation outcome significantly. Therefore, the null hypothesis was rejected in favor of the alternative hypothesis that there is statistically significant evidence a combination of three implementation CSFs, comprising organizational implementation context, organizational agility, and absorptive capacity, predict ASC 606 implementation outcomes. This result indicated organizations with enhanced organizational implementation context and high absorptive capacity are likely to experience optimum ASC 606 implementation outcomes. However, organizational implementation context predicted ASC 606 implementation outcomes the most (45%), followed by absorptive capacity (37%).

Hypotheses 1A to 1C. Hypotheses 1A to 1C investigated whether a relationship exists among the three implementation critical success factors (organizational implementation context, organizational agility, and absorptive capacity) and ASC 606 implementation outcomes.

The hypotheses were stated as follows:

$H1A_o$: There is no statistically significant relationship between organizational agility and ASC 606 implementation outcome.

$H1B_o$: There is no statistically significant relationship between an organization's absorptive capacity and ASC 606 implementation outcome.

$H1C_o$: There is no statistically significant relationship between organizational implementation context and ASC 606 implementation outcome.

Assumptions for normality, linearity, and homoscedasticity were met and reported earlier. Evidence of correlation was obtained from the correlation matrix produced from the regression analysis in hypothesis 1 and confirmed by computing Pearson's correlation independently to

examine intercorrelation. The independent variables were organizational implementation context, organizational agility, and absorptive capacity. ASC 606 implementation outcomes were treated as the dependent variable. However, it is noted in correlational research this classification is irrelevant since the objective is merely to establish an association (Price et al., 2010). Table 13 shows statistically significant relationships among all variables.

Table 13

Correlation for Predictor and Outcome Variables

	OIC	OA	ACAP	ASC606 IO
OIC	1	.41*	.36*	.60*
OA		1	.26*	.32*
ACAP			1	.54*
ASC606 IO				1

Note. *Correlation is significant at $p < 0.01$, $N = 214$.

Results. Multiple regressions supplemented with Pearson's correlation analysis were conducted to determine the relationships between three implementation critical success factors and ASC 606 implementation outcomes. The correlation matrix is found in Table 13. The strongest positive correlation was between organizational implementation context and ASC606 implementation outcomes (r (214) = .60, $p < .001$). According to Cohen (1988), this is a large correlation. This result showed a positive linear relationship between organizational implementation context and ASC 606 implementation outcomes. This indicated as organizational implementation context increases, ASC 606 implementation outcomes are more likely to increase in the same direction. Thus, the null H1C that there is no statistically significant relationship between organizational implementation context and ASC 606 implementation outcomes was rejected in favor of the alternative.

Also, the relationship between absorptive capacity and ASC 606 IO showed a medium to large positive correlation (r (214) = .54, $p < .001$; Cohen, 1988). This result also revealed a

positive linear relationship between absorptive capacity and ASC 606 implementation outcome. It meant as absorptive capacity increases, ASC 606 implementation outcomes are more likely to increase. Thus, the null H1B that there is no statistically significant relationship between absorptive capacity and ASC 606 implementation outcomes was rejected in favor of the alternative. Organizational agility correlated the least with ASC 606 implementation outcome (r (214) = .32), $p < .001$). Though smaller than the associations of organizational implementation context and absorptive capacity, the relationship between organizational agility and ASC 606 implementation outcomes was significant and constituted a medium association (Cohen). Because the relationship was positive, linear, and significant, it indicated that as organizational agility increases, ASC 606 implementation outcomes are more likely to increase. Therefore, the null H1A that there is no statistically significant relationship between organizational agility and ASC 606 implementation outcomes was rejected and the alternative accepted.

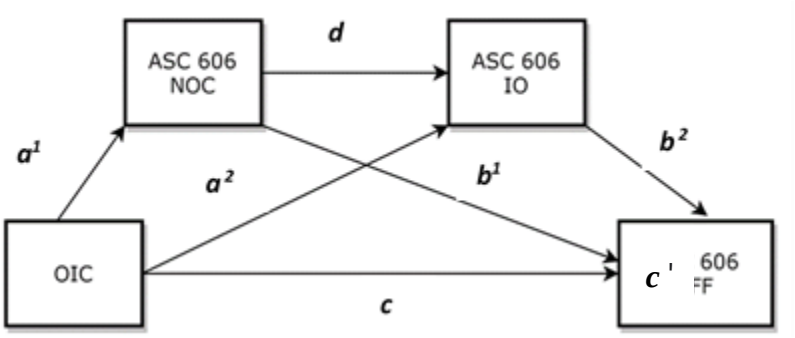
Study 2. Study 2 was designed to evaluate mechanisms that might moderate and mediate the relationship between organizational implementation context and ASC 606 efficacy. Through H2 and H2A, the researcher wanted to identify mechanisms that mediate the direct effect of organizational implementation outcomes on ASC 606 efficacy and discover if the mediating effect of ASC 606 normalization context on the effect of organizational implementation context on ASC 606 efficacy differed at different levels of absorptive capacity and organizational agility. Data were analyzed, and findings are discussed below.

Hypothesis 2. $H2_o$: There is no statistically significant evidence the direct effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization context and ASC 606 implementation outcomes. H2 was tested using Hayes' PROCESS model 6, which is considered effective in testing direct and indirect effects of serial

multiple mediation by integrating the bias-corrected bootstrap points estimate approach (Teixeira & Palmeira, 2016). Because Haye's PROCESS model initially treated each mediator as an outcome variable of the primary predictor, several tables were generated explaining each outcome. However, the most significant output table used in establishing mediation was the bootstrap output table that showed the direct and indirect effects of organizational implementation context on ASC 606 efficacy (Zhao et al., 2010). The PROCESS model 6 conceptual diagram was reintroduced in Figure 13 with additional labeling depicting the direct and indirect paths that were investigated.

Figure 13

Double Mediation of the Effects of OIC on ASC 606 EFF With Paths Labeled



In addition to the total effect of OIC on ASC 606 efficacy (path *c*), other paths that went through each mediator and both mediators were tested and culminated in path *c*′ (the direct effect). Therefore, the first path is the total effect path, denoted by *c*, and the direct effect path, denoted *c*-prime, from organizational implementation context to ASC 606 efficacy. The second path goes from a^1 to b^1 through the ASC606 normalization context. The third path goes from a^2 to b^2 through ASC606 implementation outcomes. The fourth path passes through the two mediators going from a^1, through d to b^2. The first action was establishing the impact of the total effect of organizational implementation context on ASC606 efficacy. Earlier studies, such as

Baron and Kenny (1986), required path *c* to be statistically significant and has a zero-order effect for one to proceed with determining mediation. However, more recent studies, such as Zhao et al. (2010), have provided evidence that the statistical significance of path *c* and the nonexistence of the zero-order effect do not preclude establishing mediation. Thus, analysis of data for this hypothesis, starting with Table 14, was conducted based on improvements of Baron and Kenny by recent studies, such as Zhao et al. and Hayes and Little (2018).

Table 14

The Effect of OIC on ASC 606 Efficacy

A	*R*	R^2	MSE	*F*	*df*1	*df*2	*p*
	.218	.048	.212	10.627	1.000	212.000	.001
B		Coeff	SE	*t*	*p*	LLCI	ULCI
	Constant	4.662	.261	17.884	.000	4.148	5.178
	OIC	.235	.072	3.260	.001	.093	.377

Notes. A = model summary, B = model.

Table 14 reveals the extent to which organizational implementation context predicted ASC606 efficacy alone without the interaction of other variables (the mediators). Notice that the result is statistically significant, $b = .24$, $t(212) = 3.30$, $p = .001$. The coefficient (.24) was equivalent to the effect of the total effect path denoted as *c*. The result implied when an organization's implementation climate is favorable, ASC 606 efficacy was likely to be higher.

Table 15

Path A1 showing the Effect of OIC on ASC 606 NOC

A	*R*	R^2	MSE	*F*	*df*1	*df*2	*p*
	.363	.132	.206	32.121	1.000	212.000	.000
B		Coeff	SE	*t*	*p*	LLCI	ULCI
	Constant	2.342	.257	9.117	.000	1.836	2.848
	OIC	.402	.071	5.668	.000	.263	.543

Notes. $R^2 = .132$; $F(1, 212) = 32.12$, $p < .001$. A = model summary. B = model.

In Table 15, path a[1] treated ASC 606 normalization context as if it were the outcome variable (Baron & Kenny, 1986). The result showed a positive correlation, that is, organizational implementation context significantly predicted ASC 606 normalization, b = .402, t(212) = 5.67, p < .001. This implied as organizational implementation context improves, ASC 606 normalization was likely to be high.

Table 16

Path A2 and D Showing the Effect of OIC and ASC606 NOC on ASC606 IO

A		*R*	R^2	MSE	*F*	*df*1	*df*2	*p*
		.712	.506	.489	108.251	2.000	211.000	.000
B			Coeff	SE	*t*	*p*	LLCI	ULCI
	Constant		.094	.472	.200	.841	-.835	1.024
	OIC		1.024	.119	8.628	.000	.790	1.258
	ASC_NOC		.852	.107	7.978	.000	.642	1.063

Notes. A = model summary. B = model.

Statistics in Table 16 was obtained by regressing ASC 606 implementation outcomes on organizational implementation context and ASC 606 normalization context. Thus, the Table 16 statistic involved paths a[1] through d. The results revealed a correlation between OIC, ASC 606 normalization context and ASC 606 implementation outcomes. That meant, OIC significantly predicted ASC606 implementation outcome, b = 1.01, t(211) = 8.63, p < .001 and ASC 606 normalization context also predicted ASC 606 implementation outcomes path d b = .85, t(211) = 7.98, p < .001. The two predictors accounted for 51% change in ASC 606 implementation outcomes (r^2 = 0.506).

Table 17

Effects of OIC, ASC 606 NOC, and ASC 606 IO on ASC 606 Efficacy

A	*R*	R^2	MSE	*F*	*df*1	*df*2	*p*
	.3138	.0985	.2027	7.6449	3.000	210.000	.000

B		Coeff	SE	*t*	*p*	LLCI	ULCI
	Constant	4.239	.301	14.094	.000	3.646	4.831
	OIC	.063	.088	.712	.477	−.111	.236
	ASC_NOC	.093	.078	1.192	.234	−.061	.264
	ASC_IO	.099	.044	2.252	.025	.012	.185

Notes. Overall model $F(3, 210) = 7.64$, $p < .001$. A = model summary. B = model.

Table 17 showed the individual effects of predictor variables (OIC, ASC 606 NOC, and ASC 606 IO) on ASC 606 efficacy. Results revealed apart from ASC 606 implementation outcomes that showed significance (path b^2), $b = .099$, $t(210) = 2.25$, $p = .025$, all other predictor variables had no individual statistically significant effect on ASC0606 efficacy, including organizational implementation context, $b = .063$, $t(210) = 71$, $p = .477$, and ASC 606 normalization context, $b = .093$, $t(210) = 1.19$, $p = 234$.

Table 18

The Direct and Indirect Effects of OIC and ASC 606 Efficacy

A	Effect	SE	*t*	*p*	LLCI	ULCI	c_ps	c_cs
	.235	.072	3.260	.001	.093	.377	.499	.218

B	Effect	SE	*t*	*p*	LLCI	ULCI	c'_ps	c'_cs
	.063	.088	.712	.477	−.111	.236	.133	.058

C		Effect	BootSE	BootLLCI	BootULCI
	Total	.172	.056	.068	.286
	Ind1	.037	.033	-.026	.107
	Ind2	.101	.048	.016	.201
	Ind3	.034	.017	.005	.071

Notes. A = total effect of X on Y. B = direct effect of X on Y. C = indirect effect(s) of X on Y. Ind1 OIC -> ASC_NOC -> ASC_EFF. Ind2 OIC -> ASC_IO -> ASC_EFF. Ind3 OIC -> ASC_NOC -> ASC_IO-> ASC_EFF

Table 18 is the single most important statistic for determining mediation. The table recapitulated the direct and indirect effects of *X* (OIC) on *Y* (ASC606 EFF). Therefore, Table 18 is divided into sections that reveal (A) the total effect of organizational implementation context on ASC 606 efficacy, (B) the direct effect of organizational implementation context on ASC 606 efficacy, and (C) the indirect effects of organizational implementation context on ASC 606 efficacy, with notes that explain the mediation paths and weights of the effect of each path. The statistical significance of the result is obtained by interpreting the lower and upper bounds of the bootstrap 95% confidence interval (Morgan et al., 2013; Zhao et al., 2010). The null hypothesis of the bootstrap test assumes the indirect effect in the population is equal to zero. Thus, if zero falls between the lower and upper bounds of the bootstrap 95% confidence interval, the null hypothesis is maintained

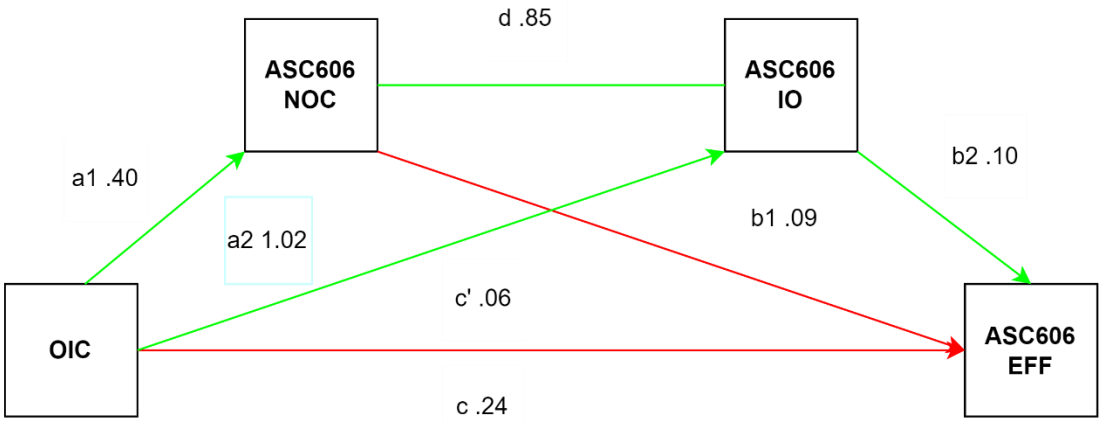
***Results*.** Multiple regression analysis was conducted to determine the best linear combination of ASC 606 normalization context and ASC 606 implementation outcomes in mediating the direct effect of organizational implementation context on ASC 606 efficacy. Data were checked for normality, outliers, and influential data points. See Figure 14 for a visual of the mediation. The data were analyzed using the mediation procedure prescribed by Baron and Kenny (1986) and improvement of the model by Hayes (2017) and Zhao et al. (2010). Paths a^1 and b^1 that go through ASC 606 normalization context, mapped in Table 18 as Ind1, were not statistically significant, *indirec*t, .04, SE. 03, 95% CI [−.026, .107]. Thus, ASC 606 normalization context did not significantly mediate the effect of organizational implementation context on ASC 606 efficacy. Paths a^2 and b^2 that go through ASC606 IO were statistically significant, *indirec*t, .10, SE. 05, 95% CI [.016, .201]. This indicated ASC 606 implementation outcome significantly mediated the relationship between organizational implementation context

and ASC 606 efficacy. Last, the path mapped Ind3 on Table 18 that goes through both mediators was statistically significant, *indirect*, .03, SE .017, 95% CI [.005, .071]. This indicated both ASC 606 normalization context and ASC 606 implementation outcomes significantly mediated the effect of organizational implementation context on ASC 606 efficacy with a total weight of .17.

The total effect of organizational implementation context on ASC 606 efficacy (.24), *b* = .24, SE .072, 95% CI [.092, .377] decreased in absolute value (.06), b = .063, SE .088, c´ [.133, .058] while adjusting for the indirect effect. This effect change implied mediation had taken place through the route mapped in Table 18 as Ind3, also denoted in Figure 14 as path c´.

Figure 14

The Indirect Effect of OIC on ASC 606 EFF with Coefficients



Going by this result, the null hypothesis that there was no statistically significant evidence the effect of organizational implementation context on ASC 606 efficacy was mediated through ASC 606 normalization context and ASC 606 implementation outcomes was rejected in favor of the alternative. However, it is noted that most of the mediation occurred through paths a^2 and b^2, making ASC 606 outcomes the stronger mediator of the effect of organizational implementation context on ASC606 efficacy. Also, the high correlation between the two

mediators, ASC 606 normalization context and ASC 606 implementation outcome (path d = .85), was noted and thought to have enhanced the indirect effect.

