FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

A CLOSER VIEW TO THE NONPROFIT INDUSTRY'S ACCOUNTING: THE FINANCIAL SUSTAINABILITY OF THE DEVELOPMENT RELATED NONPROFIT ORGANIZATIONS

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF BUSINESS ADMINISTRATION

COLLEGE OF BUSINESS

CHAPMAN GRADUATE SCHOOL

by

Mariano Herrera

June 2023

To: Dean William Hardin
College of Business

This dissertation, written by, Mariano Herrera and entitled A Closer View to The Nonprofit Industry's Accounting: The Financial Sustainability of The Development Related Nonprofit Organizations, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

_ _____
Attila Hertelendy

_____
Jayati Sinha

_____
Chaitali Kapadia

_____
Erica Harris

_____
Miguel Aguirre-Urreta, Major Professor

Date of Defense: June 26, 2023
The dissertation of Mariano Herrera is approved.

_____
Dean William Hardin
College of Business

_____
Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2023

DEDICATION

With a heart full of gratitude, I offer this dedication to the four exceptional individuals who made this research project possible. First and foremost, I give this work to Yahweh, because I would not have been able to finish it without His divine guidance and strength. As the Bible says in Proverbs 1:7, "The fear of the Lord is the beginning of knowledge, but fools hate wisdom and instruction," I recognize His power and authority in my life.

Second, I want to thank my wife, Lissette Martinez, from the bottom of my heart. Her constant support, patience, and help were essential to finishing this research project. Her love and encouragement kept me going when the road was rough.

Third, I dedicate this work to my mother, Eva Quinones, who instilled in me the importance of love and its power to make dreams a reality. Her unwavering faith in my abilities and her constant encouragement motivated me throughout this journey.

Lastly, I want to dedicate this to my late father, Mariano Herrera, who taught me the value of sticking to things and being patient. Although I wish I could give him this gift in person, I know that he is watching over me from heaven, and this work is a testament to his lasting impact on my life.

ACKNOWLEDGEMENTS

I am honored to recognize the individuals who played a significant role in completing this scholarly pursuit. My heartfelt appreciation goes to my major professor, Dr. Miguel Aguirre-Urreta, whose academic support, tireless perseverance, and theoretical guidance were instrumental in this research's success. I am grateful to Dr. Erica Harris for her unconditional acceptance to serve on my dissertation committee and for her valuable insights and counseling throughout this study. Additionally, I want to extend my deepest gratitude to Dr. Chaitali Kapadia, Dr. Attila Hertelendy, and Dr. Jayati Sinha for their vision, recommendations, and unwavering support. I also want to recognize Dr. John Casey from the School of Public Affairs at Baruch College, City University of New York, for his invaluable advice during the early stages of this journey.

I also would like to thank my fellow doctoral students in Cohort III, the FIU administrative staff, and all the FIU DBA Program professors: You have played an integral role in this journey and your unwavering support, guidance, and encouragement have been priceless. You have helped me become the scholar and researcher that I am today. Your commitment to excellence and your passion for education have made this voyage successful. I am honored to have shared this experience with you and I am grateful for the memories and friendships I have created along the way!

ABSTRACT OF THE DISSERTATION

A CLOSER VIEW TO THE NONPROFIT INDUSTRY'S ACCOUNTING: THE FINANCIAL VULNERABILITY OF THE DEVELOPMENT RELATED NONPROFITS ORGANIZATIONS

by

Mariano Herrera

Florida International University, 2023

Miami, Florida

Professor Miguel Aguirre-Urreta, Major Professor

Purpose and Significance of the Study

Exploring nonprofit organizations' financial sustainability is paramount to the entire community due to their social responsibility and the associated burden. Furthermore, to ensure the preservation of these entities, it is crucial to understand and reveal the most significant factors that impact their financial sustainability to the government, nonprofit employees, and the community at large. In doing so, adequate planning can be established to improve the level of achievement within human development. Furthermore, this understanding would help to achieve better resource allocation, reduce economic inequality, and improve social welfare. In essence, this research will contribute significantly to developing and implementing public policies directly related to governmental and nonprofit accounting and protecting the resources intended to improve individuals' lives in society.

As components of society, nonprofit organizations pursue multiple objectives, but the most common goals are an individual's development and economic independence.

This research aims to gather detailed and factual knowledge that can identify and define elements of success for all nonprofit communities. By undertaking this task, we can create a comprehensive understanding of sustainable development within the nonprofit sector, both academically and practically. Furthermore, this research will allow us to develop effective strategies and approaches to support and enhance the capacity of nonprofit organizations to achieve their objectives and contribute positively to society.

Rather than relying mainly on private charities and volunteers, most nonprofit service organizations depend on the government for more than half of their revenues; for many small agencies, government support comprises their entire budget. Moreover, this governmental funding is obtained through taxpayers' dollars, and these resources are constantly under severe scrutiny for their use. Therefore, because nonprofits depend on several revenue sources to operate, in contrast to for-profit entities, these financial resources have specific commitments on most occasions. Consequently, inappropriate tracking of financial performance translates into incorrect executive judgment affecting the programmatic offering, unstabilizing the entity’s going concern, and by default, affecting the services offered to the community in need.

The significance of nonprofit programs for developing preschoolers from impoverished backgrounds has been extensively studied. These programs have been shown to improve educational performance through active learning models. Additionally,

they play a critical role in promoting social and economic development, reducing crime rates, and improving the efficient use of taxpayer and government resources. Therefore, safeguarding and investing in these programs is essential for long-term success and the betterment of society.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF EXHIBITS

ABBREVIATIONS AND ACRONYMS

A-133	A-133 Audit or Single Audit
ACF	The Administration for Children and Families
ANOVA	Analysis of Variance
AUD	Auditors
BIG 4	Deloitte, Ernst & Young, PricewaterhouseCoopers, and Klynveld Peat Marwick Goerdeler
CACFP	Child and Adult Care Food Program
CFDA	Catalog of Federal Domestic Assistant3
CG	Contributions & Grants
CPA	Certified Public Accountant
DHHS	United States Department of Health and Human Services
DRNO	Development Related Nonprofit Organizations
ECLKC	Early Childhood Learning & Knowledge Center
FOIA	Freedom of Information Act
FSNO	Financial Sustainability of Nonprofit Organizations
FVI	Financial Vulnerability Index
GAGAS	General Accepted Government Audit Standards
GAO	General Accounting Office
GC	Government Contributions
GCO	Going Concern Opinions
GPRA	Government Performance and Results Act
IC	Indicator Computed

ICD	Internal Control Deficiencies
IRS	Internal Revenue Service
IS	Indirect Support
LLC	Limited Liability Company
LLP	Limited Liability Partnership
N	Sample Size
NAFB	Net Assets of Fund Balances
NCCS	National Center for Charitable Statistics
NCIB	National Charities Information Bureau
NPO	Non-Profit Organization
OMB	Office of Management and Budget
PC	Public Contributions
RD	Revenue Diversity
ROA	Return on Assets
SIZE	Assets
SOX	Sarbanes Oxley Act
US GAAP	United States General Accepted Accounting Principles
US GAAS	United States General Accepted Auditing Standards

CHAPTER I. INTRODUCTION

This research will focus on identifying antecedents that explain the financial sustainability of development-related nonprofit organizations (DRNO), their relative importance, and how the relationships between those and financial sustainability are moderated by the different types of auditors 'quality levels of financial auditing firms, which certify the financial statements of the nonprofit organization. A DRNO is a nonprofit focusing on improving beneficiaries' overall well-being (e.g., physical health, mental health, personal improvement, and professional development). It is imperative to illustrate briefly and eventually in more detail that the literature presents a material "traceability issue" with the DRNOs. This traceability issue interconnects the operational and financial management of these DRNOs at a magnitude that is driving these organizations to disappear. Therefore, if these nonprofit organizations occasionally work as an extended arm of the government and others as philanthropic entities continue to vanish, who will help society in need in the future? Interestingly, "the traceability issue" in these organizations translates to the efficiency and efficacy of using the financial resources provided by taxpayers and stakeholders. However, increasing efficiency and efficacy at the executive level presents a convenient solution at the communication level; however, that is insufficient to provide a definitive solution. Nonprofit organizations' "traceability issue" is not a unique phenomenon of these types of businesses only; moreover, it has been experienced and studied thoroughly in for-profit businesses but not at the same intensity within nonprofit organizations. Thus, the nature of service for these two (2) businesses groups differs; however, the theoretical background regarding a

solution is quite similar. Therefore, the literature prescribes the following action to obtain a progressive solution. This solution is geared toward improving financial accounting practices, including the timely identification of financial vulnerabilities, and increasing financial sustainability to obtain financial resiliency in case of any economic downside phenomenon. Understanding the drivers of financial sustainability will enable nonprofit organizations to reduce their financial vulnerability, design financially sustainable programs, foster their financial growth, increase their ability to serve communities in need, and survive to continue serving the community tomorrow. In addition, this research pursues a better understanding of nonprofit organizations in terms of the factors underlying their demise and their exposure to financial vulnerabilities, which may hamper their ability to continue operating successfully in the long term. These briefly explained arguments are the bridge between the phenomenon, the theoretical background, and the practical background needed to address this problem. Simultaneously, this presented argument provides a degree of why this phenomenon is essential to dedicate research to exploring and generates a more specific course of action to resolve it. Understanding DRNOs that behave financially not vulnerable and simultaneously financially sustainable will serve as a model to analyze in-depth, follow what they do differently, and prescribe how nonprofit organizations must allocate resources to stay financially healthy.

Nonprofit organizations are significantly necessary for society because of their direct contribution as an enhancer in developing new professionals and their indirect economic contribution to the workforce. In addition, nonprofit organizations have operations in sectors where corporations have not been directly involved due to their

natural characteristics of creating wealth and where the government presents historically certain failures (Ben-ner et al., 1991). Nonprofits play an important role in modern society and are not without their challenges. In particular, nonprofits suffer from insufficient, timely traceability of their financial operations and inconsistent budgetary planning for current needs (Lee & Clerkin, 2017). A generalizable situation presented by nonprofit organizations is their insufficient financial and administrative knowledge to anticipate situations that could place them in a vulnerable position. In some instances, these financially vulnerable situations could attempt their financial sustainability, placing them in a going concern situation.

The nonprofit sector in the United States employs about 7% of the US workforce and controls over $8 trillion worth of assets (Vermeer et al., 2013). A longitudinal study in Los Angeles County found that approximately 20 percent of the nonprofits were untraceable, and 15 percent had utterly disbanded since they had been surveyed ten years before (Lee, 2017). In conjunction, Ben-ner et al. (1991) indicate that; “Nonprofit organizations perform activities that the for-profit and/or government sectors do not do well, and accordingly, view nonprofit organizations as correctives to certain market and government failures.” Regarding the members of society, most DRNOs emphasize physical and mental well-being; they serve directly or indirectly towards personal and professional development (Hines, 2017). Rather than depending mainly on private charities and volunteers, most nonprofit service organizations rely on the government for over half of their revenues; for many small agencies, government support comprises their entire budget (Lipsky & Steven, 1991). Governmental funding is obtained through taxpayers' dollars, and these resources are constantly scrutinized for use (Garven et al.,

2018). Therefore, because nonprofits depend on several revenue sources to operate, and in contrast to for-profit entities, these financial resources have, on most occasions, specific commitments, the inappropriate tracking of financial performance translates into incorrect executive judgment, affecting the programmatic offering, ending instability toward the going concern of the entity, and by default, affecting the services to the community.

Technology, as an essential aspect of society, has improved exponentially in the last 20 years; this is a noticeable fact. However, let us compare areas directly addressed by nonprofit organizations (e.g., physical well-being, mental health, professional development, and education). We could see that these areas have not improved, not even close to the speed path of technological improvement. It is no doubt that in modern society, having a well-developed technological infrastructure provides a competitive edge. However, technology enhancements (e.g., high-speed internet, encrypted servers, mobile applications) could be observed as the outcome of combined harmonious benefits obtained through several segments served by nonprofit entities (e.g., education, research, urban planning, physical well-being, mental health). In effect, if we tried to visualize a simplified research model of factors contributing to technology enhancement (e.g., dependent variable), conforming persons as the research unit of analysis, it will result logically in thinking that at least mental health and physical well-being would need to be included (e.g., independent variables) in the research model. A functional society depends on a proactive interaction between acquiring knowledge, disseminating the knowledge, and putting this knowledge into practice. Therefore, a sustainable economy is appropriate when knowledge and health are present and continually improving. In theory,

the existence of nonprofit organizations in society is due to the poor proactivity and minimal performance and expertise of the different governmental bodies in achieving corrective efforts necessary in highly critical areas of human development (Lu et al., 2019a). Insufficient development in these social areas directly affects people and will negatively influence society in the long term. Because of these entities' envelopment, the complexity of their operations, and on occasions, not practical and efficient management skills, they succumb to performance measurements and disband (Anthony, 1995). Even when the focus of this research is applicable to any nonprofit organization, this research is focused on one of the oldest and longest federal social service programs in the United States, the program of the U. S. Department of Health and Human Services (DHHS) identified under the federal codification criteria with the CFDA Number 93.600, commonly known by nonprofit managers and government financial analysts as The Head Start Grant. Interestingly, in this grant, even when the grantor is the DHHS, the direct operational administrator is The Administration for Children and Families (ACF). The United States Government created the Head Start program in response to the social problems during the 1960s. DHHS decided to operationalize the Head Start Program under nonprofits, providing them with federal resources. These operationalizations arise due to several factors; one of the most critical factors is the proximity of the nonprofit entity to the community and, therefore, its knowledge of the community’s problems. Also, other significant factors included the independence of the U.S. Government as a stakeholder in providing financial resources. This independent component allowed the incorporation of rigor, impartiality, and generalizability, impacting the program objectively. Head Start is not just one program but a heterogeneous collection of

programs directed at children, families, and communities (Miller, 1986). In his State of the Union address on January 8, 1964, President Lyndon B. Johnson said: “This administration today, here and now, declares unconditional war on poverty in America” (Burkhauser et al., 2019, p.2). In a speech two months later, he outlined his terms of engagement: “I have called for a national war on poverty, our objective: total victory.” Approximately fifty-eight years have passed since President Johnson declared war on poverty, and with this declaration, the Head Start Program was born. Head Start is a complex program with many accomplishments, to which different critics give different priorities.

Head Start's history has been a story of administrative changes, improvements, and accountability initiatives in the realm of public policy, a dominant narrative of progress and rational planning that is consonant with a large, centralized governance structure (Lubeck et al., 1997). An examination of the history of Head Start shows that the program barely survived its first five years and was deemed a failure by those who initially evaluated it (Miller, 1987, p. 323). Nevertheless, the ambiguity of Head Start's principal mission and constituency has enabled its administrators to recast its image to meet shifts in the prevailing political winds without substantially altering the basic program. Experts acknowledge uncertainty as to whether Head Start is primarily an education program, an anti-poverty program, or a family support program; whether child development is Head Start's principal purpose, or whether children's services are an ancillary, although important, benefit of an adult employment program (Miller, 1987, p. 342). The popular explanation for the program's longevity is simple, Head Start works, producing, among other benefits, quantifiable gains in social and educational

achievement for the children who participate. The Head Start Program was conceived through a combined effort from the following sectors: government, academic, health, and social, in response to core components of a phenomenon named poverty. In 2018, Head Start was funded to serve nearly 1 million children and pregnant women in centers, family homes, and childcare homes in urban, suburban, and rural communities (US Department of Health and Human Services, 2019). The engaged sectors of society proved that a current minimalistic number of financial resources appropriately invested in children would translate into the future's society, creating people with significantly improved emotional development, behavioral relationships, knowledge receptivity, and literacy. The Head Start Program's essential services include education, social, health, and nutrition interventions for preschool children. An empirical study in the Philadelphia School District using ten years of data on almost 15,000 children found that Head Start children had fewer behavioral problems, better attendance rates, and lower attrition than non-Head Start children (Lee, 2017).

In 2009, children under the age of 6 years old accounted for 20.7% of people living under the poverty line in the United States". Pressman (2011) suggests that "in comparison to children born to middle-class or wealthy parents, children born into poverty are 29% more likely to repeat a grade level, 12% more likely to be suspended from school, and 21% more likely to drop out of school." A longitudinal study performed in 2012 presented evidence indicating that 12.3% of the United States population, or 36 million people, lived in poverty, having as a threshold a family with an annual salary of $ 22,350.00 with four family members (Rikoon et al., 2012). Evidence in virtue of the Head Start Program was presented in several studies (e.g., Lee & Schnur, 1988; Ramey &

Ramey, 2004; Justice et al., 2008; Harris, 2009), indicating that poverty-born preschoolers improved their educational performance as a result of the Preschool Study active learning model, therefore contributing to society through economic developments such as employment, buying a home, or reducing the crime rate.

The Rainy Days Funds and the Financial Sustainability of DRNO

Nonprofit organizations might classify their funds into three general categories: restricted, quasi-restricted, and unrestricted. According to Hankin et al. (2007), restricted funds are resources that must be used for a specific purpose. Generally, restricted funds are received through government contracts or grants, but may also be received from non-governmental sources. Another possible classification of funds is quasi-restricted funds, also recognized as temporarily restricted. These types of funds are often designated by donors to support specific programs for a specified period (Hung, 2021).

Interestingly, Calabrese (2012) defines unrestricted funds as assets that nonprofits control; these resources represent cash balances that nonprofit managers can use to reinvest in the organization to overcome short-term financial shocks. In practice, nonprofit organizations are very interested in increasing their unrestricted resources due to the financial flexibility and unhindered linkage these resources provide to their date-to-date operations. The literature defines operating reserves using several criteria, primarily those of (1) liquidity, (2) unrestrictedness, and (3) board designation (Sloan et al., 2016). According to Kim & Mason (2020), Rainy Days Funds are operating reserves extracted from unrestricted net assets that nonprofit boards designate for use in financial emergencies. Therefore, because of the three possible classifications of funding sources (restricted, quasi-restricted, and unrestricted), Rainy Day Funds are reserves that are

expected to be allocated under program revenues within each organization due to this unrestricted classification of revenue resources.

Operating reserves are distinct from other assets owned by a nonprofit that may come with donor-imposed restrictions on their usage (Calabrese, 2012, p. 284). Thus, operating reserves allow nonprofit organizations to smooth out imbalances between revenues and expenses, helping to maintain program output in the presence of fiscal shocks. Additionally, unrestricted fund balances are an important source of nonprofit internal financing (Chikoto & Neely, 2014). A nonprofit organization's operating reserves are inconclusive in terms of the adequacy of the number of resources that need to be withheld in case it suffers a financial crisis. Practitioners agree that reserves need to be highly liquid and unrestricted; however, nonprofit leaders have different perspectives on what constitutes reserves; these may include lines of credit, investment accounts, endowments, sister foundations, and capital funds (Kim & Mason, 2020). Also, Calabrese (2011) found evidence that donors penalize organizations holding excess accumulated net assets. A study performed over a sample of 3,154 nonprofit organizations within the Washington, D.C. area found that public charities had a median operating reserve of 2.1 months, and 57 percent of organizations (N = 1,800) had less than three months of operating expenses available (Sloan et al., 2016, p. 419). It would be coherent to infer that the financial sustainability of DRNO will be positively affected by the presence of operating reserves and therefore by the rainy-day funds, due to their unrestricted characteristics. However, the literature presents significant difficulties in obtaining a recommended prescription on how, strategically, in terms of timing and amount, these resources should be withheld and if these resources will affect other resource streams

within the DRNO revenue portfolio. This topic represents a significantly exciting subject to be studied in depth in the near future.

The Financial Accounting of the Nonprofit Organizations

Financial statements are an essential tool for nonprofit organizations because they provide comprehensive information. Most accounting and financial professions use the amount of assets or revenue as a size component to compare and establish an order between businesses. The use of revenue as a size components parameter is, on most occasions, a source of measure of liquidity (Frumkin & Keating, 2011). However, using assets as a size component parameter is more relevant to growth and internal financing (Zietlow et al., 2007). This size measurement component is not different in the nonprofit industry, meaning that, for example, a nonprofit with two million dollars in assets is financially bigger than a nonprofit with one million dollars in assets. A common practice used in for-profit organizations is measuring the level of assets. Nonprofit organizations include evaluating the level of assets while auditing the financial statements as evidence of a rigorous examination of their financial situation. The intention of examining the financial statements is similar for any entity (nonprofit or for-profit). The purpose of examining the financial statements is to attest, in accordance with the laws, pronouncements, and guidelines, that the financial information presented by the entity represents, in a correct dimension, the financial reality of the entity.

Moreover, the auditors will produce a report for the management with the purpose of presenting the obtained findings. One of the vital functions of the Auditor's Report is the auditor's Opinion Letter; this document describes the entity's financial position. On occasions when the audited entity is “at-risk,” auditors present their empirical perception

and opinion over the entity's future in the Auditor's Opinion Letter, specifically in the section recognized as the “going concern paragraph.” A going-concern paragraph within the auditor’s opinion indicates that the auditor has substantial doubt about whether the organization can meet its obligations as they become due (Petrovits et al., 2011a). The logical expectation is that organizations with a going concern paragraph integrated into the auditor's report are more likely to be experiencing internal control deficiencies, which directly correlate to the nonprofit’s financial vulnerability.

Broadly, sustainability refers to the ability of administrators to maintain an organization over the long term (Sontag-Padilla et al., 2009). Therefore, efforts to operate in a financially sustainable environment are required with the prevalence of managerial strategies to achieve, retain, and operate consistently outside of going concern parameters. Several nonprofit entities that appeared to be operationally efficient disappeared not because they did not perform all necessary elements of their mission correctly, but because of other aspects related to their financial vulnerability that were left uncovered (Hager et al., 1996; Searing, 2018). Interestingly, the industry Journal Nonprofit Quarterly has published a short series on nonprofit deaths and reported on nonprofit closures and exits. Poor financial and/or organizational governance are the primary reasons for organizational failure. A study focused on nonprofits serving communities targeted for sustaining revitalization financially demonstrated that greater levels of community-based philanthropy are needed for nonprofits to sustain their long-term financial operations (Besel et al., 2016). Subsequently, overreliance on government revenue can jeopardize an agency’s service delivery strategies in many ways. In order to bring financial reporting uniformity and reduce risk, several pronouncements related to

nonprofit organizations (e.g., OMB A-133 and A-122) were generated precisely to achieve accountability properly, appropriate audit scope, acceptable audit performance, correct cost allocation, and the establishment of correct internal control performance. In addition, the Internal Revenue Service (IRS) requires financial reporting for nonprofit organizations. As a result, nonprofits share some similarities even when their financial reporting is not the same as the structure of requirements presented by for-profit organizations (Mitchell & Berlan, 2018, p. 430). An empirical research focused on nonprofit organizations defined as financially distressed entities was performed in 2001; the study concluded that, of a sample that included 89 non-profits that received a first-time modified going concern audit opinion, 24 out of the 89 entities dissolved subsequently (Vermeer et al., 2013). Also, Amin & Harris (2017) found that sophisticated donors are influenced negatively by the financial instability of the organization; however, less sophisticated donors are called upon to support deteriorating firms. We found, as previously stated, that external auditors play an integral part in the increase of financial resources and, therefore, in the increased probability of the survival of these nonprofit organizations.

In addition, these nonprofit entities are subject to complying with norms, governmental laws (federal and state), and performance compliance agreements (e.g., the DHHS Head Start Program) to get funded and reduce going concern risk. One of the biggest concerns is that the required documentation by regulators is not always presented accurately, even though it is significantly relevant regarding resource provisions and allocations (Te' eni & Young, 2003). Together, these factors could represent opportunities to improve these programs and make them more efficient, while

simultaneously assisting the programmatic mission. As business elements of society, nonprofit organizations pursue multiple objectives; however, the most common goal is the individual's development and economic independence. Therefore, this research aims to identify the most relevant factors related to the financial sustainability of DRNOs. Furthermore, identifying these factors will provide a better understanding of their relationships towards enhancing financial sustainability and increasing nonprofit entities' survival.

This research has a central focus on helping nonprofit managers assess at an earlier stage, the financial problems they may have to deal with in the future. The goal is to first arrange important literature for an explanatory model of nonprofit financial sustainability and convert it into a practical tool that nonprofit scholars and practitioners can use in a more straightforward setting. In addition, with adequate exposure, provide guidance in implementing procedures to ensure consistency, uniformity, and reliability.

In addition to contributing to the academic literature on nonprofit sustainability, this research also has practical contributions for nonprofit managers, focusing on supporting their efforts to ensure the organization's long-term financial viability. This research aims to discover the relationships between the more critical financial sustainability factors that negatively impact nonprofit organizations' going concern and explore financial strategies that help avoid these diminishing financial factors. Minimizing these critical financial sustainability factors will protect the offering of services to people in need. However, simultaneously, this research presents the opportunity to contribute to the body of knowledge with empirical differentiation between financial vulnerability and financial sustainability within the nonprofit industry.

Therefore, the following research questions have been proposed:

Research Question:

RQ 1*: What are the factors contributing to the financial sustainability of nonprofit organizations?*

RQ 2*: How does the external auditor quality relate to the financial sustainability of nonprofit organizations?*

Research Design and Empirical Focus

This study is archival research by design and uses as a source of information the financial data presented in the Return of Organization Exempt from Income Tax, better known and named in the accounting industry as Form 990. This document provides valuable information that has already been processed, compiled, and reviewed. The information presented in Form 990 is very useful and broad in scope. The Form 990 provides information on the entity's financial statements, demographics, revenue allocation, and expense allocation. The information presented in Form 990 is critical for an in-depth understanding of the financial behavior of these nonprofit organizations. The focal object sample of this research is based on nonprofit entities that hold, within their revenue portfolio, the Head Start Grant, properly coded and named CFDA Number 93.600 or US Department of Health & Human Services Head Start, respectively. Therefore, extensive literature research has been conducted to explore the most relevant elements of financial information to be considered appropriate to satisfy the analysis of possible constructs and factors affecting the dependent variable (Financial Sustainability).

The literature review emphasizes financial vulnerability, revenue sources, financial sustainability, complexity structures, and other relevant factors (see Exhibit A. Definition

of Terms). This research analyzes nonprofit entities within the geographical areas recognized in the nonprofit community as the ten (10) Head Start regions. Chapter IV. Research Methodology lists the Head Start regions and their appropriate states and territories. Also, the Data Collection section is included in the mentioned chapter. The analysis of this research is based on different nonprofit revenue streams and standard financial ratios frequently used in financial and accounting practice.

Also, the analysis will visit the Financial Vulnerability Theory in the presence of the Financial Vulnerability Index and the Financial Sustainability Theory in the presence of the Financial Sustainability Ratio, both concepts designed, linked, and explored by academics and practitioners within the previously mentioned professional practices. The rest of this document is structured as follows: Chapter II presents a literature review; this section contains the comprehensive theoretical base of this research. Then, Chapter III presents the research model and hypotheses; this chapter captures a detailed visual design of this research, and the study's core explanatory concept, based on the expected interactions of the constructs. Chapter IV refers to research methodology, the data source's specifications, the unit of analysis, and the operationalization of the scientific analysis behind the study. Next, Chapter V, data analysis and results; this section refers to the analysis performed in this research, together with the empirical explanation of the outcome; finally, Chapter VI, discussion, limitations, future research and conclusion; this section will reveal the hypothesis results (supported or not supported), theoretical implications, practical implications, the significant limitations presented throughout the research's different stages, expected future research under the subject and finally, a comprehensive conclusion of the research.

CHAPTER II. LITERATURE REVIEW

An element that presents some ambiguity is the lack of a consistent methodology to define and measure financial sustainability in DRNOs. In other words, the literature on nonprofit organizations' financial performance is inconsistent in measuring financial sustainability, mainly because it relates capacity and financial vulnerability to financial effectiveness measures. This situation has generated sufficient investigation, but concluding results have not yet been obtained yet (e.g., Lu et al., 2019a; Coupet, 2018; Lu, 2015a; Carroll & Stater, 2009). Multiple models of effectiveness suggest that capacity can play a different role depending on how effectiveness is conceptualized and measured (Bryan, 2019). Also, empirical research that examines organizational characteristics such as revenue sources and vulnerability levels allow a better understanding of how nonprofit organizations define effectiveness differently and prioritize different types of capacity. Significantly, there is a lot to study to help nonprofits avoid financial default status. Understanding more consciously the relations between the different sources of revenue, and the performance of the components of the Financial Vulnerability Index, will provide a clearer concept of their effects to the financial sustainability of these nonprofit entities.

Each nonprofit organization is unique even in its same line or service to the community. Therefore, understanding their mission, vision, norms, and composition of resources allowed them to generate a complete proactive framework to achieve success. This research expects to narrow the literature gaps by clarifying the theoretical differences between financial vulnerability and financial sustainability. Also, this research seeks to contribute to practice by creating a simplified model that could identify

the most significant areas of financial distress that substantially affect financial sustainability.

This research empirically explores several constructs identified directly in the literature as relevant factors to measure financial sustainability within Nonprofit Organizations. Unfortunately, the literature generated on this subject is segregated by constructs and does not consider the understanding of the added value of the interaction of the total presented constructs as a whole. The evaluation of the constructs independently does not provide enough empirical evidence to understand and clearly define the antecedents of the financial sustainability phenomenon. However, a simplified and practical description of financial sustainability can be defined as the ability to cover annual budgets without restrictions (Almagtome et al., 2019). Therefore, the constructs with the most significant theoretical relevancy to this study's proposed dependent variable have been identified and briefly explained in this section also presented in detail in Appendix A. Definition of Terms. Complexity; this is the financial strategy of the entity to achieve financial stability and simultaneously reduce financial risk. Financial Vulnerability is the organization's financial susceptibility to overcome economic downturns. Then, Government Contributions; are financial resources provided by the government (e.g., Federal, State, Local). Then, Public Contributions; are financial resources provided by individuals, trusts & estates, corporations, foundations, or any other financial structure similar in characteristics to the previously presented legal structures. Then, Program Revenue; these are revenues generated by offered tax-free services. Then, External Auditors' Characteristics; are the most common professional characteristics of the independent auditors engaged with nonprofit entities that are part of

this research. Finally, the dependent variable, Financial Sustainability, is the capacity' change rate in each evaluated period, which consists of the resources that give an organization the wherewithal to seize opportunities and react to unexpected threats.

Complexity

Organizations with more diversified revenue portfolios have lower revenue volatility levels over time, implying that diversification is a viable strategy for organizational stability (Carroll & Stater, 2009). However, scholars following the Transaction Costs Theory argue that nonprofits with diversified revenue portfolios suffer from the complexity and inefficiency of managing multiple funding relationships, which undermines the benefits of revenue diversification (Lu et al., 2019a). Furthermore, as businesses engage in more complex transactions and have more diverse operations, the expectation of higher internal controls increases. According to Myser (2016), an organization can buffer from potential revenue shocks by diversifying revenue sources; therefore, a nonprofit with a diversified revenue portfolio might experience a higher level of complexity in its financial structure (e.g., internal controls, revenue allocation) and simultaneously an increase in financial sustainability.

The incremental complexity associated with managing multiple revenue streams and the uncertainty of the effects of revenue diversification on nonprofit organizations might obscure the benefits of pursuing diversification as a financial management strategy (Carroll & Stater, 2009, p. 950). An increase in revenue sources might translate into an increase in the complexity of operations. The relationship mentioned above might be relevant because financial resources have, by definition, specific criteria (e.g., restricted revenues versus unrestricted revenues). The greater continuity and predictability of public

grants and contracts (compared to donations and fees) make them particularly attractive to social service agencies. However, the complexity and effort involved in securing and managing them imposes high overhead costs (Kingma, 1993). These overhead costs are indirect operating expenses (e.g., rent, accounting, legal, and salaries & wages). Petrovits et al. (2011a) indicate that nonprofit organizations in poor financial health are less likely to have the resources to invest in establishing strong internal controls. Also, Greenlee et al. (2007) report that older and larger nonprofit organizations are more likely to have an internal audit function and, therefore, more control over the financial treatment of current and incoming revenue streams.

Corporate accounting scandals and the subsequent creation of the Sarbanes-Oxley Act of 2002 have focused attention on accountability in general. Even when the law is for for-profit organizations (e.g., LLCs, LLPs, and Corporations), nonprofit organizations are not significantly different in principles, concepts, and usable financial tools compared to for-profit organizations. Nonprofits can reduce revenue volatility through diversification, particularly by equalizing their reliance on earned income, investments, and contributions. Nonprofit organizations use revenue diversification ratio. This ratio sheds light on the percentage of revenue concentration in the action of the revenue portfolio. According to Khumawala et al. (2005), organizations with higher efficiency ratios in their financial statements generally receive more donations. Financial efficiency ratios are helpful financial management tools used as a source for combinations of financial streams (e.g., debt, revenue, expenses, assets), and the obtained information is subject to an analytical interpretation used as a parameter that provides a significant layer of managerial confidence at the time of executing financial decisions.

Financial Vulnerability

Arbogust (2020) presents evidence that financial vulnerability is poorly operationalized, inconsistent from study to study, and has not been empirically understood. The research tends to define financial vulnerability and then look for it rather than identify failed organizations and see if they are related to financial vulnerability (Tuckman & Chang, 1991; J. S. Greenlee & Trussel, 2009; Keating et al., 2005). This research does not follow reactivity in evaluating rates of demise, levels of bankruptcy, or "post mortem" information of the nonprofit organization, as presented in the literature. Instead, this research pursues a proactive design whose operationalization aims at identifying empirically presented financial performance factors that significantly contribute to vulnerable and sustainable detrimental financial acts.

Previous studies have evaluated the financial performance of nonprofit entities according to internal controls and auditors' opinions immediately prior to the "post-mortem" stage. Therefore, the scope of this research and the sample collection process are based on nonprofit organizations in active service. However, further research that extends the timeframe of this research might be explored in the future. Understanding and anticipating financial vulnerability is not only critical for the growth of any business but, more importantly, it is indispensable for its survival. Indeed, even the definition of financial vulnerability is not evident among scholars of the nonprofit sector, where the difficult measurement of inactive and extinct organizations is a hard barrier to overcome (Andres-Alonso et al., 2015).

According to Trussel (2002), financial vulnerability is present when businesses record cumulative net losses over three years; similarly, financial problems in nonprofit

organizations are assumed to cause a reduction in net assets over time, which would manifest itself in a decrease in revenues or an increase in expenses. Performance measures can take several forms, including, but not limited to, nonprofits meeting the goals of their operation, using resources efficiently, adapting to the environment in which they operate, and surviving. Additionally, the literature has presented four (4) operational criteria to evaluate financial vulnerability. The criteria components to evaluate Financial Vulnerability are the following: 1) Inadequate Equity Balance, 2) Revenue Concentration, 3) Low Administrative Costs, and 4) Low or Negative Operating Margins and Size (Tuckman & Chang, 1991; J. S. Greenlee & Trussel, 2009). Furthermore, Chang & Tuckman (1989) presented an empirical study developed without using data on program outputs, indicating that 4 out of 10 nonprofits in a sample of 10,538 nonprofits present at least one source of potential financial vulnerability. Also, Tuckman & Chang (1991) found in a research based on multiple categories of nonprofits (Religious, Educational, Health Care, Charity, Support, and Others), that the category with the highest likelihood of being severely vulnerable to risk was the nonprofits under the category of Support. Financial vulnerability is more likely to be weighed by debt ratios and revenue concentrations within the financial distress ratios (Tuckman & Chang, 1991, p. 452). However, it is also possible that a significant shock, such as an economy-wide recession, could cause widespread shortfalls that jeopardize all nonprofits. There is extensive research on nonprofit financial health or financial condition, although little research focuses specifically on financial distress; instead, research focuses on nonprofit vulnerability, flexibility, stability, or capacity (Myser, 2016). Searing (2018) indicates that; “financial ratios are traditionally used to predict and diagnose financial

vulnerability; this is helpful but leaves unanswered how the vulnerable nonprofit should prioritize this information to survive."

Furthermore, studies evaluating the relationship between financial vulnerability, nonprofit common resources, and financial sustainability have not been noted significantly in the literature. Therefore, nonprofit organizations must engage in the operational process of integrating proven financial distress ratio strategies to avoid falling into financial vulnerability events. We will extend this research using several extensively combined approaches (Trussel, 2003b; Petrovits et al., 2011; Tinkelman & Mankaney, 2007; Ritchie & Eastwood, 2006). Also, Tevel et al. (2015) mentioned that "whether or not a nonprofit organization is susceptible to financial problems is a concern of all stakeholders in the organization because financial problems might not allow an organization to continue to meet its objectives or provide services." As the literature presents, financial operations are the backbone of any business that transfers goods and services to the customer. Therefore, understanding financial vulnerabilities is an essential fact to comprehend before determining the financial sustainability of any business.

Government Contributions

According to Brown (2016), federal and local governments provide significant amounts of funding to nonprofits to finance and enhance their service programs; this association is subscribed to periodic programmatic performance requirements and acceptance of financial practice requirements (e.g., US GAAP, OMB A-122, OMB A-133) upon agreement to incur into a grantee/grantor relationship. These agreements are in place to provide the government and other stakeholders with added transparency and accounting consistency.

However, economic theory suggests that nonprofits emerge from conditions of market failure in which the goods or services they produce cannot generate a large enough monetary profit to sustain profitable operations (Carroll & Stater, 2009). The most common form of contribution from the government (e.g., federal, state, local) comes in the form of grants, which are considered "free money." These resources, even when the entity does not require repayment, are accepted under several warranties of services to the community. Heutel (2014) found that government grants can respond to private donors similarly to private donors' reactions. In essence, governments are nonbenevolent, including charity responses or considering various equilibria in which private donors and governments move endogenously toward nonprofit operations. Government support will unambiguously crowd out private support only if the two types of support are substitutes and the individual is satisfied or oversatisfied with the level of support (Hughes et al., 2012). Also, these government contributions as sources of taxpayers' money are under constant scrutiny from governmental authorities and, therefore, subject to evaluation of the best uses within the communities, without excluding the additional economic effort made by the grantee to achieve and sustain its mission. If the government sufficiently meets public demand, there is no incentive for people to personally contribute insofar as the good is already paid for indirectly by their taxes (Kim & Mason, 2020). Weisbrod & Dominguez (1986) present a well-established economic model of giving in which nonprofit organizations are considered private providers of public goods, and donations are the proxy for the aggregate demand for the organization's output. Ecer et al. (2017) have documented a positive relationship between the extent of reliance on commercial activities for revenues and the efficiency in

managing overhead and administrative expenses. Based on multiple pieces of literature presented on this subject (Petrovits et al., 2011b; Keating et al., 2005b; Ritchie & Kolodinsky, 2003), nonprofit organizations' trends most likely positively correlate with their behavior regarding government contributions, external performance compliance, and the type of public contributions.

Public Contributions

Each year, Americans make donations equal to about 2% of the gross domestic product, which in 2004 amounted to more than $248 billion (Tinkelman & Mankaney, 2007). Nonprofit organizations rely on different resources to fulfill their missions in their communities. These resources come in multiple configurations depending on their nature, use restrictions, and reporting requirements. Blouin et al. (2018) found that nonprofit organizations receive more donations when they voluntarily disclose formal financial information online; moreover, these disclosures are most effective in increasing donations when they reveal positive information about the financial management of the organization, including effective use of donations (program ratio) and effective use relative to its comparison group. Ely et al., 2020 said that; “endowments can be composed of donor-restricted and unrestricted funds and may support general operating expenses, specific programs, or capital investments.” Also, Kerlin & Pollak (2011) showed that the human services sector presented significant increases from 1982 to 2002 in commercial revenue as a percentage of total revenue (50% to 59%), and government grants were close behind at 18% to 25%.

The increase in different types of public contributions certainly decreases the financial dependency of nonprofit organizations and will most likely contribute to these

entities' success by including additional resources. Also, bringing more financial resources translates into increasing the services offered to the community and simultaneously exploring new kinds of services possibilities. Cheng (2018) found that communities with more financial resources will likely generate more financial support for local nonprofit organizations, such as donations and earned income opportunities. Also, according to the Benefits Theory, nonprofits that provide private services rely more on earned program revenues, while nonprofits that provide more public services rely more on donations (Cheng, 2018, p. 207). Benefits Theory is a conceptual construct to foster an understanding of how social purpose organizations are financed. As a theory, the degree to which its assumptions correspond to how nonprofits behave is useful in describing how they finance themselves. Therefore, a nonprofit organization's revenue mix can be fueled partly by its mission or the nature of its services, thus minimizing its desire to concentrate its revenue on a single funding stream (Wilsker & Young, 2010; Chikoto & Neely, 2014). Evidence from research suggests that the theory rings substantially true, explaining observed financing patterns. These resources, in turn, will support nonprofit organizations in engaging in more complex public-service supporting activities.

A fundamental concept in attracting public contributions is using marketing techniques to increase this revenue stream and establishing a nonprofit "brand" that clearly and consistently communicates the mission of the organization and the services provided in a way that differentiates it from alternative nonprofit or for-profit organizations (Sontag-Padilla et al., 2009). However, Cacija (2013) found that inadequate implementation of nonprofit marketing activities can have negative consequences due to the avoidance of reporting the costs of their marketing activities. Nonprofit organizations

reliant on direct public support are more likely to take the h-election (Section 501h). Also, the financial reporting requirements of Section 501h nonprofits are less rigid due to their inability to integrate pass-through taxpayer resources (e.g., federal grants and state grants) into their revenue portfolio. On the contrary, those reliant on government grants are less likely to take the h election and agree to fulfil the required laws, norms, and performance reports (Grasse et al., 2019). The mission, services, and uniqueness of the nonprofit entity will likely behave strategically in parallel. Studies performed by Woronkowicz & Nicholson-Crotty (2017) and Kim & Mason (2020) offer significant additional support to the existing literature on fundraising effects by demonstrating that contributions to nonprofits are positively associated with fundraising performance.

Program Revenue

The Internal Revenue Service's Instruction Booklet of Form 990 states, "Program services are primarily those that form the basis of an organization's exemption from taxes." Program service revenue includes funds collected directly from recipients receiving services from organizations (e.g., service fees) or third-party payers (e.g., insurance companies) but also includes income from government contracts (Kerlin & Pollak, 2011). Program revenues provide operational flexibility to the nonprofit organization due to its exemption characteristic. Income earned from providing a service to government agencies that benefit the agency directly or benefit the general public can be reported as program service revenues. These resources include income earned from providing services to government agencies that benefit that agency or the general public. Some specific examples of program revenues are; revenues received by medical facilities rentals, performing arts organizations' fees, university tuition, author royalties, income

that aids another organization's exempt function, and an unrelated trade or business activities that generate service fees. Also, Luksetich (2008a, p. 7) said that; “the expansion of program revenues had a much greater effect on the number of nonprofits than government grants.” Greenlee & Trussel (2009) found that many charities that ceased operations did so primarily for program-related reasons (such as a reduction or a decreased demand for programs services).

J. Trussel (2003a) found that the program-spending ratio is positively correlated with revenues when controlling for organizational type and strategy; therefore, an increase in revenues spent directly on programs affairs is viewed before the eyes of donors and other stakeholders as a signal of financial health; therefore, a charity has the incentive to overstate revenues to indicate continued revenue growth. Charities with fewer revenue sources are more vulnerable to financial distress than those with multiple revenue sources (Copley, 2009). Furthermore, Amin & Harris (2017) indicate that program revenues generated by these services are vital to the financial health of many nonprofit organizations, and service-oriented organizations rely more on program revenues than charitable organizations. Also, under this subject, Calabrese (2012) found that Higher Education NPOs may operate in a countercyclical industry, where a worsening macro economy that leads to reductions in donor support may be offset by increasing enrollments (and, therefore, increasing program revenues). An increase in revenues is financially translated to an increase in allocations of financial resources to programs and, therefore, fewer financial liquidity concerns (Amin & Harris, 2017, p. 341).

Lee et al. (2022) found that 66% of nonprofits expect a severe financial impact based on the cumulative effect of the COVID-19 pandemic, revealing that it is nearly impossible for nonprofits to generate commercial revenue. On the other hand, the pandemic has shown us how much nonprofits have been relying on commercial revenue, which is crucial for their survival. Interestingly, Wilsker & Young (2010, p. 210) suggest that program decisions drive revenue mix and revenue return, hence a more productive resource development strategy might well start with the notion that programming choices determine the kinds of income support that are the most productively cultivated, and those revenue-seeking strategies should begin with an examination and possible adjustments to program portfolios.

External Auditors' Quality

In the current auditing system, regulators potentially exacerbate the audit. The Internal Revenue Service's Instruction Booklet of Form 990 states, "Program services are primarily those that form the basis for an organization's exemption from taxes." Program service revenue includes funds collected directly from recipients receiving services from organizations (e.g., service fees) or third-party payers (e.g., insurance companies), but also includes income from government contracts (Kerlin & Pollak, 2011). Program revenues provide operational flexibility to the nonprofit organization due to its exemption characteristics. Income earned from providing a service for governmental agencies that benefits that agency directly or the general public can be reported as program service revenues. These resources include income earned from providing services to government agencies that directly benefit that agency or the general public. Some specific examples of program revenues are revenues received by medical facility rentals, performing arts

organizations' fees, university tuition, author royalties, income that aids another organization's exempt function, and unrelated trade or business activities that generate service fees. Also, Luksetich (2008a, p. 7) said that; "the expansion of program revenues had a much greater effect on the number of nonprofits than government grants." Greenlee & Trussel (2009) found that many charities that ceased operations did so primarily for program-related reasons (such as a reduction in or decreased demand for program services).

J. Trussel (2003a) found that the program-spending ratio is positively correlated with revenues when controlling for organizational type and strategy; therefore, an increase in revenues spent directly on program affairs is viewed before the eyes of donors and other stakeholders as a signal of financial health; therefore, a charity has the incentive to overstate revenues to indicate continued revenue growth. Charities with a few revenue sources are more vulnerable to financial distress than those with multiple revenue sources (Copley, 2009).

On the other hand, the pandemic has shown us how much nonprofits have been relying on commercial revenue, which is crucial for their survival. Interestingly, Wilsker & Young (2010) suggest that program decisions drive revenue mix and revenue return; hence, a more productive resource development strategy might well start with the notion that programming choices determine the kinds of income support that are most productively cultivated, and those revenue-seeking strategies should begin with an examination and possible adjustments to program portfolios' gaps.

These gaps are related to multiple aspects of audit quality, such as the absence of material misstatements, the completion of all tasks required by the firm's audit

methodology, compliance with professional standards, or the avoidance of economic problems for a company (Brenk et al., 2022). Reheul et al. (2017) present essential independent qualitative features of an auditor's decision-making process that every auditor must have; these are: 1) competence, 2) risk tolerance/assessment, 3) conservatism, and/or independence; these characteristics are directly associated with the audit opinions. These audit opinions are significantly relevant to the lawmakers because of the origin of the audited resources; these awarded grants are taxpayers' money and are constantly under fiscal scrutiny. In contrast, commercial organizations' scrutiny is significantly different from nonprofit organizations because the resources subject to financial reporting and testing do not have taxpayers' dollars as a source.

The type of auditor (Big-4 versus non-Big-4) can also affect the quality of internal control (IC), since Big-4 auditors may enjoy more independence given their diversified client portfolio and thus exert more pressure on management to improve IC. (Chalmers et al., 2019). The OMB Circular A-133, popularly known as the "Single Audit," establishes guidance through two specific objectives; 1) to increase grantee accountability and 2) to decrease the administrative burden for grantees (Tassin et al., 2019, p. 2). Furthermore, nonprofit organizations take the audit report disclosed by independent auditors very seriously because this identifies any deficiencies in the design or operation of internal controls discovered during the audit and provides an opinion on whether the nonprofit has complied with applicable laws, regulations, and federal grant requirements (Feng, 2020). In performing tests of internal controls, auditors also assess whether the audit is considered "low risk" and report this risk assessment to the federal government. To be considered "low risk," the nonprofit's past two annual audits must have had "clean"

opinions, no internal control deficiencies (ICDs), and no audit findings. An empirical study based on 12,618 audit observations performed between 2005 and 2015 indicates that the audit fee paid to incumbent auditors is positively related to the adverse audit quality proxy, significantly and positively correlated with adverse audit quality, and significantly but negatively correlated with audit quality proxy (Asthana et al., 2019). Also, Boone et al. (2010) found weak evidence that the Big 4 have a higher propensity to issue going-concern audit opinions for distressed companies; however, the performance-adjusted abnormal accruals for Big 4 and Second-tier audit firm clients appear to be similar. Audit information is particularly relevant in the charitable community, as several constituent groups rely on the information provided by an audit; this information goes beyond the information available on Tax Form 990 (Amin & Harris, 2017). In addition, IRS regulations require charitable organizations to make copies of their tax filings available to any donor or potential donor who requests them (Gordon et al., 1999).

According to Feng (2020), "the issuance of internal control deficiencies is driven primarily by the riskier clients that have either the Big 4 or specialist firms, while qualified audit opinions are primarily driven by the riskier clients that have small audit firms." "Based on auditing practice literature, the female gender presents a higher prevalence of lower risk tolerance, higher conservatism, and independence" (Reheul et al., 2017). Unlike audits of for-profit companies, Garven et al. (2018) found that in the nonprofit sector, mid-tier audit firms are, in some cases, associated with higher financial reporting quality than Big 4 firms or small CPA firms. The Sarbanes-Oxley Act (SOX) instituted numerous changes that impact auditor selection choices, such as restrictions on auditors providing non-audit services and the increase in the scope of auditor duties;

therefore, audit firms mainly depend on the client firm's switching cost (Ahrum et al., 2020).

Also, according to Feng (2020), Big 4 audit firms make fewer going concern reporting errors than non-Big 4 audit firms, suggesting that Big 4 auditors provide higher audit quality. Krishnan & Scheauer (2000) found that the extent of noncompliance in audit opinions decreased as audit firm size increased. The Single Audit Act has increased audit fees due to additional audit procedures, increased potential liability, and requirements that auditors receive supplemental audit training; however, this increase in costs might be offset by reducing the number of audits conducted and/or enhancing auditor efficiency (Keating et al., 2005a). According to Stout et al. (2001), "Audits of Certain Nonprofit Organizations" noted that assessment of materiality involves both quantitative and qualitative judgments; this is quite different in regard to establishing a materiality assessment for a for-profit organization, which is usually a percentage of the total assets, total revenues, or some other measure of an organization's size. The literature about how nonprofit organizations articulate their decisions on selecting their auditors is inconclusive; however, it demonstrates a positive relationship between audit quality and audit expense (audit fees). Therefore, it is expected that nonprofit organizations would explore audit firms whose fees might increase before the nonprofit organization's executive committee makes decisions based on the perception of an increase in the value of the audit engagement.

Financial Sustainability

Sustainability is a reasonable effectiveness standard for nonprofits because it indicates stability to persist, satisfy clientele, and weather crises (Chang & Tuckman,

1989, p. 659). According to Dollery & Grant (2011), sustainable development is a process that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs." Bowman (2011) defines financial sustainability as the rate of change in capacity in each period, where capacity consists of resources that give an organization the wherewithal to seize opportunities and react to unexpected threats. However, the literature uses financial sustainability and vulnerability interchangeably, ignoring that financial sustainability measures the capacity and ability to continue existing. Denison & Beard (2003) contrast these two constructs when explaining “a more meaningful interpretation of financial vulnerability by considering a continuum of financial vulnerability between financial sustainability and demise.” Furthermore, Laureano et al. (2018) said that in a period of significant financial instability, where public funding is increasingly low, these organizations seek other sources of funding, particularly individual donors since they can guarantee their financial sustainability. In other words, when nonprofit organizations face financial vulnerability, they experiment with increasing other resource streams to be sustainable. The sustainability principle posits that the long run is reached through successive short runs, requiring consistency between the short term (as measured by annual surpluses) and the long term (as measured by asset growth) (Bowman, 2011, p. 40). Interestingly, Kilbey & Smit (2014) present funding difficulties as a synonym of financial vulnerability, indicating that; “While nonprofit organizations face many funding difficulties and challenges, there is a great deal of scope for organizations to improve and develop their fundraising capacity.” Therefore, nonprofit organizations could seek to increase fundraising efficiency to offset their financial vulnerability and achieve financial sustainability. In addition, Carroll &

Stater (2009) found that nonprofit organizations are more volatile over time, suggesting that organizations that rely mainly on contributions may be most at risk from resource dependency. Therefore, a highly competitive market for nonprofit donations might negatively influence the levels of financial instability for organizations that rely mainly on donations. According to Calabrese (2012), nonprofit net assets are differentiated from for-profit equity by the ability of donors to restrict certain assets. Also, because, on occasion, financial resources acquired by nonprofits are for specific missions, those restrictions increase the likelihood of experiencing financial sustainability. On the other hand, the impediment to matching cash inflows to cash outflows comes from the large proportion of time-restricted or use-restricted donations; therefore, cash outflows that are not easily or currently funded by donors pose a significant threat to the liquidity position (Zietlow et al., 2007).

Literature Review Summary

In summary, this literature review covers the most relevant components of the relationship between the financial sustainability of a nonprofit organization. Therefore, the most relevant takeaways from this literature review reside in their developed constructs. The construct of Complexity considers that in order to generate revenue, an expense must be incurred, but simultaneously a significant increase in sources of revenue translates to a more complex internal control financial structure and, therefore, an increase in complexity in the overall financial operations. The construct of Financial Vulnerability considers the financial constraints during a specific period and their current relevance to the organization's financial performance. The construct of Government Contributions is considered due to its historical representation as the most significant

source of revenue for the nonprofit organization and its direct relationship to its financial operations. The construct of Public Contributions considers the significant financial streams as a direct interaction of the services offered to the public. The construct of Program Revenue considers the potential flexibility these resources contribute, including new services, improving current services, and servicing, as financial cushioning due to its unrestricted fund characteristic. External Auditors' Quality considers the different auditors and their critical internal control approach, potential corrective course of action, and relevancy in discriminatory evaluative material before governmental authorities. Lastly, Financial Sustainability is a significant component of measuring going concern avoidance; therefore, its theoretical and practical differentiation is vital to understanding this phenomenon and identifying the most significant factors to avoid its demise.

CHAPTER III. RESEARCH MODEL AND HYPOTHESES

The research model examined in this study has been developed based on an in-depth literature review focused on nonprofit organizations' nature, needs, perceptions, and financial performance. The expected results of this research might open new horizons in the nonprofit community; due to the research design, the likelihood of challenges and limitations is similar to other financial and accounting related studies performed in the nonprofit industry.

The focal context of this study is the Head Start Program, which has been extensively reviewed (e.g., Datta, 1969; Williams & Evans, 1969; Smith & Bissell, 1970; L. K. Miller & Schneider, 1970; Bentler & Woodward, 1978; L. Miller, 1986; Lubeck et al., 1997; Hinitz, 2014; Bauer & Schanzenbach, 2016). The decision to choose Head Start as the research context was motivated by four factors: 1) Rigor in Program Requirements, 2) Program Longevity, 3) Program Proven Effectiveness, and 4) Geographical Coverage. However, we notice through the literature exploration that several financial repercussions, such as federal resource cuts, program service reductions, and even entities disbanded, have been perceived due to improper definitions and incorrect operations based on erroneously established nonprofit organizations' financial performance (Blouin et al., 2018; Harris et al., 2019).

According to Carman (2009), nonprofits, governments, and foundations typically focus on outcomes and results. For example, the Government Performance and Results Act (GPRA, 1993) at the federal level required that federal agencies develop 5-year strategic plans with performance goals and indicators. Also, the General Accounting

Office (GAO), which serves the Congress of the United States, promulgates and oversees auditing guidelines through the United States Government Auditing Standards (U.S. GAS), commonly referred to as the "Yellow Book." The GAO articulates Generally Accepted Government Audit Standards (GAGAS) for financial and performance audits (Copley, 2009). In recent years, Head Start has begun to offer more detailed service guidelines and quality requirements. For example, Head Start conducts triennial on-site federal monitoring reviews, which are external reviews that occur at least once every three years and evaluate Head Start agencies' compliance with the program performance standards, including program governance, fiscal integrity, and child health, safety, development, and education (Joshi et al., 2015).

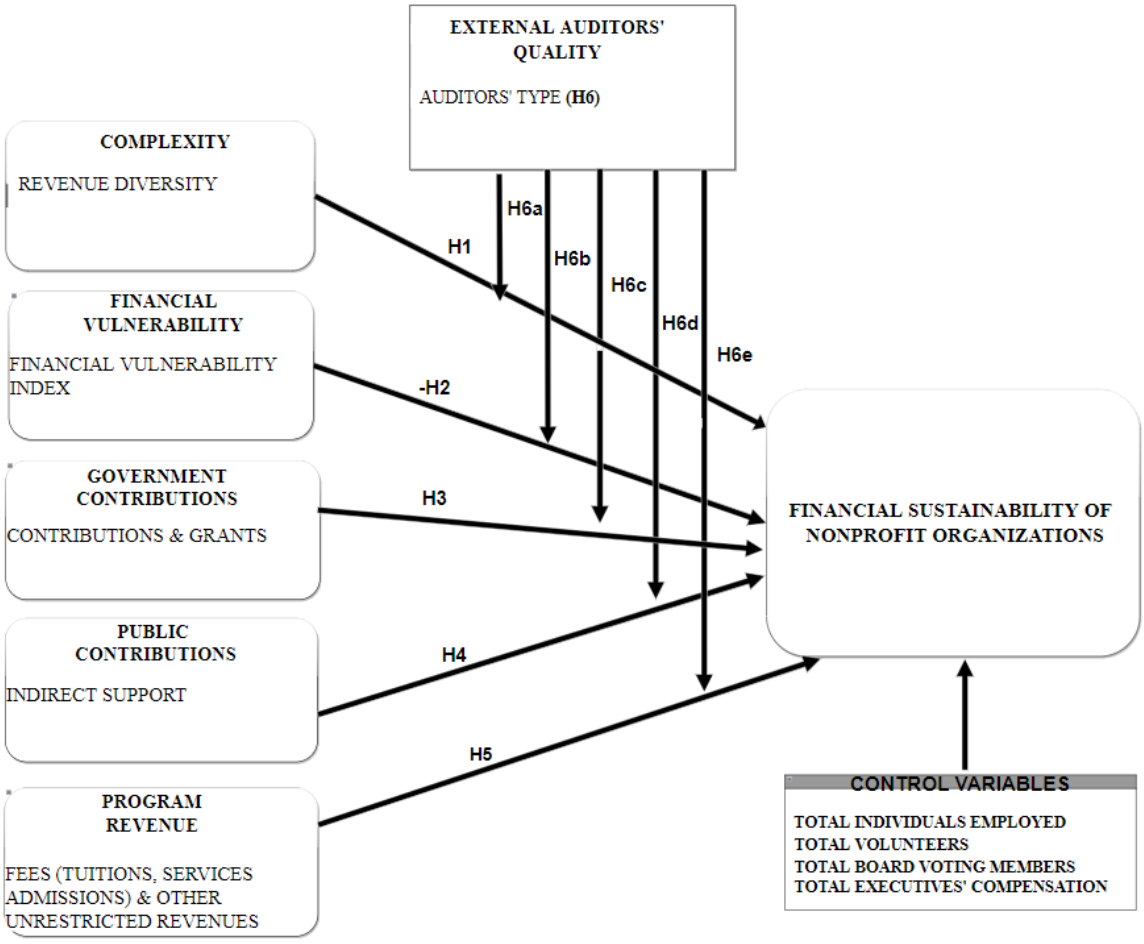
The literature defining financial measures and vulnerabilities has been an extensive and significant presence since the 1980s (e.g., Weisbrod & Dominguez, 1986; Chang & Tuckman, 1989; Tuckman & Chang, 1991; Lee & Trussel, 2000; J.M. Trussel et al., 2002; Keating et al., 2003; Keating et al., 2005; C. Petrovits et al., 2011; E. Harris et al., 2017). However, some financial definitions and operational programmatic terms used in nonprofit organizations have been untouchably acquired from for-profit entities without considering the disparity within the nonprofit industry. For instance, comparing financial performance under both business contexts (e.g., the for-profit financial performance focuses on increasing profits vs. the nonprofit financial performance focuses on decreasing vulnerability and providing social services). These acquisitions of concepts from for-profit entities, used by nonprofit entities without a thorough conceptual evaluation of the terms, have created confusion in academia and practice. In addition, the literature presents some critical gaps in financial vulnerability and financial sustainability

that have been used interchangeably on occasion (e.g., Dollery & Grant 2011). Both financial concepts, however, appear to have some unclear conceptualization or overlap problems. Therefore, this research aims to fill two (2) main theoretical gaps; 1) to reduce the gap between financial vulnerability meaning and financial sustainability meaning in nonprofit organizations, 2) contribute with practical empirical evidence on financial factors that might significantly increase the going concern risk in nonprofit organizations. This research intends to address theoretical gaps through the following: 1) defining conceptual misconceptions between financial vulnerability and financial sustainability, explaining their differences and core elements by using the current financial nonprofit literature together with empirical statistical results; 2) identifying empirically the relationships between the most relevant financial factors in the nonprofit organizations' financial performance distress measures and the financial sustainability measures generally used in nonprofit organization literature. Understanding these concepts and identifying their relationships will allow establishing the financial limitations due to financial vulnerabilities, financial sustainability, or both; these simultaneously translate to reducing going concern risk.

The research model positions the Financial Sustainability of Nonprofit Organizations as the dependent variable of interest. This research is modeled as a function of five different characteristics of nonprofit organizations as independent variables: Complexity, Financial Vulnerability, Government Contributions, Public Contributions, and Program Revenue. Also, this research model contemplates a moderator variable in the External Auditors' Quality function.