Hypothesis 2A. $H2A_o$ was stated as there is no statistically significant evidence ASC 606 normalization context mediates the effect of organizational implementation context on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility. Organizational implementation context was the predictor variable, and ASC 606 implementation efficacy was the dependent variable. The mediating variable was ASC 606 normalization context, while the moderators were absorptive capacity and organizational agility. Data for each variable in the hypothesis were checked for approximately normal distribution using several parameters. Organizational implementation context passed the skewness, *z*-value test, and Kolmogorov-Smirnov normality test. Visual examination of histograms and plots also confirmed at least approximately normal distribution. Organizational agility, absorptive capacity, and ASC 606 efficacy passed the skewness and *z*-value tests but failed the Kolmogorov-Smirnov normality test. However, a visual examination of the histogram, box plots, and normal Q-Q plots showed slight skewness but not significantly different from an approximately normal distribution. In addition, Cook's (1977) statistic was calculated (see Appendix G), and no value exceeded one, meaning there were no outliers. Accordingly, multiple linear regression analysis was used in computing the variables. The regression model was conceptualized based on Hayes' PROCESS model 9 (see Figure 9), which was used to test the hypothesis. We specifically opted for HC4 heteroscedasticity-consistent inference, which is more robust, especially when normality is slightly skewed. Also, values were conditioned at −1SD, mean, and +1SD to facilitate interpreting the effect at different levels of moderation. The predicted value of ASC 606 normalization context is obtained by applying the regression equation below. It basically

regresses the mean of ASC606 normalization context onto OIC, ACAP, OA and computes their interactions.

$$\widehat{\text{ASC606NOC}} = \beta_o + \beta_1 X_{OIC} + \beta_2 X_{ACAP} + \beta_3 X_{OA} + \beta_4 X_{OIC} X_{ACAP} + \beta_5 X_{OIC} X_{OA}$$

Table 18 provided data for plotting the simple slope of the regression model.

$$\widehat{\text{ASC606NOC}} = -3.808 + 178_{OIC} + .775_{ACAP} - .017_{OA} - .325_{OIC} X_{ACAP} - .042_{OIC} X_{OA}$$

Evidence of moderated mediating effects is depicted by the variance of the indirect effect as a function of the level of the moderators (Xin et al., 2020). The size of moderated mediation effect is gleaned from the interaction. Thus, an interaction greater than zero, depicted by r^2 change, indicates moderated mediation has occurred. Whether the moderated mediation is statistically significant is gleaned from the position of zero on the lower and upper bounds of the bootstrap 95% confidence interval or simply from the *p*-value.

Table 19

Summary of Interaction of ASC 606 NOC with OIC, ACAP, and OA

A	*R*	R^2	MSE	F(HC4)	*df*1	*df*2	*p*
	.646	.417	.141	36.213	5.000	208.000	.000
B		Coeff	SE	*t*	*P*	LLCI	ULCI
	Constant	−3.808	.029	−130.66	.000	3.750	3.865
	OIC	.178	.072	2.46	.015	.0351	.320
	ACAP	.775	.071	10.88	.000	.635	.915
	Int_1	−.325	.150	−2.16	.032	−.630	−.029
	OA	−.017	.092	−.18	.855	−.198	.164
	Int_2	−.042	.180	−.24	.810	−.398	.312
C		R^2-*chng*	*F*(HC4)	*DF*1	*DF*2	*P*	
	X*W	.010	4.684	1.000	208.000	.032	
	X*Z	.000	.058	1.000	208.000	.810	
	Both (X)	.010	2.415	2.000	208.000	.092	

Notes. Product terms key: Int_1: OIC x ACAP. Int_2: OIC x OA. A = model summary. B = model. C = tests of highest order unconditional interactions.

Table 19 provided information on interaction 1 (with ACAP) and interaction 2 (with OA). The information suggested absorptive capacity's interaction was statistically significant, *b* = -.325, SE .150, *t*(208) = −.2.164, *p* = .032. This indicated absorptive capacity moderated the effect of organizational implementation context on ASC 606 normalization context. The r^2 change explained specific changes in ASC 606 efficacy explained by the moderator (absorptive capacity) alone (Cohen, 2003; Fairchild & McQuillin, 2010). The change was statistically significant, $r^2\Delta = .010$, $F(1, 208) = 4.68$, $p = .032$. This indicated a 1% change in ASC606 efficacy was accounted for solely by absorptive capacity. According to Cohen (1988), this is a small change. However, the interaction of organizational agility was not statistically significant, *b* = −.042, SE .180, *t*(208) = −.242, *p* = .810. The r^2 change associated with organizational agility was .000. This indicated no variation in ASC 606 efficacy that could be attributed to the moderated mediation of organizational agility alone. Further evidence and the impact of moderated mediation at different levels are gleaned from Table 20.

The indices of moderated mediation were the principal data used in determining the existence and significance of moderated mediation, that is, indirect effect variance across different levels of absorptive capacity and organizational agility (Hayes, 2017). Evidence of significance or a lack of it was gleaned from the position of zero within the upper and lower levels of the bootstrap 95% confidence intervals (Hayes; Morgan et al., 2013). The conditional indirect effect of absorptive capacity was statistically significant at low absorptive capacity levels, *b* = .054, SE .029, bootstrap 95% CI [.008, .124), and at average levels, *b* = .034, SE .021, bootstrap 95% CI [.002, .082]. At high absorptive capacity levels, the conditional indirect effect was not statistically significant, *b* = .014, SE .020, bootstrap 95% CI [-.026, .057). Recall values were conditioned at −1SD, Mean, and +1SD, thus resulting in absorptive capacity values −.352

(1SD below mean), .000 (mean), and .352 (1SD above mean), respectively. These values were codified as low, average, and high absorptive capacity levels, respectively. The significance transition region, that is, where high absorptive capacity levels started suffering from diminishing return, was 3.979, gleaned from the Johnson-Neyman table (see Appendix H). The Johnson-Neyman table is a comprehensive list of all absorptive capacity scores instead of just the low, average, and high group classification. Proof of the statistical significance of moderated mediation was obtained from the indices of moderated mediation at a 95% bootstrap confidence interval.

Table 20

The Direct and Conditional Indirect Effect of OIC on ASC 606 Efficacy

A	Effect	*SE* (HC4)	*t*	*P*	LLCI	ULCI
	.164	.080	.0352	.043	.005	.323
B	ACAP	OA	Effect	BootSE	BootLLCI	BootULCI
	−.352	−.338	.054	.029	.008	.124
	−.352	.000	.052	.029	.008	.122
	−.352	.338	.049	.033	.004	.132
	.000	−.338	.034	.021	.002	.082
	.000	.000	.031	.020	.003	.080
	.000	.338	.029	.025	−.003	.092
	.352	−.338	.014	.020	−.026	.057
	.352	.000	.011	.018	−.020	.053
	.352	.338	.009	.023	−.029	.064
C	Variable		Index	BootSE	BootLLCI	BootULCI
	ACAP		−.057	.039	−.152	−.001
	OA		−.008	.033	−.070	.069

Notes. A = direct effect of X on Y. B = conditional indirect effect of X on Y. OIC -> ASC_NOC -> ASC_EFF. C = Indices of partial moderated mediation.

Table 21

The Mediating Effect of ASC 606 NOC on ASC 606 Efficacy

A	*R*	R^2	MSE	*F* (HC4)	*DF*1	*DF*2	*p*
	.277	.077	.207	9.419	2.000	211.000	.000
B		Coeff	SE	*t*	*p*	LLCI	ULCI
	Constant	4.836	.284	17.027	.000	4.276	5.396
	OIC	.164	.080	2.035	.043	.005	.323
	ASC606 NOC	.177	.073	2.415	.017	.033	.321

Notes. A = model summary. B = model.

Based on Table 21, ASC 606 normalization was found to have a positive statistically significant mediating effect on ASC 606 efficacy, b = .177, SE .073, $F(2, 211) = 2.42$, p = .017.

***Results*.** In recognition of the fact that organizational implementation context may not fully account for changes in ASC 606 efficacy, simultaneous multiple regression was used to evaluate the extent to which the mediation effect of ASC 606 normalization context on the relationship between organizational implementation context and ASC 606 efficacy varied across different levels of absorptive capacity and organizational agility. Data were checked for homoscedasticity, approximately normal distribution, and influential data points consistent with Cohen (2003). The data were analyzed using a percentile bootstrap estimation approach with 5000 samples, implemented with Hayes' PROCESS macro conceptual model 9 in SPSS version 3.5. Results indicated the interaction between organizational implementation context and absorptive capacity was statistically significant, b = −.325, SE .150, $t(5, 210)$ = −.2.164, p = .032; thus, absorptive capacity moderated the effect of organizational implementation context on ASC 606 normalization. R^2 = .417 indicated 42% of changes in ASC 606 normalization context are accounted for by absorptive capacity and organizational agility. ASC 606 normalization was found to significantly mediate the relationship between organizational implementation context and ASC 606 efficacy b = .177, SE .073, $F(2, 211) = 2.42$, p = .017. The index of moderated

mediation was significant, $b = -.325$, SE .150, $t(5, 208) = -2.164$, $p = .032$. Additionally, a 1% change in ASC 606 efficacy was accounted for specifically by different absorptive capacity levels. According to Cohen (1988), this was a small change. However, McClelland and Judd (1993) considered a 1% change in effect impactful and meaningful. Stone-Romero and Liakhovitski (2002) posited the power in moderation models is often small because of the small effect size typical of social sciences research. Thus, social science literature on moderation reports interaction from real-world data typically accounts for between 1% and 3% of the variance in the dependent variable (Champoux & Peters, 1987; Fairchild & McQuillin, 2010).

Alternatively, evidence of moderated mediation due to organizational agility was not statistically significant, $b = -.042$, SE .180, $t(208) = -.242$, $p = .810$. Also, its r^2 change was reported as .000. These indicated organizational agility had no effect on variations in ASC606 efficacy. Therefore, only a partial moderated mediation was found, with most of it coming from absorptive capacity. It was also found that the variance in ASC 606 efficacy was negligible at extremely high levels of absorptive capacity. consistent with the law of diminishing returns. Based on this evidence, the null hypothesis that there is no statistically significant evidence ASC 606 normalization context mediates the effect of organizational implementation context on ASC 606 efficacy differently due to different levels of absorptive capacity and organizational agility was rejected in favor of the alternative.

Study 3. Hypothesis 3. $H3_o$: There is no statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcome and organizational legitimacy. ASC 606 implementation outcome was the independent variable, ASC 606 the mediating variable, and organizational legitimacy the outcome variable. Data for each variable were checked for approximately normal distribution using multilayer parameters. Organizational

legitimacy passed the skewness, *z*-value test, and Kolmogorov-Smirnov normality test. Visual examination of its histogram and plots also confirmed an approximately normal distribution. ASC 606 implementation outcome and ASC 606 efficacy passed the skewness and *z*-value tests but failed the Kolmogorov-Smirnov normality test. However, a visual examination of their histograms, box plots, and normal Q-Q plots showed slight skewness but not significantly different from an approximately normal distribution. In addition, Cook's statistic was checked (see Appendix G), and no value exceeded one, meaning there were no outliers (Cook, 1977). Accordingly, multiple linear regression analysis was used in testing the hypothesis. The regression model was conceptualized based on Hayes' PROCESS model 4 (see Figure 10). The *t*-test, standard deviations, and intercorrelations can be found in Tables 22 and 23. The regression statistic in Table 22 treated ASC 606 efficacy as the outcome variable and ASC 606 implementation outcome as its predictor. The data revealed the relationship between the two was statistically significant, $b = .141$, SE .029, $F(1, 212) = 4.90$, $p < .001$. This result indicated ASC606 implementation outcome positively predicted ASC606 efficacy.

Table 22

The Relationship Between ASC 606 IO and ASC 606 Efficacy

A	*R*	R^2	MSE	F(HC4)	*df*1	*df*2	*p*
	.300	.090	.203	24.037	1.000	212.000	.000

B		Coeff	E(HC4)	*t*	*p*	LLCI	ULCI
	Constant	4.518	.208	21.689	.000	4.108	4.929
	ASC_IO	.141	.029	4.903	.000	.084	.198

Notes. A = model summary. B = model.

Table 23

The Relationship Between ASC 606 IO, ASC 606 EFF, and OL

A	*R*	R^2	MSE	*F*(HC4)	*DF*1	*DF*2	*p*
	.510	.260	.583	41.759	2.000	211.000	.000

B		Coeff	SE(HC4)	*t*	*p*	LLCI	ULCI
	Constant	.264	.615	.429	.668	−.948	1.476
	ASC606 IO	.225	.058	3.902	.000	.111	.338
	ASC606 EFF	.699	.124	5.654	.000	.455	.942

Notes. R = .510, SE .583, $F(2, 211) = 41.76$, $p < .001$. A = model summary. B = model.

In Table 23, ASC 606 implementation outcomes and ASC 606 efficacy were treated as predictors of organizational legitimacy. ASC 606 implementation outcomes significantly predicted organizational legitimacy, $b = .225$, SE .058, $t(2, 211) = 3.90$, $p < .001$, as well as ASC 606 efficacy, $b = .699$, SE .124, $t(2, 211) = 5.65$, $p < .001$. Table 24 shows the direct and indirect effects of ASC 606 implementation outcomes on organizational legitimacy. Overall, there was a positive statistically significant total effect which reduced as the mediator, ASC 606 efficacy, was introduced in the model.

Table 24

The Direct Effect of ASC 606 IO on OL and Indirect Effect due to ASC 606 EFF

A	Effect	SE(HC4)	*t*	*p*	LLCI	ULCI
	.324	.055	5.838	.000	.214	.433

B	Effect	SE(HC4)	*t*	*p*	LLCI	ULCI
	.225	.058	3.902	.000	.111	.338

C		Effect	BootSE	BootLLCI	BootULCI
	ASC606 EFF	.099	.024	.055	.150

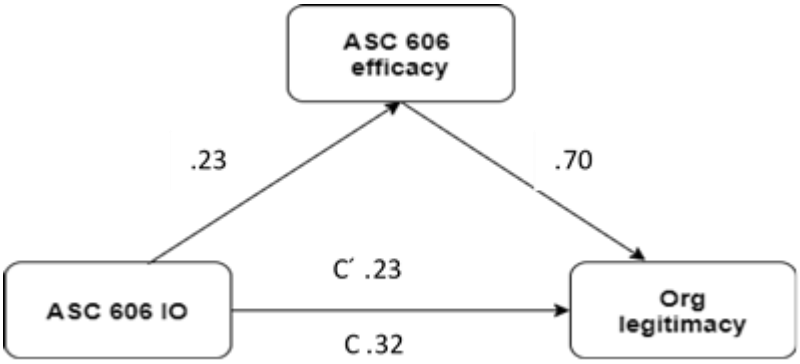
D		Effect	BootSE	BootLLCI	BootULCI
	ASC606 EFF	.112	.027	.063	.168

Notes. A = total effect of X on Y. B = direct effect of X on Y. C = indirect effect(s) of X on Y. D = completely standardized indirect effect(s) of X on Y.

Results. Multiple regression analysis was computed to ascertain if the direct effect of ASC 606 implementation outcomes on organizational legitimacy was mediated by ASC 606 efficacy. Data were checked and passed assumptions of linearity, normality, outliers, and influential data points. The data were analyzed using the mediation procedure prescribed by Baron and Kenny (1986) and improvement of the model by Hayes (2017) and Zhao et al. (2010). See Figure 15 for a visual of the mediation. Results indicated ASC 606 efficacy significantly predicted changes in organizational legitimacy, path "a," b = .14, SE .029, p < .001 and path "b," b = .70, SE .124, $t(2, 211) = 5.65$, p < .001. Also, ASC 606 implementation outcomes predicted organizational legitimacy significantly, b = .23, SE .058, p < .0001. This also indicated organizations with high ASC 606 implementation outcomes were likely to be perceived as more legitimate. Approximately 26% of the variance in organizational legitimacy was accounted for by ASC 606 efficacy and ASC 606 implementation outcome (R^2 = .26). According to Cohen (1988), this is a small effect. The mediation effect was tested using a bootstrap estimation approach with 5000 samples within the PROCESS macro consistent with Shrout and Bolger (2002). The mediation (indirect effect) was statistically significant, b = .099, SE .024, bootstrap 95% CI [.005, .150]. The total effect, b = .32, SE .055, p < .0001 decreased, b = .23, SE .058, bootstrap 95% CI [.111, .338], completely standardized b = .112, while adjusting for the indirect effect of ASC 606 efficacy (path c´).