Therefore, the following research model has been proposed:

Figure I. Research Model



Relationship between Complexity and Financial Sustainability of Nonprofit Organizations

Nonprofits earn revenue from gifts, grants, program services, membership dues, sales of inventories, and investments. Organizations with fewer revenue sources may be more vulnerable to financial shocks than those with multiple revenue sources (Greenlee & Trussel, 2009). In the context of the higher education sector (public or private), an area where nonprofits are well represented, the research performed by Love (2018) found that revenue diversity and resource efficiency would sustain university funding. Moreover, universities ranked lowest in contributions, investment income, revenue, net gains, and

net losses would not sustain the funding challenges over time. Charities with a few revenue sources are more vulnerable to financial distress than those with multiple revenue sources; hence, a charity with multiple sources can rely on alternative funding sources and thus avoid reducing its program services (Copley, 2009). Nonprofit organizations usually have several revenue streams (e.g., grants, public contributions, program revenue). Nonprofit organizations with a highly concentrated revenue level demonstrate that their revenue resources are generated from a specific or less diversified revenue portfolio. Therefore, a sudden financial shock to that specific revenue stream might reduce normal operations. Moderately concentrated revenue levels indicate that several revenue streams are part of the revenue portfolio; therefore, a sudden financial shock to a specific revenue stream might not contribute to the reduction of normal operations. One way to measure the dependence of a nonprofit on its revenue streams is to focus on the degree of concentration, which ranges from zero to one (Myser, 2016). A measure of one under revenue diversity indicates extreme revenue concentration, and values closer to one are more concentrated on a singular revenue source. Thus, a measure approaching zero indicates more revenue diversity and a favorable revenue position.

Also, Kingma (1993) indicates that revenue diversity is a measure of predictability or vulnerability because a revenue shock is more likely to affect one revenue source than it is to affect all sources at once. Chikoto & Neely (2014) mention that the number of funding streams appears to influence the degree to which this variable effectively contributes toward growing one’s restricted and unrestricted net assets over time. Usually, the current year's net assets are accumulated in subsequent years as unrestricted or restricted net assets. Restricted Net Assets are accumulated financial

resources with a predetermined purpose (e.g., restricted grants, restricted foundation funds); their use is strictly for the pre-established purpose. Compared to restricted net assets, unrestricted net assets are accumulated financial resources free for use (e.g., program revenue, unrestricted foundation funds). This argument is fascinating because an increase in unrestricted net assets might be translated into broader programmatic offerings, including an increase in the population served, newly offered services, or a favorable view, both previously mentioned approaches.

Consequently, this research will also observe the relationship between restricted and unrestricted net assets with respect to the level of financial sustainability in nonprofit organizations. Organizations with more unrestricted net assets (than restricted ones) should be able to withstand financial shocks better since they could react faster in moving financial resources between programs. However, increasing revenue diversity requires increasing internal controls, generating more complex and robust protection for the nonprofit organization's financial performance. Therefore, exposure to a financially sophisticated environment historically coexists with an incremental degree of complexity in the design of a revenue portfolio. This approach aims to identify the most significant components of financial vulnerability before exposure to economic shocks and simultaneously understand their relationship to financial sustainability to mitigate financial risk. Therefore, the following hypothesis has been generated:

Hypothesis 1*: An Increase in Complexity, measured by Revenue Diversity, will increase the Financial Sustainability of Nonprofit Organizations.*

Relationship between Financial Vulnerability and Financial Sustainability of Nonprofit Organizations

Cerullo & Cooney (2011) found that most nonprofit managers with no formal evaluation training often mistake accountability practices with accurate outcome measurement and evaluation. Therefore, we can infer that in order for nonprofits to be able to contemplate future governmental grants, considerations towards effective accountability and effective compliance are required. Nonprofit managers without training in nonprofit financial accounting could incorrectly infer the importance of accountability requirements (e.g., revenue restrictions, expenses restrictions) and compliance (e.g., revenue recognition, audit requirements, financial reporting requirements). Accountability requirements and compliance issues work synergistically and might generate a loss of future awards if a complete understanding of the use of the financial resources and their components is not acknowledged. This inference might be one of the most critical topics to evaluate when applying to the subsequent funding year.

According to Helmig et al. (2014), the organizational success of NPOs will depend on how their mission is measured in terms of short-term outputs and long-term impact. The level of abstraction of the evaluative component of for-profit organizations (e.g., profit and loss statements) is less cloudy when compared with the evaluative component of nonprofit organizations. Nonprofit organizations are evaluated in a programmatic manner (e.g., families served, child aptitude, reading comprehension) and under financial performance (e.g., expense allocations, revenue recognition, debt level). However, nonprofit funds' providers also have social, programmatic performance measures as requirements to retain and subsequently apply for financial resources in

coming years. Also, incorrect financial decisions made in for-profit organizations (e.g., Commercial Banks, Investment Banks) are diluted as operational costs and, in better situations, write-off as lost in their financial statements without any political remorse.

Nevertheless, on nonprofits, diluted operational costs are not likely to occur due to allocation cost requirements, and write-off is practically non-existent because it could result in recognition of gains, which is outside the scope of the nonprofit organization's function. The purpose of nonprofit organizations is to serve society without expecting remuneration (contrary to for-profit entities). The burden of being "profitable" is practically non-existent; therefore, the characteristic of generating profits for distribution through stakeholders is not required or expected.

After completing a year of operations, the remaining revenues not spent during the year are rollover to the equity balance of the nonprofit organization. More significant equity balances represent the long-term financial stability of a nonprofit. This financial stability allows organizations to borrow or convert an unrestricted portion of net assets to cash to overcome unexpected financial difficulties (Kim & Jung, 2015). However, this accumulated equity needs to be strictly justified because stakeholders might observe that practice as incorrect and moreover, an overstatement to the financial plan. Donors necessarily view wealth accumulation negatively; accumulated available wealth (less than two years' worth of expenses) generally is observed as positive on contributions (Calabrese, 2011, p. 867). Therefore, nonprofits are not created to generate and retain wealth; the perception of wealth retention by donors could send an incorrect message and retract donors' contributions, creating an environment of potential future financial vulnerability. Like any other for-profit business, nonprofit organizations use financial

analytical tools to establish the adequacy of financial performance. These financial analytical tools are recognized as financial ratios. These financial ratios are used as a barometer to observe financial performance that is not directly observable through reading the entity's financial statement. Ritchie & Kolodinsky (2003) found six financial performance measurement ratios (commonalities on all six variables were above .87), representing three performance-related categories: fundraising efficiency, public support, and fiscal performance. These financial ratios are 1) Total Revenue divided by Total Fundraising Expenses. 2) Direct Public Support divided by Total Fundraising Expenses, 3) Total Revenue divided by Total Organizational Expenses, 4) Total Contributions divided by Total Organizational Expenses, 5) Direct Public Support divided by Total Assets, and 5) Total Contributions divided by Total Revenue. Interestingly, when these financial ratios are compared with the financial distress ratios as the core elements of the Financial Vulnerability Index, we can determine that the first four (4) financial ratios and the sixth (6) financial ratio presented by (Ritchie & Kolodinsky, 2003, p. 374) are intrinsically represented in the Surplus Margin Ratio as one of the components of the Financial Vulnerability Index. The nominator is captured under the Surplus Margin Ratio in the fifth (5) listed ratio (Total Public Support divided by Total Assets). The denominator is partially captured in the Size measure of the Financial Vulnerability Index as a measure of the natural log of total assets.

The performance focus of the financial ratios presented by (Ritchie & Kolodinsky, 2003), capture significantly the financial components related to short-term financial performance and not the financial vulnerability phenomenon as a whole, with the slight exceptions of two financial ratios (Direct Public divided by Total Assets &

Total Contributions divided by Total Revenue). Hence, the Financial Vulnerability Index's factors represent a more robust measure of financial vulnerability due to its implicit evaluation of Debt, Administrative Cost, Assets, and Revenue Concentration. In addition, Calabrese (2011) found that nonprofits within subsectors behave relatively homogeneously; in other words, similarly sized nonprofits behave alike (regardless of the mission) and face similar incentives.

Nonprofit organizations rely on grants, contracts for service, and sales of goods and services as the primary source of revenue to finance their operations; however, their revenue portfolios will significantly define their financial and operational strategies toward their scope and organization's mission legitimacy (Carroll & Stater, 2009). Interestingly (Chang & Tuckman, 1989; Tuckman & Chang, 1991; Greenlee & Trussel, 2000) present and used the Financial Vulnerability Index as a financial vulnerability measure tool based on five (5) Financial Distress Indicators[1] please see Appendix B, Financial Distress Indicators. The components of the Financial Vulnerability Index were pursued to evaluate several different financial areas, presented as follows: 1) Debt Ratio; which evaluates financial vulnerability according to inadequate equity balances; 2) Revenue Concentration; which evaluates financial vulnerability according to lack of revenue diversity, 3) Surplus Margin; evaluates financial vulnerability according to low excess of revenue, 4) Administrative Cost Ratio; evaluates financial vulnerability according to low

[1] The Financial Vulnerability Index presented originally by Tuckman and Chang (1991), contains four (4) financial distress ratios these are 1) Equity Ratio, 2) Revenue Concentration Ratio, 3) Administrative Cost Ratio, 4) Operating Margin. Greenlee and Trussel (2000), include the measure of Size 5) based on Total Assets.

administrative cost, and 5) Size; evaluates financial vulnerability according to the dollar amount of assets. The goal is to maintain a beneficial financial condition that ensures organizational survival to satisfy their programmatic strategy, diminishing exposure to financial vulnerability. In summary, the factors that will measure Financial Vulnerability are intrinsic in the Financial Vulnerability Index, and are the following: Debt Ratio, Revenue Concentration, Surplus Margin, Administrative Cost Ratio, and Size. Table II. Financial Distress Measures vs Financial Sustainability Expectation (p.76), presents the proposed relationship of the Financial Distress Measures with Financial Sustainability. Therefore, the following hypothesis has been generated:

Hypothesis 2*: High levels of Financial Vulnerability, measured by the Financial Vulnerability Index, will decrease the Financial Sustainability of Nonprofits Organizations.*

Relationship between Government Contributions and Financial Sustainability of Nonprofit Organizations

The Uniform Guidance, issued in December 2013 and effective in 2015, superseded and streamlined guidance from eight previous OMB circulars. A key aspect of the Uniform Guidance reform is that it raised the single audit threshold to $750,000 in federal awards from the previous threshold of $500,000 in federal awards (Tassin et al., 2019). In addition, when an organization receives federal funds, it must adhere to specific government performance standards and regulations in order to use those funds. Kitching (2009) performed a study analyzing 349 organizations on the National Charities Information Bureau (NCIB), concluding that charities benefit simply from a higher

quality auditor correlated with the donors' decisions. Recurrent donors are genuinely interested in the operational performance and financial performance of the nonprofit entity to which they contribute. Therefore, donors closely follow the reputation of the audit firm performing the audit examination of the financial statements and internal controls, and more importantly, the outcome of the auditors' opinion toward the financial statements (Kitching, 2009; Reheul et al., 2017). An unqualified opinion over the financial statements provided by a well-respected accounting firm serves the donors as a positive assessment that their contributions are indeed working towards a cause.

Governments have several reasons to prefer subsidizing nonprofits rather than providing services independently; however, the following three are some of the most significant. First, it may garner political support for the party; second, the government's share of the operating costs may be lower; and third, volunteer labor available to schools and hospitals means lower costs in providing these services (Luksetich, 2008a). Though nonprofit organizations receive funding from government, state, and/or federal sources, they must adequately use these resources following their appropriate financial pronouncements and guidelines (e.g., US GAAP, OMB A-122, OMB A-133, Congress, 2007) to assess and avoid wrongly used waste. In essence, even when nonprofit organizations receive funding from several sources, the government contributes approximately 44 percent, representing the most significant revenue source (Silverman & Patterson, 2011, p. 443). The operational behavior of nonprofit organizations is multifaceted due to their general contracting in the nonprofit sector (Lipsky & Steven, 1991, p. 629). Nonprofit organizations have multiple sources of resources (e.g., foundations, state governments, and the federal government); the ones that have

historically predominated are commonly called “passed-through grants” and once called "third-party government” (Salamon, 1987). These nonprofit organizations have plenty of opportunities open as far as their external performance is under the procedures, norms, and previously established thresholds for services (Lu et al., 2019b). These resources will follow and accommodate the relevant services (e.g., immigration services, nonprofits, preschool nonprofits, hospitals, and universities). Heutel (2014) found that government grants can respond to private donors in the same way that private donors can respond. In essence, governments are nonbenevolent, including charity response or considering various equilibria in which private donors and governments move endogenously, but for nonprofit operations included. However, financial operations in nonprofit organizations are significantly relevant for the overall perception of financial sustainability and for the organization's continued status as a recipient of financial resources.

Nonprofit organizations should strive to operate financially in balance because operating in net income or net loss carries its own financial operational, and programmatic repercussions. Nonprofit organizations working on the net income side are perceived by lawmakers and granting entities as overestimated awarded nonprofits. Therefore, a subsequent new award is reduced due to the previous factual overstatement. Also, nonprofit organizations operating at a net loss provide a perception to the lawmakers and governmental grantors that the totality of the assigned and awarded resources was not projected cautiously or, occasionally, observed as probable signs of resource misuse or waste. Under this assumption, the government chooses a level of contributions to maximize social welfare; a symmetric result is that private donations crowd out government grants at a one-to-one rate (Heutel, 2014, p. 145). Government

grants are less susceptible to unpredictable shifts than donations or other revenue sources; therefore, nonprofit organizations perceive governmental funds as less risky resources (Myser, 2016). Smith (2010) said that, more generally, nonprofit organizations receiving public funds face markedly higher expectations of transparency and reporting on their programmatic and financial operations. This behavior occurs because many states and localities have restructured their contracts to place them on a performance contracting basis, at which point the government does not reimburse nonprofit agencies receiving public funds unless they meet specific performance targets. Also, government contributions as sources of taxpayers' funds are under constant assessment from governmental authorities and, therefore, subject to evaluation of the best uses within the communities, without excluding the additional economic effort made by the grantee to achieve and sustain its mission. Thus, if the government sufficiently meets public demand, there is no incentive for people to personally contribute insofar as the good is already paid for indirectly by their taxes (Kim & Mason, 2020). Consequently, the previously explained approach represents an advantage to the nonprofit in obtaining resources more frequently. Also, it creates a mutually beneficial relationship between the government (e.g., offering public services through nonprofits) and nonprofit entities (e.g., receiving recurrent financial resources through the government). Therefore, government contributions are expected to contribute to the financial sustainability of nonprofit organizations. Thus, the following hypotheses have been generated:

Hypothesis 3*: High Levels of Government Contributions, measured by the total Contributions and Grants, will increase the Financial Sustainability of Nonprofit Organizations.*

Relationship between Public Contributions and Financial Sustainability of Nonprofit Organizations

According to Mook et al. (2005), a significant amount of nonprofits' value comes from volunteer contributions, which are not reflected in conventional accounting statements because they are not exchanged in the market. Cheng (2018) found that communities with more financial resources will likely generate more financial support for local nonprofit organizations, such as donations and earned income opportunities. Indirect contributions are the difference between total contributions and the total of government grants plus the total program revenue for a given year. The increase in different types of public contributions certainly decreases the financial dependency of nonprofit organizations and will most likely contribute to their success by including additional resources for bringing more services to the community and simultaneously exploring new possibilities for services. However, these contributions must relate directly to the primary purpose for which the organization received its tax-exempt status (Grasse et al., 2019). Additionally, according to Nageswarakurukkal et al. (2019), pressure to maintain low overhead costs and familiarity with traditional fundraising mechanisms may hinder their ability or willingness to alter their fundraising strategy. Some of these pressures are toward increasing donations called "In-kind." In-kind donations are direct or indirect non-cash donations of services or products (Boura et al., 2022). In-kind services (also goods) are provided to the nonprofit organization for the benefit of the

community, and these transactions have no financial cost on behalf of the nonprofit organization. However, these In-kind donations are recorded in the financial records of the nonprofit organization at the fair market value of the services received and passthrough to the community. In other words, the In-kind donation does not cost the entity; however, the provided service is recorded as "revenue" due to the fair market value of the services offered. Therefore, this revenue recognition is not recorded as "net revenue," nor as a gain in the financial statements because of the principle of exchange of services and/or goods at their fair market value. When recording the in-kind contribution, the offset to the revenue amount would be the corresponding value as an expense of in-kind goods or services; thus, revenue equals the expense, and no profit has been realized.

Nonprofit organizations depend heavily on these types of donations because of their service cost efficiency and, in essence, their unique provision of health services. These donations could come in different forms (e.g., dentist service fees, accountant service fees, fundraising by field personnel). Therefore, these In-Kind donations on occasion translate financially into huge savings for the nonprofit organization because they represent services that are needed and required to be offered to the community at minimal cost or, on occasion, at no cost. The rationale behavior under this previous argument is that an increase in public contributions will translate to an increase in financial sustainability because public contributions include a component of unrestricted financial resources that are collected but not expected, reducing the burden on overhead costs and extracurricular operations. Therefore, the following hypothesis has been generated:

Hypothesis 4*: High levels of Public Contributions, measured by the total indirect support, will increase the Financial Sustainability of Nonprofit Organizations.*

Relationship between Program Revenue and Financial Sustainability of Nonprofit Organizations.

In general, a nonprofit's main sources of revenue include government agencies (contracts and grants), fees for services from self-paying participants, fees for services from the government as a third-party payer (such as Medicaid), private contributions (donations and foundations), federated giving (such as United Way), investment income, and others (Lu, 2015b). According to Copley (2009), a charity with multiple sources might be able to rely on alternative funding sources and thus avoid reducing its program services; in other words, charities receiving revenues from fewer sources are more likely to become financially distressed, a predicted positive relationship. The revenue structure of nonprofits may also influence the need and ability to attract funds for a permanent endowment. For example, high levels of program service revenue and government grants and contracts may indicate that an organization can be self-supporting without a permanent source of investment income (Ely et al., 2020).

Program revenues are often presented in the financial statements as unrestricted assets by the organization. At the same time, unrestricted assets are also gained through investments and other unique fundraising sources from nonprofits. These resources are often used for administrative costs and employee salaries (Brown, 2016). Reckers (2008, p. 273) indicated that program revenues are business-like resources that require market discipline and thus send quality signals. According to Carroll & Kachersky (2019), the traditional view of nonprofit organizations regards fundraising for charitable donations as

their primary source of revenue; nonprofits rely on grants, contracts for service, and sales of goods and services to finance operations and capital improvements. Interestingly, Calabrese (2012) contrasts corporate accounting vs. nonprofit accounting equity recognition; corporate accounting differentiates between resources invested in a firm and the profits generated from operations (exchanges with customers). In contrast, nonprofits that raise capital through gifts (such as through a capital campaign) report such infusions as revenue (the not-consumed revenues pass to retained earnings). Equity is the difference between a nonprofit's total assets and total liabilities. Also, equity has several forms and can be held in a restricted or unrestricted, liquid or illiquid form. Nevertheless, restrictions on the use of equity can limit the extent to which a nonprofit can use its equity to offset financial shocks; a nonprofit's equity position is important in at least four ways (Chang & Tuckman, 1989, p. 660). Luksetich (2008a) found that for nonprofits, fundraising spending has a positive and statistically significant relationship to the size of the grants available to them; only their fundraising expenditures affect program service revenues. The availability of increased resources to be used in fundraising campaigns is vital because grantors are more likely to include a percentage of the coverage of the entity’s overhead costs in the contributions. The portion of resources allocated to cover the entity’s overhead costs is flexible. Nonprofit organizations use them to maximize their resources with fundraising campaigns to acquire more unrestricted funds (e.g., program revenue). Program service revenue is a flexible source of income for nonprofit organizations; the increase in program revenues allows more resources to be allocated to the growth and quality of the programs (Trussel, 2003a).

According to Myser (2016), unrestricted net assets represent one of the best

resources for nonprofit organizations because they allow nonprofit managers the widest selection of choices for expenditures to leverage programs and fund expansions, offer protection against vulnerability, or create additional programs for an organization.

Although restrictions on the use of equity can limit the extent to which a nonprofit can use its equity to offset financial shocks, a nonprofit's equity position is essential in at least two ways. 1) Unrestricted liquid assets available to sustain or replace lost revenues. 2) Unrestricted illiquid assets present as collateral to secure loans. This approach is particularly the case if such assets are held in transferable form (Chang & Tuckman, 1989, p. 660). The following hypothesis has been generated:

Hypothesis 5: *High levels of Program Revenue, measured by the total tuition fees, service fees, Admission fees, and other unrestricted revenues, will increase the Financial Sustainability of Nonprofit Organizations.*

External Auditors' Quality as a Moderator

Even though the monitoring role of auditors requires a focus on the public interest, the audit is a credence good where it is difficult for an outsider to observe differences in audit quality (Brenk et al., 2022). The widely used definition by DeAngelo (1981, p. 186) defines audit quality as "the market-assessed joint probability that a given auditor will both discover a breach in a client's accounting system and report the breach." Reheul et al. (2017) present valid independent qualitative features of an auditor's decision-making process that every auditor must have; these are: 1) competence, 2) risk tolerance/assessment, 3) conservatism, and/or independence; these characteristics are directly associated with the audit opinions. Unlike for-profit firms, nonprofit organizations do not predominantly select the Big-4

audit firms; instead, numerous specialist and small audit firms are selected to conduct most of these audits (Keating et al., 2005b). The auditor type (Big-4 versus non-Big-4) can also affect Internal Control (IC) quality since Big-4 auditors may enjoy more independence given their diversified client portfolio and thus exert more pressure on management to improve IC (Herda et al., 2014).

Empirical evidence indicates that specialist auditors are better at assessing the reasonableness of the financial estimates of their nonprofit clients (Garven et al., 2018, p. 4). Feng (2020) noticed that proxies for audit quality are higher (e.g., smaller discretionary accruals) when companies are audited by the Big 4 audit firms, auditors from larger offices, industry specialists, or when the auditor–client relationship is longer. Also, Petrovits et al. (2011b) report that organizations with audits performed by national, large regional, and specialist firms report fewer internal control problems. Larger auditing firms spend relatively more time assessing internal controls and less time performing detailed tests than smaller auditors (Herda et al., 2014). Therefore, we can infer that, compared to the Big 4, medium and small audit firms concentrate more of their audit hours on field audit testing than on assessing internal controls. Amin & Harris (2017) found an inverse relationship between going concern opinions (GCO), government grants, and total contributions. This finding is significantly relevant due to the context and required sample of this research. Interestingly, Harris et al. (2019) found that local industry specialist auditors are associated with higher governance quality, poorer financial health (losses), and greater complexity. Nonprofit entities audited by non-Big 4 local industry specialist auditors have shorter audit report lag and see more future direct donations than

nonprofits audited by non-specialist auditors and Big 4 auditors (Harris et al., 2019, p. 635). Additionally, insufficient financial health is associated with industry-specific auditors. The in-depth knowledge of a specialist in the subject is associated with an increase in financial audit findings, which translate into significant corrections to the financial statements (e.g., reclassification of revenues, corrections in expense allocations, incorrect accruals). Therefore, a correction to the financial statements might result in an unfavorable financial position for the nonprofit organization's management. These resources are significantly relevant to nonprofit organizations and come with norms and restrictions to follow, as defined in related guidelines. Also, some federal regulations require uniformity in the treatment of financial resources, not only in the granted resources but also in the totality of the resources presented in the revenue portfolio of the awarded nonprofit entity.

Lu (2015b) explained that the potential risks might make nonprofits less willing to rely on government funds due to their external performance and governmental audit requirements. Therefore, when setting accountability and disclosure policies, predicting which organizations may become financially vulnerable is also essential for government regulatory agencies. Government agencies, private foundations, and banks use audited financial statements to screen for grant and loan decisions (Amin & Harris, 2017, p. 330). As a result, nonprofit organizations should view external auditors as experts and consultants of the nonprofit industry's accounting and finance practice rather than prosecutors of the rules. Also, predicting financial vulnerability is important for external auditors when determining the inherent risk in an audit, foundations when distributing and

monitoring grants, and management during the strategic planning process (Keating et al., 2005b). However, Feng (2020) indicates that the Big 4 auditors are less likely to issue internal control reports, but they conclude that this result is driven by self-selection; in other words, the Big 4 auditors are engaged by higher quality, lower risk nonprofits. Garven et al. (2018) found that the Big 4 firms are not necessarily associated with higher reporting quality in nonprofit organizations, unlike audits of for-profit companies. In the nonprofit sector, mid-tier audit firms are, in some cases, associated with higher financial reporting quality than Big 4 firms. Medium-sized audit firms more often detect misstatements specific to the nonprofit industry (i.e., the program ratio and fundraising costs).

Furthermore, in research evaluating 3,345 nonprofit organizations, Garven et al. (2018) found some support for auditor size; however, medium-sized auditors sometimes appear to provide higher quality than the Big 4 and small audit firms. This outcome is significantly important due to the restrictions on the usability of some specific nonprofits' financial resources (e.g., government grants, restricted funds). Several nonprofits are entitled to significantly restricted funds, which will incidentally impact the acquisition of quality auditors due to their variability in their audit fees. Harris et al. (2019) found that non-Big 4 firms may contribute more to an organization's expertise, credibility, and donor network to help nonprofits attract more donations than other external auditors. The theory of auditor choice remains underspecified; however, the characterizations of the auditor choice process assume that the demand for audit quality results from an information asymmetry between the organization and its stakeholders. Non-Big 4 external auditors are associated with

quality audit reports and are simultaneously perceived as links to potential new donors and the potential increase in new financial resources. According to Francis (2004), auditing appears to be a relative "bargain" in the sense that audits cost a relatively small fraction of client sales; however, the low cost of auditing does not necessarily mean that audit quality is low. Because of the implication of the nonprofit sector for the U.S. economy, it is important to consider how external auditors affect the quality of this financial reporting and, therefore, potential financial sustainability issues. Therefore, the following hypothesis has been generated:

Hypothesis 6: *External Auditors' Quality will have a moderating effect on enhancing the relationship between Financial Sustainability and its antecedents.*

- ***H6a:*** *External Auditors' Quality will positively moderate the relationship between Complexity and the Financial Sustainability of Nonprofit Organizations, enhancing the positive effect when is a High-Quality Auditor than when it is not.*
- ***H6b:*** *External Auditors' Quality will positively moderate the relationship between Financial Vulnerability and the Financial Sustainability of Nonprofit Organizations, diminishing the negative effect when is a High-Quality Auditor than when it is not.*
- ***H6c:*** *External Auditors' Quality will positively moderate the relationship between Government Contributions and the Financial Sustainability of Nonprofit Organizations, enhancing the positive when is a High-Quality Auditor than when it is not.*
- ***H6d:*** *External Auditors' Quality will positively moderate the relationship*

between Public Contributions and the Financial Sustainability of Nonprofit Organizations, enhancing the positive when is a High-Quality Auditor than when it is not.

H6e: *External Auditors' Quality will positively moderate the relationship between Program Revenue and the Financial Sustainability of Nonprofit Organizations, enhancing the positive effect when is a High-Quality Auditor than when it is not.*

Control Variables

Total Individuals Employed: This represents the total number of individuals employed by each nonprofit organization.

Total Volunteers: This represents the total number of personnel with volunteer functions.

Total Board Voting Members: This represents the total number of board of directors' members with voting power.

Total Executives' Compensation: This represents the total compensation of the executive team.

Research Model Equations*:*

The research model equations without interactions and with interactions have been provided, respectively, as follows:

$$\mathcal{FSNO} = \mathscr{b}\emptyset + \mathscr{b}1 * \mathcal{RD} + \mathscr{b}2 * \mathcal{FVI} + \mathscr{b}3 * \mathcal{CG} + \mathscr{b}4 * \mathcal{PC} * \mathscr{b}5 * \mathcal{PR} + e$$

(*without interactions)*

$$\mathcal{FSNO} = \mathscr{b}\emptyset + \mathscr{b}1 * \mathcal{RD} + \mathscr{b}2 * \mathcal{FVI} + \mathscr{b}3 * \mathcal{CG} + \mathscr{b}4 * \mathcal{IS} * \mathscr{b}5 * \mathcal{PR} + \mathscr{b}6 * \mathcal{AUD} + \mathscr{b}7 * \mathcal{RD} * \mathcal{AUD} + \mathscr{b}8 * \mathcal{FVI} * \mathcal{AUD} + \mathscr{b}9 * \mathcal{CG} * \mathcal{AUD} + \mathscr{b}10 * \mathcal{IS} * \mathcal{AUD} + \mathscr{b}11 * \mathcal{PR} * \mathcal{AUD} + e$$

(with interactions)

CHAPTER IV. RESEARCH METHODOLOGY

This research will be conducted using a quantitative approach based on archival data. The unit of analysis of this research is directed at nonprofit organizations that held Head Start Program funds in their revenue portfolio. The Head Start Program is a federal program registered under the US Department of Health and Human Services (DHHS) but managed by the Administration for Children and Families (ACF). The Head Start Program differentiates from other social service programs in terms of the population served, children from birth to age 5; however, their financial structure, accounting guidelines, and procedures are similar to other programs in the same nonprofit sector.

The financial computations will be based on the Financial Vulnerability Theory and Financial Sustainability Theory used in nonprofit organizations. The Financial Vulnerability Theory proposes that an organization is financially vulnerable if the likely response to a financial shock is a reduction in services (Tuckman & Chang, 1991). Financial Sustainability Theory proposes that annual surpluses are sufficient to maintain asset values at replacement cost over the long term while also maintaining short-term financial resources (Bowman, 2011). Research on financial sustainability has focused mainly on describing the measurement of financial sustainability (Bowman, 2011; Zietlow, 2011; Chikoto & Neely, 2014) rather than analyzing the determinants of financial sustainability. Also, this research uses the most relevant nonprofit revenue sources and the effect of the intervention of external auditors (CPA firms) in the internal control measures due to the quality of the CPA firms' work. Several nonprofit studies have found a similar methodology for the analysis of financial vulnerability: Chang & Tuckman (1989); Greenlee & Trussel (2000); J.M. Trussel et al. (2002). However, the

evaluation of financial sustainability will focus on the Financial Sustainability Theory exemplified by Bowman (2011); Ye & Gong (2021). The data collection process will begin with several meetings with the Administration for Children and Families (ACF); DHHS assigned administrators of the federal grant identified under the federal codification criteria as CFDA Number 93.600, commonly known as the Head Start Grant. The intervention of the ACF is significantly relevant because they know and manage the information of nonprofit entities with the Head Start Grant in their revenue portfolio. The primary functional interaction with the ACF is to identify potential participants (roster) within all Head Start regions, with the Head Start Grant in their revenue portfolio based on the legal identifiers (e.g., federal identification number, nonprofit entity names). However, the portal of the Head Start Early Childhood Learning and Knowledge Center, better acknowledged as ECLKC, also provides a comprehensive source of entities with Head Start Grant within their revenue portfolio. The sample roster will be based on the convenience requirements of the sample. The convenience sample requirements were based on the familiarity of the observed region and the potential generalizability due to the observed diversified demographic characteristics.