Figure 15

Coefficients of the Mediating Effect of ASC 606 EFF on ASC 606 IO and OL



Consistent with the literature, the c´(c-prime) path must be smaller than c path and be as close to zero as possible when the mediator is introduced into the model (Fairchild & McQuillin, 2010; MacKinnon et al., 2002; Shrout & Bolger, 2002). This indicated the mediating effect of ASC 606 efficacy was significant, implying organizations with higher levels of ASC 606 efficacy were likely to be perceived by the public as being more legitimate. Going by this result, the null hypothesis that there is no statistically significant evidence ASC 606 efficacy mediates the relationship between ASC 606 implementation outcomes and organizational legitimacy was rejected in favor of the alternative.

Relationship of the Findings

This subsection explicates the research findings relationship with key components that necessitated the study, such as the research problem and research questions, and those that guided the study, such as the theoretical framework and literature.

Research Problem and Research Questions

The findings have addressed the research problem adequately. Recall the specific research problem was management's possible apathetic response in creating an enabling implementation context for a smooth transition to the new revenue recognition guidelines (ASC

606) within the construction industry in the Mid-Atlantic United States, resulting in possible ASC 606 implementation outcomes impairment and potential loss of organizational legitimacy. To fully understand this problem, the researcher carried out a thorough review of the literature and discovered implementation science had identified a plethora of implementation drivers that could be tweaked to enhance implementation outcomes. Thus, three that were assumed to be particularly critical to ASC 606 implementation success were chosen to be studied further: organizational implementation context, organizational agility, and absorptive. In response to the research problem, the researcher wanted to know if these implementation drivers could be used to understand and solve the research problem. Could organizational agility be applied in understanding and solving management's initial ASC 606 implementation inertia? Could organizational implementation context guide the creation of an enabling environment for ASC 606 implementation? Could absorptive capacity guide the learning needed to effectuate ASC 606? The first research question was born out of this curiosity. Research question 1 queried the extent to which a combination of three implementation CSFs (organizational implementation context, organizational agility, and absorptive capacity) would predict ASC 606 implementation outcomes. The research question was extended to further discover whether there was a positive association between each of the implementation critical success factors and ASC 606 implementation outcomes.

These research questions were meant to provide evidence of the relationship between these implementation drivers and ASC 606 implementation outcomes to provide insights into what organizations need in their tool kit while contemplating ASC 606 implementation. However, because correlation alone does not provide adequate insight into the mechanisms that may need to be manipulated to improve implementation outcomes, two other research questions

were posed focusing on gaining more insight into the ASC 606 implementation phenomenon. Thus, discovering mechanisms that mediate relationships became an indispensable part of the study. Earlier studies had established that changes in processes, the control environment, and IT solutions are critical to ASC 606 effectiveness. The necessity for these changes to be embedded into everyday practice led to the discovery of another variable, ASC 606 normalization context. Accordingly, Research Question 2 queried the extent to which the effect of organizational implementation context on ASC 606 efficacy is mediated through ASC 606 normalization and ASC 606 implementation outcomes. Furthermore, Research Question 2A was structured to set the basis for understanding if the collective effort at normalizing ASC 606 is different due to different levels of absorptive capacity and organizational agility. It was hoped that answers to these questions would provide insights into the mechanisms that could hold back implementation if not attend to and guide actions needed to solve ASC 606 implementation quandary.

Findings revealed the direct effect of organizational implementation context on ASC 606 efficacy was statistically significant, but the impact was reduced when ASC 606 implementation outcomes and ASC 606 normalization context were introduced into the model as mediators. This revealed the mediators significantly affected the relationship. However, most of the mediation occurred through ASC 606 implementation outcome than through ASC 606 normalization context. How this result guides organizations' implementation decisions is that efforts at increasing ASC 606 efficacy should be concentrated on actions that optimize ASC 606 implementation outcomes. Evidence of whether this mediation differed at different levels of absorptive capacity and organizational agility was obtained from Research Question 2A findings. RQ 2 findings revealed absorptive capacity, more than organizational agility, moderated the effect of organizational implementation context on ASC 606 normalization context differently at

different levels of absorptive capacity. However, at very high absorptive capacity levels, the effect on ASC 606 efficacy was negligible. This result informs organizations to concentrate efforts on building ways that knowledge is acquired and being aware that very high levels are unnecessary.

The third research question evolved from the part of the research problem that established loss of organizational legitimacy because of markedly mediocre ASC 606 implementation rollout. It had already been established ASC 606 implementation outcomes predicted ASC 606 efficacy. Thus, when ASC 606 implementation outcomes are not optimal, ASC 606 efficacy is likely to be impaired, such that organizations may likely lose legitimacy. Research Question 3 sought answers to whether the relationship between ASC 606 implementation outcomes and organizational legitimacy was mediated by ASC 606 efficacy. Findings provided evidence ASC 606 implementation outcomes are positively correlated with organizational legitimacy, and the direct effect of ASC 606 implementation outcomes on organizational legitimacy is mediated by ASC 606 efficacy. Thus, the third research question was answered in the affirmative, and its corresponding null hypothesis was rejected. The implication of this result indicated that organizations with optimal ASC 606 implementation outcomes and ASC 606 efficacy would likely be perceived as legitimate by the public. Therefore, efforts to improve public image can, among other things, be concentrated on increasing the effectiveness and quality of revenue reporting. This implication is directly related to the last aspect of the research problem that considered a possible loss of organizational legitimacy as a direct consequence of suboptimal ASC 606 implementation outcomes.

Theoretical Framework

This study was guided by an integrated theoretical framework of three interrelated theories: CTs, institutional theory, and NPT. Together they provided the blueprint for studying the research problem. CTs have gained prominence, especially in today's dynamic world where things are constantly changing. Planned change and organizational readiness for change have become the most popular tools in preparing or changing behavior and moving an organization in a new desired direction (Shirey, 2013). However, change is not easy to implement as many organizational members cling to old routines and show resistance to new ones as a sense of security or fear for the unknown (Burnes, 2015). These are some of the situations that prevailed in construction companies, as noticed in early inertia in ASC 606 implementation. How do planned change and organizational readiness for change help understand the situation in construction companies and thus provide the basis for moving organizations from a point of inertia to a point of acceptance and ASC 606 change implementation? This question focused on exploring various change theory propositions and deciding how to use information gathered to study the research problem. In all, CTs provided the framework for identifying organizational agility as a variable of interest. This study's findings revealed organizational agility is positively correlated with ASC 606 implementation outcomes. However, ASC 606 normalization context did not mediate the effect of organizational implementation context on ASC 606 efficacy different at different levels of organizational agility.

Alternatively, institutional theory suggests values, norms, and organizational patterns originate externally but significantly influence how an organization is structured and managed (Meyer & Rowan, 1977). Institutional theory explained mechanisms, such as coercive, mimetic, and normative isomorphism, that pressure organizations to adopt homogenous behavior patterns

across the industry. Coercive isomorphism, for example, derives from political and regulatory influences and problems of legitimacy. Mimetic isomorphism is a response to uncertainty in the external environment, and normative isomorphism is associated with professionalization. Because the three mechanisms derive from different institutional pressure, they yield different outcomes (DiMaggio & Powell, 1983). Therefore, institutional theory explained why organizations in the construction industry finally yielded to ASC 606 implementation and the type of mechanism that pressured them. Having a late start, ASC 606 implementation outcomes depended on the individual organization's change responsiveness (agility) and its ability to identify and assimilate external knowledge. However, even among highly knowledge-oriented organizations, there is variability in outcomes, suggesting implementation outcomes depend not only on the organization's ability to acquire and assimilate knowledge but also on its ability to internalize and embed new knowledge into acceptable pragmatic daily routines. The NPT provides insight into how and what organizations must do to make that happen.

According to Finch et el. (2012), new practices are assimilated and rendered achievable because of convoluted interactions between characteristics of the practice itself, individual actions of those involved in the process, and physical and social aspects of the implementation environment. Based on this concept, ASC 606 normalization context was identified as a variable of interest, and the NPT helped understand the variable's behavior. Studies such as Peng et al. (2020) have suggested barriers to innovation routinization may include any one of unwillingness to fully participate in the intervention program, heavy workloads, lack of training and supervision. These issues are addressed by the NPT. Recent studies, such as Rapley et al. (2018), proposed quantitative and qualitative instruments for monitoring and measuring factors in the normalization environment likely to affect normalization. Embracing such instruments permitted

measuring the extent to which ASC 606 normalization context mediated ASC 606 efficacy, and consistent with theory, this study's findings revealed ASC 606 normalization context is highly correlated with ASC 606 implementation outcomes. Furthermore, both ASC 606 normalization context and ASC 606 implementation outcomes significantly mediated the effect of organizational implementation context on ASC 606 efficacy. In sum, the theoretical framework was congruent with the research problem, informed the choice of variables, and helped justify the research findings.

Literature

The research findings are reasonably consistent with the literature. Beginning with implementation, critical success factors are defined as a few things that must go well to ensure success (Abdelmoniem, 2016; Epizitone & Olugbara, 2019; Ram et al., 2013; Shatat, 2015). Concerns about the abysmal implementation success rate necessitated identifying implementation CSFs and understanding how they are tweaked to optimize implementation success (Abdelmoniem; Epizitone & Olugbara). Findings revealed the variables identified as critical for ASC 606 implementation were correlated with ASC 606 implementation outcomes. The literature, for example, Lyon et al. (2018), found that even when other implementation strategies are in place to support behavioral change, the inner organizational setting or the immediate context in which implementation occurs has the most impact on service delivery. No surprises then, organizational implementation context contributed the most to ASC 606 implementation outcomes. Also, many studies associated organizational failure with inattention to changes in the external environment (Asil & Farahmand, 2019), to the extent organizational agility became important artillery in combating environmental turbulence (Ojha et al., 2020; Zitkiene & Deksnys, 2018). This study found organizational agility significantly associated with

ASC 606 implementation outcomes. Alternatively, absorptive capacity is described in the literature as an organization's ability to value, assimilate, and apply new knowledge (Cohen & Levinthal, 1990; Harris & Yan, 2018; Zahra & George, 2002).

The absorptive capability was considered particularly important in implementing and applying the complex issues associated with ASC 606. Findings that absorptive capacity is positively correlated with ASC 606 implementation outcomes and evidence it moderates the relationship between organizational implementation context and ASC 606 normalization are consistent with what literature insinuated it does. For example, Rojo et al. (2018) found operational absorptive capacity and organizational learning both moderated the relationship between environmental dynamism and supply chain flexibility, with operational absorptive capacity being the stronger of the two. Also, Xin et al. (2020) found a positive association between social capital new product development and the relationship is simultaneously fully mediated by absorptive capacity and marketing capability. They further found the impact of absorptive capacity on new product development is amplified when a condition of explorative learning exists.

Studies such as Fulop et al. (2016) and Proctor et al. (2011) established several implementation outcomes indicators and asserted implementation outcomes directly impact service efficacy. These revelations are consistent with this study's findings that the relationship between ASC 606 implementation outcomes is positively related to ASC 606 efficacy. In addition, ASC 606 normalization context and ASC 606 implementation outcomes both mediated the effect of organizational implementation context on ASC 606 efficacy.

May and Finch (2009) asserted that normalizing a new practice is the most important step in making the practice effective. In another related study, Bertram et al. (2015) found suboptimal

normalization context resulted in implementation infidelity making the practice ineffective and inefficient. This study's findings revealed a very high correlation (.85) between ASC 606 normalization context and ASC 606 implementation outcomes. ASC 606 implementation outcomes also correlated with organizational agility. In addition, ASC 606 efficacy mediated the effect of ASC 606 implementation outcomes on organizational legitimacy. This finding is consistent with Kuruppu et al. (2019), who found that organizations in very sensitive industries manage legitimacy through external reporting.

Summary of Findings

The results of study 1 (H1 and H1A to H1C) revealed the combination of variables, including organizational implementation context, organizational agility, and absorptive capacity, significantly predicted ASC 606 implementation outcomes, $F(3, 210) = 65.59$, $p < .001$. The beta coefficient indicated organization implementation context, $t(3, 210) = 7.9$, $p < .001$, and absorptive capacity, $t(3, 210) = 6.9$, $p < .001$ contributed significantly to the prediction when all three variables were included in the model. The R^2 was .48, indicating that 48% of the variance in ASC 606 IO was explained by the implementation CSFs. According to Cohen (1988), this is a large effect.

For H1A to H1C, the study found all three implementation CSFs had statistically significant relationships with ASC 606 implementation outcomes. Organizational agility contributed the least to ASC 606 implementation outcome (r (214) = .32), $p < .001$). Though smaller than organizational implementation context and absorptive capacity, the relationship between organizational agility and ASC 606 implementation outcome was a moderate positive correlation (Cohen, 1988). The result meant organizations with higher levels of organizational agility were likely to have higher ASC 606 implementation outcomes. Thus, the null H1A was

rejected. Also, the relationship between absorptive capacity and ASC 606 implementation outcomes showed a medium to large positive correlation (r (214) = .54, p < .001; Cohen, 1988). This result also revealed organizations with higher levels of absorptive capacity were likely to experience higher ASC 606 implementation outcomes. Thus, the null H1B was rejected. The strongest positive correlation was that between organizational implementation context and ASC 606 implementation outcomes (r (214) = .60, p < .001). According to Cohen, this is a medium to large correlation. This result showed organizations with optimal organizational implementation context were likely to experience optimal ASC 606 implementation outcomes. Thus, the null H1C was rejected.

Study 2 (H2 and H2A) revealed ASC 606 normalization context (path a^1 and b^1) did not significantly mediate the effect of organizational implementation context on ASC 606 efficacy, indirect, .04, SE. 03, 95% CI [−.026, .107]. ASC 606 implementation outcomes (path a^2 and b^2) significantly mediated the relationship between organizational implementation context and ASC 606 efficacy, indirect, .10, SE. 05, 95% CI [.016, .201]. Last, both ASC 606 normalization context and ASC 606 implementation outcomes (the path through both mediators) significantly mediated the effect of organizational implementation context on ASC 606 efficacy, indirect, .03, SE .017, 95% CI [.005, .071]. This implied indirect mediation took place at a significant level. Thus, the null hypothesis H2 was rejected. Concerning H2A, 42% of changes in ASC 606 normalization context are accounted for by absorptive capacity and organizational agility. However, only the interaction between organizational implementation context and absorptive capacity was statistically significant, b = −.325, SE .150, t(5, 210) = −.2.164, p = .032, indicating absorptive capacity moderated the effect of organizational implementation context on ASC606 normalization. One percent changes (r^2 change of .010) in ASC 606 efficacy were accounted for

solely by different absorptive capacity levels. According to Cohen (1988), this was a small change. However, McClelland and Judd (1993) considered a 1% change in effect impactful and meaningful in social sciences. Alternatively, evidence of moderated mediation coming from organizational agility was not significant. Organizational agility's interaction was statistically not significant, $b = -.042$, SE .180, $t(208) = -.242$, $p = .810$. Its r^2 change was reported as .000. This indicated organizational agility had no effect on the variations in ASC 606 efficacy. Therefore, only a partial moderated mediation was found. However, it was enough to reject the null H2A.

Results of study 3 suggested ASC 606 efficacy significant mediated the direct effect of ASC 606 implementation outcomes on organizational legitimacy, $b = .099$, SE .024, bootstrap 95% CI [.005, .150]. Path a was statistically significant, $b = .14$, SE .029, $p < .001$, and path b was also statistically significant, $b = .70$, SE .124, $t(2, 211) = 5.65$, $p < .001$. ASC606 implementation outcomes predicted organizational legitimacy significantly, b = .23, SE .058, $p < .0001$. These results indicated organizations with optimal ASC 606 implementation outcomes and high ASC 606 efficacy were likely to be perceived as having more legitimacy. Thus, null hypothesis 3 was rejected.