The data will be generated through the Internal Revenue Service portal in digital form, Returns of Organizations Exempt from Income Tax, more commonly known as Form 990s. The proposed independent and dependent variables related data will be generated based on the roster obtained from the ACF in function of the pre-established literature review foundation and this research's supportive focal theoretical background. The supportive theoretical background has a fundamental approach in the theories of Financial Vulnerability and Financial Sustainability as fundamental sources of financial

health but is not mutually inclusive towards possible going concern risk. The empirical tests will be based on the most relevant literature on professional practices and pre-established financial accounting for nonprofits.

Data Collection

The data will be obtained from the Tax Return of Organizations Exempt from Income Tax (Form 990). It is essential for this research to indicate that Form 990s are often unaudited documents; however, these documents still represent the financial situation of the nonprofit organization. Therefore, this study is consistent with the Financial Vulnerability Theory and the Financial Sustainability Theory regarding the approach to the collection process of financial information. The data collection process is focused on the calendar year 2018. The Internal Revenue Service (IRS) Form 990 is required by Section 6033 for tax-exempt organizations, nonexempt charitable trusts, and Section 527 political organizations that generally have $50,000 or more in gross receipts.

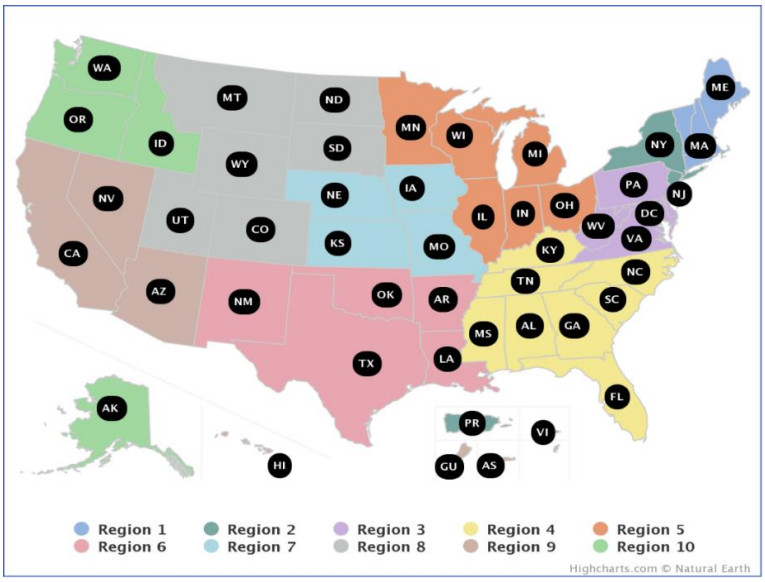
Nonprofit organizations registered and operated exclusively for religious, charitable, scientific, testing for public safety, literary, educational, or other purposes that meet certain other requirements are tax exempt under Internal Revenue Code Section 501(c)(3). Also, Form 990 has a short-form version named Form EZ. However, this variation fulfills the U.S. Tax Code in terms of requirements for taxable information. The IRS provides a digital version of Form 990, which replicates the exact information from the paper version. The digital version of Form 990 has been selected for use in this research due to the convenience of financial analytical manipulation, data preservation, and statistical data conversion advantages. The extracted data will be compiled and analyzed based on identified financial information and financial ratios according to the

obtained financial and accounting nonprofit literature (Petrovits et al., 2011; Trussel, 2003b; Tuckman & Chang, 1991; Bowman, 2011; Kitching, 2009). This explanatory financial information and ratios will be used to examine the relationships between External Auditors' Quality, Complexity, Financial Vulnerability, Government Contributions, Program Revenue, and Public Contribution to the Financial Sustainability of the Nonprofit organization.

The Population of Interest

This study will focus on the population of DRNOs within any of the ten (10) Head Start regions. The ten (10) Head Start regions encompass the following states and territories: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New York, New Jersey, Puerto Rico, The Virgin Islands, Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, Arkansas, Louisiana, New Mexico, Oklahoma, Texas, Iowa, Kansas, Missouri, Nebraska, Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming, California, Arizona, Nevada, Hawaii, Alaska, Idaho, Oregon, and Washington.

Figure II. Head Start Map by Region



Source: www.acf.hhs.gov/oro/regional-offices

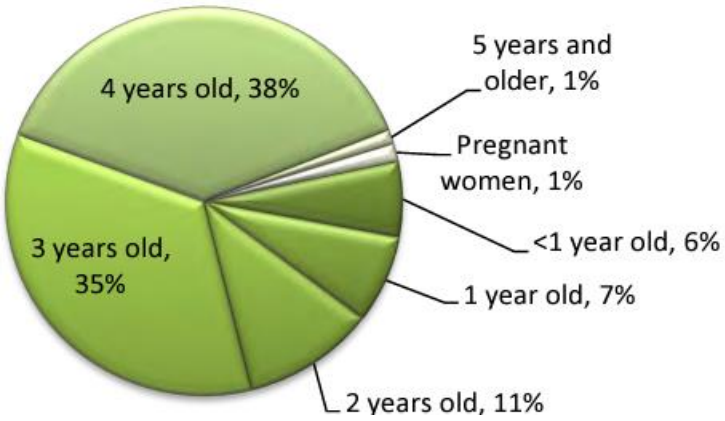
The Head Start programs cumulatively served 1,050,000 children aged birth to 5 and pregnant women throughout the 2017–2018 program year. Head Start serves a diverse group of children, families, and pregnant women. Thirty-seven (37) percent identified themselves as Hispanic/Latino, and thirty (30) percent identified themselves as Black / African American. The population ethnicity allocation is presented in Figure III as follows:

Figure III. Head Start 2018 Ethnicity

Source: https://eclkc.ohs.acf.hhs.gov

Each year, Head Start programs must submit Program Information Reports (PIR) on the services they have provided to children and families throughout the program year, including child, family, and staff demographics and program characteristics. The cumulative enrollment population by age is presented in Figure IV as follows:

Figure IV. Head Start Cumulative Enrollment by Age



Source: https://eclkc.ohs.acf.hhs.gov

Sample Collection

The sampling methodology used in this research is based on convenience.

According to Etikan (2016), “Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of nonprobability or nonrandom sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate, are included for the purpose of the study.” The arguments used for the convenience technique are based on fulfilling the following specific criteria:

First, nonprofits should have operations within a U.S. state and/or U.S. territory in at least one of the ten (10) Head Start Program Regions (Region #1; Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, Region #2; New York, New Jersey, Puerto Rico, and The Virgin Islands, Region #3; Delaware, District of Columbia, Maryland, Pennsylvania, Virginia and West Virginia, Region #4; Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, Region #5; Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin, Region #6; Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, Region #7; Iowa, Kansas, Missouri, and Nebraska, Region #8; Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming, Region #9; California, Arizona, Nevada, and Hawaii, Region #10; Alaska, Idaho, Oregon, and Washington).

Second, nonprofit organizations must have affirmatively withheld the Head Start In their revenue portfolio composition, and final criteria, these nonprofit organizations must have presented their exempt tax return (Form 990) during the tax year 2018.

These three criteria for the convenience sampling technique are required to be part of this sample, and excluding any of these components translates to excluding those units

as part of the sample of this study. After applying the sample-specific criteria, the exclusion of seventeen (17) nonprofit organizations was required due to them not fulfilling all the specific criteria. Also, in the process of analyzing the normality of the data, the observed sample presents some elements of abnormality in several units in the sample; therefore, a statistical test that could allow us to identify and understand the presence of possible outliers in a multivariate sample was required. After exploring several tests (e.g., Cook's distance, Minimum Covariance determination, Mahalanobis distance), the approach that fit the research criteria most adequately was the Mahalanobis distance test.

It is significantly relevant indicate that the Head Start Grant is a federal grant and therefore its operations and financial requirements are uniform through the United States without exceptions of any state or territory served within the union. Also, the Head Start Grant has been historically characterized as a one of the very rigorous grants in terms of general parameters of evaluation not only at the programmatic level, but also financially. This explained approach ensures that both operations of the Head Start organizations as well as the quality of the services they provide under the grant are comparable across jurisdictions.

According to Leys et al. (2017), the basic Mahalanobis criterion is a multivariate extension of the univariate method of the mean ± a coefficient times the standard deviation. The Mahalanobis distance test quantifies the differences between two or more sets of observations, considering the correlation between the variables. This statistical test detects outliers in a multivariate data set by calculating the distance between each data

point and the mean of the data set and normalizing the distance by the covariance matrix of the data set (Ghorbani, 2019). The points with the large Mahalanobis distance in the data set are considered different from most data and likely to be outliers. After completing the Mahalanobis distance test over the data set, an additional portion of twenty-nine (29) nonprofit organizations presented large Mahalanobis distance coefficients and were therefore excluded from the sample. The sample's total excluded unit was forty-six (46) nonprofit organizations. The total accepted sample concludes with a total of seven hundred and seventy-three (773) nonprofit organizations dispersed through the ten (10) regions of the Head Start Program. This sample represents the direct observation and evaluation of more than thirty-eight percent (38.06%) of the total nonprofit population that is the subject of this study.

Table I. Sample Selection and Acceptance Rate

Nonprofits Population	Sampled-Nonprofits	Excluded-Nonprofits	Accepted-Nonprofits	Acceptance Rate
2031	819	46	773	38.06%

Form 990 Return of Organization Exempt from Income Tax

Most nonprofit organizations in the United States must file Form 990 with the Internal Revenue Service to obtain tax-exempt status. These forms are publicly available at www.propublica.org. These forms are required by the government for public nonprofits and have standardized line-item reporting requirements. This investigation expects to create a database of all the DRNOs (entities with Head Start Program

resources in their revenue portfolio), with operations geographically within any of the ten (10) Head Start Regions and Head Start.

The Head Start Grant is also recognized and codified as CFDA Number 93.600 or U.S. Department of Health & Human Services Head Start. The financial threshold incorporated as part of the limited acceptance requirement for each development-related nonprofit in the data will be $750,000 in federal assets and/or federal revenues on Form 990s. Therefore, this analysis will use Form 990 for each subject to extract the data and create the sample database file.

Financial Vulnerability Prediction Process

Bowman (2011, P. 49) indicates that; "Financial analysis consists of a set of measurements on financial variables that enable managers to identify and diagnose problems." Financial problems in a nonprofit organization are assumed to cause a reduction in net assets over time, manifesting through a reduction in revenues or an increase in expenses (Greenlee & Trussel, 2009). However, the reason for this reduction in net assets might be complex to determine when this situation has occurred over time; this evaluation is considered yearly and not on a cumulative basis. Also, a reduction in net assets for many years in a row affects the nonprofit's financial vulnerability; the accumulation of losses over time does not necessarily mean that the organization is in a critical financial situation (de Andres-Alonso et al., 2016). Tuckman & Chang (1991) indicate that an organization must have had more than a 20 percent decrease in its fund balance over three years to be classified as financially vulnerable. This comparative evaluation explores the trend of the fund balances yearly due to the natural financial behavior of revenues and expenses within each year.

The financial vulnerability indicators measure different areas that might succumb to the health of the financial situation of a nonprofit organization. Each indicator has its own particular financial behavior and follows a different assessment of the financial operations of the organization. Tuckman & Chang (1991) clearly describe the first four (4) financial vulnerability indicators evaluated in the FVI. These are the following: first, the Debt Ratio. The higher the ratio, the more likely the organization will be financially vulnerable. Then, Revenue Concentration. A nonprofit is more vulnerable to revenue downturns if its revenue sources are limited or more concentrated than if they are diverse. Then, Surplus Margin also acknowledged as Profit Margin. According to Tuckman & Chang (1991, p. 453), "A nonprofit's operating margin is defined as its revenues less its expenditures, divided by its revenues." This shows the percentage that its net income represents of its revenues. This financial ratio follows the measure of the percentage of net income that represents its revenues; therefore, it might be simplified as a profitability measure, which is not the case when compared to the Return on Asset (ROA). Charities with higher levels of Surplus Margin usually are less financially vulnerable because surpluses might be allocated to cover the cost of other services. Then Size, this financial vulnerability indicator, was incorporated by J. M. Trussel (2002) to strengthen the original FVI formulation; size is measured as the natural log of total assets. Size is associated with age, reputation, and economies of scale related to costs. More prominent organizations may be less vulnerable to financial problems. Finally, Sector or administrative costs associated with charity operations. Macroeconomic factors may affect different sectors of nonprofit organizations differently; therefore, this Financial

Vulnerable Indicator integrates the specific reaction to an economic phenomenon (e.g., inflation, recession, depression) within the nonprofit sector.

Figure V. Financial Vulnerability Indicators

Indicator	*Measure*	*Expected Sign*
Debt ratio (EQUITY)	$\frac{\text{Total liabilities}}{\text{Total assets}}$	+
Revenue concentration (CONCEN)[a]	$\sum\left(\frac{\text{Revenue}_j}{\text{Total revenues}}\right)^2$	+
Surplus margin (MARGIN)	$\frac{\text{Total revenues} - \text{Total expenses}}{\text{Total revenues}}$	−
Size (SIZE)	Natural log of total assets	−
Sector (SECTOR_j)	Dummy variable[b]	?

Source: Trussel (2002).

Assessing the probability of financial vulnerability includes three (3) steps: first, compute the financial indicators. These financial indicators are obtained directly through the financial information in the sample object of the study. The financial information might be obtained from the organization's Form 990 or another appropriate financial source.

Figure VI. Example**:** Computing the Financial Indicators

Revenue from source A:	$ 40,000	Administrative expenses:	$ 40,000
Revenue from source B:	$360,000	Total expenses:	$300,000
Total revenues:	$400,000	Total liabilities:	$250,000
Total assets:	$500,000	Total equity:	$250,000

Financial Indicator	*Formula*	*Example*	*Indicator Computed*
DEBT	$\frac{\text{Total liabilities}}{\text{Total assets}}$	$\frac{250{,}000}{500{,}000}$	0.500
CONCEN	$\sum\left(\frac{\text{Revenue}_j}{\text{Total revenues}}\right)^2$	$\left[\left(\frac{40{,}000}{400{,}000}\right)^2 + \left(\frac{360{,}000}{400{,}000}\right)\right]^2$	0.8200
MARGIN	$\frac{\text{Revenues} - \text{expenses}}{\text{Revenues}}$	$\frac{400{,}000 - 300{,}000}{400{,}000}$	0.250
SIZE	ln(Total assets)	ln (500,000)	13.1224
EQUITY[a]	$\frac{\text{Total equity}}{\text{Total revenue}}$	$\frac{250{,}000}{400{,}000}$	0.625
ADMIN[a]	$\frac{\text{Administrative expenses}}{\text{Total revenues}}$	$\frac{40{,}000}{400{,}000}$	0.100

Source: Trussel (2002).

The second step in obtaining the probability of financial vulnerability involves obtaining the regression coefficients for each component of the Financial Vulnerability Index (FVI). These regression coefficients are the beta values obtained from the regression analysis using the financial values from the universe or total available population within the nonprofit service classification subject of study (e.g., Human Services, Health, Education). The financial information could be obtained from the IRS Statistics of Income database or the National Center for Charitable Statistics (NCCS).

Figure VII. Regression Coefficients

	Financial Indicators (A)
Constant	0.2475
MARGIN	−1.3527
CONCEN	0.8402
SIZE	−0.1396
DEBT	1.1080
ADMIN	−0.8208

Source: Trussel (2002).

The third step, using the financial coefficients with the implicit FVI formula, calculates the probability of financial vulnerability for each of the units in the sample.

The formula to calculate the probability of Financial Vulnerability is the following; FVI =1/(1 + e^{-z}), when IC = Indicator Computed and Z = (CONSTANT) + IC (EQUITY) + IC (CONCEN) - IC (MARGIN) + IC (ADMIN) – LOG NUM (SIZE). The probability of financial vulnerability is 0.66[2]; therefore, any organization obtaining a probability of more than 0.66 might be considered financially vulnerable. The statistical

[2] Financial Vulnerability Index Probability obtained following (J. M. Trussel, 2002).

operationalization of the financial vulnerability per unit sampled is managed based on probability; the higher the coefficient, the more significant the possibility that the nonprofit entity being considered financially vulnerable.

Financial Sustainability Prediction Process

According to Bowman (2011), financial sustainability has two-timed frames or stages: long-term, which emphasizes in maintaining services, and short-term, which emphasizes resiliency. Interestingly, to achieve the stage of maintaining services (long-term frame), the short-term stage (short-term frame) needs to be fulfilled. Therefore, this research focuses on short-term sustainability because it is a critical stage that could determine if the organization survives or perishes.

Organizations need to earn a profit to be financially healthy and be able to replace equipment with newer, more expensive equipment, acquire new technologies, expand services, and meet the challenges of the future (Finkler et al., 2019). However, it might be improper for several not-for-profit organizations to profit excessively. Different from financial vulnerability, which follows achieving net income after covering obligations yearly (profitability measure), financial sustainability (capacity measure) emphasizes resiliency because of potential economic downside phenomena (e.g., recession, inflation, depression). Expenses decrease net assets; thus, revenue minus expenses equals a change in net assets; typically, a change in the numerator is small compared to the denominator, so the ratio for sustainability is known in the business literature as the return on assets (Bowman, 2011, p. 41-42). Therefore, financial sustainability pursuits that measure the financial resistance of the organization are far from a contraction that could make the entity financially vulnerable in a specific period. It might require new research to

understand when exactly the overlapping of these two phenomena, financial sustainability and financial vulnerability, occurs. However, financial sustainability coexists with financial vulnerability, and its occurrence is vital for nonprofit entities.

Financial Sustainability is measured by applying the Return on Assets Ratio (ROA). The financial information will be extracted using forms 990 of each nonprofit organization object of this research. This financial measure is presented as follows:

$$Return\ on\ Assets\ (ROA) = 100\% \cdot (Total\ Revenue - Total\ Expenses)/Total\ Assets,$$

The greater the financial ratio obtained by the organization, the higher will be its level of resilience and the higher will be its financial capacity to sustain normal operations in the short term.

Research Model Measures

The analytical portion of this research encompasses the use of financial data extracted from each of the 773 identified nonprofit organizations (N = 773). Please see Appendix A and Appendix D for the Definition of Terms and Hypotheses, Measures, and Translations tables, respectively. The data has been digitally extracted based on the IRS digital Form 990 - Return of Organization of Exempt from Income for Tax Year 2018. The analytical portion of this research encompasses the use of financial data extracted from each of the 773 identified nonprofit organizations (N = 773). Please see Appendix A and Appendix D for the Definition of Terms and Hypotheses Data Translations & Evaluative Measures, respectively. The data has been digitally extracted based on the IRS digital Form 990 - Return of Organization of Exempt from Income for Tax Year 2018. The measures are as follows:

Independent Variables

1. *Complexity: Stability source and strategy to reduce the financial risk of the entity. The data reported in Form 990 are in U.S. dollars.*

   Revenue Diversification - This is an ordinal variable by definition. Demarcated by the total revenue sources from # 1 through #3 (e.g., Government Contributions, Public Contributions, and Program Service Revenue. The higher the revenue diversification, the more diversified the revenue portfolio and, therefore, the higher expectation of more complex financial operations.

2. *Financial Vulnerability: Financial instability or exposure to financial risk and shock. The data reported in Form 990 are in US dollars.*

   The financial Vulnerability Index (FVI) is a financial indexing measure obtained as a ratio variable, demarcated by the Financial Vulnerability Probability Formula FVI $=1/(1+e^{-z})$, when IC = Indicator Computed and Z = (CONSTANT) + IC (EQUITY) + IC (CONCEN) - IC (MARGIN) + IC (ADMIN) – LOG NUM (SIZE).

   A higher percentage is translated into a higher probability of a financially vulnerable position - Table II. Financial Distress Measures vs. Financial Sustainability illustrates the likelihood of the behavior of the Financial Distress Measures towards Financial Sustainability. Interestingly, the academic literature is divided towards the expected relationship between administrative costs and financial sustainability in nonprofit organizations (Tevel et al., 2015; MacIndoe & Sullivan, 2014; Kim, 2017; Lecy & Searing,

2015; Denison & Beard, 2003). However, the most consistent, theoretically coherent, and expected in this research is the following presented in the table below:

Table II. Financial Distress Measures vs. Financial Sustainability Expectation

Indicator	Formula	Expected Sign
Debt Ratio	$\frac{\text{Total equity}}{\text{Total revenues}}$	-
Revenue Concentration	$\sum\left(\frac{\text{Revenue source}_i}{\text{Total revenues}}\right)^2$	-
Surplus Margin	$\frac{\text{Total revenues} - \text{total expense}}{\text{Total revenues}}$	+
Administrative Cost Ratio	$\frac{\text{Administrative expenses}}{\text{Total revenues}}$	+
Size (SIZE)	Natural log of total assets	+

3. *Government Contributions: Federal, State, or Local financial resources are assigned to nonprofit entities in exchange for serving the community. The data reported in Form 990 are in U.S. dollars.*

Contributions & Grants – This is an implicit financial measure and an ordinal variable denoted by the total contributions and grants received during the year. More total contributions and grants reflect a more favorable revenue position.

4. *Public Contributions: Resources from individuals, trusts and estates, corporations, and foundations. The data reported in Form 990 are in U.S.*

dollars.

Indirect Support – This is a financial implicit measure amount and an ordinal variable. Demarcated by total contributions received during the year less the total of the government grants received, and the program revenue received. A higher amount of indirect support is referent to a more favorable revenue position.

5. *Program Revenue: Service revenue, including government fees and contracts, received for the fiscal year. The data reported in Form 990 are in U.S. dollars.*

This variable is a financial implicit measure amount and an ordinal variable demarcated by total resources received on tuition fees, service fees, admissions fees, and other unrestricted revenue sources during the year. A higher amount of program revenues is referent to a more favorable revenue position.

Tuition Fees – This is a financial implicit measure amount and an ordinal variable demarcated by total tuition fees received during the year. A higher amount of tuition fees reflects a more favorable revenue position.

Service Fees - This is a financial implicit measure amount and an ordinal variable. Demarcated by the total service fees received during the year. More service fees are a referent to a more favorable revenue position.

Admissions Fees - This is an implicit financial measure and an ordinal variable. Demarcated by the total admission fees received during the year. A higher amount of admissions fees is referent to a more favorable revenue position.

Other Unrestricted Revenues - This is an implicit financial measure and an ordinal variable demarcated by the total of other unrestricted revenue sources received during the year. A higher amount of admissions fees refers to a more favorable revenue position.

Dependent Variable

1. *Financial Sustainability: Financial process that implies meeting the requirements of current needs without compromising the ability of future generations to meet their own needs. The data reported in Form 990 are in U.S. dollars.*

   Financial Sustainability Ratio - This is a financial ratio measure and an interval variable. Demarcated by 100% * (Total Revenue -Total Expenses) / Total assets. A higher ratio is translated to a better financially sustainable position.

Moderating Variable

*External Auditors' Quality: Audit Quality is defined as "the market assessed joint probability that a given auditor will both discover a breach in a client's accounting system and report the breach." Type / Classification of the Auditors' Firms will be attested through a direct assessment to the Federal Audit Clearing House (*https://facdissem.census.gov/Main.aspx).

Auditors' Type - This is an ordinal variable. External auditors will be defined as Low/Local=1, Medium/Regional=2, and High/Big 4 = 3.

Quantitative Approach and Statistical Testing

This study incorporates a quantitative approach that will be greatly satisfied using the extraction and analysis of financial information presented in Form 990 – Return of

Organization Exempt from Income Tax.

Furthermore, the utilization of implicit financial information (when required), appropriate financial ratios, and the integration of indexing vulnerability practices, combined with proven scientific focus statistical techniques obtained from the literature, will facilitate the testing of hypotheses and the understanding of this phenomenon in an empirically proven manner. This study will use generally accepted advanced statistical techniques, including but not limited to; Descriptive Statistics, ANOVA, Multiple Regression Analysis, and among other concepts used in scientific research settings.

CHAPTER V. DATA ANALYSIS AND RESULTS

Chapter V. Data Analysis and Results comprehends three (3) consecutive inclusive analyses. The content of these analyses is an integral part of understanding the theoretical and practical behavior of the phenomena, and they are described as follows:

1. **Descriptives Statistical Analysis:** This section aims to provide an overview of the data, including measures of central tendency (e.g., mean, median, mode) and dispersion (e.g., range, standard deviation), to identify patterns, trends, and relationships within the data. The main objective of this section is to describe the main features of the sample data, provide an efficient and straightforward summary of the data, and create a basis for the statistical analysis. In addition, visual aids such as histograms, bar graphs, data tables, and other frequently used visual research tools are implemented to illustrate the general characteristics of the data collected used in the research.
2. **Empirical Statistical Analysis:** This section presents the empirical outcomes of the most relevant statistical tests associated with this research. This type of analysis is essential for a quantitative research study because it systematically examines the relationships between the variables. This subject requires a strong understanding of statistical methods and techniques for correctly interpreting research findings. Empirical Statistical Analysis typically includes a range of inferential statistics, such as regression analysis, correlation analysis, ANOVA, and other multivariate techniques. These techniques examine the relationships

between variables, test hypotheses, explain possible theoretical or practical phenomena, and establish preliminary facts to draw conclusions.

3. **Research Model Analysis and Results:** This section presents the results as well as a discussion of the results in the context of the research model and hypotheses. This section aims to provide a clear and comprehensive examination of the results between variables and to draw valid and reliable conclusions based on the data. Usually, the results are presented based on the proposed evaluation of the hypotheses under the premise of observing whether the provided hypotheses were supported, partially supported, marginally supported or not supported. However, on occasions, an in-depth statistical analysis is required for a specific hypothesis if the inference of the outcome of the performed statistical test contributes to the finding.

Descriptives Statistical Analysis

The descriptive statistics surrounding the dependent variable and the independent variables utilized in this study are presented in the following section, Table III. Research Sample Observations illustrates the total number of observations presented in the research and their percentage representation concerning the nonprofit population. The research sample concluded with seven hundred and seventy-three (773) nonprofit organizations dispersed through the ten (10) regions of the Head Start Program. Therefore, this sample represents a direct observation and evaluation of more than thirty-eight percent (38.06%) of the total nonprofit population that is the subject of this study.

Table III. Research Sample Observations

Nonprofits Population	Research Sample	Sample Rate
2031	773	38.06%

Table IV. Sample Distribution by Region illustrates the most significant stream values regarding the presence of nonprofit organizations by the regional office. The population explored in this subject is divided into ten (10) regions and is recognized by the city name where their central regional offices are located. The top five (5) regions with the highest presence of nonprofit organizations were Chicago with 159 entities, or 20.57%; Atlanta with 131 entities, or 16.95%; New York with 90 entities, or 11.64%; Philadelphia with 87 entities, or 11.25%; followed by San Francisco with 80 entities, or 10.35%. These five regions capture a cumulative representation of more than 70 percent of the sampled entities. The region with the lowest presence of nonprofit organizations was Kansas City, with only 8 entities, or 1.03%.

Table IV. Sample Distribution by Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Boston	54	6.99	6.99	6.99
	Seattle	57	7.37	7.37	14.36
	New York	90	11.64	11.64	26.00
	Philadelphia	87	11.25	11.25	37.26
	Atlanta	131	16.95	16.95	54.20
	Chicago	159	20.57	20.57	74.77
	Dallas	60	7.76	7.76	82.54
	Kansas City	8	1.03	1.03	83.57
	Denver	47	6.08	6.08	89.65
	San Francisco	80	10.35	10.35	100.00
	Total	773	100.00	100.00	

Figure VIII. Sample Distribution by State illustrates the presence of nonprofit organizations by state or territory. The observations cover all fifty (50) states plus the U.S. territory of Puerto Rico. The state with the highest frequency is New York, with 73 observations, or 9.40%, followed by California, with 62 observations, or 8.00%. Conversely, the states or territories with the lowest frequency are New Hampshire and Rhode Island, tied with 4 observations or.5%, respectively, Delaware with 2 observations or.3%, and Puerto Rico with 1 observation or.1%.

Figure VIII. Sample Distribution by State

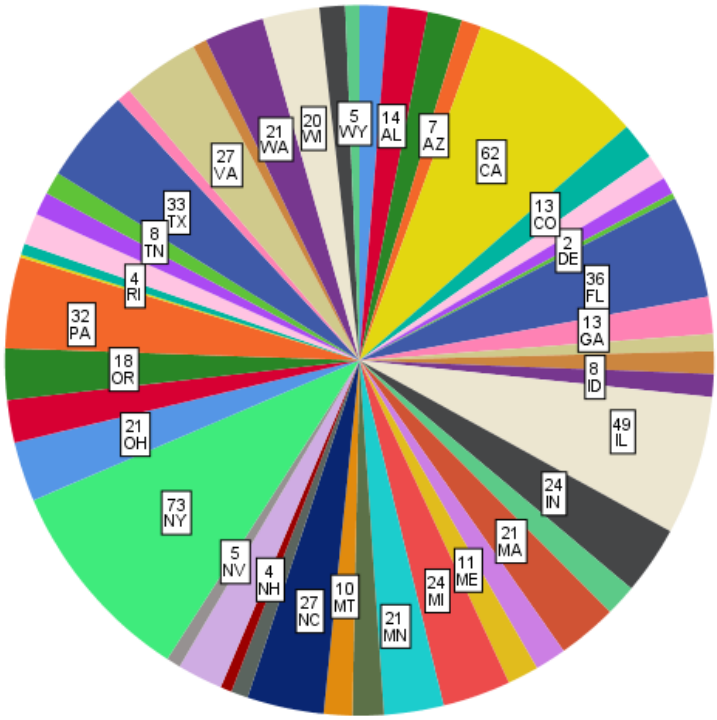


Table V. General Research Variables' Descriptive Statistics illustrates the Descriptives Statistics outcomes by the research variables through the total research sample (N = 773). The mean score Complexity Level of the organizations is 2.46, with a standard deviation of.68, indicating a moderate complexity level in the sample. The

Financial Vulnerability mean Score is.815, with a minimum of.42 and a maximum of.97. This implies that the sample organizations have, on average, a high financial vulnerability exposure. The mean level of Government Contribution is 15.78, with a minimum of 6.78 and a maximum of 19.22, indicating a significant government investment in the organizations. The Public Contribution mean score is 7.84, with a minimum of 0 and maximum of 17.24, and a standard deviation of 5.54, indicating that the organizations also rely on public funds to some extent. The Program Revenue mean score is 10.34, with a minimum of 0 and a maximum of 20.38, and a standard deviation of 6.04, indicating that the organizations generate revenue from their programs. Finally, the mean Auditors' Quality score is 2.17, with a minimum of 1 and a maximum of 3. This outcome most likely indicates that the sample organizations have reasonably good auditors' quality.

In summary, Financial Vulnerability is the variable with the smallest variance, which suggests that this variable is less dispersed and has less variability than the other variables. On the other hand, Government Contribution has the largest variance, suggesting that the values are more dispersed and variable than the other variables.

Table V. General Research Variables' Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Complexity Level	773	1	3	2.46	.679	.461
F. Vulnerability	773	.4210	.9420	.805488	.0524534	.003
Government Contribution	773	6.7833	19.2208	15.778355	1.4301033	2.045
Public Contribution	773	.0000	17.2442	7.843592	5.5396124	30.687
Program Revenue	773	.0000	20.3800	10.341158	6.0403141	36.485
Auditors' Quality	773	1	3	2.17	.451	.203
Valid N (listwise)	773					

Table VI. Research Variables' Descriptive Statistics by Auditors' Quality Level illustrates the most relevant descriptive statistics through the obtained research sample using the moderator variable, Auditors' Quality Levels. The research segregates the total sample N = 773 through three (3) auditor quality levels, which are Low, Medium, and High, with samples of 24, 594, and 155 organizations, respectively. The presence of the sample is normal, as attested in Appendices E–J. The independent variables presented in this study are based on the following financial indicators, Financial Vulnerability, Government Contribution, Public Contribution, Program Revenue and External Auditors' Quality as a moderating variable. The mean values of Complexity Level across the three groups are similar, ranging from 2.38 to 2.59.

For the Low Auditors' Quality group and the High Auditors' Quality group, their Complexity Level mean values were at the minimum (2.38) and maximum (2.59), respectively, while for the Medium Auditors' Quality group, the mean value of the Complexity Level variable was at the middle level (2.43). The standard deviation for the Complexity Level variable is the lowest (SD =.589) for the High Auditors 'Quality group indicating a relatively homogeneous distribution. However, the highest standard deviation (SD =.711) belongs to the Low Auditors' Quality group, indicating a more diverse distribution; this particular result might be an effect of the lower observations presented related to the Low Auditors' Quality group (N = 24).

The Financial Vulnerability variable shows that the mean values for all three Auditors' Quality Groups are above 0.5, indicating that the Financial Vulnerability is relatively high. The mean values for the Auditors' Quality groups are the following: 1) Low Auditors' Quality =.792, Medium Auditors' Quality =.802, and High Auditors'

Quality =.822. However, the standard deviation in all the groups is small (SD < 1), indicating that the values are tightly grouped around the mean.

In terms of the Government Contributions variable, the mean values were presented as follows; Medium Auditor's Quality group (m = 15.68), High Auditors 'Quality group (m = 16.02), and Low Auditors' Quality group (m = 16.66). The standard deviation is the highest for the High Auditors' Quality group (SD = 1.36). The variance values for the Medium Auditors' Quality group and the High Auditors' Quality group are over 1 (Medium Auditors' Quality = 2.09, High Auditors' Quality = 1.85) and close to 1. (Low Auditors' Quality =.95), indicating a considerable variation in government contributions.

For the Public Contribution variable, the mean values are the highest for the High Auditors' Quality group, indicating a relatively high level of public contributions in this group. The standard deviation is the highest for the Low Auditors' Quality group; however, the Medium Auditors' Quality and High Auditors' Quality groups reflect very similar standard deviation values (SD = 5.55 and SD = 5.41, respectively). Overall, the combination of the minimal observations presented in the Low Auditors' Quality group (N = 24) and the group's respective obtained standard deviation value; (SD = 6.00) indicates that the data is not widely dispersed.

The mean values of the Program Revenue variable increased for the Medium Auditors' Quality group (m = 9.94), in comparison with the High Auditors' Quality group (m = 11.90), while the Low Auditors' Quality group registered the centered mean value of the three groups (m = 10.10). The standard deviation values are similar between all groups (Low Auditors' Quality = 6.17, Medium Auditors' Quality = 6.11, and High

Auditors' Quality = 5.50). The variance values are over 1 through the groups, indicating a considerable variation in program revenue.

In summary, the results indicate that levels of Auditors' Quality present some influence over some of the variables presented in this research.

Table VI. Research Variables' Descriptive Statistics by Auditors' Quality Level

Descriptive Statistics

Auditors' Quality		N	Minimum	Maximum	Mean	Std. Deviation	Variance
Low	Complexity Level	24	1	3	2.38	.711	.505
	F. Vulnerability	24	.6829	.8867	.793231	.0436237	.002
	Government Contribution	24	14.7134	18.9015	16.655098	.9764567	.953
	Public Contribution	24	.0000	15.0078	7.435085	6.0078871	36.095
	Program Revenue	24	.0000	17.3525	10.100601	6.1723906	38.098
	Auditors' Quality	24	1	1	1.00	.000	.000
	Valid N (listwise)	24					
Medium	Complexity Level	594	1	3	2.43	.696	.485
	F. Vulnerability	594	.4210	.9195	.801728	.0534014	.003
	Government Contribution	594	6.7833	19.2037	15.680814	1.4455338	2.090
	Public Contribution	594	.0000	17.2442	7.674654	5.5480818	30.781
	Program Revenue	594	.0000	20.3800	9.943145	6.1122556	37.360
	Auditors' Quality	594	2	2	2.00	.000	.000
	Valid N (listwise)	594					
High	Complexity Level	155	1	3	2.59	.589	.347
	F. Vulnerability	155	.6835	.9420	.821794	.0467097	.002
	Government Contribution	155	11.4243	19.2208	16.016405	1.3603001	1.850
	Public Contribution	155	.0000	16.3405	8.554256	5.4103818	29.272
	Program Revenue	155	.0000	18.3772	11.903693	5.5022170	30.274
	Auditors' Quality	155	3	3	3.00	.000	.000
	Valid N (listwise)	155					

Empirical Statistical Analysis

The group of Tables VII-IX illustrates the results of ANOVA, Model Summary, and Coefficients for the research model, including the Financial Vulnerability Index (FVI) as a measure of financial vulnerability. The results illustrate the three models predicting Financial Sustainability with different numbers of predictors. The dependent

variable in each model is Financial Sustainability, and the independent variables are a set of organizational factors, such as Employees, Volunteers, Board of Directors, Executive Compensation, Auditors' Quality, Public Contribution, Financial Vulnerability, Program Revenue, Government Contribution, Complexity Level, and their corresponding interaction effects.

The first ANOVA model includes four independent variables and their interaction effects, and the results indicate that the regression model is statistically significant ($F(4, 768) = 4.624$, $p = 0.001$). However, the R-squared value is low at 0.024, indicating that the model explains only a small proportion of the variance in Financial Sustainability.

The second ANOVA model includes all independent variables and their interaction effects, and the results indicate that the regression model is statistically significant ($F(10, 762) = 9.268$, $p = 0.000$). The R-squared value is higher than in the first model, at 0.108, indicating that the model explains more of the variance in Financial Sustainability than in the first model.

The third ANOVA model includes all independent variables and their interaction effects, and the results indicate that the regression model is statistically significant ($F(15, 757) = 6.276$, $p = 0.000$). However, the R-squared value is higher than in the second model, at 0.111, indicating that the model explains more of the variance in Financial Sustainability than the second model.

In terms of the coefficients, the first model shows that Executive Compensation significantly negatively affects Financial Sustainability. In the second model, two independent variables (Executive Compensation and Financial Vulnerability) have a significant negative and positive effect, respectively, on Financial Sustainability. Finally,

in the third model, two independent variables (Executive Compensation and Financial Vulnerability) have a significant negative and positive effect, respectively, on Financial Sustainability.

In summary, in all the models, the regression term is significant at the $p < 0.01$ level, indicating a statistically significant relationship between the predictors and the dependent variable. The mean square of the residual is small compared to the mean square of the regression, which indicates that most of the variance in Financial Sustainability is explained by the predictors in each model. Overall, the third model appears to be the most useful in predicting Financial Sustainability since it explains more of the variance in the dependent variable and has a higher number of significant independent variables.

Table VII. ANOVA with FVI as Financial Vulnerability Measure

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.283	4	.071	4.624	.001[b]
	Residual	11.771	768	.015		
	Total	12.055	772			
2	Regression	1.307	10	.131	9.268	.000[c]
	Residual	10.748	762	.014		
	Total	12.055	772			
3	Regression	1.333	15	.089	6.276	.000[d]
	Residual	10.721	757	.014		
	Total	12.055	772			

a. Dependent Variable: F.Sustainability

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

c. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, Auditors' Quality, Public Contribution, F. Vulnerability, Program Revenue, Government Contribution, Complexity Level

d. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, Auditors' Quality, Public Contribution, F. Vulnerability, Program Revenue, Government Contribution, Complexity Level, P.ContMOD, P.ReveMOD, G.ContMOD, F. VulnMOD, ComplMOD

Table VIII. Model Summary with FVI as Financial Vulnerability Measure

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.153[a]	.024	.018	.1238033	.024	4.624	4	768	.001
2	.329[b]	.108	.097	.1187622	.085	12.097	6	762	.000
3	.333[c]	.111	.093	.1190086	.002	.369	5	757	.870

a. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, Auditors' Quality, Public Contribution, F. Vulnerability, Program Revenue, Government Contribution, Complexity Level

c. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, Auditors' Quality, Public Contribution, F. Vulnerability, Program Revenue, Government Contribution, Complexity Level, P.ContMOD, P. ReveMOD, G.ContMOD, F.VulnMOD, ComplMOD

d. Dependent Variable: F.Sustainability

Table IX. Coefficients with FVI as Financial Vulnerability Measure

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.076	.014		5.320	.000	.048	.103		
	Employees	-2.503E-6	.000	-.009	-.244	.807	.000	.000	.868	1.152
	Volunteers	1.441E-6	.000	.034	.957	.339	.000	.000	.986	1.014
	Board of Directors	.000	.001	.010	.270	.787	-.001	.001	.929	1.076
	E.Compensation	-.004	.001	-.151	-3.977	.000	-.007	-.002	.884	1.131
2	(Constant)	-.366	.085		-4.288	.000	-.534	-.199		
	Employees	-1.040E-5	.000	-.039	-1.021	.307	.000	.000	.812	1.232
	Volunteers	1.085E-6	.000	.026	.744	.457	.000	.000	.970	1.031
	Board of Directors	.000	.001	-.015	-.405	.686	-.001	.001	.890	1.124
	E.Compensation	-.004	.001	-.127	-3.321	.001	-.006	-.002	.798	1.253
	F. Vulnerability	.692	.090	.291	7.669	.000	.515	.869	.815	1.227
	Complexity Level	-.022	.018	-.119	-1.230	.219	-.057	.013	.124	8.039
	Government Contribution	-.006	.003	-.069	-1.792	.074	-.013	.001	.800	1.250
	Public Contribution	.001	.002	.036	.511	.610	-.002	.004	.240	4.168
	Program Revenue	-.001	.001	-.039	-.571	.568	-.004	.002	.250	3.999
	Auditors' Quality	.017	.010	.060	1.724	.085	-.002	.036	.956	1.046
3	(Constant)	-.371	.086		-4.324	.000	-.539	-.203		
	Employees	-9.374E-6	.000	-.035	-.909	.364	.000	.000	.795	1.258
	Volunteers	1.087E-6	.000	.026	.742	.459	.000	.000	.963	1.039
	Board of Directors	.000	.001	-.012	-.328	.743	-.001	.001	.884	1.131
	E.Compensation	-.004	.001	-.129	-3.354	.001	-.006	-.002	.792	1.262
	F. Vulnerability	.685	.091	.288	7.535	.000	.507	.864	.807	1.240
	Complexity Level	-.022	.018	-.118	-1.210	.227	-.057	.014	.123	8.156
	Government Contribution	-.006	.003	-.070	-1.816	.070	-.013	.000	.795	1.257
	Public Contribution	.001	.002	.035	.494	.621	-.002	.004	.236	4.239
	Program Revenue	-.001	.001	-.036	-.523	.601	-.004	.002	.248	4.030
	Auditors' Quality	.022	.011	.079	1.934	.053	.000	.044	.712	1.404
	ComplMOD	.012	.044	.028	.272	.786	-.075	.099	.115	8.709
	F.VulnMOD	.035	.222	.007	.158	.874	-.400	.470	.694	1.442
	G.ContMOD	-.010	.007	-.051	-1.312	.190	-.024	.005	.767	1.304
	P.ContMOD	-.001	.004	-.020	-.267	.789	-.008	.006	.214	4.680
	P.ReveMOD	-.001	.003	-.011	-.159	.874	-.007	.006	.236	4.241

a. Dependent Variable: F.Sustainability

The group of Tables X-XII illustrates the results of ANOVA, Model Summary, and Coefficients for the research model, including the Financial Distress Measures as individual factors of financial vulnerability.

In Model 1, the results of the ANOVA show that the regression model is significant, F (4, 768) = 4.624, p=.001. The regression coefficients for the model suggest that only the independent variable, Executive Compensation, is a significant predictor of Financial Sustainability.

In Model 2, the results of the ANOVA indicate that the regression model is significant, F (14, 758) =30.386, p <.001. The model summary results show that the model explains 35.9% of the variance in Financial Sustainability. The regression coefficients suggest that FVI: Debt Ratio and FVI: Surplus Margin are significant predictors of Financial Sustainability. It is pertinent to indicate that Complexity Level does not fulfill the statistical requirements to be considered as a predictor of Financial Sustainability; however, its level of significance (P =.064, β = -.030) together with its negative effect over the dependable variable, make this relevant for future research.

In Model 3, the ANOVA results show that the regression model is significant, F (23, 749) = 19.450, p<.001. The model summary results indicate that the model explains 37.4% of the variance in Financial Sustainability. The regression coefficients suggest that FVI: Debt Ratio, FVI: Surplus Margin, FVI: Administrative Cost Ratio, and Size-Moderation are significant predictors of Financial Sustainability. Furthermore, predictors such as Complexity Level (P =.061, = -.30), Program Revenue (P =.056, =.003), and Government Contribution - Moderation (P =.054, =.016) provide results indicating that these measures will be subject of interest for further investigation in the future.

Overall, the results suggest that various factors contribute to the financial sustainability of nonprofit organizations, with Model 3 explaining the most variance in Financial Sustainability. In addition to the variables included in Model 1, the other significant predictors of financial sustainability in Models 2 and 3 highlight the importance of organizational complexity, financial viability ratios, and revenue sources.

The Research Model using the Financial Vulnerability Index (FVI) as a measure of Financial Vulnerability was able to generate an R-squared, which could explain 11.1 % of the variance of the Dependent Variable, Financial Sustainability. However, when the same Research Model is considered using the coefficients of the Financial Vulnerability Index (better known as Financial Distress Measures) instead of the FVI, the obtained R-squared of this version of the Research Model can explain 37.4% of the variable, or an incremental change in the R-squared of 26.3%. Therefore, because the Research Model, which considers the Financial Distress Ratios, provides a more robust explanatory power of the variance of the Dependable Variable, this Research Model will be considered the primary focus of the subsequent evaluations within this research.

Table X. ANOVA: Financial Distress Measures as Financial Vulnerability

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.283	4	.071	4.624	.001[b]
	Residual	11.771	768	.015		
	Total	12.055	772			
2	Regression	4.333	14	.310	30.386	.000[c]
	Residual	7.721	758	.010		
	Total	12.055	772			
3	Regression	4.508	23	.196	19.450	.000[d]
	Residual	7.547	749	.010		
	Total	12.055	772			

a. Dependent Variable: F.Sustainability

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

c. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, Auditors' Quality, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level

d. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, Auditors' Quality, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level, P.ContMOD, AdmMOD, DebtMOD, P.ReveMOD, G.ContMOD, ConcMOD, SurpMOD, SizeMOD, ComplMOD

Table XI. Model Summary: Financial Distress Measures as Financial Vulnerability

Model Summary[d]

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.153[a]	.024	.018	.1238033	.024	4.624	4	768	.001
2	.600[b]	.359	.348	.1009282	.336	39.758	10	758	.000
3	.611[c]	.374	.355	.1003806	.014	1.921	9	749	.046

a. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, Auditors' Quality, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level

c. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, Auditors' Quality, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level, P.ContMOD, AdmMOD, DebtMOD, P.ReveMOD, G.ContMOD, ConcMOD, SurpMOD, SizeMOD, ComplMOD

d. Dependent Variable: F.Sustainability

Table XII. Coefficients with Financial Distress Measures as Financial Vulnerability

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.076	.014		5.320	.000	.048	.103		
	Employees	-2.503E-6	.000	-.009	-.244	.807	.000	.000	.868	1.152
	Volunteers	1.441E-6	.000	.034	.957	.339	.000	.000	.986	1.014
	Board of Directors	.000	.001	.010	.270	.787	-.001	.001	.929	1.076
	E.Compensation	-.004	.001	-.151	-3.977	.000	-.007	-.002	.884	1.131
2	(Constant)	.047	.056		.850	.396	-.062	.156		
	Employees	1.036E-5	.000	.039	1.182	.238	.000	.000	.792	1.263
	Volunteers	4.644E-7	.000	.011	.374	.708	.000	.000	.967	1.034
	Board of Directors	.000	.001	-.029	-.901	.368	-.001	.001	.821	1.219
	E.Compensation	-.001	.001	-.046	-1.341	.180	-.003	.001	.733	1.364
	Complexity Level	-.030	.016	-.161	-1.856	.064	-.061	.002	.112	8.908
	FVI:D.Ratio	-.041	.020	-.070	-2.056	.040	-.081	-.002	.730	1.369
	FVI:R.Concentration	.022	.027	.029	.816	.415	-.030	.074	.675	1.481
	FVI:S.Margin	.555	.033	.554	16.942	.000	.490	.619	.791	1.264
	FVI:A.Cost Ratio	-.045	.023	-.065	-1.921	.055	-.091	.001	.728	1.374
	FVI:Assets	-.006	.004	-.066	-1.402	.161	-.013	.002	.384	2.605
	Government Contribution	.001	.003	.010	.266	.790	-.005	.007	.627	1.595
	Public Contribution	.002	.001	.092	1.443	.150	-.001	.005	.209	4.791
	Program Revenue	.003	.001	.139	2.107	.035	.000	.006	.194	5.146
	Auditors' Quality	.006	.008	.020	.682	.496	-.011	.022	.943	1.060
3	(Constant)	.061	.056		1.082	.280	-.050	.172		
	Employees	1.018E-5	.000	.038	1.151	.250	.000	.000	.769	1.300
	Volunteers	3.912E-7	.000	.009	.314	.754	.000	.000	.948	1.055
	Board of Directors	.000	.001	-.029	-.893	.372	-.001	.001	.810	1.235
	E.Compensation	-.001	.001	-.048	-1.422	.156	-.003	.001	.721	1.386
	Complexity Level	-.030	.016	-.163	-1.879	.061	-.061	.001	.111	9.038
	FVI:D.Ratio	-.044	.020	-.074	-2.169	.030	-.083	-.004	.723	1.383
	FVI:R.Concentration	.015	.027	.021	.577	.564	-.037	.068	.655	1.528
	FVI:S.Margin	.565	.033	.564	16.971	.000	.499	.630	.758	1.319
	FVI:A.Cost Ratio	-.051	.024	-.074	-2.153	.032	-.097	-.004	.706	1.417
	FVI:Assets	-.004	.004	-.050	-1.067	.286	-.012	.004	.378	2.644
	Government Contribution	.000	.003	.002	.044	.965	-.006	.006	.613	1.631
	Public Contribution	.002	.001	.096	1.510	.132	-.001	.005	.205	4.867
	Program Revenue	.003	.001	.127	1.918	.056	.000	.005	.191	5.239
	Auditors' Quality	.007	.010	.024	.697	.486	-.012	.025	.703	1.423
	ComplMOD	-.038	.041	-.087	-.942	.347	-.118	.041	.098	10.229
	DebtMOD	.039	.046	.031	.861	.389	-.050	.129	.641	1.560
	ConcMOD	-.005	.065	-.003	-.083	.934	-.133	.122	.548	1.825
	SurpMOD	.003	.089	.001	.030	.976	-.172	.177	.588	1.702
	AdmMOD	.054	.051	.037	1.060	.289	-.046	.154	.690	1.449
	SizeMOD	-.031	.009	-.168	-3.474	.001	-.049	-.014	.356	2.807
	G.ContMOD	.016	.008	.082	1.929	.054	.000	.031	.465	2.150
	P.ContMOD	.004	.003	.077	1.108	.268	-.003	.011	.173	5.771
	P.ReveMOD	.005	.003	.097	1.395	.163	-.002	.011	.171	5.840

a. Dependent Variable: F.Sustainability

The group of Tables XIII-XV illustrates the results of ANOVA, Model Summary, and Coefficients for the dependent variable Financial Sustainability across three quality groups: Low, Medium, and High.

Across the Low Auditors' Quality group, Model 1 has an F-value of 0.585, which is not significant ($p > 0.05$), while Model 2 has an F-value of 3.732, which is significant ($p < 0.05$). Moreover, the R-squared value of the first model is only 0.11, indicating that the predictors explain only 11% of the variation in Financial Sustainability.

For the Medium Auditors 'Quality group, Model 1 has an F-value of 4.560, which is significant ($p < 0.05$), and Model 2 has an F-value of 25.263, which is significant ($p < 0.001$). Additionally, the R Square value of the second model is 0.362, indicating that the predictors explain 36.2% of the variation in Financial Sustainability.

For the High Auditors' Quality group, Model 1 has an F-value of 2.974, which is significant ($p < 0.05$), and Model 2 has an F-value of 10.833, which is highly significant ($p < 0.001$). Additionally, the R Square value of the second model is 0.50, indicating that the predictors explain 50% of the variation in Financial Sustainability.

In the Coefficients table, the predictor variables' coefficients show the relationship between each predictor variable and the dependent variable, controlling for all other predictors in the model. The Model 1 within the Low Auditors' Quality group provided no significant predictors; however, the Model 2 provided Complexity Level ($\beta = -.373$) as a significant negative predictor of Financial Sustainability. The Model 1, within the Medium Auditors' Quality group, provided Executive Compensation ($\beta = -.005$) as a significant negative predictor of Financial Sustainability; however, when Model 2, under the same group is evaluated, the results of several predictors are significantly relevant to

Financial Sustainability. The predictors that result in significant relevancy under this model are the following: FVI: Debt Ratio (β =-.061), FVI: Surplus Margin (β = .545), and FVI: Cost Ratio (β = -.084). Lastly, the Model 1 within the High Auditors' Quality Group provided the Number of Volunteers as a significant positive predictor of Financial Sustainability; however, when we consider the Model 2 under the same quality group, several predictors result in a significant explanation of the variance of Financial Sustainability. These predictors are the following: Complexity Level (β = .004), FVI: Surplus Margin (β = .630), Public Contributions (β = .006), Program Revenue (β = .007) and FVI: Assets (β = -.029). Interestingly, the predictor FVI: Size (Assets) results in an unexpectedly significant low-strength negative relationship to Financial Sustainability. These results might be significantly interesting to be evaluated in future research.

In general, the ANOVA and regression results suggest that the relationship between the independent and dependent variables is stronger in the High Auditors' Quality group, followed by the Medium Auditors' Quality group, and weaker in the Low Auditors' Quality group. The predictor variables that are most strongly associated with the dependent variable also vary between quality groups.

Table XIII. ANOVA by Type of Auditors' Quality

ANOVA[a]

A. Quality Groups	Model		Sum of Squares	df	Mean Square	F	Sig.
Low	1	Regression	.018	4	.005	.585	.677[b]
		Residual	.149	19	.008		
		Total	.167	23			
	2	Regression	.139	13	.011	3.732	.022[c]
		Residual	.029	10	.003		
		Total	.167	23			
Medium	1	Regression	.303	4	.076	4.560	.001[b]
		Residual	9.799	589	.017		
		Total	10.103	593			
	2	Regression	3.652	13	.281	25.263	.000[d]
		Residual	6.450	580	.011		
		Total	10.103	593			
High	1	Regression	.127	4	.032	2.974	.021[b]
		Residual	1.601	150	.011		
		Total	1.728	154			
	2	Regression	.864	13	.066	10.833	.000[e]
		Residual	.865	141	.006		
		Total	1.728	154			

a. Dependent Variable: F.Sustainability

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

c. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI: S.Margin, FVI:A.Cost Ratio, Program Revenue, Government Contribution, Public Contribution, FVI:D.Ratio, FVI:R.Concentration, FVI:Assets, Complexity Level

d. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level

e. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:R.Concentration, Public Contribution, FVI:D.Ratio, FVI:A.Cost Ratio, Government Contribution, Program Revenue, FVI:S.Margin, FVI:Assets, Complexity Level

Table XIV. Model Summary by Type of Auditors' Quality

Model Summary[c]

						Change Statistics				
A. Quality Groups	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
Low	1	.331[a]	.110	-.078	.0884987	.110	.585	4	19	.677
	2	.911[b]	.829	.607	.0534454	.719	4.677	9	10	.012
Medium	1	.173[a]	.030	.023	.1289853	.030	4.560	4	589	.001
	2	.601[d]	.362	.347	.1054571	.331	33.460	9	580	.000
High	1	.271[a]	.073	.049	.1033269	.073	2.974	4	150	.021
	2	.707[e]	.500	.454	.0783143	.426	13.346	9	141	.000

a. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees

b. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:S.Margin, FVI:A.Cost Ratio, Program Revenue, Government Contribution, Public Contribution, FVI:D.Ratio, FVI:R.Concentration, FVI:Assets, Complexity Level

c. Dependent Variable: F.Sustainability

d. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:D.Ratio, FVI:S.Margin, Public Contribution, FVI:R.Concentration, Government Contribution, FVI:A.Cost Ratio, Program Revenue, FVI:Assets, Complexity Level

e. Predictors: (Constant), E.Compensation, Volunteers, Board of Directors, Employees, FVI:R.Concentration, Public Contribution, FVI:D.Ratio, FVI:A.Cost Ratio, Government Contribution, Program Revenue, FVI:S.Margin, FVI:Assets, Complexity Level

Table XV. Coefficients by Type of Auditors' Quality

Coefficients[a]

A. Quality Groups	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
			B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
Low	1	(Constant)	.034	.056		.594	.560	-.085	.152		
		Employees	6.760E-5	.000	.147	.541	.595	.000	.000	.635	1.575
		Volunteers	-2.154E-6	.000	-.060	-.262	.796	.000	.000	.888	1.126
		Board of Directors	-.003	.003	-.266	-1.084	.292	-.008	.003	.780	1.282
		E.Compensation	.001	.005	.077	.264	.795	-.009	.012	.550	1.817
	2	(Constant)	.491	.580		.846	.417	-.801	1.783		
		Employees	-9.693E-6	.000	-.021	-.087	.932	.000	.000	.291	3.438
		Volunteers	-8.530E-6	.000	-.238	-1.040	.323	.000	.000	.327	3.062
		Board of Directors	-.003	.003	-.324	-1.232	.246	-.010	.003	.247	4.040
		E.Compensation	.003	.006	.196	.618	.551	-.009	.016	.169	5.920
		Complexity Level	-.373	.149	-3.112	-2.498	.032	-.706	-.040	.011	90.803
		FVI:D.Ratio	.041	.120	.130	.346	.736	-.226	.309	.120	8.311
		FVI:R.Concentration	.166	.201	.320	.822	.430	-.283	.614	.113	8.845
		FVI:S.Margin	.726	.358	.440	2.028	.070	-.072	1.524	.362	2.760
		FVI:A.Cost Ratio	.190	.101	.421	1.888	.088	-.034	.415	.343	2.915
		FVI:Assets	-.002	.031	-.034	-.067	.948	-.071	.067	.067	14.825
		Government Contribution	-.001	.032	-.008	-.023	.982	-.073	.071	.124	8.037
		Public Contribution	.030	.013	2.087	2.234	.049	.000	.059	.020	51.052
		Program Revenue	.026	.012	1.877	2.185	.054	-.001	.052	.023	43.194
Medium	1	(Constant)	.070	.016		4.236	.000	.037	.102		
		Employees	-4.252E-7	.000	-.001	-.032	.975	.000	.000	.875	1.142
		Volunteers	7.650E-7	.000	.019	.461	.645	.000	.000	.990	1.010
		Board of Directors	.001	.001	.043	1.027	.305	-.001	.002	.933	1.072
		E.Compensation	-.005	.001	-.175	-4.081	.000	-.008	-.003	.898	1.114
	2	(Constant)	.103	.062		1.663	.097	-.019	.224		
		Employees	1.501E-5	.000	.049	1.319	.188	.000	.000	.809	1.236
		Volunteers	1.810E-7	.000	.004	.132	.895	.000	.000	.971	1.030
		Board of Directors	.000	.001	-.021	-.577	.564	-.002	.001	.836	1.197
		E.Compensation	-.002	.001	-.072	-1.913	.056	-.004	.000	.768	1.301
		Complexity Level	-.020	.019	-.107	-1.086	.278	-.057	.016	.112	8.893
		FVI:D.Ratio	-.061	.024	-.098	-2.536	.011	-.108	-.014	.731	1.368
		FVI:R.Concentration	.019	.031	.024	.599	.550	-.043	.080	.701	1.427
		FVI:S.Margin	.545	.038	.522	14.419	.000	.471	.619	.841	1.189
		FVI:A.Cost Ratio	-.084	.028	-.116	-3.048	.002	-.138	-.030	.765	1.306
		FVI:Assets	.000	.005	.005	.094	.925	-.009	.010	.401	2.497
		Government Contribution	-.002	.004	-.022	-.538	.591	-.009	.005	.638	1.567
		Public Contribution	.002	.002	.072	1.003	.316	-.002	.005	.211	4.733
		Program Revenue	.002	.002	.072	.966	.335	-.002	.005	.197	5.078
High	1	(Constant)	.119	.035		3.391	.001	.050	.189		
		Employees	-1.707E-5	.000	-.099	-1.139	.256	.000	.000	.823	1.215
		Volunteers	9.010E-6	.000	.170	2.122	.035	.000	.000	.960	1.041
		Board of Directors	-.001	.001	-.124	-1.530	.128	-.003	.000	.936	1.068
		E.Compensation	-.004	.003	-.121	-1.419	.158	-.010	.002	.847	1.180
	2	(Constant)	-.099	.106		-.937	.350	-.309	.110		
		Employees	-3.417E-6	.000	-.020	-.281	.779	.000	.000	.717	1.395
		Volunteers	1.899E-6	.000	.036	.516	.607	.000	.000	.735	1.360
		Board of Directors	-.001	.001	-.061	-.896	.372	-.002	.001	.767	1.304
		E.Compensation	.004	.003	.124	1.566	.120	-.001	.009	.569	1.758
		Complexity Level	-.075	.031	-.417	-2.425	.017	-.136	-.014	.120	8.324
		FVI:D.Ratio	.008	.038	.015	.212	.833	-.068	.084	.681	1.468
		FVI:R.Concentration	.018	.052	.027	.339	.735	-.085	.120	.542	1.845
		FVI:S.Margin	.630	.074	.766	8.460	.000	.483	.777	.433	2.308
		FVI:A.Cost Ratio	.033	.048	.059	.688	.492	-.061	.127	.488	2.047
		FVI:Assets	-.029	.007	-.405	-4.077	.000	-.043	-.015	.359	2.784
		Government Contribution	.011	.007	.135	1.581	.116	-.003	.024	.487	2.053
		Public Contribution	.006	.003	.294	2.218	.028	.001	.011	.202	4.954
		Program Revenue	.007	.003	.361	2.669	.009	.002	.012	.194	5.162

a. Dependent Variable: F.Sustainability

The group of Tables XV-XVIII illustrates the results of Descriptives Statistics, ANOVA, Model Summary, and Coefficients for the research model, including the Financial Distress Measures individual's factors of financial vulnerability for the Auditors' Quality groups segregated as Otherwise Auditors' Quality and High Auditors' Quality.