Application to Professional Practice

The findings of this study were instrumental in making a series of evidence-based recommendations intended to improve ASC 606 implementation and implementation of other programs that may be introduced in the future. Malinoski (2018) recommended that organizations should develop and execute ASC 606 implementation strategies without elucidating what those strategies should involve. Thus, this study improves on the broad non-specific recommendation by explicating specific strategies to apply based on scientific evidence.

Exploring implementation CSFs and mechanisms that cause change have made this study's findings the basis for more specific recommendations to optimize implementation outcomes.

Improving General Business Practice

The in-depth and comprehensive examination of implementation critical success factors has increased insight into specific drivers, which determine ASC 606 implementation outcomes. Findings provided evidence of a positive correlation between the three critical success factors and ASC 606 implementation outcomes. In many earlier studies, recommendations for improving ASC 606 implementation are vague, merely imploring organizations to adopt and execute implementation strategies. Based on this study's findings, a more specific recommendation can be made to optimize ASC 606 implementation outcomes. Based on Proctor et al. (2011), the study operationalized implementation outcomes as implementation fidelity. Thus, investigating factors that would have a large effect on implementation fidelity revealed organizational implementation climate is the most significant driver with the most correlation with ASC 606 implementation outcome, $r = .60$, $p < 0.01$. Management must invest more in actions intended to improve organization implementation context. This can be facilitated by optimizing a combination of its three components comprising implementation leadership, implementation climate, and ICB.

Another way of explaining improvement on general business practice is to view it from the perspective of the research problem and guidance of the theoretical framework. Theory informed us due to institutionalized (coercive) pressure, organizations initially in a state of inertia eventually come around to ASC 606 implementation to avoid regulatory sanctions and public discontentment. Thus, it was imperative to know how quickly an organization transitioned from the point of inertia to the point of implementation. An organization's position on that

spectrum depended on its agility, that is, how quickly it adapted to change and its absorptive capability. Understanding organizational agility and absorptive capacity viz à vis their relationship with ASC 606 implementation outcome has given management a new perspective on dealing with the implementation crises and where to focus to achieve maximum effect. The study's findings provided evidence of positive correlations between organizational agility and ASC 606 implementation outcomes, $r = .32$, $p < 0.01$, and absorptive capacity and ASC 606 implementation outcomes, $r = .54$, $p < 0.01$. This evidence is used to recommend that management implement change strategies and enhance organizational absorptive capacity. However, because absorptive capacity has a larger association with ASC 606 implementation outcomes, the management should invest more in organizational absorptive capacity than in change strategies.

These recommendations, calling out specific actions to be taken, contribute to improving business practice more than recommendations in early studies that merely requested organizations to adopt strategies without naming what the strategies should be. However, because correlation alone is not sufficient in providing more actionable information that management needs to optimize practice, the study integrated moderation and mediation to discover mechanisms that cause change. The novel approach provides more insights into the ASC 606 implementation phenomenon and acts as a source of diverse and more streamlined actionable information to management.

Potential Application Strategies

The starting point in leveraging this study's finding is investing in the three dimensions of organizational implementation context to ameliorate ASC 606 implementation fidelity. Management must first create implementation leadership that focuses on specific behaviors

supportive of ASC 606 implementation, thus sending a clear signal to teams of management's stand regarding implementation success. Second, it is recommended management creates a general climate that supports ASC 606 implementation. This can be done by providing several motivations to teams and providing training, ASC 606 resources, and getting outside consultation. The third recommendation is that management encourages ICB among teams. This will increase the extent to which teams go above and beyond to support ASC 606 implementation. This can be done by motivating employees who go above and beyond with promotions. Optimizing organizational implementation context to enhance implementation outcome may not be a sure strategy. Depending on other vulnerabilities, there are additional options available to management to supplement the effects of the implementation context.

Where time was lost to initial hesitancy in ASC 606 implementation, other factors need to be invested in to realize the full potential of organizational implementation context. Thus, particular attention should be paid to organizational agility and absorptive capacity. However, because absorptive capacity had a larger correlation with ASC 606 implementation outcomes, management should leverage it more than organizational agility. It must be noted that exceptional high absorptive capacity levels are not useful. This implies that organizations with high absorptive capacity need not invest in it further. Also, moderated mediation led to the discovery of other mechanisms that particularly impact some other outcome variables. For instance, because of evidence that ASC 606 normalization context and ASC 606 implementation outcomes mediated the effect of organizational implementation context on ASC 606 efficacy, management can leverage improving both mechanisms to achieve high ASC 606 efficacy. Actions to optimize ASC 606 implementation outcomes had been mentioned before, including harnessing the three dimensions of the organization's implementation context. Alternatively,

ASC 606 normalization context can be bolstered by improving ASC 606 embedding through management support, training, and resources accessibility. Thus, management actions to optimize ASC 606 efficacy go through optimizing ASC 606 implementation outcomes and ASC 606 normalization. Improving ASC 606 efficacy is not an end to itself. Further evidence from mediation analysis proved ASC 606 efficacy also mediated the effect of ASC 606 implementation outcomes on organizational legitimacy.

Because an organization can lose legitimacy through impaired ASC 606 efficacy, management can leverage increasing ASC 606 efficacy as a means of increasing its public image. In addition, ASC 606 efficacy can improve capital investment efficiency, consistent with Biddle et al. (2009). According to Biddle et al., the correlation between financial reporting quality and investment efficiency results in decreased information asymmetry between organizations and external capital providers. Therefore, it is likely that higher financial reporting quality could permit constrained organizations to attract capital by making their positive net present value projects more visible to investors and reducing adverse selection in the issuance of securities. In another perspective, higher financial reporting quality could disincentivize the management of organizations with ample capital from engaging in value-destroying activities such as empire building. Thus, organizations can leverage optimizing ASC 606 implementation outcomes, ASC 606 normalization context, and ASC 606 efficacy to improve capital investment efficiency, translating into organizational legitimacy.

Summary

This subsection commenced with an overview of the study and then expounded on how the study could be applied to professional practice. Thus, a detailed discussion was given on how the findings improved general business practice and potential application strategies. In sum, the

findings suggested that because organizational implementation context has a larger impact on ASC 606 implementation outcomes, organizations need to harness and enhance the three dimensions of organizational implementation context. This and other suggestions will go a long way to improving general business practice. In addition, moderation and mediation analysis permitted suggestions on strategies organizations can apply to ameliorate ASC 606 efficacy to gain investment efficiency and sustain organizational legitimacy.

Recommendation for Further Studies

A possible limitation of this study is that its data were cross-sectional, which measured participants' judgment at a particular point in time. Cross-sectional data limit analyzing only temporary situations in the organization. The study can be taken further by collecting longitudinal data. Longitudinal data have the added advantage of measuring changes within-sample over time, enabling an assessment of the variable over time. Because of the limited time for this research, longitudinal data could not be collected. Future research could focus on collecting longitudinal data and spread the sample over most of the United States. In addition, future studies could investigate how the transition from legacy GAAP to principles-based revenue recognition and the complexity in ASC 606 itself is impacting ASC 606 efficacy. Questions have been raised on whether judgment, an intrinsic cornerstone in principles-based accounting, could increase the complexity of ASC 606 compliance and impact reporting quality within U.S. organizations. This investigation could be a significant contribution to the literature because while the findings of this study indicated implementation outcomes and normalization context improve ASC 606 efficacy from an implementation viewpoint, it may be thought-provoking to know how the application of ASC 606 itself is impacting revenue reporting quality or how management, faced with the fastidious conundrum of finding a balance between rules

embedded in U.S. legacy GAAP and significant judgment required within ASC 606 application, could impact reporting quality (ASC 606 efficacy).

Reflection.

This subsection discussed the researcher's personal experience and challenges while carrying out this research and the personal and professional benefits that have accrued as a result of this research. The subsection ends with a discussion of how the purpose of the study relates to and integrates with the Christian worldview.

Personal and Professional Growth.

This researcher commenced the doctoral program with significant apprehension knowing the challenges and workload involved in coursework and research. However, because it presented an opportunity for defining myself, I embarked on the doctoral journey with determination and a sense of hope that dampened my trepidation. Another factor that eased the tension was how the course curriculum is designed at my university to prepare students for the ultimate challenge posed by research. Throughout the coursework, assignments that mimic graduate APA style writing were to be completed and submitted so that by the time a student reaches the research stage of the doctoral journey, the skills accumulated embolden them to face the research directly. Students were advised to find a topic early in the journey, so from the very onset, this researcher identified his research interest and started considering titles. The resources that went into this enterprise in terms of time, note pad, ink, and emptying trash baskets were considerable. To be honest, I did not land a definitive topic until the first week of the first dissertation course. Fine-tuning the topic, developing the research purpose, problems, research questions, and designing the study was, to say the least, a herculean academic task, but it also was a great learning and transformational opportunity. Schiappa (2009) articulated that doctoral

studies present an incredible opportunity to grow and experience intellectually in ways one would never imagine.

Carrying out the literature review increased my understanding of the topic, the theories adopted, and related areas dealing with methodology, data collection and analysis. Prior to enrolling in the doctoral program, I held part-time teaching positions in two universities while teaching full-time in a high school. The wealth of knowledge obtained in doctoral studies, especially from conducting this research, will produce different outcomes in the business and academic domains. Professionally, the researcher has gained enough knowledge to help organizations struggling with any form of implementation to make informed strategic choices. Academically, the researcher has gained experience that can gravitate him towards a faculty position and towards becoming an active researcher. The academic goal has always been the researcher's primary motivation for enrolling in doctoral studies. A secondary outcome from this research and doctoral studies is the personal development the researcher has gained through transforming opaque beliefs and attitudes into a more pragmatic value system. A value system that is also grounded on a Christian worldview.

Biblical Perspective.

The business functions emphasized in this study and prompted by the research problem were the creation of an enabling implementation context, enhancing organizational agility and absorptive capabilities as a means of optimizing ASC 606 implementation outcomes, and ASC 606 efficacy, which are considered predictors of organizational legitimacy. The creation of an enabling implementation context mimics God's creation of the world for the sustenance of His creations. Genesis 1 recounts how the earth was formless, empty, and dark in the beginning. God undertook to create light, separated light from darkness, created an expanse that separated the

water beneath from the skies, and gathered the water in one place so dry land could emerge. God then made the dry land fertile and ordered vegetation so that seed-bearing plants and fruit-bearing trees of all kinds could grow and survive. God went ahead to make two great lights, the greater light to govern the day and the lesser light to govern the night that led to the beginning of day and night. The earth was then good and perfect for dwelling, so God ordered birds and animals of all kinds to fill the earth and created man and woman, blessed them, ordering them to fill the earth and have dominion over the earth and its creatures. Creation was designed for God's purpose for man.

According to Sam Storms, "Creation in its totality exists as a means to the fulfillment of some specific purpose that terminates on and for the sake of Jesus Christ" (Evans, 2022, para 3). J. C. Ryle confirmed this and went on to expound, "It was the Trinity, which at the beginning of creation said, 'Let us make man,' and it was the Trinity again, which at the beginning of the Gospel seemed to say, 'Let us save man'" (Evans, 2022, para. 4). Thus, it is evident God bestowed on man abundant love and was committed to redeeming him at the end even before the commencement of creation. One should note how similar God's purpose for creating earth is to the creation of a conducive implementation context intended not only to optimize ASC 606 implementation outcomes but also destined to save the organization from any potential existential legitimacy issue. ASC 606 normalization and ASC 606 efficacy are the media through which the organization can be saved from any legitimacy catastrophe resulting from ASC 606 implementation missteps.

In the research, one finds that absorptive capacity has a medium to strong relationship with ASC 606 implementation outcomes and moderates the effect of OIC on ASC 606 efficacy. Biblical teaching in support of organizational learning is a sine qua non for organizational

growth abound. In Colossians 1:9-10, Paul explicated the concept of growth through learning to the Colossian church. According to Boa (2005a), Paul wanted the Colossian church to learn, a desire all wise leaders have for their followers, knowing no organization can afford to ignore the curriculum built into its daily activities. Relating Paul's teaching to the research, findings revealed ASC 606 normalization context facilitates embedding ASC 606 into the daily routines of organizations while absorptive capacity permits the organization to understand the curriculum (processes) required to apply ASC 606. The ultimate outcome is the sustainability of organizational growth through efficient revenue reporting.

Summary and Study Conclusion

This ex post facto nonexperimental quantitative correlation study addressed the relationship between implementation critical success factors and ASC 606 implementation outcomes. An extension of the study into moderated mediation analysis also addressed the effects of ASC 606 normalization context and ASC 606 implementation outcomes on the relationship between organizational implementation context and ASC 606 efficacy, as well as studying whether that effect is different due to different levels of absorptive capacity and organizational agility. This study focused on construction companies in Mid-Atlantic United States where early hesitancy in implementing ASC 606 was envisaged would significantly impair ASC 606 implementation outcomes and consequently damage organizational legitimacy. The novel adopted for this study brought forth a new perspective of implementation concepts and principles that were not clear before, thus contributing to the literature. Findings from the study suggest the combination of three CSFs comprising organizational implementation context, organizational agility, and absorptive capacity significantly predict ASC 606 implementation, with all three factors also showing significant correlation with ASC 606 implementation

outcomes. In addition, evidence was also obtained suggesting the relationship between organizational implementation context and ASC 606 efficacy was mediated by ASC 606 normalization context and ASC 606 implementation outcomes. Also, the effect of organizational implementation context on ASC 606 efficacy was significantly different at different levels of absorptive capacity. Further evidence was obtained showing the ASC 606 efficacy significantly mediated the effect of ASC 606 implementation outcomes on organizational legitimacy. These findings are consistent with literature and theories, and the sections on application to professional practice discussed how the findings contribute to improving business practice, and evidenced-based strategies management should focus on to improve implementation outcomes of present and future programs.

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Appendices

Appendix A. Permission to Reprint the PRISM Diagram

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Appendix B. Permission to Reprint the Program Change Model

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Appendix C. Survey

A) Organizational Implementation Context

1) Management developed a clear plan to facilitate ASC 606 implementation

2) Management removed obstacles to ASC 606 implementation

3) Management has established clear department standards for ASC 606 implementation

4) Financial officer is knowledgeable about ASC 606

5) Financial officer is able to answer my questions about ASC 606

6) Financial officer knows what he or she is talking about when it comes to ASC 606

7) Financial officer recognizes employee efforts in successfully implementing ASC 606

8) Financial officer supports employee efforts in learning more about ASC 606

9) Financial officer supports employee efforts to use ASC 606

10) Financial officer perseveres through the ups and downs of implementing ASC 606

11) Financial officer is dedicated to overcoming the challenges of implementing ASC 606

12) Financial officer reacts to critical ASC 606 issues by openly addressing the problem(s)

13) One of my organization's main goals is to use ASC 606 effectively

14) People in my organization think implementing ASC 606 is important

15) Using ASC 606 is a top priority in the construction industry

16) Within the last two years, my organization has provided workshops or seminars focusing on ASC 606

17) My organization provides ASC 606 trainings

18) My organization provides ASC 606 training materials, such as journals, etc

19) Staff who use ASC 606 are seen as experts

20) Staff who use ASC 606 are held in high esteem in the organization

21) Staff who use ASC 606 are more likely to be promoted

22) My organization actively recruits staff who show knowledge of ASC 606

23) My organization actively recruits staff with education that facilitates ASC 606 use

24) My organization actively recruits staff who value ASC 606

25) My organization selects staff who are adaptable

26) My organization selects staff who are flexible

27) Staff assist others to make sure they implement ASC 606 properly

28) Staff help teach ASC 606 implementation procedures to new team members

29) Staff help others with responsibilities related to ASC 606

30) Staff keep informed of changes in ASC 606

31) Staff keep up with the latest news regarding ASC 606

32) Staff keep up with the organization's communications related to ASC 606

B) Organizational Agility

1) Quick in terms of detecting changes that occur in the environment
2) Quick in detecting changes in laws and regulations
1. Quick in detecting changes in innovation
2. Analyzes important events concerning stakeholders, competitors, and technology without any delay
3. Quickly detects opportunities and threats in its environment
4. Quick at executing action plans to meet stakeholders' needs
5. Quick at implementing action plans in response to strategic changes
6. Quickly implements action plan on how to use innovation
7. Can quickly reconfigure its structure
8. Can quickly re-adjust its processes
9. Can quickly adopt new IT solution
10. Can introduce new products in a timely manner