The Descriptives Statistics analysis illustrates the compilation and segregation of the research sample by type of Auditors' Quality, their appropriate predictor means, and standard deviations. The sample has been distributed in two (2) types of Auditors' Qualities: Otherwise Auditors' Quality (Low Auditors' Quality and Medium Auditors' Quality together) and High Auditors' Quality. The sample distribution was N = 618 nonprofit entities defined as users of Otherwise Auditors' Quality and N = 155 nonprofit entities defined as users of High Auditors' Quality. Both Auditors' Quality groups correspond to the total sample of this research N = 773.

The ANOVA table reports the results of the analysis of the variance test, which is used to evaluate whether there is a significant difference between the means of the Otherwise Auditors' Quality group and the High Auditors' Quality group. For the Otherwise group, the ANOVA table shows that there is a significant difference between the means of the two regression models, with F (4, 613) = 4.271, p =.002, for Model 1, and F (14, 603) = 23.930, p =.000, for Model 2. For the high-quality group, the ANOVA table also indicates that there is a significant difference between the means of the two regression models, with F (4, 150) = 2.974, p =.021 for Model 1 and F (13, 141) = 10.833, p =.000 for Model 2.

The model summary table reports the R-squared values for the two groups and the two models. The R-squared is a measure of how much of the variation in the dependent variable is explained by the independent variables in the model. For the Otherwise Auditors' Quality group, the R-squared is .027 for Model 1 and .357 for Model 2, indicating that the latter model explains much more of the variation in Financial Sustainability. For the High Auditors' Quality group, the R-squared is .073 for Model 1 and .500 for Model 2, again showing a substantial improvement in the variance explained.

The Coefficients table provides information about the relationship between the predictors and the dependent variable. For the Otherwise Auditors' Quality group, Model 1, the predictor Total Executive Compensation (β = -.005) has a significant negative relationship with Financial Sustainability.

For Model 2, the predictors Total Executive Compensation (β =-.002), FVI: Debt Ratio (β = -.055), and FVI: Administrative Cost Ratio (β = -.069) has a significant negative relationship with Financial Sustainability, while the predictor FVI: Surplus Margin (β = .556) has a significant positive relationship with Financial Sustainability. For the High Auditors' Quality group, Model 1, the predictor Volunteers (β = 9.0110E-6) has a significant positive with Financial Sustainability. For Model 2, Complexity (β = -.075) and Size (Assets) (β = -.029) have a significant negative relationship with Financial Sustainability. In contrast, the predictors of Public Contribution (β = .006), Program Revenue (β = .007), and FVI: Surplus Margin (β = .630) have a positive relationship with Financial Sustainability.

In general, the tables of ANOVA, Model Summary, and Coefficients suggest that predictor variables such as Total Executive Compensation, Volunteers, Complexity, and various financial metrics significantly explain the variation in Financial Sustainability.

Table XVI. Descriptive Statistics: vs. High Otherwise Auditors' Quality

Descriptive Statistics

HighQGROUP		Mean	Std. Deviation	N
Otherwise	F.Sustainability	.025763	.1290386	618
	Employees	305.55	416.404	618
	Volunteers	829.13	3177.534	618
	Board of Directors	15.28	7.568	618
	Total E. Compensation	10.532588	4.3802858	618
	Complexity	-.022816	.6963942	618
	G. Contribution	.213784	1.4419847	618
	P. Contributions	-.169796	5.5616132	618
	P. Revenue	-.489575	6.1096304	618
	A. Quality	-.198835	.1933579	618
	FVI: D. Ratio	-.064507	.2136953	618
	FVI: R. Concentration	.011729	.1649363	618
	FVI: S. Margin	-.007367	.1229173	618
	FVI: A. Cost Ratio	.010577	.1806991	618
	Assets	-.118896	1.4402468	618
High A. Quality	F.Sustainability	.046382	.1059428	155
	Employees	456.14	612.530	155
	Volunteers	1010.09	2000.989	155
	Board of Directors	17.30	8.902	155
	Total E. Compensation	11.974534	3.1470138	155
	Complexity	.143548	.5888220	155
	G. Contribution	.511539	1.3603001	155
	P. Contributions	.719109	5.4103818	155
	P. Revenue	1.464858	5.5022170	155
	A. Quality	.840000	.0000000	155
	FVI: D. Ratio	-.044160	.1989958	155
	FVI: R. Concentration	-.039654	.1656177	155
	FVI: S. Margin	.025958	.1287266	155
	FVI: A. Cost Ratio	-.001207	.1892808	155
	Assets	.454405	1.4838468	155

Table XVII. Auditors' Quality in ANOVA: High vs. Otherwise

ANOVA[a]

HighQGROUP	Model		Sum of Squares	df	Mean Square	F	Sig.
Otherwise	1	Regression	.279	4	.070	4.271	.002[b]
		Residual	9.995	613	.016		
		Total	10.274	617			
	2	Regression	3.669	14	.262	23.930	.000[c]
		Residual	6.604	603	.011		
		Total	10.274	617			
High A. Quality	1	Regression	.127	4	.032	2.974	.021[b]
		Residual	1.601	150	.011		
		Total	1.728	154			
	2	Regression	.864	13	.066	10.833	.000[d]
		Residual	.865	141	.006		
		Total	1.728	154			

a. Dependent Variable: F.Sustainability

b. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees

c. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees, A. Quality, D. Ratio, S. Margin, P. Contributions, R. Concentration, G. Contribution, A. Cost Ratio, P. Revenue, Assets, Complexity

d. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees, R. Concentration, P. Contributions, D. Ratio, A. Cost Ratio, G. Contribution, P. Revenue, S. Margin, Assets, Complexity

Table XVIII. Model Summary: High vs. Otherwise Auditors' Quality

Model Summary[c]

						Change Statistics				
HighQGROUP	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
Otherwise	1	.165[a]	.027	.021	.1276919	.027	4.271	4	613	.002
	2	.598[b]	.357	.342	.1046542	.330	30.959	10	603	.000
High A. Quality	1	.271[a]	.073	.049	.1033269	.073	2.974	4	150	.021
	2	.707[d]	.500	.454	.0783143	.426	13.346	9	141	.000

a. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees

b. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees, A. Quality, D. Ratio, S. Margin, P. Contributions, R. Concentration, G. Contribution, A. Cost Ratio, P. Revenue, Assets, Complexity

c. Dependent Variable: F.Sustainability

d. Predictors: (Constant), Total E.Compensation, Volunteers, Board of Directors, Employees, R. Concentration, P. Contributions, D. Ratio, A. Cost Ratio, G. Contribution, P. Revenue, S. Margin, Assets, Complexity

Table XIX. Coefficients Otherwise Auditors' Quality vs. High Auditors' Quality

Coefficients[a]

HighQGROUP	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
			B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
Otherwise	1	(Constant)	.0683	.0159		4.3050	1.9441E-5	.0371	.0994		
		Employees	6.8242E-7	1.3175E-5	.0022	.0518	.9587	.0000	2.6556E-5	.8780	1.1389
		Volunteers	6.8256E-7	1.6273E-6	.0168	.4194	.6750	.0000	3.8784E-6	.9883	1.0118
		Board of Directors	.0006	.0007	.0338	.8202	.4124	-.0008	.0020	.9334	1.0713
		Total E. Compensation	-.0049	.0012	-.1679	-3.9845	7.5747E-5	-.0074	-.0025	.8939	1.1187
	2	(Constant)	.0520	.0150		3.4791	.0005	.0227	.0814		
		Employees	1.4415E-5	1.1234E-5	.0465	1.2832	.1999	.0000	3.6478E-5	.8112	1.2327
		Volunteers	1.9374E-7	1.3481E-6	.0048	.1437	.8858	.0000	2.8413E-6	.9674	1.0337
		Board of Directors	-.0003	.0006	-.0192	-.5383	.5906	-.0015	.0009	.8358	1.1964
		Total E. Compensation	-.0020	.0011	-.0695	-1.8530	.0644	-.0042	.0001	.7569	1.3212
		Complexity	-.0219	.0183	-.1181	-1.1957	.2323	-.0578	.0141	.1093	9.1472
		G. Contributions	-.0023	.0037	-.0257	-.6207	.5350	-.0096	.0050	.6239	1.6029
		P. Contributions	.0016	.0017	.0675	.9368	.3492	-.0017	.0048	.2053	4.8700
		P. Revenue	.0017	.0016	.0790	1.0630	.2882	-.0014	.0048	.1929	5.1837
		A. Quality	.0100	.0222	.0150	.4528	.6509	-.0335	.0536	.9651	1.0362
		FVI: D. Ratio	-.0549	.0232	-.0909	-2.3671	.0182	-.1005	-.0094	.7224	1.3842
		FVI: R. Concentration	.0194	.0307	.0248	.6304	.5286	-.0410	.0797	.6906	1.4480
		FVI: S. Margin	.5557	.0372	.5293	14.9213	.0000	.4825	.6288	.8472	1.1804
		FVI: A. Cost Ratio	-.0690	.0266	-.0966	-2.5938	.0097	-.1213	-.0168	.7680	1.3020
		FVI: Assets	.0012	.0047	.0132	.2536	.7999	-.0080	.0103	.3952	2.5306
High A. Quality	1	(Constant)	.1195	.0352		3.3908	.0009	.0499	.1891		
		Employees	.0000	1.4985E-5	-.0987	-1.1394	.2564	.0000	1.2535E-5	.8229	1.2152
		Volunteers	9.0096E-6	4.2459E-6	.1702	2.1220	.0355	6.2009E-7	1.7399E-5	.9605	1.0412
		Board of Directors	-.0015	.0010	-.1242	-1.5297	.1282	-.0034	.0004	.9363	1.0681
		Total E. Compensation	-.0041	.0029	-.1211	-1.4186	.1581	-.0098	.0016	.8473	1.1802
	2	(Constant)	-.0023	.0321		-.0730	.9419	-.0659	.0612		
		Employees	.0000	1.2169E-5	-.0198	-.2808	.7792	.0000	2.0639E-5	.7168	1.3950
		Volunteers	1.8989E-6	3.6785E-6	.0359	.5162	.6065	.0000	9.1711E-6	.7351	1.3604
		Board of Directors	-.0007	.0008	-.0609	-.8957	.3720	-.0023	.0009	.7672	1.3035
		Total E. Compensation	.0042	.0027	.1237	1.5659	.1196	-.0011	.0094	.5689	1.7578
		Complexity	-.0750	.0309	-.4168	-2.4253	.0166	-.1361	-.0139	.1201	8.3241
		G. Contributions	.0105	.0066	.1350	1.5812	.1161	-.0026	.0237	.4871	2.0529
		P. Contributions	.0058	.0026	.2941	2.2179	.0282	.0006	.0109	.2019	4.9540
		P. Revenue	.0070	.0026	.3612	2.6686	.0085	.0018	.0121	.1937	5.1623
		FVI: D. Ratio	.0081	.0384	.0153	.2116	.8327	-.0678	.0841	.6813	1.4677
		FVI: R. Concentration	.0176	.0518	.0275	.3395	.7347	-.0848	.1199	.5419	1.8452
		FVI: S. Margin	.6301	.0745	.7657	8.4599	.0000	.4829	.7774	.4332	2.3085
		FVI: A. Cost Ratio	.0328	.0477	.0587	.6882	.4925	-.0615	.1271	.4885	2.0472
		FVI: Assets	-.0289	.0071	-.4052	-4.0768	7.5953E-5	-.0430	-.0149	.3592	2.7836

a. Dependent Variable: F.Sustainability

Table XX. Significance Analysis of Individual Predictors for Groups Differences displays the statistical findings of regression analysis with five predictors (Debt Ratio, Revenue Concentration, Surplus Margin, Administrative Cost Ratio, and Size) and their associations with two levels of Auditors' Quality, high quality and otherwise (low and medium) quality. In addition, the regression analysis provides estimates of the regression coefficient (β) and standard error (SE) for each predictor at each level of Auditors' Quality.

The beta coefficients indicate the direction and magnitude of the relationship between each predictor and the type of quality. A positive beta coefficient (β) suggests a positive relationship, while a negative beta coefficient suggests a negative relationship. The standard error (SE) provides an estimate of the precision of the beta coefficient.

The difference column shows the difference between the beta coefficient (β) for High Auditors' Quality group and the beta coefficient for Otherwise Auditors' Quality group. The z score column measures the standard deviation of the beta coefficients from the null hypothesis of no relationship. The p-value column shows the probability of obtaining a z score as extreme or more extreme than the observed z score, assuming that the null hypothesis is true.

Complexity is negatively associated with high quality (β = -0.0750, SE = 0.0309) and otherwise quality (β = -0.0219, SE = 0.0183). However, the difference in the regression coefficients for the High Auditors' Quality group vs. Otherwise Auditors' Quality is not statistically significant (β = -0.0531, z score = -1.4786, p-value = 0.1392).

FVI: Debt Ratio has a positive coefficient of 0.0081 in the High Auditors' Quality group but a negative coefficient of -0.0549 in the Otherwise Auditors' Quality group. The

difference between the two coefficients is not significant, with a z score of 1.4042 and a p-value of 0.1602.

FVI: Revenue Concentration has a positive coefficient of 0.0070 in the High Auditors' Quality group and a higher coefficient of 0.0194 in the Otherwise Auditors' Quality group. However, the difference between the two coefficients is not significant, with a β of -.6873, a z score of -0.4025, and a p-value of 0.6873.

FVI: Surplus Margin has a positive coefficient of 0.6301 in the High Auditors' Quality group and a slightly lower coefficient of 0.5557 in the Otherwise Auditors' Quality group. The difference between the two coefficients is not significant, with a β of .0744, a z score of 0.8935, and a p-value of 0.3716.

FVI: Administrative Cost Ratio has a positive coefficient of 0.0328 in the High Auditors' Quality group but a negative coefficient of -0.0690 in the Otherwise Auditors' Quality group. The difference between the two coefficients is not significant, with a β of .1018, a z score of 1.8639, and a p-value of 0.062. However, the closeness of the obtained p-value provided an empirical base for further research on this phenomenon further.

FVI: Assets have a negative coefficient of -0.0289 in the High Auditors' Quality group but a positive coefficient of 0.0012 in the Otherwise Auditors' Quality group. The difference between the two coefficients is significant, with a β of -.0301, a z score of -3.5351, and a p-value of 0.0004.

Government Contributions have a positive association with the High Auditors' Quality group (β = 0.0105, SE = 0.0066) and a negative association with the Otherwise Auditors' Quality group (β = -0.0023, SE = 0.0037). The difference in the regression coefficients for the High Auditors' Quality group vs. Otherwise Auditors' Quality is

statistically significant (β of .0128, z score = 1.6917, p-value = 0.0907). However, the p-value is relatively high and might not be significant at a more stringent significance level. As presented similarly to FVI: Administrative Cost Ratio, the closeness of the obtained p-value provided an empirical base to further investigate this predictor.

Public Contributions positively correlate with the High Auditors' Quality group (β = 0.0058, SE = 0.0026) and the Otherwise Auditors' Quality group (β = 0.0016, SE = 0.0017). However, the difference in the regression coefficients for the High Auditors' Quality group vs. the Otherwise Auditors' Quality group is not statistically significant (β of .0042, z score = 1.3520, p-value = 0.1764).

Program Revenue is positively associated with the High Auditors' Quality group (β = 0.0070, SE = 0.0026) and Otherwise Auditors' Quality group (β = 0.0017, SE = 0.0016). However, the difference in the regression coefficients for the High Auditors' Quality group vs. the Otherwise Auditors' Quality group is not statistically significant (β of .0053, z score = 1.7361, p-value = 0.0826). This predictor might also be considered for further exploration in subsequent research.

In summary, the results suggest some differences in the coefficients of the predictors between the High Auditors' Quality group and the Otherwise Auditors' Quality group. The outcome also illustrated the coefficient difference for the predictor FVI: Assets as significant. However, several predictors (Administrative Cost Ratio, Government Contributions, and Program Revenue) present some empirical evidence that positions them as candidates for further research.

Table XX. Significance Analysis of Individual Predictors for Group Differences

PREDICTOR	(β) HIGH QUALITY	(SE) HIGH QUALITY	(β) OTHERWISE QUALITY	(SE) OTHERWISE QUALITY	(SE) DIFFERENCE (HIGH VS OTHERWISE)	Z SCORE	((β) DIFFERENCE (HIGH VS OTHERWISE)	P-VALUE
Complexity	-0.0750	0.0309	-0.0219	0.0183	0.0359	-1.4786	-0.0531	0.1392
FVI: Debt Ratio	0.0081	0.0384	-0.0549	0.0232	0.0449	1.4042	0.0630	0.1602
FVI: Revenue Concentration	0.0070	0.0026	0.0194	0.0307	0.0308	-0.4025	-0.0124	0.6873
FVI: Surplus Margin	0.6301	0.0745	0.5557	0.0372	0.0833	0.8935	0.0744	0.3716
FVI: Administrative Cost Ratio	0.0328	0.0477	-0.0690	0.0266	0.0546	1.8639	0.1018	0.0623
FVI: Assets (Size)	-0.0289	0.0071	0.0012	0.0047	0.0085	-3.5351	-0.0301	0.0004
Government Contributions	0.0105	0.0066	-0.0023	0.0037	0.0076	1.6917	0.0128	0.0907
Public Contributions	0.0058	0.0026	0.0016	0.0017	0.0031	1.3520	0.0042	0.1764
Program Revenue	0.0070	0.0026	0.0017	0.0016	0.0031	1.7361	0.0053	0.0826

Research Model Analysis and Results

This section presents the analysis of the research model developed in Chapter 3. The research model is the theoretical framework that provides the basis for the research questions and hypotheses tested in this study. This study examined the relationship between various antecedents and the financial sustainability of nonprofit organizations. The model included six hypotheses and one moderator hypothesis, with their appropriate predicament and results as follows:

The first hypothesis (H1) predicted that an increase in complexity, measured by revenue diversity, would increase the financial sustainability of nonprofit organizations. The results indicated that this hypothesis was not supported ($\beta = -0.030$, $p = 0.061$).

Therefore, a nonprofit with diverse revenue streams may be less financially sustainable than one with just a few sources; however, other endogenous and exogenous factors might be significantly relevant to this outcome and might be observed individually.

The second hypothesis (H2) predicted that high levels of financial vulnerability, measured by the financial vulnerability index (FVI), would decrease the financial sustainability of nonprofit organizations. The results partially supported this hypothesis, as the coefficients for Debt Ratio ($\beta = -0.044$, $p = 0.030$), Surplus Margin ($\beta = 0.565$, $p = 0.000$), and Administrative Cost Ratio ($\beta = -0.051$, $p = 0.032$) were statistically significant, indicating that an increase in these factors would decrease financial sustainability. However, the results towards the hypothesis which evaluate the predictor Administrative Cost Ratio demonstrated an opposite behavior in regards the position of the beta coefficient ($\beta = -0.051$), and therefore how the evaluative concept was hypothesized. As mentioned previously, Administrative Cost Ratio has been a controversial subject in academic literature and its behavior must be examined further in future studies. Nevertheless, the coefficient of Revenue Concentration ($\beta = 0.015$, $p = 0.564$) was not statistically significant, indicating that this factor did not have a significant effect on Financial Sustainability. Also, the coefficient for Size (Assets) ($\beta = -.004$, $p = 0.286$) was not statistically significant, indicating that this factor did not have a significant effect on Financial Sustainability.

In summary, the findings suggest that financial sustainability decreases as the proportion of debt to total assets increases. This finding is likely because a higher level of debt increases the organization's financial risk and reduces its ability to invest in future projects or operations. Furthermore, the findings over the Surplus Margin suggest that

increasing the surplus after all expenses are paid improves financial sustainability. This finding is likely because a higher surplus margin provides the organization with more resources to invest in future projects or operations, which in turn can improve its financial sustainability. Regarding the administrative cost ratio, the findings suggest that financial sustainability decreases as the proportion of administrative costs to total expenses increases.

The results are interesting due to the division and controversy of the academic literature on the expected relationship between Administrative Costs and Financial Sustainability in nonprofit organizations (Tevel et al., 2015; MacIndoe & Sullivan, 2014; Kim, 2017; Lecy & Searing, 2015; Denison & Beard, 2003). This outcome is likely because higher administrative costs reduce the organization's ability to invest in its core mission or programs, ultimately affecting its financial sustainability. However, some analysis of administrative judgment and cost-to-benefits analysis should be part of the increase in administrative expenses. The findings on revenue concentration suggest that an organization's reliance on a particular funding source does not necessarily affect its ability to sustain itself financially. This finding is clever because it indicates that organizations may be able to rely on a particular funding source without risking their financial sustainability as long as they maintain healthy financial ratios and control administrative costs.

Lastly, the findings regarding Size (assets) suggest that larger nonprofit organizations may face greater financial risks that can offset the potential benefits of their larger size. Therefore, another possibility is that the relationship between size and financial sustainability may be more complex than initially assumed. Alternatively, the

impact of size on financial sustainability may depend on other factors, such as the nature of the organization's mission or the types of programs and services it provides.

These findings suggest that nonprofit organizations should be mindful of their financial vulnerability and work to maintain healthy financial ratios and control administrative costs to improve their financial sustainability.

The third hypothesis (H3) predicted that high levels of government contributions, measured by the total contributions and grants, would increase the financial sustainability of nonprofit organizations. The results did not support this hypothesis, as the coefficient was not statistically significant ($\beta = 0.000$, $p = 0.965$). These findings might be due to inadequate funding, ineffective use of funds, or other factors exogenous to nonprofits' core operations.

The fourth hypothesis (H4) predicted that high levels of public contributions, measured by the total indirect support, would increase the financial sustainability of nonprofit organizations. The results did not support this hypothesis, as the coefficient was not statistically significant ($\beta = 0.002$, $p = 0.132$). These findings could be related to the level of public contributions not being significant enough, ineffective use of funds by nonprofit organizations, or other external factors such as economic conditions and organizational management that may play a more critical role in determining financial sustainability.

The fifth hypothesis (H5) predicted that high levels of program revenue, measured by the total tuition fees, service fees, admission fees, and other unrestricted revenues, would increase the financial sustainability of nonprofit organizations. The results marginally supported this hypothesis, as the coefficient was statistically significant at the

0.056 level (β = 0.003, p = 0.056). Therefore, nonprofits that generate more revenue from their programs may be more financially sustainable than those that rely on other sources. The results suggest that nonprofits that generate more revenue from their programs may be more financially sustainable than those that rely on other sources. This finding could imply that nonprofits that focus on creating effective and profitable programs can enhance their financial sustainability instead of relying on external funding sources such as government grants or public contributions.

The sixth hypothesis (H6) predicted that Auditors' Quality would have a moderating effect on the relationship between Financial Sustainability and its antecedents. More specifically, we examine the moderating effect of Auditors' Quality on the relationship between Complexity, Financial Vulnerability, Government Contributions, Public Contributions, and Program Revenue.

a. The sub-hypothesis (H6a) posited that Auditors' Quality would positively moderate the relationship between Complexity and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. However, the results did not support this hypothesis (β = -0.053, p = 0.139). Therefore, Auditors' Quality did not have a significant moderating effect on the relationship between Complexity and Financial Sustainability. One possible explanation for this finding is that, while a High-Quality Auditor may provide more accurate financial statements, the Complexity of the organization's financial situation may still pose a significant challenge to achieving Financial Sustainability, regardless of the auditor's quality.

b. The sub-hypothesis (H6b) predicted that Auditors' Quality would positively

moderate the relationship between Financial Vulnerability and Financial Sustainability, diminishing the negative effect when it is a High-Quality Auditor. The results of this hypothesis are developed over the sub-hypotheses H6b1, H6b2, H6b3, H6b4 and H6b5 presented as follows:

b1. The sub-hypothesis (H6b1) proposed that Auditors' Quality would positively moderate the relationship between Debt Ratio and Financial Sustainability, diminishing the negative effect when it is a High-Quality Auditor. However, the results did not support this hypothesis ($\beta = 0.063$, $p = 0.160$). Therefore, Auditors' Quality did not have a significant moderating effect on the relationship between Debt Ratio and Financial Sustainability. One possible explanation could be that the level of Auditors' Quality did not significantly impact how the Debt Ratio affects Financial Sustainability. It could also be that the relationship between Debt Ratio and Financial Sustainability is inherent to long-term obligations and that not much can be done to mitigate its negative impact.

b_2. The sub-hypothesis (H6b2) predicted that Auditors' Quality would positively moderate the relationship between Revenue Concentration and Financial Sustainability, diminishing the negative effect when it is a High-Quality Auditor. The results did not support this hypothesis ($\beta = -0.012$, $p = 0.687$). Therefore, Auditors' Quality did not have a significant moderating effect on the relationship between Revenue Concentration and Financial Sustainability. One possible explanation is that nonprofit organizations often rely on a few major funding sources, such as government grants or large donations, which can create

Revenue Concentration. High-quality auditors may not be able to influence the source or amount of funding, which can limit their ability to mitigate the negative impact of Revenue Concentration on Financial Sustainability.

b_3. The sub-hypothesis (H6b3) posited that Auditors' Quality would positively moderate the relationship between Surplus Margin and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. However, the results did not support this hypothesis ($\beta = 0.074$, $p = 0.372$). Therefore, Auditors' Quality did not have a significant moderating effect on the relationship between Surplus Margin and Financial Sustainability. One possible explanation is that the Surplus Margin, or the revenue left after covering expenses, may not be as significant in nonprofit Financial Sustainability as other factors. Additionally, high-quality auditors may not have enough influence over how nonprofit organizations allocate their Surplus Margin, limiting their ability to enhance the positive impact on Financial Sustainability.

b_4. The sub-hypothesis (H6b4) predicted that Auditors' Quality would positively moderate the relationship between Administrative Cost Ratio and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. The results marginally supported this hypothesis ($\beta = 0.102$, $p = 0.062$). Therefore, Auditors' Quality had a marginally significant moderating effect on the relationship between the Administrative Cost Ratio and Financial Sustainability. One possible explanation is that high-quality auditors may be able to identify opportunities for nonprofit organizations' management to reduce administrative costs and redirect funds to more impactful programs or services.

Additionally, high-quality auditors may be able to provide guidance on how to allocate resources effectively to maximize Financial Sustainability; however, the ultimate decision gravitates toward the higher management of the entity.

b_5. The sub-hypothesis (H6b5) posited that Auditors' Quality would positively moderate the relationship between Size (assets) and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. However, the results did not support this hypothesis ($\beta = -0.030$, $p = 0.000$). Therefore, the quality of the auditors did not have a significant moderating effect on the relationship between Size (assets) and Financial Sustainability. One possible explanation is that nonprofit organizations of different sizes may face unique Financial Sustainability challenges, and high-quality auditors may not have a one-size-fits-all solution. Additionally, high-quality auditors may not have enough influence to change the Size of nonprofit organizations, limiting their ability to enhance the positive impact of Size on Financial Sustainability.

c. The sub-hypothesis (H6c) predicted that Auditors' Quality would positively moderate the relationship between Government Contributions and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. The results marginally supported this hypothesis, as the coefficient was statistically significant at the 0.091 level ($\beta = 0.013$, $p = 0.091$). One possible explanation for this finding is that a High-Quality Auditor may have more expertise in identifying opportunities for securing Government Contributions, which could ultimately contribute to the organization's Financial Sustainability.

d. The sub-hypothesis (H6d) predicted that Auditors' Quality would positively

moderate the relationship between Public Contributions and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. However, the results did not support this hypothesis, as the coefficient was not statistically significant ($\beta = 0.004$, $p = 0.176$). One possible explanation is that Public Contributions may be subject to less regulatory oversight and requirements than government contributions, making the auditor's role less critical. Alternatively, it may be that the auditor's quality is not as important in this context, as other factors, such as the organization's management and governance practices, may have a more significant influence on Financial Sustainability.

e. The sub-hypothesis (H6e) predicted that Auditors' Quality would positively moderate the relationship between Program Revenue and Financial Sustainability, enhancing the positive effect when it is a High-Quality Auditor. The results marginally supported this hypothesis, since the coefficient was statistically significant at the 0.083 level ($\beta = 0.005$, $p = 0.083$). One possible reason is that a skilled auditor can better identify opportunities to increase program revenue and ensure its effective allocation for overall financial sustainability. This finding can be explained by the fact that high-quality auditors are likely to have more expertise in analyzing the financial performance of organizations in similar industries or with similar business models. This outcome provides evidence to aid organizations in improving their Program Revenue streams, such as finding new funding sources or optimizing existing programs. Additionally, high quality auditors may be better able to provide

recommendations for efficiency improvements, by this, helping the organization's Financial Sustainability. The results are outlined in Table XXI. Research Model: Hypotheses Results, as follows:

Table XXI. Research Model: Hypotheses Results

Hs	Predictor	Statement	(β)	P-Values	Results
H1 (+)	Complexity	An Increase in Complexity, measured by Revenue Diversity, will increase the F. Sustainability of Nonprofit Organizations.	-0.030	0.061	Not supported
H2 (-)	F. Vulnerability: FVI	High levels of F. Vulnerability, measured by the FVI, will decrease the F.Sustainability of Nonprofits Organizations.	0.685	0.000	Partially supported
(-)	F. Vulnerability: D. Ratio	Increase in Debt Ratio will decrease the F. Sustainability of Nonprofits Organizations.	-0.044	0.030	Supported
(-)	F. Vulnerability: R. Concentration	Increase in Revenue Concentration will decrease the F. Sustainability of Nonprofits Organizations.	0.015	0.564	Not supported
(+)	F. Vulnerability: Surplus Margin	Increase in Surplus Margin will increase the F. Sustainability of Nonprofits Organizations.	0.565	0.000	Supported
(+)	F. Vulnerability: Adm. Cost Ratio	Increase in Administrative Cost Ratio will increase the F. Sustainability of Nonprofits Organizations.	-0.051	0.032	***Partially supported**
(+)	F. Vulnerability: Size (Assets)	Increase in Size will increase the F. Sustainability of Nonprofits Organizations.	-0.004	0.286	Not supported
H3 (+)	Government Contributions	High Levels of Government Contributions, measured by the total Contributions and Grants, will increase the F. Sustainability of Nonprofit Organizations.	0.000	0.965	Not supported
H4 (+)	Public Contributions	High levels of Public Contributions, measured by the total Indirect Support, will increase the F. Sustainability of Nonprofit Organizations.	0.002	0.132	Not supported
H5 (+)	Program Revenue	High levels of Program Revenue, measured by the total tuition fees, service fees, Admission fees, and other unrestricted revenues, will increase the F. Sustainability of Nonprofit Organizations.	0.003	0.056	Marginally Supported
H6 (+)	Moderator: Auditors' Quality	Auditors' Quality will have a moderating effect enhancing the relationship between F. Sustainability and its antecedents.			
H6a (+)	Auditors' Quality Moderating: Complexity ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Complexity and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	-0.053	0.139	Not supported
H6b	Auditors' Quality Moderating: F.V. ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between F. Vulnerability and the F. Sustainability, diminishing the negative effect when is a high quality auditor.			
$H6b_1$ (+)	Auditors' Quality Moderating: F.V. : D. Ratio ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Debt Ratio and the F. Sustainability, diminishing the negative effect when is a high quality auditor.	0.063	0.160	Not supported
$H6b_2$ (+)	Auditors' Quality Moderating: F.V.:R. Concen ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Revenue Concentration and the F. Sustainability, diminishing the negative effect when is a high quality auditor.	-0.012	0.687	Not supported
$H6b_3$ (+)	Auditors' Quality Moderating: F.V. : S. Margin ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Surplus Margin and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	0.074	0.372	Not supported
$H6b_4$ (+)	Auditors' Quality Moderating: F.V.: Adm.Cost ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Administrative Cost Ratio and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	0.102	0.062	Marginally Supported
$H6b_5$ (+)	Auditors' Quality Moderating: F.V.: Size ↔ F. Sustainability	Auditors' Quality will positively moderate the relationship between Size and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	-0.030	0.000	Not supported
H6c (+)	Auditors' Quality Moderating: G. Contributions ↔ F. Sustainability	External Auditors' Quality will positively moderate the relationship between Government Contributions and the F. Sustainability, enhancing the positive when is a high quality auditor.	0.013	0.091	Marginally Supported
H6d (+)	Auditors' Quality Moderating: P. Contributions ↔ F. Sustainability	External Auditors' Quality will positively moderate the relationship between Public Contributions and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	0.004	0.176	Not supported
H6e (+)	Auditors' Quality Moderating: P. Revenue ↔ F. Sustainability	External Auditors' Quality will positively moderate the relationship between Program Revenue and the F. Sustainability, enhancing the positive effect when is a high quality auditor.	0.005	0.083	Marginally Supported

Analysis of Predictors with Unexpected Behavior

Complexity

Figures IX and X provide an exciting insight into the analysis of nonprofit organizations' Financial Sustainability concerning their Complexity Level, as measured by revenue diversity. Figure IX. Financial Sustainability Mean by Complexity presents the Financial Sustainability of nonprofit organizations plotted against their level of Complexity, which is segregated into low, medium, and high categories. Figure X. Analysis of Financial Sustainability Mean vs. Complexity Level by Auditors' Quality Groups further explores this relationship by segregating the data by Auditors' Quality, with high-quality auditors being compared to low and medium-quality auditors.