11. Can adjust its prices quickly in response to competition
12. Responds promptly to regulators' critique
13. Always demands extra time to make corrections

C) Absorptive Capacity

1) Frequently scans the environment for new technologies, knowledge, processes, and opportunities
2) We thoroughly observe global trends
3) Observe in detail external sources of new technologies, knowledge, processes, and opportunities
4) We thoroughly collect industry information
5) We have information on state-of-the-art external technologies
6) We frequently acquire technologies and knowledge from external sources
7) Periodically organize special meetings with external partners to acquire new technologies and knowledge
8) Employees regularly approach external institutions to acquire new technology, knowledge, and processes
9) We often integrate knowledge and technology into our firm in response to acquisition opportunities
10) We thoroughly maintain relevant knowledge over time
11) Employees store technological knowledge for future reference
12) We communicate relevant knowledge across relevant units of our organization
13) Knowledge management is functioning well in our company
14) When recognizing a business opportunity, we can quickly rely on our existing knowledge and processes
15) We are proficient in reactivating existing knowledge and processes for new uses
16) We quickly analyze and interpret changing market demands for our existing technologies, knowledge, and processes
17) New opportunities to serve our stakeholders with existing technologies, knowledge, and processes are quickly understood
18) We are proficient in transforming new technology and knowledge into new products

19) We regularly match new technologies and knowledge with existing ideas for new products
20) We quickly recognize the usefulness of new technologies and knowledge for existing technology and products
21) Our employees are capable of sharing their expertise to develop new products
22) We regularly apply technologies and knowledge in new products
23) We constantly consider how to better exploit technology and knowledge
24) We easily implement technologies in new products
25) It is well known who can best exploit new technologies and knowledge inside our firm

D) ASC 606 Normalization Context

1) Staff working in my organization are committed to using ASC 606
2) Staff in my organization are motivated to implement ASC 606
3) Staff believe management can get people invested in implementing ASC 606
4) Staff working here will do whatever it takes to implement ASC 606
5) The staff can manage the politics of implementing ASC 606
6) Changes to processes and structure needed for ASC 606 were made early
7) The staff has adapted to all changes made to accommodate ASC 606 *
8) Staff across all levels in the department are united in using ASC 606
9) Staff are excited about ASC 606
10) We have the technology/IT solution we need to carry on this change *
11) Using ASC 606 has become a daily routine
12) There was no initial hesitancy in implementing ASC 606
13) Changes required for ASC 606 were rapidly made
14) My organization was an early implementer of ASC 606

E) ASC 606 Efficacy

1) Staff working in my organization are committed to using ASC 606
2) Staff in my organization are motivated to implement ASC 606
3) Staff believe management can get people invested in implementing ASC 606
4) Staff working here will do whatever it takes to implement ASC 606
5) The staff can manage the politics of implementing ASC 606

6) Changes to processes and structure needed for ASC 606 were made early
7) The staff has adapted to all changes made to accommodate ASC 606

F) Organizational Legitimacy

1) Construction companies adhere to government regulations
2) Construction companies adhere to industry standards
3) Construction companies are honest in their dealings
4) Construction companies are good corporate citizens
5) Construction companies are quality-oriented
6) Construction companies are environmentally friendly
7) I have a positive opinion about the implementation of ASC 606 in construction companies
8) Management of Construction companies think ASC 606 is compatible with their operations
9) Construction companies prefer ASC 606 over older industry-specific revenue recognition approaches
10) Construction companies are carrying out changes for ASC 606 implementation in good faith
11) Construction companies do not resist ASC 606
12) Post-ASC 606 financial report of construction companies are more relevant
13) Overall, construction companies report revenue accurately

G) ASC 606 Implementation Outcomes

1) After implementing and adopting ASC 606 in your organization, how do you rate its outcomes in terms of fidelity

Appendix D. Permission to use Assessment Scale for Absorptive Capacity

[External] RE: Pardot Engagement Studio Program: Contact IMD - All Enquiries [redacted]

Infodesk (Information Center) <InfodeskInformationCenter@imd.org>
Mon 6/28/2021 4:45 AM

To: Tafon, Charles [redacted]
Cc: Infodesk (Information Center) <InfodeskInformationCenter@imd.org>

1 attachment (15 KB)
Internal_processes_scale_items.docx;

Dear Charles,

Thank you for your interest in IMD, and our apologies for the delay in our answer.
Bettina Büchel agreed for you to use the assessment tool in your dissertation. She sent the attached document that should give you more information on the subject.

Wishing you all the best in writing your research paper,

Warm regards,
Infodesk /
Corinne

Information Desk
Tel: +41 21 618 03 66 Fax: +41 21 618 06 31
infodesk@imd.org
IMD | Ch. de Bellerive 23, P.O. Box 915, CH-1001 Lausanne | Switzerland | www.imd.org

Appendix E. Permission to use Assessment Scale for Quality of Financial Reporting

Gmail Charles Tafon <tafoncharles@gmail.com>

Permission to use the assessment scale for quality of financial reporting

3 messages

Charles Tafon <[redacted]> Sat, Jun 12, 2021 at 4:08 PM
To: [redacted]

Hello Mr. Rashid.

I am Charles Tafon. I am a doctoral candidate at Liberty University at Virginia USA. I am currently carrying out research for my dissertation. I wish to be granted permission to use the survey and assessment scale for the quality of financial report adopted in your article "Financial reporting quality and share price movement: Evidence from listed companies in Bangladesh (2020), published in the Journal of Financial Reporting and Accounting.

I also understand that your sample frame was all listed companies in Bangladesh. Can you please let me know who were actually the research participants (respondents to your survey)?

This information and your permission to use your survey and assessment scale will go a long way in helping me prepare my research proposal.

Thank you very much Sir.

Kind Regards,

Charles

Financial reporting quality and share price movement-evidence from listed companies in Bangladesh

---

Mamunur Rashid FCMA [redacted] Sat, Jun 12, 2021 at 6:58 PM
To: Charles Tafon [redacted]

Dear Charles Tafon,

Good morning. You can use the financial reporting quality index used in my paper. You can also modify them tailored to your needs. My paper was prepared basically on secondary data collected from the annual report. No survey was conducted...

Thank you for your interest.... Wish you all the best.

Mamunur Rashid FCMA
[Quoted text hidden]

Appendix F. Permission to use Organizational Legitimacy Assessment Scales

RE: [EXTERNAL] Permission to use assessment scale

Bruce Berger [redacted]
Tue 6/15/2021 11:43 PM
To: Tafon, Charles [redacted]
Cc[redacted]

Hi, Charles.

Per your request below, I hereby give you my permission to use the assessment scale for organizational legitimacy in my co-authored article: *Developing measurement scales of organizational and issue legitimacy: A case of direct-to-consumer advertisement in the pharmaceutical industry,* which was published in *Journal of Business Ethics* in 2015.

Wishing you well with your dissertation research.
Best regards, Bruce

Bruce K. Berger, Ph.D.
Professor Emeritus, Advertising & Public Relations
Board Member, The Plank Center for Leadership in Public Relations
Trustee, Institute for Public Relations
College of Communication & Information Sciences
Box 870172
University of Alabama
Tuscaloosa, AL 35487-0172

From: Tafon, Charles [redacted]
Sent: Tuesday, June 15, 2021 8:37 PM
To: Bruce Berger [redacted]
Cc: [redacted]
+20jamied+40virginia+2Eedu@namprd05.prod.outlook.com> **Subject:** [EXTERNAL] Permission to use assessment scale

Greetings,

This is Charles Tafon. I am a doctoral candidate at Liberty University in Virginia. I am currently carrying out research for my dissertation.

I will appreciate your permission to use the assessment scale for organizational legitimacy in your article: Developing measurement scales of organizational and issue legitimacy: A case of direct-to-consumer advertisement in the pharmaceutical industry, published in Journal of Business Ethics in 2015.

While hoping to hear from you, accept my very kind regards.
Charles Tafon

Appendix G. Residual Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	5.46	8.69	7.00	.695	214
Std. Predicted Value	-2.210	2.433	.000	1.000	214
Standard Error of Predicted Value	.050	.165	.095	.027	214
Adjusted Predicted Value	5.44	8.68	6.99	.695	214
Residual	-1.906	1.160	.000	.719	214
Std. Residual	-2.634	1.604	.000	.993	214
Stud. Residual	-2.671	1.614	.000	1.002	214
Deleted Residual	-1.960	1.183	.001	.731	214
Stud. Deleted Residual	-2.711	1.621	-.001	1.006	214
Mahal. Distance	.018	10.133	2.986	2.229	214
Cook’s Distance	.000	.050	.004	.006	214
Centered Leverage Value	.000	.048	.014	.010	214

a. Dependent Variable: ASC606_IO

Appendix H. John Neyman Table

Moderator value(s) defining Johnson-Neyman significance region(s):

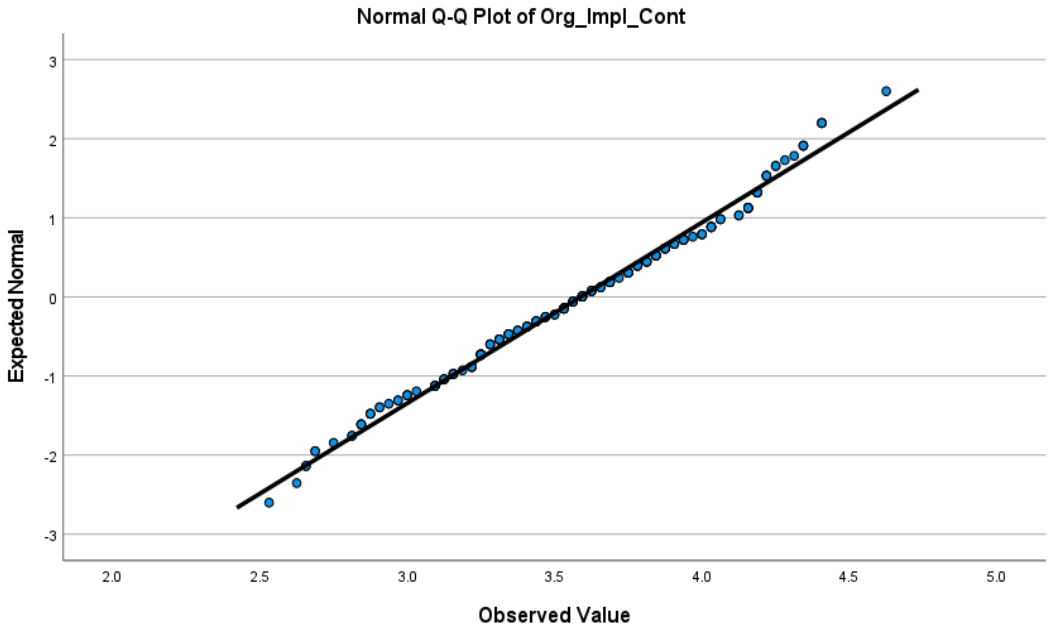
Value	% below	% above
3.979	58.879	41.121

Conditional effect of focal predictor at values of the moderator:

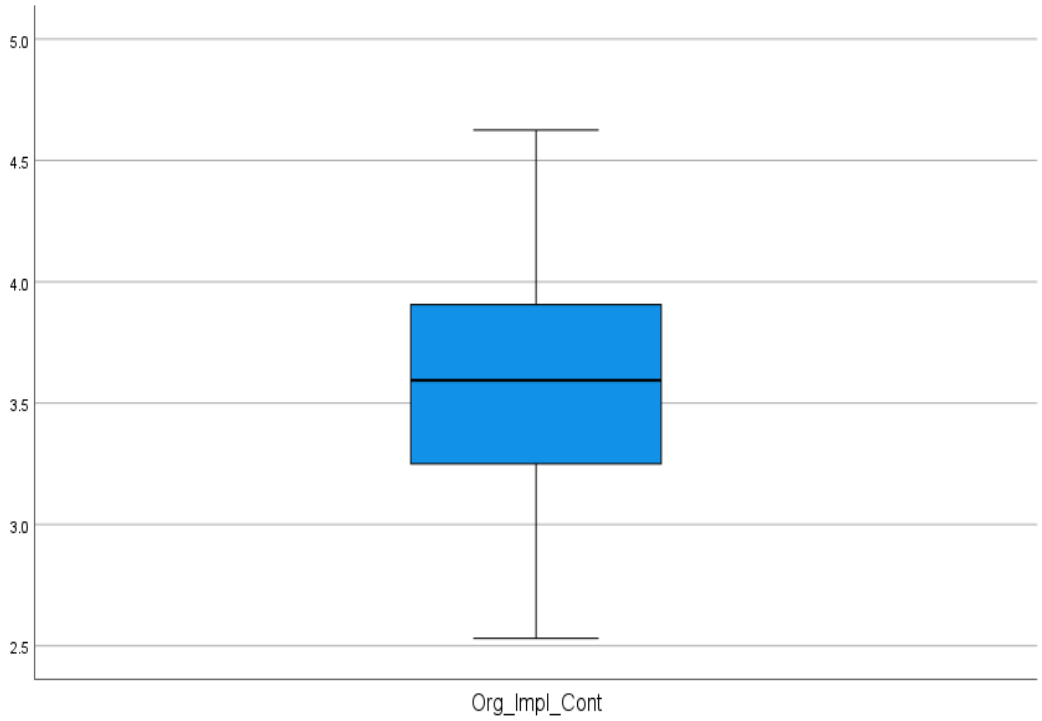
ACAP	Effect	se(HC4)	t	p	LLCI	ULCI
3.120	.424	.121	3.499	.001	.185	.663
3.198	.398	.112	3.567	.000	.178	.618
3.276	.372	.102	3.634	.000	.170	.573
3.354	.345	.094	3.693	.000	.161	.530
3.432	.319	.085	3.736	.000	.151	.488
3.510	.293	.078	3.745	.000	.139	.447
3.588	.267	.072	3.695	.000	.124	.409
3.666	.240	.068	3.558	.000	.107	.374
3.744	.214	.065	3.308	.001	.087	.342
3.822	.188	.064	2.940	.004	.062	.314
3.900	.162	.065	2.480	.014	.033	.290
3.978	.135	.068	1.979	.049	.001	.270
3.979	.135	.068	1.971	.050	.000	.270
4.056	.109	.073	1.488	.138	-.035	.254
4.134	.083	.080	1.040	.300	-.074	.240
4.212	.057	.087	.650	.517	-.115	.228
4.290	.030	.095	.318	.751	-.158	.218
4.368	.004	.104	.039	.969	-.201	.209
4.446	-.022	.114	-.196	.845	-.246	.202
4.524	-.049	.123	-.393	.695	-.292	.195
4.602	-.075	.133	-.561	.576	-.338	.188
4.680	-.101	.144	-.703	.483	-.384	.182

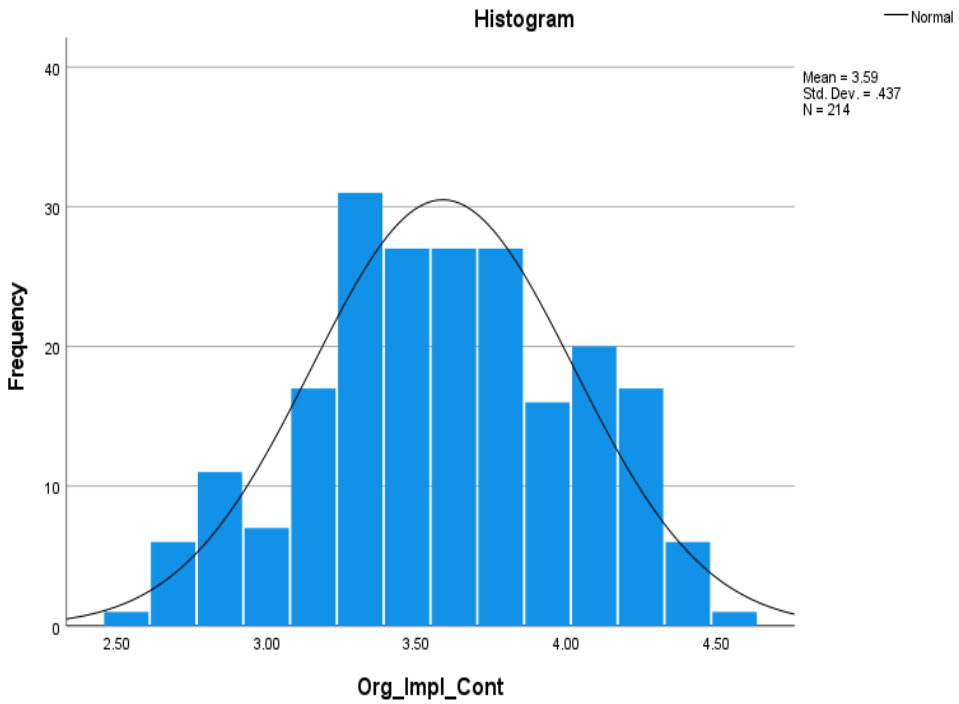
****

Appendix I. SPSS Outputs

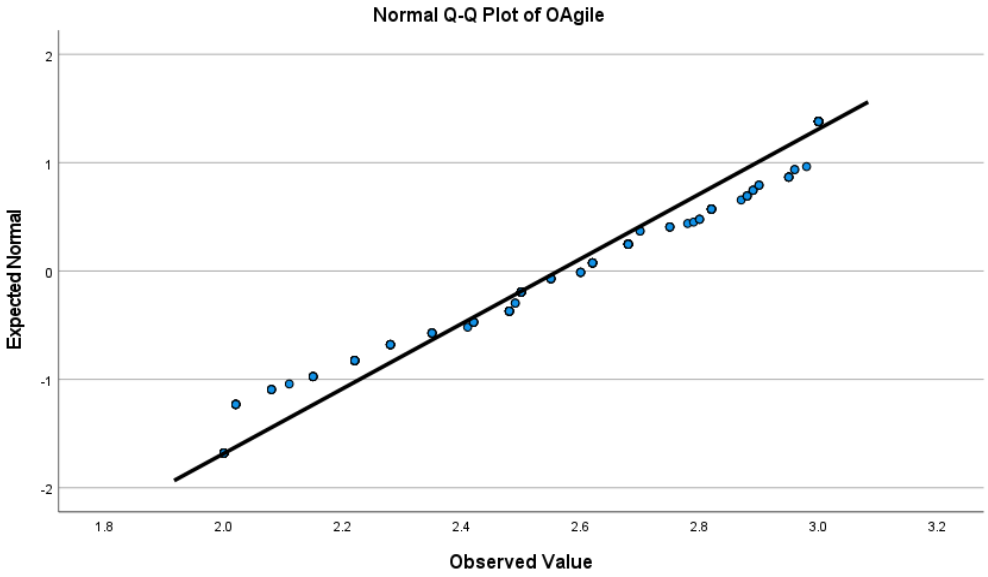


Box Plot for OIC

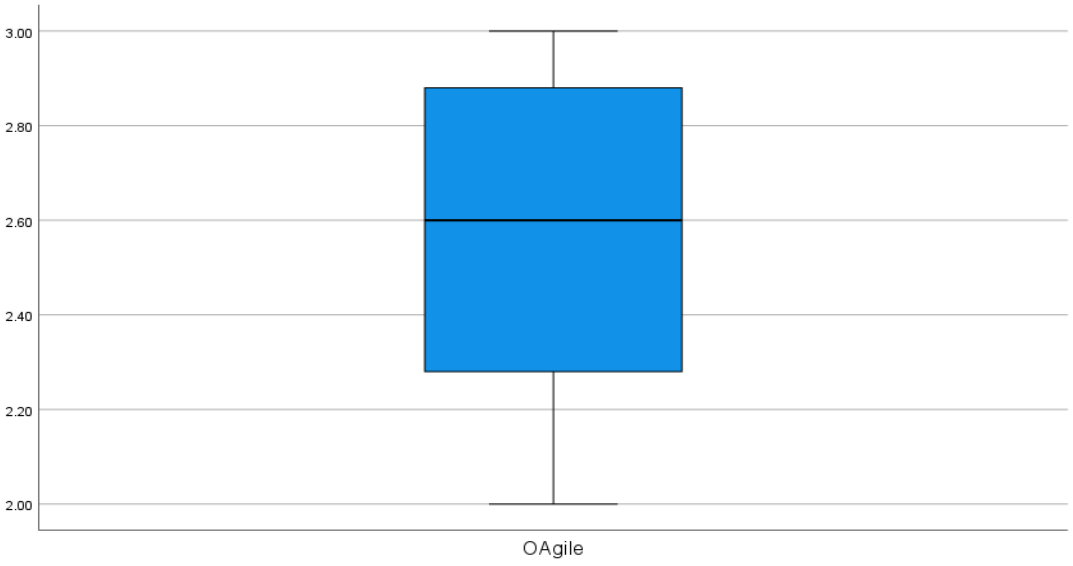


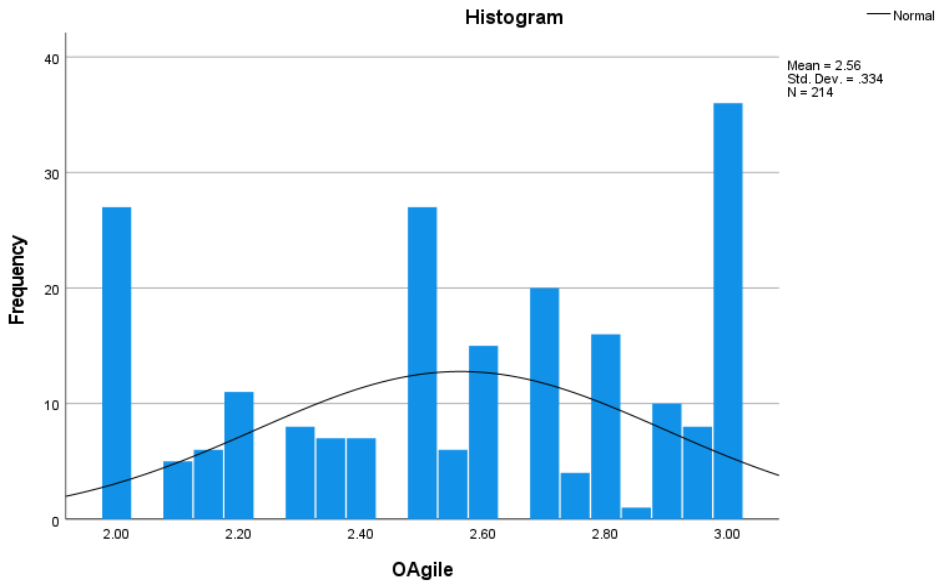


Normal Q-Q Plot of Organizational Agility

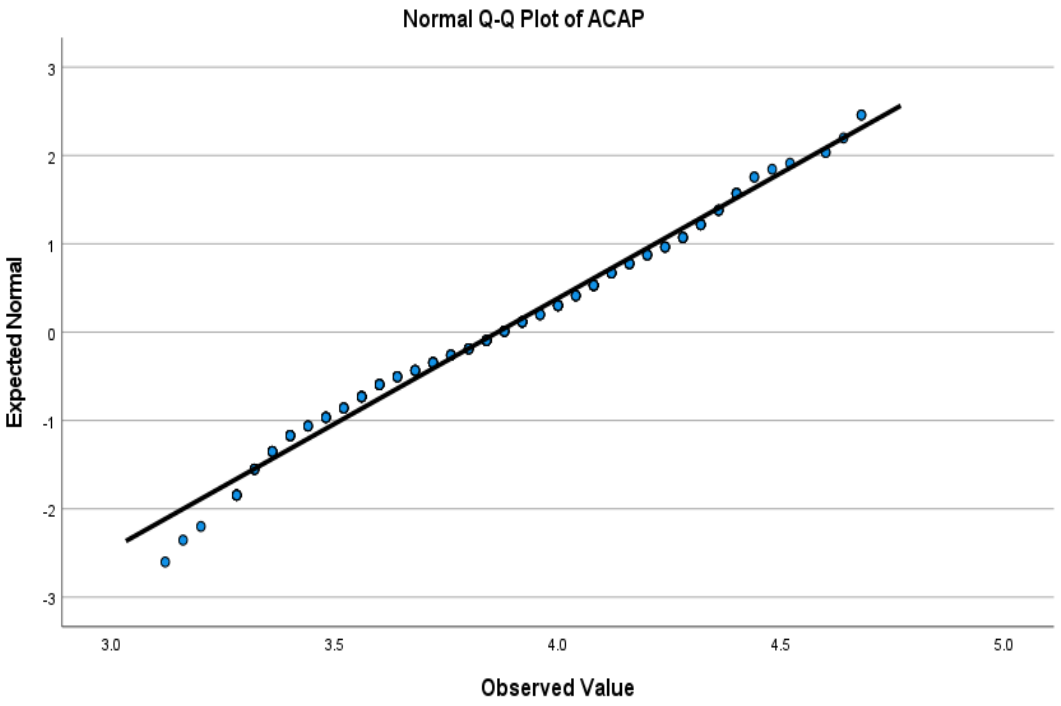


Box Plot for Organizational Agility

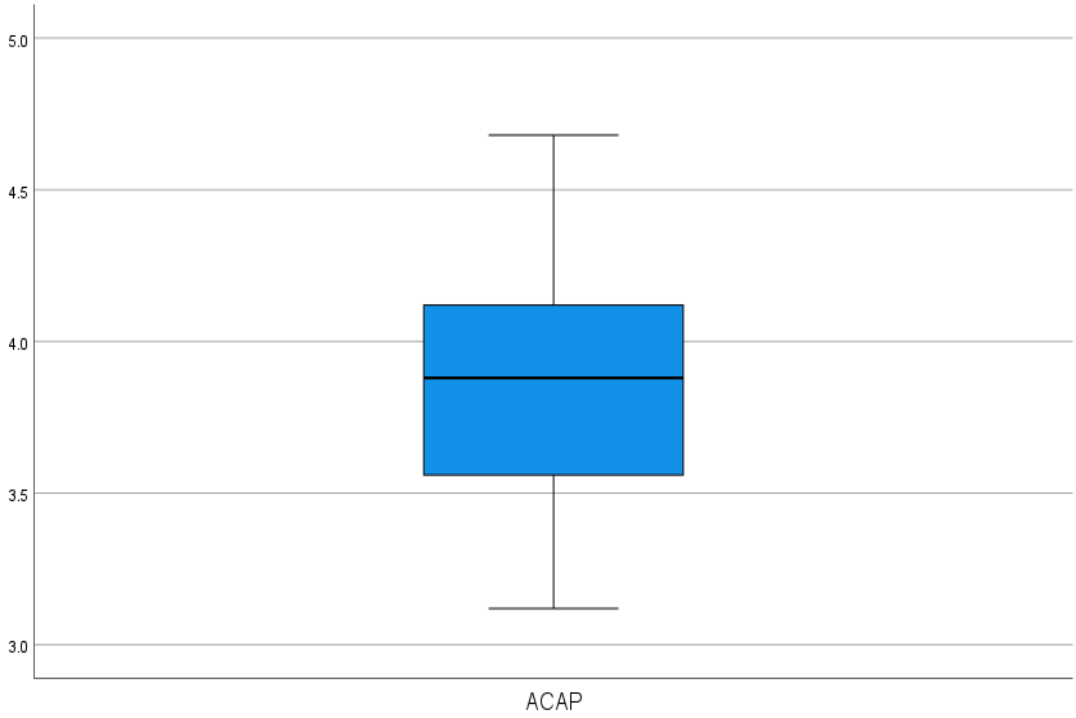


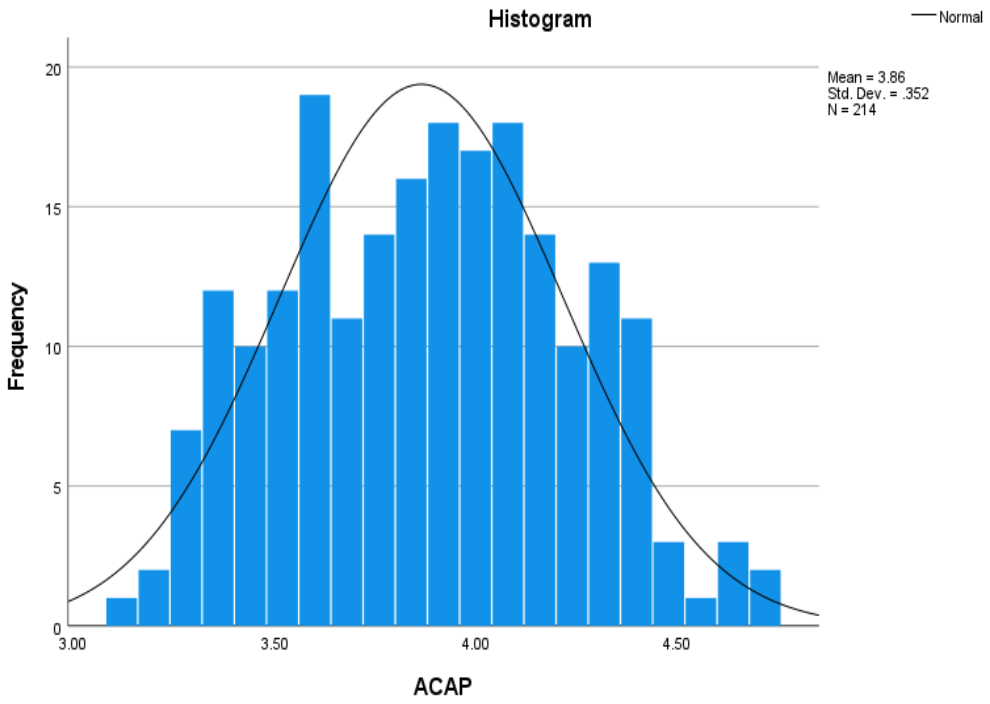


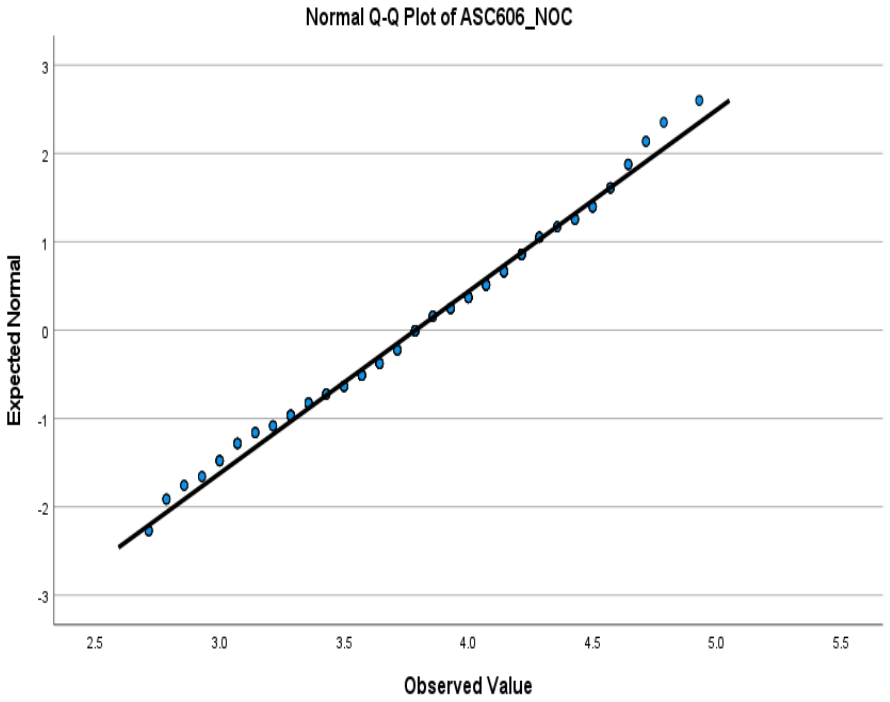
Normal Q-Q Plot of Absorptive Capacity

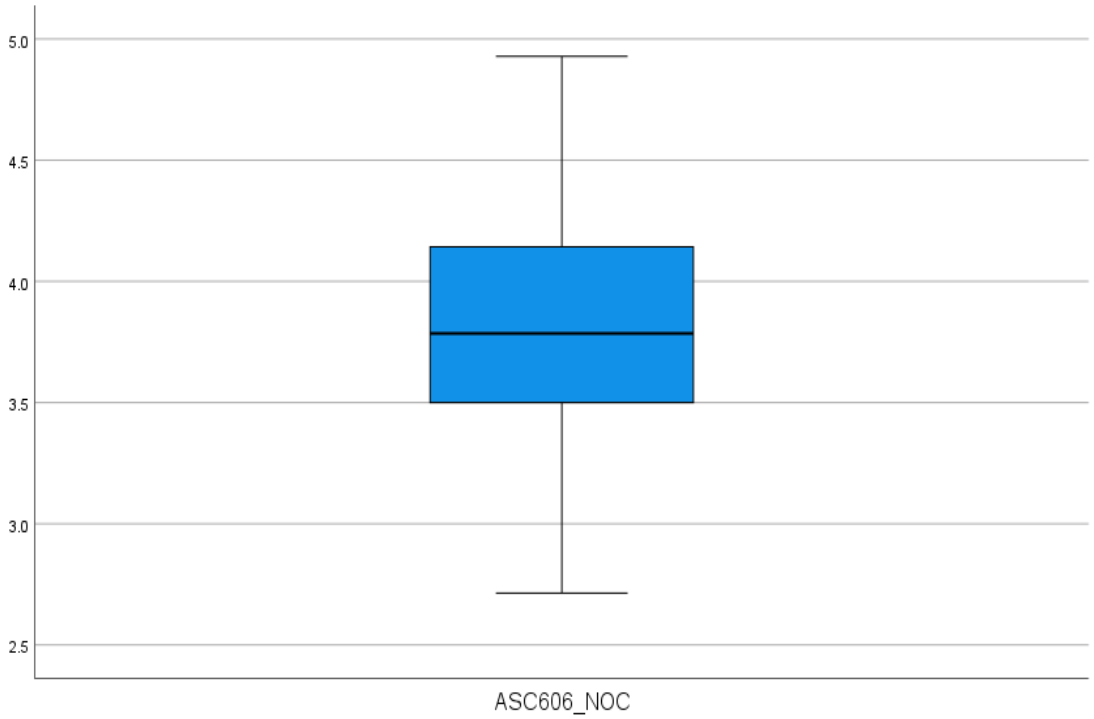


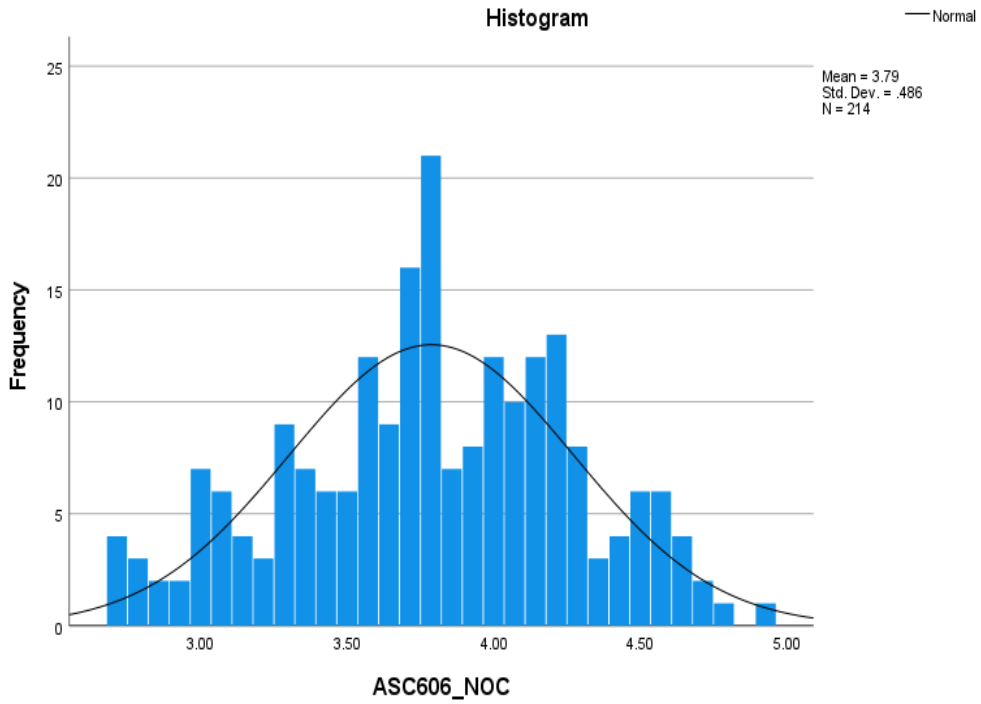