The analysis examined two hypotheses more in-depth. The first hypothesis (H1) proposed that an increase in Complexity, as measured by Revenue Diversity, will increase the Financial Sustainability of Nonprofit Organizations. However, the results did not support this hypothesis. The beta value for Complexity was negative (-0.030), indicating that increased Complexity decreases Financial Sustainability. Although the p-value for this variable was not significant (0.061), the result suggests that there was not enough evidence to support the hypothesis.

Possible reasons for this finding could be that as nonprofit organizations become more complex and diversified, their operational costs increase, making it harder to achieve Financial Sustainability. According to Tevel et al. (2015), findings on this issue are quite inconclusive, and a different view considers revenue diversification a liability due to the increased costs of managing the many different sources and their potentially conflicting rationales. For example, nonprofit organizations operating in multiple regions

or programs may need to hire more staff and incur additional costs for coordination and administration. This type of operation may lead to reduced efficiency, lower productivity, and higher overhead costs, ultimately affecting the organization's Financial Sustainability. Additionally, increased Complexity may lead to a greater risk of fraud, embezzlement, and mismanagement, which could further affect the organization's financial performance.

The second hypothesis (H6a) proposed that the quality of auditors will positively moderate the relationship between Complexity and Financial Sustainability, improving the positive effect when a High-Quality Auditor is present. However, the results did not support this hypothesis either. The beta value for the interaction term between auditor quality and Complexity was also negative (-0.053), suggesting that the presence of a High-Quality Auditor does not enhance the positive effect of Complexity on Financial Sustainability. The p-value for this variable was also not significant (0.139), indicating that there was not enough evidence to support the hypothesis.

One possible reason for this finding could be that having a high-quality auditor does not necessarily lead to increased Financial Sustainability. Although high-quality auditors may provide valuable insights into an organization's financial performance, they cannot single-handedly improve Financial Sustainability. Other factors, such as leadership, management, and fundraising strategies, also significantly determine an organization's Financial Sustainability. However, we could observe that consistently high-quality auditors are predominant at the moment in handling complex financial environments (Francis, 2004; Chalmers et al., 2019).

Figure IX. Financial Sustainability Mean by Complexity

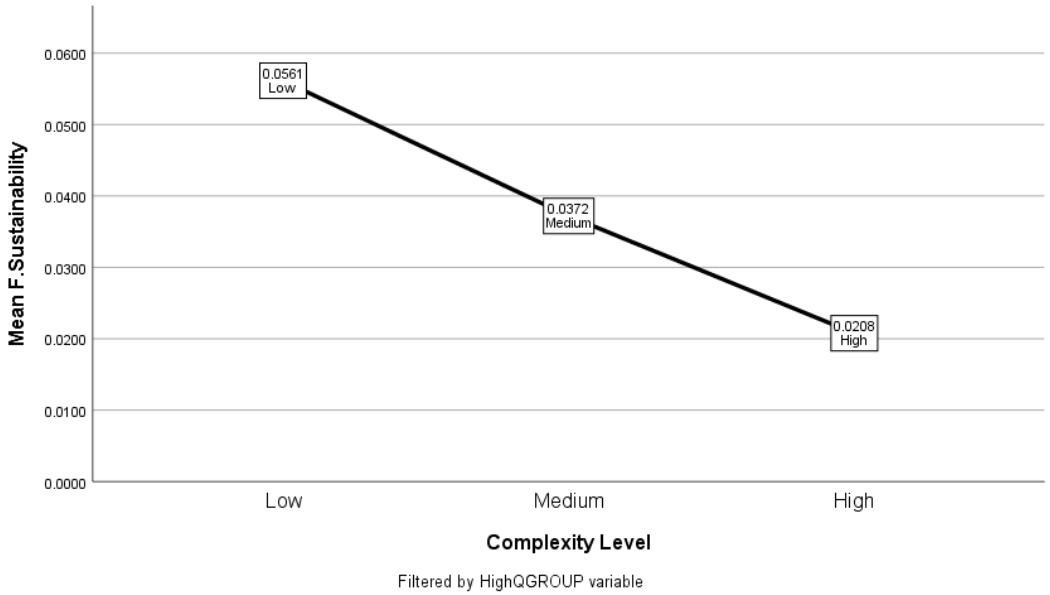
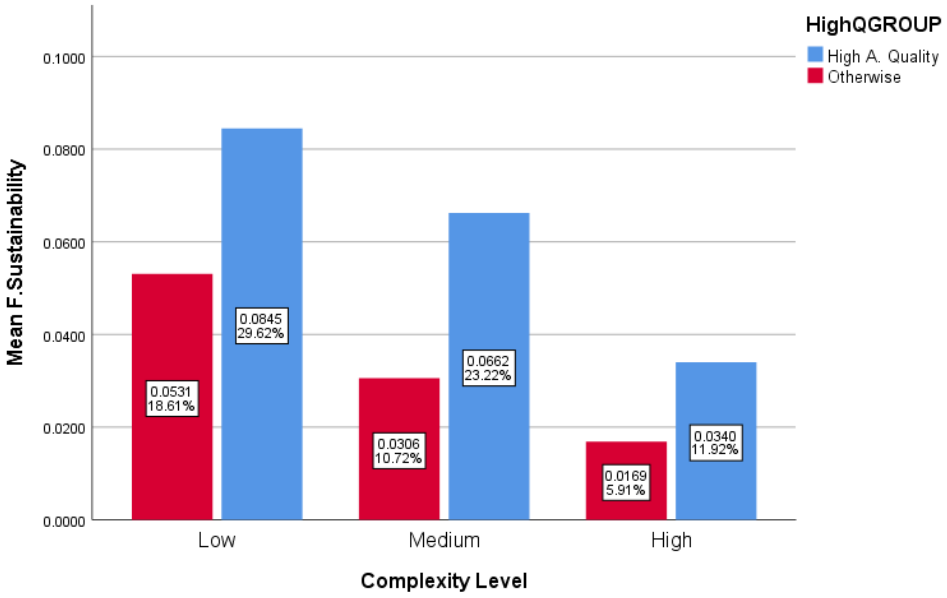


Figure X. Analysis of Financial Sustainability Mean vs. Complexity Level by Auditors' Quality Groups



Revenue Concentration Distress Measure

The first hypothesis evaluated here considers revenue concentration as a financial distress measure and a component of the Financial Vulnerability Index (F. Vulnerability: R. Concentration). This hypothesis suggests that an increase in revenue concentration will decrease the financial sustainability of nonprofit organizations. Figure XI. Mean of Revenue Concentration by Financial Sustainability illustrates the sample's behavior. The results showed that this hypothesis was not supported (β=0.015, p=0.564). The statistical analysis indicates no significant relationship between Revenue Concentration and the Financial Sustainability of Nonprofit Organizations.

One possible reason for this outcome is that nonprofit organizations with concentrated revenue sources may have the opportunity to diversify their income streams to mitigate the risks associated with a single funding source. However, this revenue strategy is insufficient and must be in line with the entity's operational and financial realities (Chikoto & Neely, 2014). This approach is in line with the Resource Dependence Theory, which suggests that organizations depend on their environment for resources and must respond to the needs of their stakeholders to obtain and secure those resources (Bryan, 2019). Nonprofits may be able to leverage their strong relationships with concentrated funders to diversify their funding sources, thus increasing their Financial Sustainability. Additionally, the Stakeholders' Theory suggests that organizations have a responsibility to their stakeholders, including funders, and that by meeting their needs, they can secure continued support and long-term funding stability (Dhanani & Connolly, 2012).

The second hypothesis, H6b2, proposed that Auditors' Quality would positively moderate the relationship between Revenue Concentration and Financial Sustainability, reducing the negative impact when a High-Quality Auditor is involved. However, the results did not support this hypothesis (β=-0.012, p=0.687). The statistical analysis indicates that there is no significant interaction between Auditors' Quality and Revenue Concentration regarding the Financial Sustainability of Nonprofit Organizations. Figure XII. Exploring Patterns between Revenue Concentration and Financial Sustainability by Auditors' Quality Groups illustrates that the presence of High-Quality Auditors does not directly contribute to a better Financial Sustainability position. One possible explanation for this outcome is that auditors may not significantly impact the managerial strategy behind Revenue Concentration. Agency theory suggests that auditors act as agents for stakeholders and provide assurance that the organization's financial statements are free from material misstatement. While this assurance is valuable, it may not significantly impact the financial sustainability of nonprofit organizations if management accepts the risk (Reheul et al., 2015). Moreover, financially sustainable nonprofit organizations may be more likely to engage high-quality auditors due to their ability to pay for their services, which aligns with the professional fee offered by auditors.

In summary, the lack of support for the first hypothesis suggests that Revenue Concentration may not necessarily decrease the Financial Sustainability of Nonprofit Organizations. Nonprofits may have the opportunity to engage in income diversification and leverage their strong relationships with concentrated funders to ensure long-term Financial Sustainability. These findings have important implications for nonprofit

organizations and their stakeholders, as they provide evidence for alternative strategies to increase Financial Sustainability that may not necessarily involve revenue diversification.

Figure XI. Mean of Revenue Concentration by Financial Sustainability

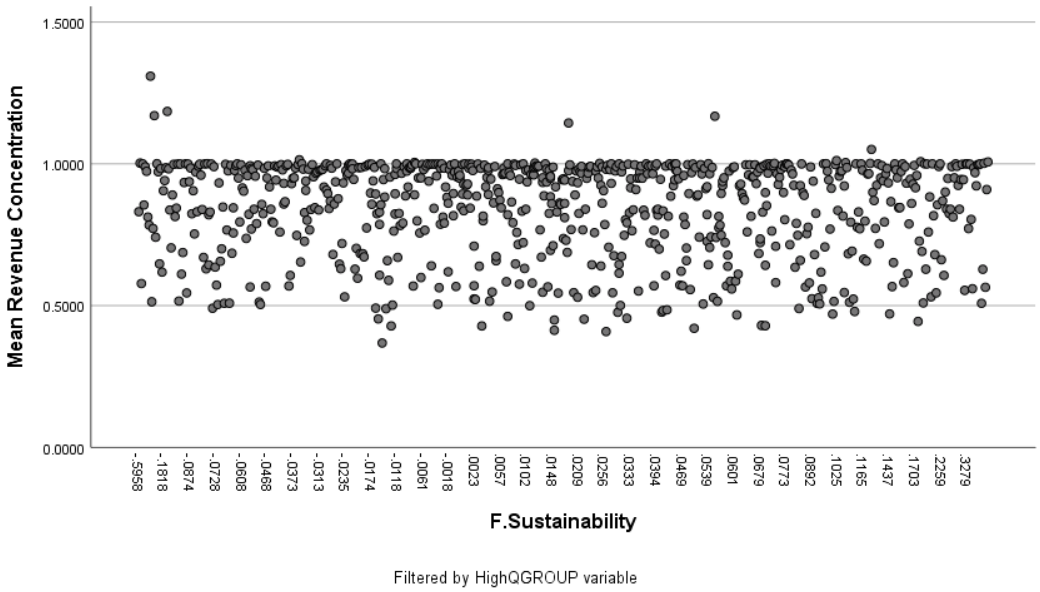
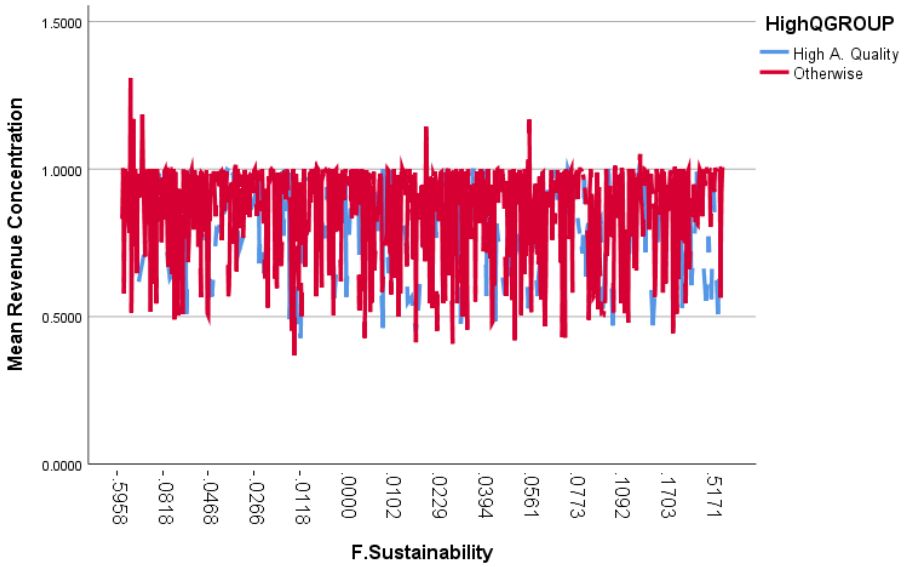


Figure XII. Exploring Patterns between Revenue Concentration and Financial Sustainability by Auditors' Quality Groups



Size Distress Measure

The hypothesis evaluated here considers Size (assets) as Financial Distress Measure and a component of the Financial Vulnerability Index (F. Vulnerability: Assets). This argument hypothesized that an increase in organizational Size (measured by assets) would lead to increased Financial Sustainability for Nonprofit Organizations. The group of Figure XIII. FVI: Assets Mean by Financial Sustainability illustrates the analysis results, not supporting this hypothesis. The regression analysis showed no significant relationship between organizational Size and Financial Sustainability (β=-0.004, p=0.286).

The second hypothesis (H6b5) tested the potential moderating effect of Auditor Quality on the relationship between organizational Size and Financial Sustainability for Nonprofit Organizations. The results of the analysis did not show a significant moderating effect of Auditor Quality on this relationship (β=-0.030, p = 0.000). In other words, Auditor Quality did not enhance the positive effect of organizational size on Financial Sustainability, as was hypothesized.

The Group of Figures XIV and XV illustrates the moderation effect of the Auditors' Quality Groups on the relationship between Size (assets) and Financial Sustainability. The figures clearly show that there is a significant difference in the mean values of financial vulnerability index assets between High Quality Auditors and Low/Medium-Quality (Otherwise) Auditors. However, Auditors' Quality groups' Financial Sustainability means are not significantly different.

These findings suggest that while auditor quality is an essential factor to consider in financial management for nonprofit organizations, it does not necessarily directly

impact the relationship between organizational size and financial sustainability. Other factors, such as effective financial management practices and fundraising strategies, may be equally or more critical in achieving nonprofit Financial Sustainability.

In summary, the results of both analyses suggest that organizational size alone is not a significant predictor of Financial Sustainability for nonprofit organizations. While high quality auditors may be associated with better Financial Sustainability outcomes, they do not necessarily enhance the positive effect of organizational size on Financial Sustainability. These findings highlight the need for a holistic approach to financial management in the nonprofit sector, considering multiple factors beyond size and Auditor Quality. Further research is necessary to understand thoroughly the factors contributing to Financial Sustainability in this sector.

Figure XIII. FVI**:** Assets Mean by Financial Sustainability

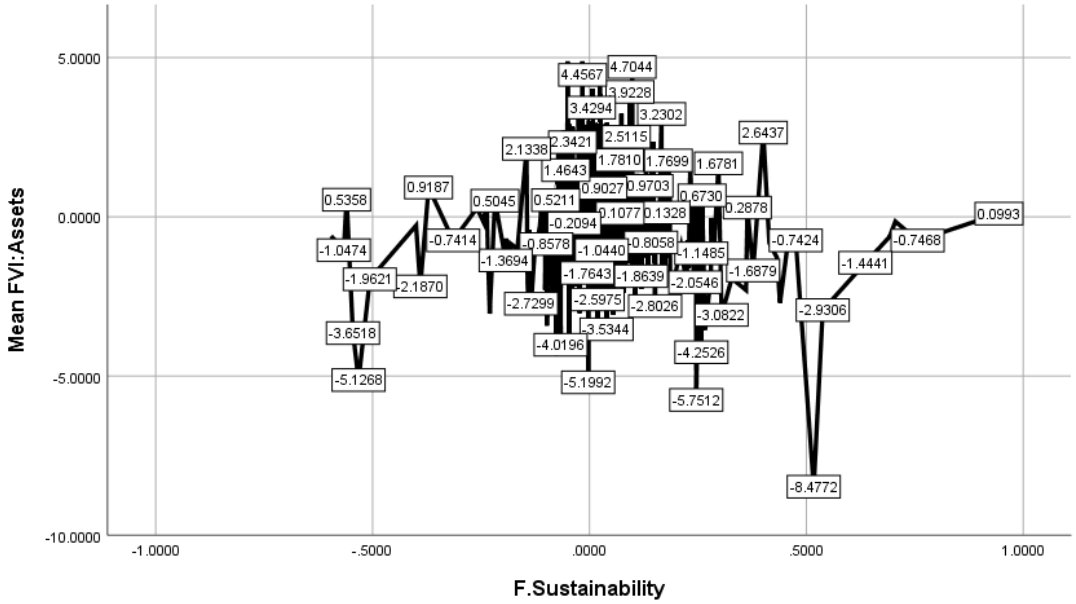


Figure XIV. Comparison of F. Sustainability and FVI: Assets means among Groups

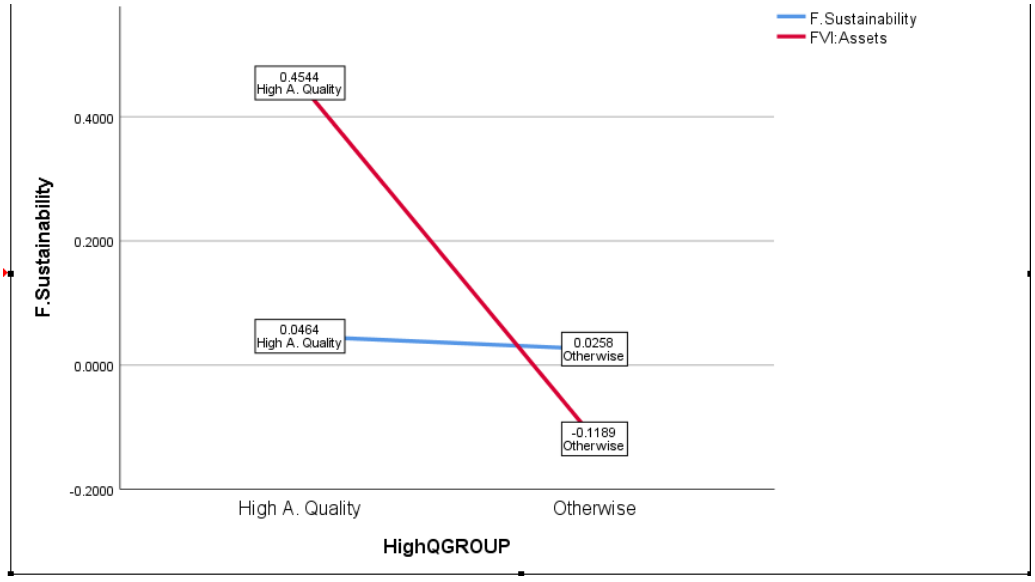
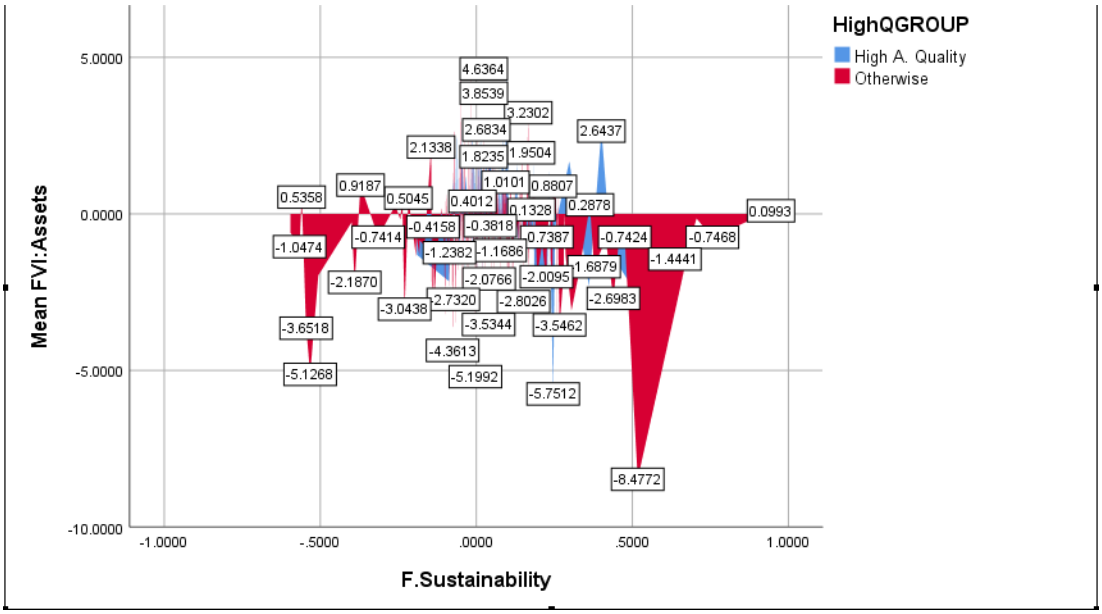


Figure XV. Analysis of FVI: Assets Mean by Financial Sustainability and Groups



CHAPTER VI. DISCUSSION, LIMITATIONS, FUTURE RESEARCH AND CONCLUSION

Discussion: Theoretical Implications

In recent decades, accounting and finance academics have dedicated considerable effort to research nonprofit organizations, with the aim of transferring proven theories, principles, and practices from this domain to the realm of nonprofit financial accounting. However, it is crucial to recognize that the nature of these two segments of society, their respective clients, and their financial focus are significantly different, implying that they require different theoretical paradigms regarding their visions, missions, and appropriate performance evaluations. While both nonprofit and for-profit entities have a direct impact on the global economy, they serve distinct purposes and have unique goals and objectives that must be considered when evaluating their financial performance. It is crucial for accounting and finance academics to recognize these differences and develop theoretical frameworks that are tailored to the specific needs of each segment of society. Only through such an approach can we ensure that the research and recommendations are genuinely relevant and helpful for the organizations we seek to serve.

This research has contributed valuably to enhancing the understanding of the implications and components of the theoretical misperceptions between Financial Vulnerability and Financial Sustainability, often used interchangeably. The study sheds light on the fact that these two concepts are not mutually exclusive and are significantly important in understanding the potential financial interactions and effects on the financial health of nonprofit organizations. The findings provide a more transparent empirical view of the relationship between Financial Vulnerability and Financial Sustainability and

demonstrate that both are integral components of a comprehensive financial health assessment. Therefore, researchers and practitioners must recognize and appreciate these two concepts' nuanced differences and develop frameworks that accurately reflect their contributions to an organization's overall financial well-being. By doing so, we can help nonprofit organizations manage their finances better and achieve greater Financial Sustainability and resilience over the long term.

The nonprofit industry is facing financial challenges that require careful and strategic management to ensure long-term sustainability. The research findings suggest that Auditors' Quality may have a limited impact on the Financial Sustainability of Nonprofit Organizations when it comes to managing debt, revenue concentration, surplus margin, and size of assets. Therefore, nonprofit organizations may need to focus on other strategies to mitigate the negative impact of debt on Financial Sustainability, such as revenue diversification and financial contingency plans. Similarly, while high quality auditors may not fully offset the negative impact of Revenue Concentration, nonprofit organizations may benefit from exploring revenue diversification strategies.

Regarding the relationship between Surplus Margin and Financial Sustainability, research suggests that it may already be strong and not much can be done to further enhance it. Therefore, nonprofit organizations may need to focus on maintaining or improving their Surplus Margin rather than relying on auditors to enhance their positive impact on Financial Sustainability. However, high quality auditors may still help manage administrative costs to improve the Financial Sustainability of Nonprofit Organizations.

In summary, the results of this study underscore the imperative for nonprofit organizations to adopt a proactive and strategic approach to managing their Financial

Sustainability. The study findings suggest that while high quality auditors may not be the panacea for financial challenges, they can contribute to managing administrative costs and enhancing the positive impact of certain financial metrics. Nonetheless, nonprofit organizations must explore a range of strategies, such as revenue diversification and debt management, to ensure long-term sustainability. In addition, as the nonprofit sector continues to evolve, organizations must remain cognizant of emerging trends and technologies to ensure financial success. The future is replete with challenges for nonprofit organizations, and as such, there is a need to adopt a strategic outlook to navigate these challenges and to continue to create meaningful impact in their communities.

Discussion: Managerial Implications

The significance of nonprofit organizations in the social sector cannot be overstated. Unlike for-profit entities, their primary objective is not to generate profits, but to promote social causes. Nevertheless, the absence of sufficient financial resources can impede the achievement of their objectives and even result in their closure. The correlation between Financial Sustainability and programmatic and financial performance is intricate and multifaceted. Therefore, managers responsible for long-term planning must comprehend the direct impact of financial sustainability on the organization's overall performance.

Nonprofit organizations are critical to addressing social issues and delivering services to communities. However, their ability to achieve their objectives and sustain operations is reflected in their Financial Sustainability performance. Therefore, nonprofit managers must prioritize Financial Sustainability to ensure their organizations' long-term

success. Financial Sustainability affects nonprofit organizations' ability to achieve their missions, programmatic plans, and financial performance. As such, managers responsible for long-term planning must clearly understand the impact of Financial Sustainability on the organization's overall performance. Poor financial management can send the wrong signal to funders and grantmakers, negatively impacting the organization's ability to secure funding from various sources, including foundations, corporations, and government agencies.

To ensure Financial Sustainability, nonprofit organizations can adopt various financial practices, such as monitoring expenses, reviewing expense allocations, and conducting regular financial audits. When nonprofit organizations are financially sustainable, they are better positioned to address the community's needs effectively. Thus, nonprofit managers should prioritize Financial Sustainability to ensure their organizations can positively impact society in the long term.

Nonprofit organizations must prioritize Financial Sustainability to ensure their long-term success. To achieve this, nonprofit managers should consider the practical implications of various financial factors for their operations. For instance, a high Debt Ratio can lead to potential financial difficulties in the future, which may result in closure. Therefore, nonprofit managers should aim to maintain a balanced Debt Ratio to avoid such outcomes.

Similarly, Revenue Concentration can harm Financial Sustainability, as relying on a few key sources can leave nonprofits vulnerable to fluctuations in revenue. To mitigate this, nonprofit managers should strive to diversify their revenue sources to reduce their dependence on a few key sources.

Maintaining a healthy Surplus Margin is also essential for long-term financial stability and the ability to withstand unexpected financial challenges. By keeping surplus margins at a healthy level, nonprofit managers can ensure that their organizations are prepared to weather financial challenges and continue operating smoothly.

Another area that nonprofit managers should consider is administrative costs. Keeping these costs low is important, as high administrative costs can negatively impact on Financial Sustainability. Therefore, nonprofit managers should strive to keep administrative costs at a reasonable level to improve their organization's Financial Sustainability and improve program outcomes.

Finally, although high quality auditors can provide some benefits, nonprofit managers should not rely solely on them to enhance the positive effect of Size (assets) on Financial Sustainability. Instead, they should focus on practical strategies such as diversifying revenue sources, maintaining a healthy surplus margins, and keeping administrative costs low to ensure long-term financial stability.

In summary, nonprofit managers must consider various factors affecting their organization's Financial Sustainability and take practical steps to mitigate adverse effects. Nonprofit managers can ensure their organization's long-term success by maintaining a balanced debt level, diversifying revenue sources, keeping administrative costs low, and maintaining a healthy surplus margins.

Research Limitations

The primary objective of this study was to comprehensively examine the interplay between Financial Vulnerability Theory and various financial quantitative and qualitative variables in the context of DRNO's Financial Sustainability. Although the study's design

and data collection process underwent meticulous planning, some limitations were encountered at different stages of the research. However, despite these constraints, the results of this investigation provide valuable insights into the complex relationship between Financial Vulnerability and Financial Sustainability, thus contributing to the existing body of knowledge on this topic.

While designing a research study on the Financial Sustainability of Nonprofit Organizations, one of the major challenges encountered was the identification of appropriate theories. This task was complicated because the nonprofit financial industry often receives less attention than its for-profit counterpart in academic literature. As a result, identifying theories that provided coherent, broad, and generalizable theoretical constructs proved to be a significant challenge. Identifying suitable theoretical frameworks was critical to ensuring the study's rigor and credibility and required careful consideration and evaluation of existing literature. Therefore, presenting research based on Financial Sustainability Theory resulted in most likely, at the macro level, comparing nonprofits that are still in business and nonprofits that have already disappeared from business. In addition, the Financial Vulnerability Theory implies longitudinal research by design. The availability of financial information throughout this research (2016, 2017, 2018) presents a limitation in replicating previous research presented in academic literature. This research focused on identifying endogenous and exogenous variables that could contribute to the financial sustainability of DRNO. Therefore, the collection thoroughly represents a sample representing all the population within the population of interest during a specific year; for the scope of this research year, 2018 was a coherent

resource. Essentially, a unit sample without consistent financial information throughout the research timeframe represents a unit that is not valid to be included in the sample.