Box Plot of Absorptive Capacity

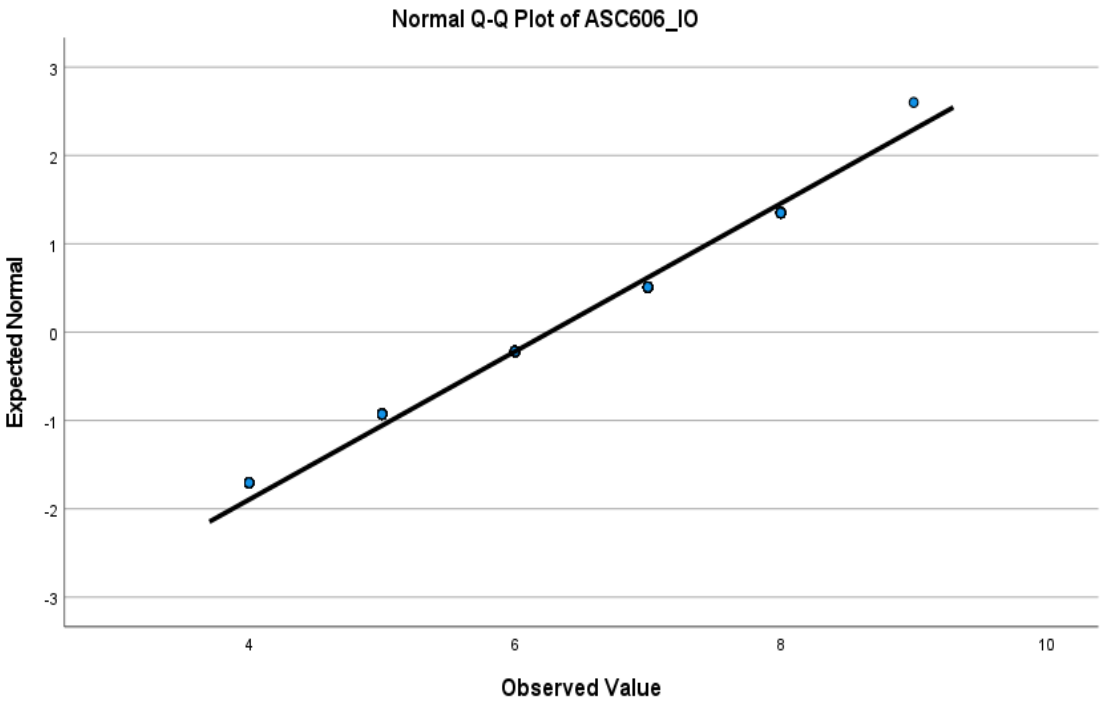


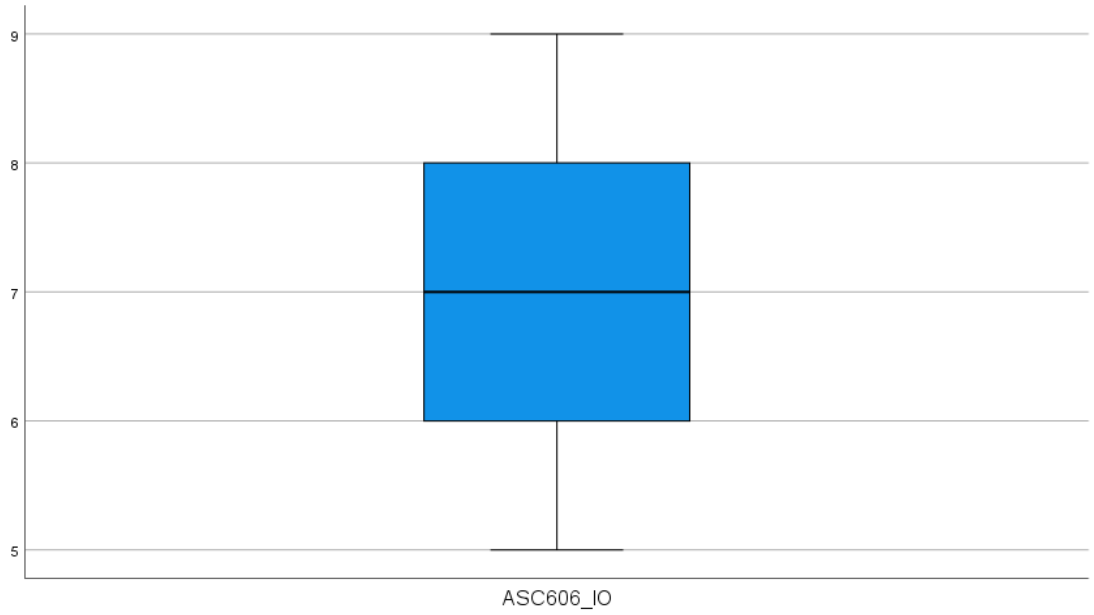

Histogram
Normal
Mean = 3.86
Std. Dev. = .352
N = 214
Frequency
ACAP
0
5
10
15
20
3.00
3.50
4.00
4.50

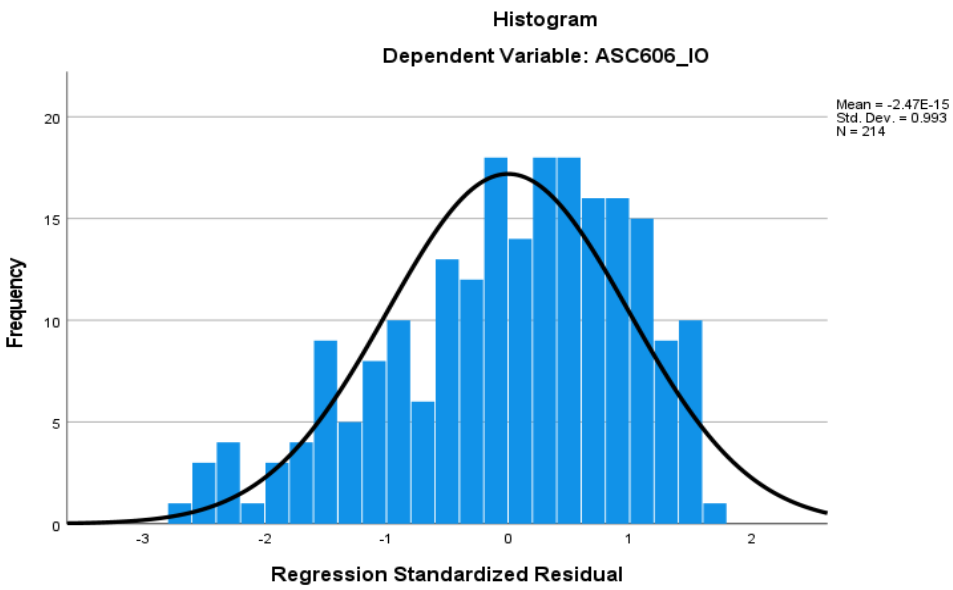

Normal Q-Q Plot of ASC606_NOC
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
2.5
3.0
3.5
4.0
4.5
5.0
5.5

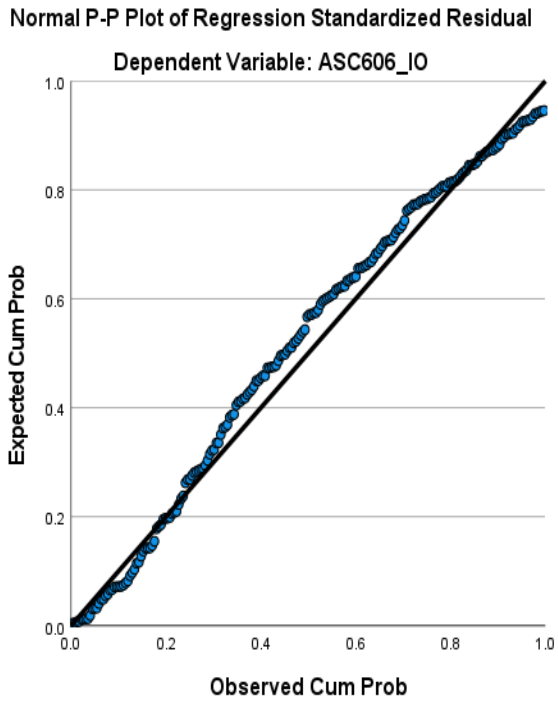

5.0
4.5
4.0
3.5
3.0
2.5
ASC606_NOC

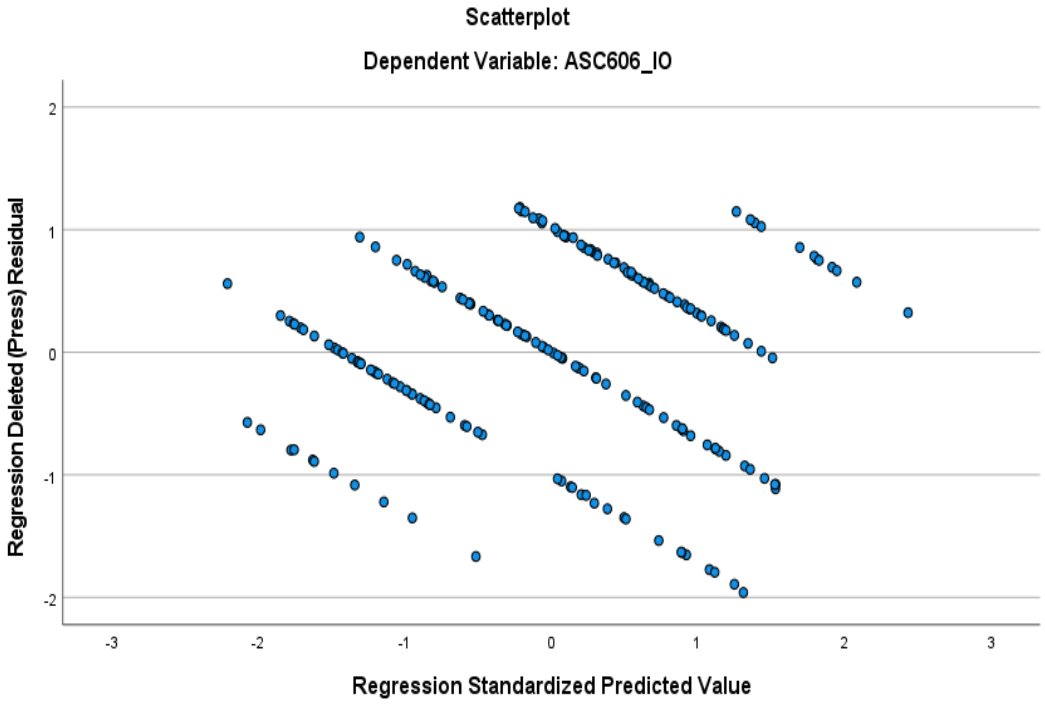

Histogram
Normal
Mean = 3.79
Std. Dev. = .486
N = 214
Frequency
25
20
15
10
5
0
3.00
3.50
4.00
4.50
5.00
ASC606_NOC

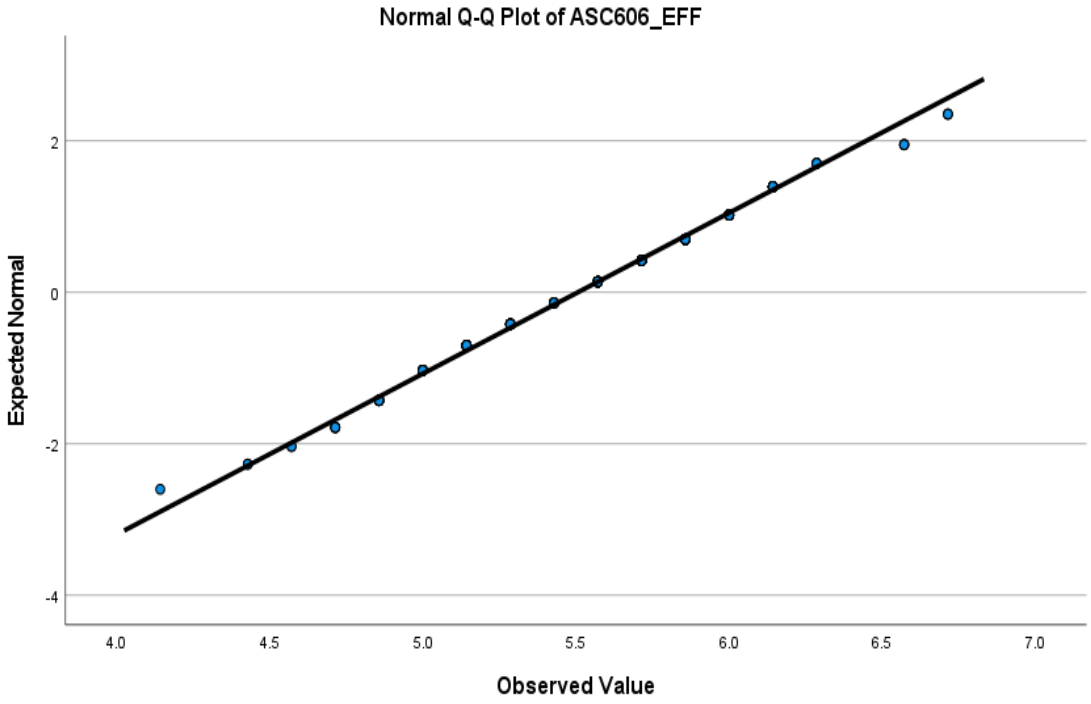

Normal Q-Q Plot of ASC606_IO
Expected Normal
3
2
1
0
-1
-2
-3
4
6
8
10
Observed Value

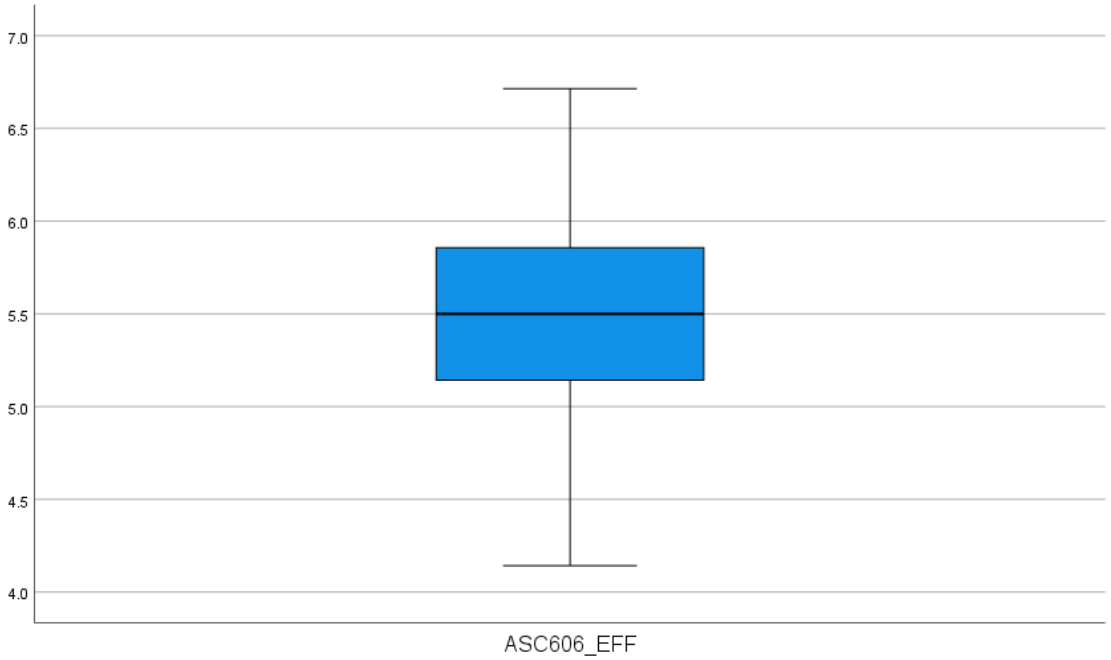

9
8
7
6
5
ASC606_IO

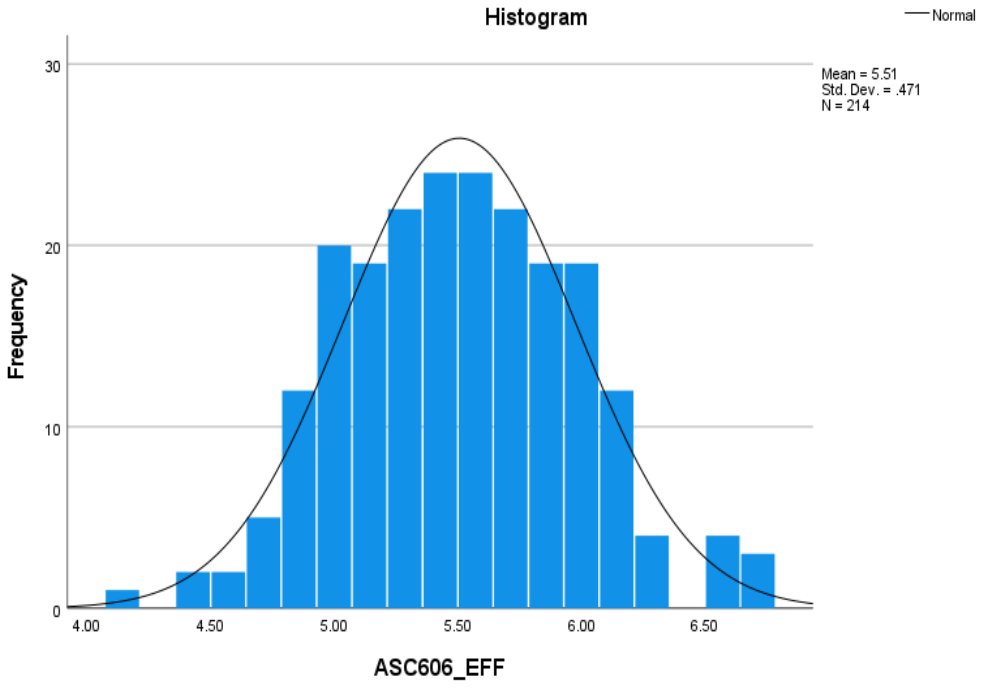

Histogram
Dependent Variable: ASC606_IO
Mean = -2.47E-15
Std. Dev. = 0.993
N = 214
Frequency
Regression Standardized Residual

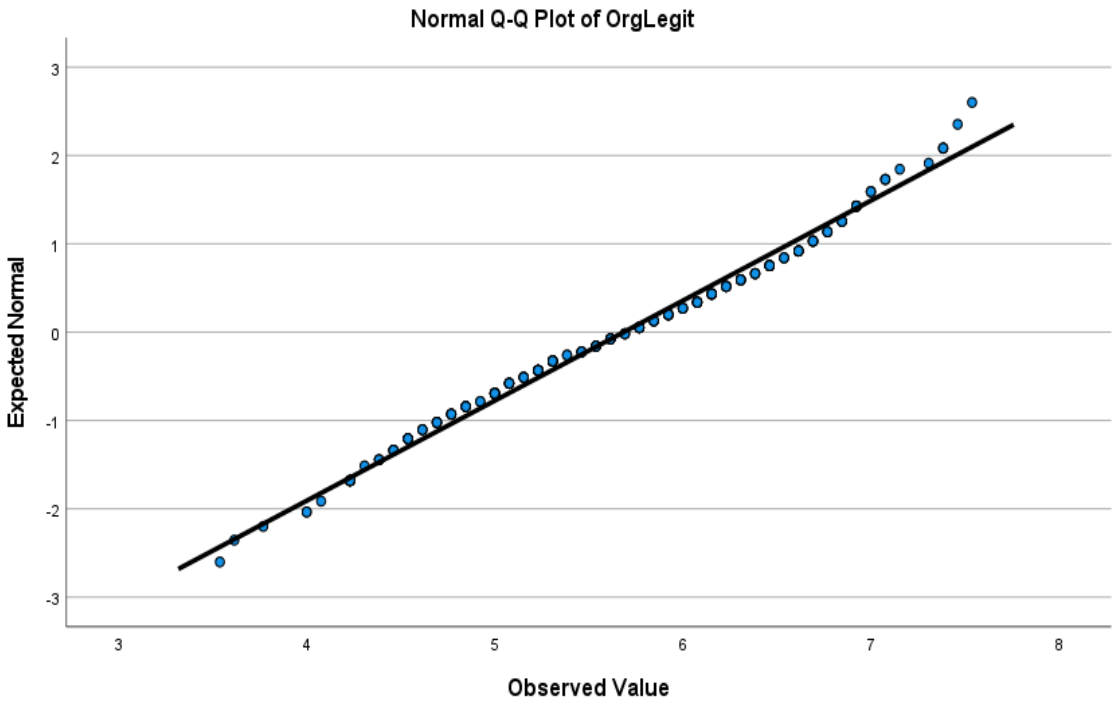

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: ASC606_IO
Expected Cum Prob
Observed Cum Prob

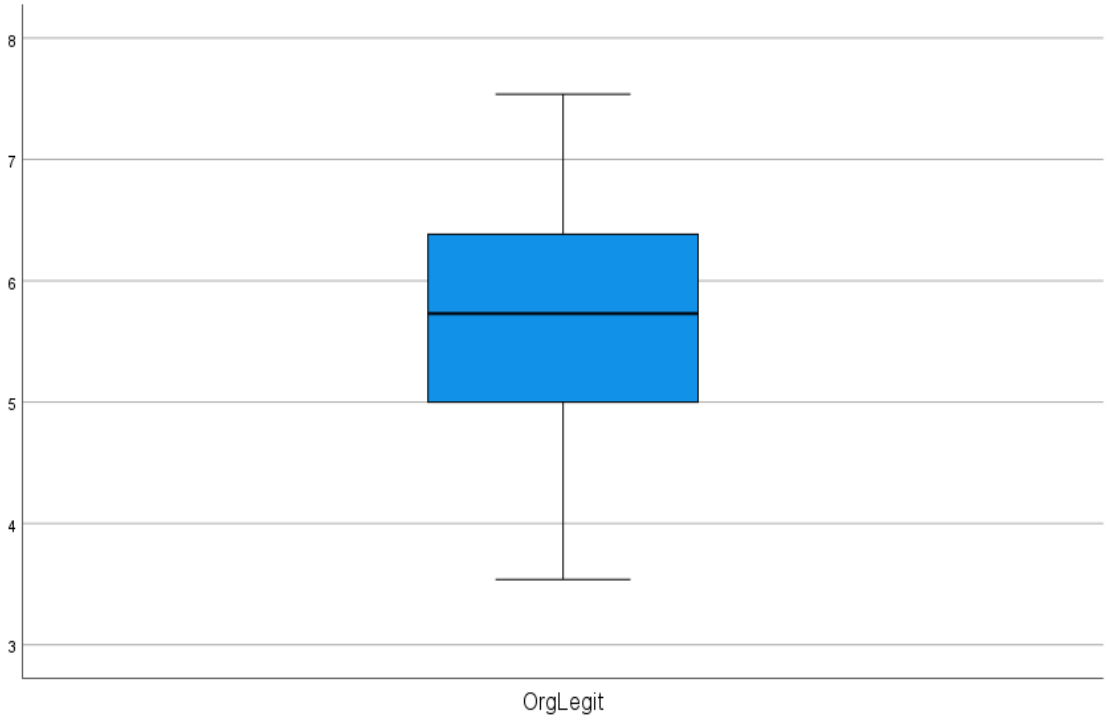

Scatterplot
Dependent Variable: ASC606_IO
Regression Deleted (Press) Residual
Regression Standardized Predicted Value
2
1
0
-1
-2
-3
-2
-1
0
1
2
3

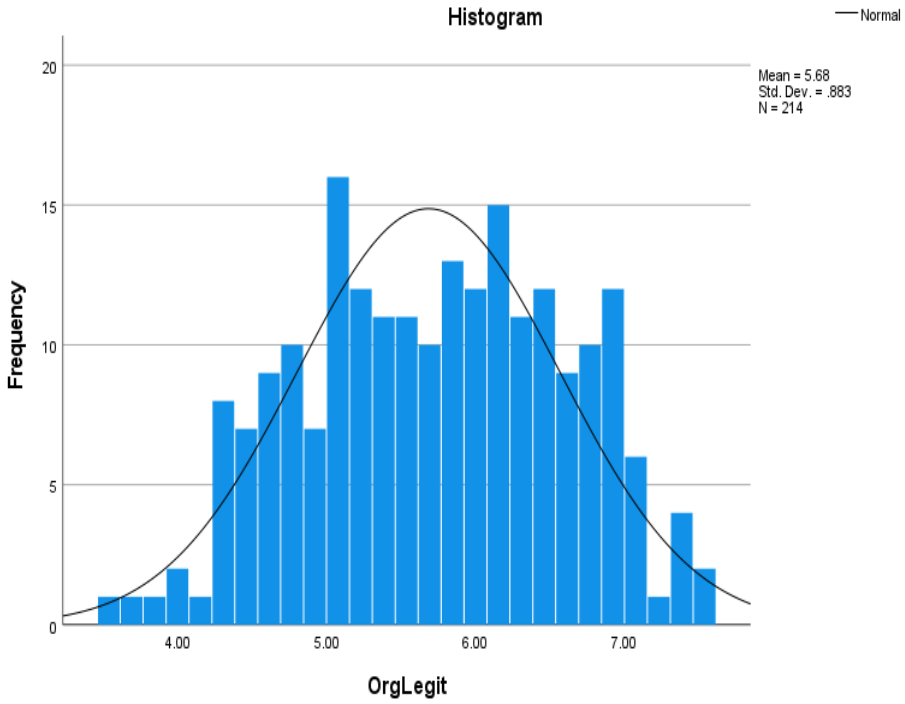

Normal Q-Q Plot of ASC606_EFF
Expected Normal
Observed Value
2
0
-2
-4
4.0
4.5
5.0
5.5
6.0
6.5
7.0


7.0
6.5
6.0
5.5
5.0
4.5
4.0
ASC606_EFF


Histogram
Normal
Mean = 5.51
Std. Dev. = .471
N = 214
Frequency
30
20
10
0
4.00
4.50
5.00
5.50
6.00
6.50
ASC606_EFF


Normal Q-Q Plot of OrgLegit
Expected Normal
3
2
1
0
-1
-2
-3
3
4
5
6
7
8
Observed Value


8
7
6
5
4
3
OrgLegit


Histogram
Normal
Mean = 5.68
Std. Dev. = .883
N = 214
Frequency
20
15
10
5
0
4.00
5.00
6.00
7.00
OrgLegit

Appendix J. Institutional Review Board Exemption

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

August 17, 2021

Charles Tafon
Gene Sullivan

Re: IRB Exemption - IRB-FY21-22-69 Implementation Critical Success Factors and Accounting Standard Codification Topic 606 Implementation Dynamics: A Correlation and Moderated Mediation Study.

Dear Charles Tafon, Gene Sullivan,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix K. Consent Letter

Title of the Project: Implementation Critical Success Factors and Accounting Standard Codification Topic 606 Implementation Dynamics: A Correlational Study.
Principal Investigator: Charles Tafon, Doctoral Candidate, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be at least 18 years, and be either an accounting staff at a supervisory level in a construction company, CFO or finance manager in a construction company, a manager of a construction company, or be an independent CPA. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to provide a clearer understanding of ASC 606 implementation dynamics through a comprehensive investigation into the bearing of implementation CSFs on ASC 606 implementation outcome. Thus, the research will focus on evaluating relationships that might exist between absorptive capacity, organizational agility, organizational implementation context, and ASC 606 implementation outcome in companies within the construction industry in the Mid-Atlantic United States. These relationships, if they exist, will provide new perceptions on the values of these CSFs and evidence that their interaction with each other can be manipulated to produce a positive impact on ASC 606 implementation outcome

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. Provide some demographical information such as age, race, highest education and number of years in current position. This information is provided by checking radio buttons and takes less than one minute to complete.
2. Complete a closed-ended questionnaire with responses ranging from "strongly disagree" to "strongly agree" by checking the appropriate radio button. The questionnaire(s) takes approximately 15 minutes to complete.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society include improved application of the new revenue recognition guidelines which will improve the quality of financial reporting and enhance investment decisions.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be anonymous.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or your organization. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey, without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey prior to submission and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Charles Tafon. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him by phone at [redacted] mail at [redacted] o contact the researcher's faculty sponsor, Dr. Sullivan at [redacted]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.