Additionally, identifying comprehensive sources of information that could provide financial data for nonprofits currently in business was quite a challenge. However, potential new research to be explored in the future, and probably more challenging in design, will include nonprofits' financial behavior at least five (5) years before “morten”. In essence, the observation and inclusion of nonprofits that have already disappeared is a task and focus of longitudinal research, and it might represent a collaboration of two governmental agencies to obtain the correct sample; one agency to identify the population of interest (e.g., U.S. DHHS) and another agency for obtaining financial information (U.S. Treasury-IRS). Interestingly, the paradigm is that not all the entities not present in a population of interest are out of business, and not all nonprofits without financial information for a particular period, are not part of the population of interest. Therefore, this research might end up being paradoxical but highly interesting.

Some limitations were found during the data collection process. The first limitation was identifying an appropriate population to be explored due to the scope of the research. The research required to analyze nonprofit organizations with the Head Start Grant (CFDA Number 93.600) within their revenue portfolio. To obtain a list of the possible entities to be included in the sample, an official request was required under the Freedom of Information Act (FOIA) through the Administration of Children and Families. This FOIA request was a significantly sluggish process, even for establishing the foundation of the required information. This FOIA request was significantly important because the ACF are the administrators of the Head Start Grant, and their

participation included validity toward the appropriate sample requirements and, therefore, future sample selection. The data collection process was obtained by downloading the Form 990 associated with each unit presented in the sample. However, several names were inconsistent with the names under which the entities were registered. Therefore, a more in-depth screening was necessary to validate that the information followed the required unit. Also, the data were occasionally assigned to a specific year, irrelevant to the financial information provided on Form 990. Therefore, other financial sources were used to validate consistency and coherence within the financial information (e.g., www.irs.gov).

Overall, it is evident that assessing information from the outset posed substantial limitations, primarily stemming from bureaucratic hurdles and the level of mathematical evaluation required to clean and access the appropriate information in a statistically meaningful format. However, I acknowledge from the beginning that these limitations are inherent in any study seeking meaningful insights from complex data sets. In my opinion, these challenges should not discourage researchers like us from pursuing rigorous and insightful analyses that have the potential to make a significant contribution to this field respectively. Rather than being a source of frustration, these limitations should motivate us to continually innovate and refine the research methodologies. After all, my ultimate goal was to produce research outcomes that are accurate and reliable, but also insightful and transformative. By embracing these challenges head on, we can continue to push the boundaries of knowledge and make meaningful contributions to this field of study.

Future Research

Despite the contribution of this study to the body of knowledge and the literature on nonprofit organizations, several areas for future research remain unexplored. One of the future directions could be to investigate the impact of the Board of Directors' characteristics on Financial Sustainability. Specifically, future research could examine how the size, diversity, and independence of the board affect the Financial Sustainability of Nonprofit Organizations. Furthermore, it would be interesting to investigate whether the presence of female and male directors on the Board of Directors impacts Financial Sustainability.

Another area of future research is investigating the relationship between fundraising efficiency and Financial Sustainability. Previous studies have shown that fundraising is essential for nonprofit organizations, but it is not clear whether the efficiency of fundraising efforts affects Financial Sustainability. Future research could investigate whether high fundraising efficiency translates into better Financial Sustainability for Nonprofit Organizations.

As our society continues to evolve, so do the economic conditions, technology, governmental requirements, health regulations, strategic planning, and the influence of communication on decision-making processes. These factors can significantly impact nonprofit organizations and the communities they serve. The recent COVID-19 pandemic has further highlighted the gaps in our society, but it has also demonstrated humankind's incredible capacity for learning and adapting in times of crisis. Indeed, this crisis has forced us to reassess and reevaluate our priorities and has shown the vital importance of nonprofit organizations in providing essential services and support to those in need.

Additional possible research to be explored might observe the influence of governance structures on nonprofit organizations' financial performance. This research could examine the relationship between different governance structures (e.g., Boards of Directors, Volunteer Committees, and Executive Staff) and financial performance.

Financial accounting science is a critical area of study that has significant implications for society, particularly for nonprofit entities and the government. One of the key areas of research in financial accounting science concerns the interaction between external economic factors and nonprofit organizations' financial performance. Such research can provide valuable insights into how economic conditions impact the development of laws and regulations governing nonprofit organizations and how these laws and regulations shape public perceptions of these organizations' financial aspects. By studying these dynamics in greater depth, we can better understand how external factors impact nonprofit organizations' financial performance.

Research that might change the point of observing nonprofit organizations might contemplate the role of technology as a tool in the financial sustainability of nonprofit organizations. Recently, we have seen corporations including FINTECH in their services to achieve financial leverage, increase efficiency, and reduce costs, but what about this in nonprofit organizations? This research could explore the use of financial technology (online fundraising, payment systems, cryptocurrencies, and other recent technologies) in nonprofit organizations' programmatic and financial performance and their interaction with governmental agencies.

Finally, if I could hypothetically travel back in time and re-do this research, I would consider several additional factors to improve the efficiency and effectiveness of the study. These factors might not be limited to the following:

Firstly, I would consider incorporating a sample by groups based on a similar nonprofit mission. This component would provide a more nuanced understanding of the relationship between the groups and, simultaneously, of the differences between the groups.

Secondly, I would also consider incorporating qualitative data through interviews or focus groups with nonprofit leaders and stakeholders. This factor would provide a deeper understanding of the experiences and perspectives of those involved in nonprofit organizations and provide context for the quantitative findings.

Thirdly, I would consider examining the impact of external factors such as economic conditions, regulatory environments, and changes in funding structures on the financial sustainability of nonprofit organizations. This factor would provide a more comprehensive understanding of the factors that impact the Financial Sustainability of nonprofit organizations beyond the internal factors examined in this study.

Lastly, I would consider exploring the impact of innovative funding models and revenue streams on the Financial Sustainability of Nonprofit Organizations. This component would provide information on how nonprofits can diversify their funding streams and explore new opportunities to generate revenue, ultimately improving their Financial Sustainability.

Incorporating these additional factors would enhance the robustness of the study and provide valuable insights into the factors that impact the Financial Sustainability of Nonprofit Organizations.

The potential for future research in financial accounting for nonprofit organizations is vast and promising. These organizations operate in a unique space, providing essential services to communities and positively impacting society. However, the lack of attention to their financial accounting practices could be holding them back from reaching their full potential. By conducting further research into this area, we can better understand nonprofits' challenges and opportunities and work toward solutions that will enable them to thrive. Let us not miss this opportunity to create a positive revolution in the nonprofit sector and beyond.

Conclusion

In conclusion, the study sheds light on the role of auditors in enhancing the Financial Sustainability of nonprofit organizations. The findings reveal that while High-Quality Auditors have a limited impact in mitigating the negative effects of Debt Ratio and Revenue Concentration on Financial Sustainability, they can enhance the positive effect of Administrative Cost Ratio on Financial Sustainability. These outcomes imply that nonprofit organizations should prioritize investing in strategies to optimize Administrative Costs Ratio, reduce Debt Ratio, and reduce Revenue Concentration to improve their Financial Sustainability. Additionally, High Quality Auditors should be engaged to ensure effective monitoring of financial activities and provide expert advice on financial management.

The study's results also provide significant theoretical implications for the

nonprofit sector. Specifically, the study highlights the importance of considering the quality of auditors as a moderator in understanding the relationship between financial indicators and Financial Sustainability in nonprofit organizations. These results underscore the need for more research in this area, particularly in exploring the impact of other moderating factors that may influence the relationship between financial indicators and Financial Sustainability in nonprofit organizations. Further research could also investigate how other types of auditors, such as internal auditors, may contribute to the Financial Sustainability of nonprofit organizations.

The managerial implications of the study suggest that nonprofit organizations should invest in developing effective financial management practices to improve their Financial Sustainability. Specifically, nonprofit organizations should prioritize reducing their Debt Ratio, reduce Revenue Concentration, optimize Administrative Costs Ratio, and engage with High Quality Auditors. These strategies can help enhance the Financial Sustainability of nonprofit organizations, enabling them to achieve their missions effectively. Additionally, nonprofit organizations should consider the potential benefits of engaging internal auditors to support effective financial management and decision-making.

The findings of this study offer a clear and compelling case for nonprofit organizations to prioritize sound financial management practices and engage competent auditors to enhance their long-term Financial Sustainability. The study's results emphasize the crucial role that auditors play in bolstering the Financial Sustainability of nonprofit organizations. Efficient financial management practices, such as debt reduction, revenue diversification, and cost optimization, are crucial to achieving Financial

Sustainability. By engaging the services of competent auditors, nonprofit organizations can significantly enhance their Financial Sustainability, providing a solid foundation for achieving their mission.

Theoretical implications of these findings stress the importance of auditors as moderators in analyzing financial indicators and sustainability in nonprofits. Thus, nonprofits should prioritize competent auditors for optimized long-term financial practices. Nonprofit organizations must act now and implement these findings to improve their Financial Sustainability. By doing so, they can effectively achieve their mission while ensuring their long-term viability. The study's results present an opportunity for nonprofits to strengthen their financial foundation and create a more secure future.

Therefore, the evidence is clear: prioritizing efficient financial management practices and engaging competent auditors are essential for nonprofit organizations seeking to enhance their long-term Financial Sustainability. By implementing these practices, nonprofits can build a stable foundation for their mission and ensure their continued success.

As Nelson Mandela once said, "Education is the most powerful weapon that you can use to change the world." This quote highlights the critical role education and development play in shaping the future of our society. Investing in people's education and skills empowers them to create positive change and make a meaningful contribution to their communities. Therefore, we must prioritize investment in people's development and ensure that everyone has the necessary tools and knowledge to succeed.

REFERENCES

Almagtome, A., Shaker, A. S., & Nima, H. (2019). The Integration between Financial Sustainability and Accountability in Higher Education Institutions : An Exploratory Case Study. *International Journal of Innovation, Creativity and Change*, *8*(2), 202–221.

Amin, K., & Harris, E. E. (2017). Nonprofit Stakeholder Response to Going-Concern Audit Opinions. *Journal of Accounting, Auditing and Finance*, *32*(3), 329–349. https://doi.org/10.1177/0148558X15604989

Bowman, W. (2011). Financial Capacity and Sustainability of Ordinary Nonprofits. *Nonprofit Management and Leadership*, *22*(4), 37–51. https://doi.org/10.1002/nml

Bryan, T. K. (2019). Toward a Contingency Model for the Relationship Between Capacity and Effectiveness in Nonprofit Organizations. *Nonprofit and Voluntary Sector Quarterly*, *48*(4), 885–897. https://doi.org/10.1177/0899764018815617

Calabrese, T. D. (2011). Do Donors Penalize Nonprofit Organizations with Accumulated Wealth? *Public Administration Review*, *71*(6), 859–869. https://doi.org/10.1111/j.1540-6210.2011.02420.x

Calabrese, T. D. (2012). The Accumulation of Nonprofit Profits: A Dynamic Analysis. *Nonprofit and Voluntary Sector Quarterly*, *41*(2), 300–324. https://doi.org/10.1177/0899764011404080

Carroll, D. A., & Stater, K. J. (2009). Revenue diversification in nonprofit organizations: Does it lead to financial stability? *Journal of Public Administration Research and Theory*, *19*(4), 947–966. https://doi.org/10.1093/jopart/mun025

Center, D.-N. R. (2003). Understanding Fee-for-Service Models. In *Environmental*

Protection.

Chalmers, K., Hay, D., & Khlif, H. (2019). Internal control in accounting research : A review. *Journal of Accounting Literature*, *42*(May 2017), 80–103. https://doi.org/10.1016/j.acclit.2018.03.002

Chang, C. F., & Tuckman, H. P. (1989). Financial Vulnerability and Attrition As Measures of Nonprofit Performance. *Annals of Public and Cooperative Economics*, *62*(4), 655–672.

Copley, P. (2009). *Research in governmental and nonprofit accounting*. Emerald Group Publishing Limited.

Coupet, J. (2018). Exploring the link between government funding and efficiency in nonprofit colleges. *Nonprofit Management and Leadership*, *29*(March 2017), 65–81. https://doi.org/10.1002/nml.21309

de Andres-Alonso, P., Garcia-Rodriguez, I., & Romero-Merino, M. E. (2016). Disentangling the Financial Vulnerability of Nonprofits. *Voluntas*, *27*(6), 2539–2560. https://doi.org/10.1007/s11266-016-9764-6

Denison, D. V, & Beard, A. (2003). Financial Vulnerability of Charitable Organizations: Lessons from Research. *Journal for Nonprofit Management*, 23–31.

Francis, J. R. (2004). What do we know about audit quality? *British Accounting Review*, *36*(4), 345–368. https://doi.org/10.1016/j.bar.2004.09.003

Greenlee, J. S., & Trussel, J. M. (2000). Predicting the financial squeeze. *Nonprofit Management & Leadership*, *11*(2), 199–211. https://doi.org/10.7748/phc.19.5.6.s9

Greenlee, J. S., & Trussel, J. M. (2009). Predicting the Financial Vulnerability of Charitable Organizations. *Nonprofit Management & Leadership*, *11*(2), 199–210.

https://doi.org/10.7748/phc.19.5.6.s9

Helmig, B., Ingerfurth, S., & Pinz, A. (2014). Success and failure of nonprofit organizations: Theoretical foundations, empirical evidence, and future research. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *25*(6), 1509–1538.

Kerlin, J. A., & Pollak, T. H. (2011). Nonprofit commercial revenue: A replacement for declining government grants and private contributions? *American Review of Public Administration*, *41*(6), 686–704. https://doi.org/10.1177/0275074010387293

Kim, M. (2017). The Relationship of Nonprofits' Financial Health to Program Outcomes: Empirical Evidence From Nonprofit Arts Organizations. *Nonprofit and Voluntary Sector Quarterly*, *46*(3), 525–548. https://doi.org/10.1177/0899764016662914

Lecy, J. D., & Searing, E. A. M. (2015). Anatomy of the Nonprofit Starvation Cycle: An Analysis of Falling Overhead Ratios in the Nonprofit Sector. *Nonprofit and Voluntary Sector Quarterly*, *44*(3), 539–563. https://doi.org/10.1177/0899764014527175

Lee, C., Lu, J., & Shon, J. (2022). Managing the Market-Mission Tension : When Does Commercial Revenue Crowd out Charitable? *Public Performance & Management Review*, *45*(3), 532–556. https://doi.org/10.1080/15309576.2021.2002166

Lu, J. (2015). Which nonprofit gets more government funding? Nonprofits' organizational attributes and their receipts of government funding. *Nonprofit Management and Leadership*, *25*(3), 297–312.

Lu, J., Shon, J., & Zhang, P. (2019). *How Do Nonprofits Fail ? The Financial Causes of Organizational Dissolution* (No. 1116). 1–38.

Luksetich, W. (2008). Government funding and nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, *37*(3), 434–442. https://doi.org/10.1177/0899764007310415

MacIndoe, H., & Sullivan, F. (2014). Nonprofit Responses to Financial Uncertainty: How Does Financial Vulnerability Shape Nonprofit Collaboration? *Journal of Management and Sustainability*, *4*(3). https://doi.org/10.5539/jms.v4n3p1

Myser, S. (2016). Financial Health of Nonprofit Organizations. In *Financial Health of Nonprofit Organizations*.

Reheul, A. M., Van Caneghem, T., & Verbruggen, S. (2015). NONPROFIT ORGANIZATIONS' CHOICE IN FAVOR OF A SECTOR EXPERT AUDITOR: A STUDY OF BEHAVIORAL CHOICE CRITERIA. *Journal of Public Budgeting, Accounting & Financial Management*, *27*(2), 179–224.

Ritchie, W. J., & Kolodinsky, R. W. (2003). Nonprofit Organization Financial Performance Measurement: An Evaluation of New and Existing Financial Performance Measures. *Nonprofit Management and Leadership*, *13*(4), 367–381. https://doi.org/10.1002/nml.5

Tassin, K. L., Waymire, T. R., & Hines, C. S. (2019). A Historical Evaluation of the Single Audit: Thirty Years from Initial Legislation to Uniform Guidance. *Journal of Governmental & Nonprofit Accounting*, *8*(1), 21–35. https://doi.org/10.2308/ogna-52470

Tevel, E., Katz, H., & Brock, D. M. (2015). Nonprofit Financial Vulnerability: Testing Competing Models, Recommended Improvements, and Implications. *Academy of Management Annual Meeting Proceedings*, *26*(6), 2500–2516.

https://doi.org/10.1007/s11266-014-9523-5

Trussel, J. (2003). Assessing potential accounting manipulation: The financial characteristics of charitable organizations with higher than expected program-spending ratios. *Nonprofit and Voluntary Sector Quarterly*, *32*(4), 616–634. https://doi.org/10.1177/0899764003257459

Trussel, J. M. (2002). Revisiting the Prediction of Financial Vulnerability. *Nonprofit Management and Leadership*, *13*(1), 17–31. https://doi.org/10.1002/nml.13103

Tuckman, H. P., & Chang, C. F. (1991). A Methodology for Measuring the Financial Vulnerability of Charitable Nonprofit Organizations. *Nonprofit and Voluntary Sector Quarterly*, *20*(4), 445–460. https://doi.org/10.1177/089976409102000407

Wilsker, A. L., & Young, D. R. (2010). How Does Program Composition Affect the Revenues of Nonprofit Organizations ?: Investigating a Benefits Theory of Nonprofit Finance. *Public Finance Review*, *38*(2), 193–216. https://doi.org/10.1177/1091142110369238

APPENDICES

Exhibit A. Definitions of Terms

Terms	Definitions	Sources
External Auditors' Quality	Audit Quality is defined as "the market assessed joint probability that a given auditor will both discover a breach in a client's accounting system and report the breach"	DeAngelo (1981)
Complexity	It is a source of stability and a strategy to reduce the risk for a financial entity. Is a prudent strategy to potentially minimize the volatility of revenue portfolios managed by nonprofit organizations.	Chang & Tuckman (1994); Tuckman & Chang (1996)
Revenue Diversity	A number of revenue sources included on Form 990 from 0-to 3 (e.g., Public Support, Gov. Contributions, and/or Program Revenue).	Petrovics (2011)
Surplus Margin	The product of total revenues less total expenses.	Petrovics (2011)
Size	End of year total assets.	Kitching (2009), Petrovics (2011)
Financial Sustainability	It is the rate of change in capacity in each period, where capacity consists of resources that give an organization the wherewithal to seize opportunities and react to unexpected threats.	Bowman (2011)
Financial Vulnerability	It is the act of likely cutting back service offerings immediately due to experiences of financial shock, such as losing a significant source of funds or a general economic downturn.	Tuckman and Chang (1991)
Debt Ratio	It measures the amount of debt the organization uses to finance its programs and projects.	Greenlee & Trussel (2000)
Revenue Concentration	It measures the organization's amount and variety of revenue sources.	Trussel (2002)
Administrative Cost Ratio	Total administrative expenses.	Greenlee & Trussel (2000)
Program Revenue	Service revenue, including government fees and contracts, received for the fiscal year.	Kitching (2009), Petrovics (2011)
Contributions & Grants	Funds which their resource is Federal, State, or Local Government.	Copley (2009)
Public Contributions	Gifts received from individuals, trusts and estates, corporations, and foundations.	Petrovics (2011)
Indirect Support	Contributions through federated fundraising campaigns.	Petrovics (2011); Ecer (2017)
Unrestricted Net Assets	Assets that Nonprofit have control over. Represent the cash balances nonprofit managers can use to reinvest in the organization to overcome short-term financial shocks.	Calabrese (2012), Prentice (2016)
Auditors' Type	Audit firm engaged in the audit examination procedure. (International=1, Regional=2, Local=3).	Keating (2005)
Financial Vulnerability Index (FVI)	It is a financial index that evaluates the organization's susceptibility to financial problems based on four compiled financial ratios (Debt Equity Ratio, Revenue Concentration Ratio, Surplus Margin Ratio, Administrative Cost Ratio, and Size). This index allows for identifying entities severely at risk due to financial shock.	Tevel (2015); Tuckman and Chang (1991)
Fees (Tuition, Service & Admissions)	Fees from various models of earning income in exchange for products or services. A fee-for-service uses its earnings to support the nonprofit's mission.	Compassion Capital Fund National Resource Center, (2003)

Exhibit B. Financial Distress Indicators – Theoretical Explanations

Distress Ratios	Evaluates	Formula	Theoretical Explanation	Source
Debt Ratio	Equity	$\frac{\text{Total equity}}{\text{Total revenues}}$	It is a measure of the relative amount of debt that the organization uses to finance its programs and projects.	Trussel (2002)
Revenue Concentration	Revenue Concentration	$\sum\left(\frac{\text{Revenue source}_j}{\text{Total revenues}}\right)^2$	It is a measure of the amount and variety of revenue sources that an organization has. Nonprofits with fewer revenue sources are more vulnerable to financial shock than those with multiple revenue sources. Multiple sources of revenue may rely on alternative sources of funding and thus avoid reducing services	Chang and Tuckman (1994)
Surplus Margin	Operating Margin	$\frac{\text{Total revenues} - \text{total expense}}{\text{Total revenues}}$	It measures the excess of revenues over expenses relative to revenues. Surplus Margin is defined as its revenues, less its expenditures, divided by its revenues. This shows the percentage that its net income represents of its revenues.	Tuckman and Chang (1991)
Administrative Cost Ratio	Administrative Cost	$\frac{\text{Administrative expenses}}{\text{Total revenues}}$	Measures the percentage of revenues spent on administrative, as opposed to program, costs.	Tuckman and Chang (1991)
Size (SIZE)	Total Assets	Natural log of total assets	Measures the total amount of assets available to the nonprofit. Factors such as age, reputation, economies of scale related to cost, and the like are typically correlated with size.	Trussel (2002)

Exhibit C. Research Concepts - Source Map

Concept	Evaluation / Classification	Formula	Source from Form 990 (Paper Version)	Source from Form 990 (Digital Version)
Debt Ratio	Equity	$\frac{\text{Total equity}}{\text{Total revenues}}$	**Total Equity** = Part I (***NAFB***), Line 21 **Total Revenues** = Part I (***Revenue***), Line 12	**Debt Ratio** = D.RATIO (Column Label)
Revenue Concentration	Revenue Concentration	$\sum\left(\frac{\text{Revenue source}_i}{\text{Total revenues}}\right)^2$	**Revenue Sources** = Part I ***(Revenue***), Sources of Revenue: 1)*Contributions & Grants* = Line 8 2)*Program Service Revenue* = Line 9 3) *Investment Income* = Line 10 4)*Other Revenue* = Line 11 **Total Revenues** = Part I (***Revenue***), Line 12	**Revenue Concentration** = R.CONC. (Column Label)
Surplus Margin	Operating Margin	$\frac{\text{Total revenues} - \text{total expense}}{\text{Total revenues}}$	**Total revenues** = Part I (***Revenue***), Line 12 **Total expenses =** Part I (***Expenses***) Line 18	**Surplus Margin** = S.MAR. (Column Label)
Administrative Cost Ratio	Administrative Cost	$\frac{\text{Administrative expenses}}{\text{Total revenues}}$	**Administrative expenses** = Part I (***Expenses***), Line 15 **Total Revenues =** Part I **(*Revenue*),** Line 12	**Administrative Cost Ratio** = A.COST. (Column Label)
Size	Total Assets	Natural log of total assets	**Total Assets** = Part I (***NAFB***), Line 20	**Size** = SIZE (Column Label)
External Auditors' Quality	Firm Expertise	Classification of Firm	**Auditors' Type =** Small/Local = 1, Medium/Regional = 2, High/ Big 4 = 3.	**External Auditors' Characteristics** = Firm Expertise (Column Label)
Financial Sustainability	Financial Sustainability	Financial Sustainability Ratio	**Total revenues** = Part I (**Revenue**), Line 12 **Total expenses** = Part I (**Expenses**) Line 18 **Total Assets** = Part I (**NAFB**), Line 20	**Financial Sustainability =** DV Sustainability (Column Label)

NAFB = Net Assets of Fund Balances.
Form 990 (Digital Version) = This is a summarized/complied version of the collected data from the raw digital version of each nonprofit entity Form 990. Forms 990 (raw data) are saved and available for record keeping and analysis replication purposes .
Classification of Firm = Firms will be attested through the PCAOB's Registration Annual & Special Reporting.

Exhibit D. Hypotheses Data Translations & Evaluative Measures

Construct	Reporting Unit	Evaluative Conversion Description	Evaluative Rule & Determination
Complexity	Number of Revenue Sources	Demarcated by the total revenue sources from # 1 through #3 (e.g., Government Contributions, Public Contributions, and Program Service Revenue).	More Sources of Revenue = More complex financial operations
Financial Vulnerability	U.S. Dollars	Financial vulnerability probabilities for all organizations in the sample must be arrayed based on the Financial Vulnerability Probability Formula. Cutoff points will be established to classify each organization under one of these premises: Vulnerable, Not Vulnerable, Undetermined.	Higher Ratio = Higher Probability of of a financial vulnerable position
Government Contributions	U.S. Dollars	Demarcated by total contributions and grants received during the year.	Higher Dollar Amount = More Favorable Revenue Position
Public Contributions	U.S. Dollars	Demarcated by total resources received during the year from federated fundraising campaigns.	Higher Dollar Amount = More Favorable Revenue Position
Program Revenue	U.S. Dollars	Demarcated by total resources received on tuition fees, service fees, admissions fees and other unrestricted revenues sources during the year.	Higher Dollar Amount = More Favorable Revenue Position
Financial Sustainability	U.S. Dollars	Demarcated by 100% * (Total Revenue -Total Expenses) / Total assets.	Higher Ratio = Better Financially Sustainable Position
External Auditors' Quality	Assessment based on Federal Audit Clearing House	Assessment and classification based on the Federal Audit Celaring House (https://facdissem.census.gov/Main.aspx)	1= Small/Local 2= Medium/Regional 3= High/Big 4

Exhibit E: Histograms Complexity Level by Auditors' Quality Level

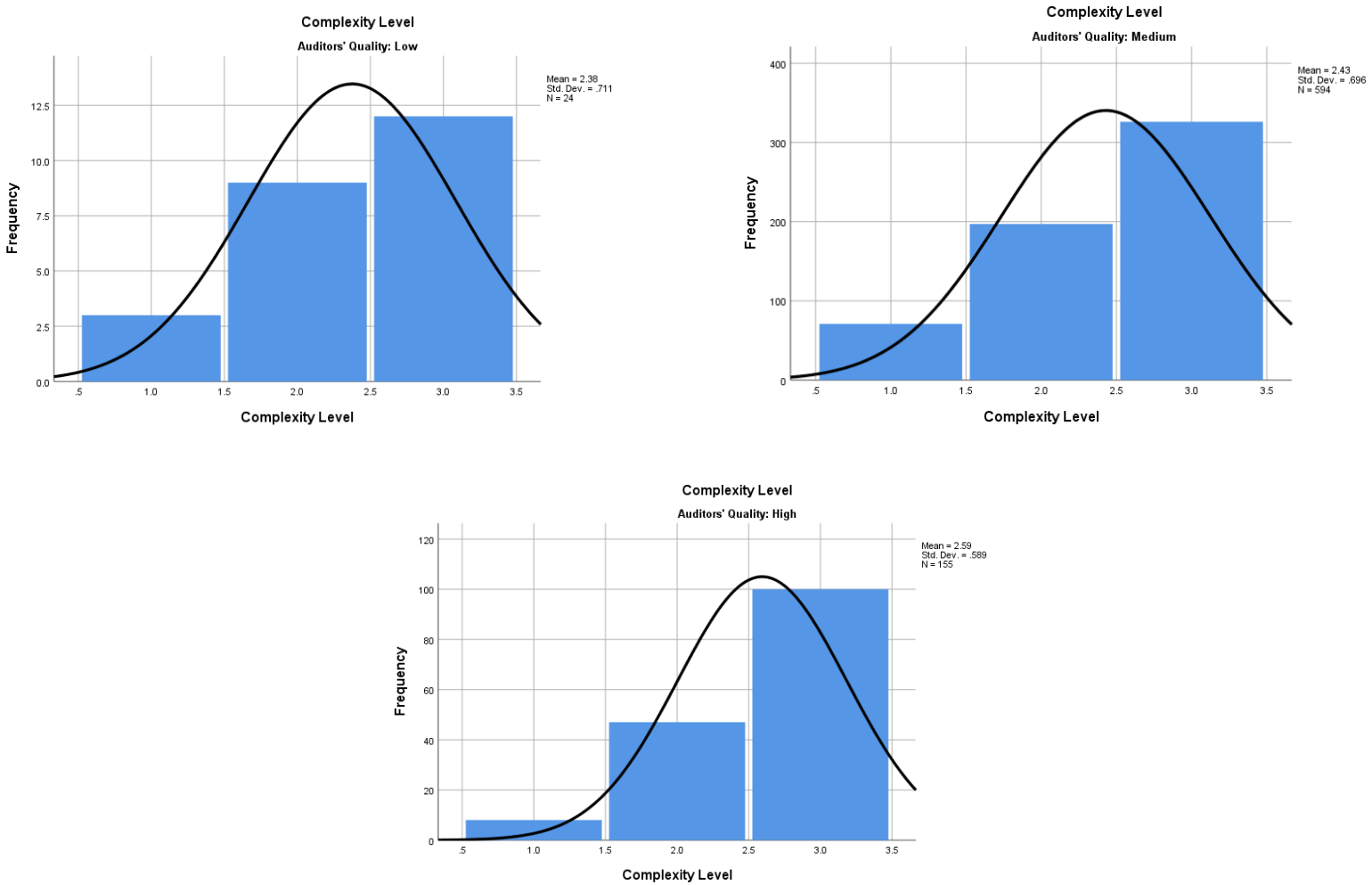
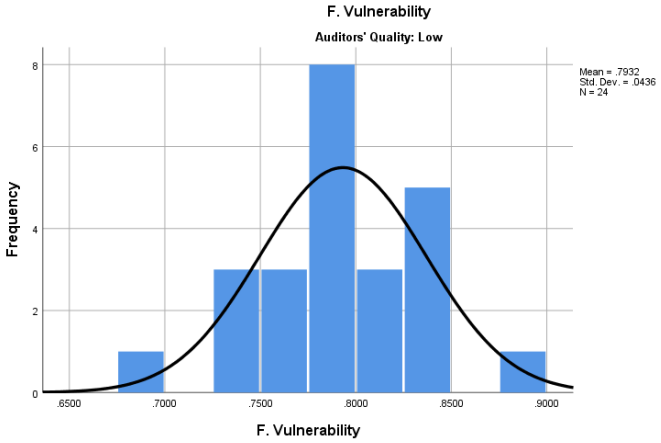
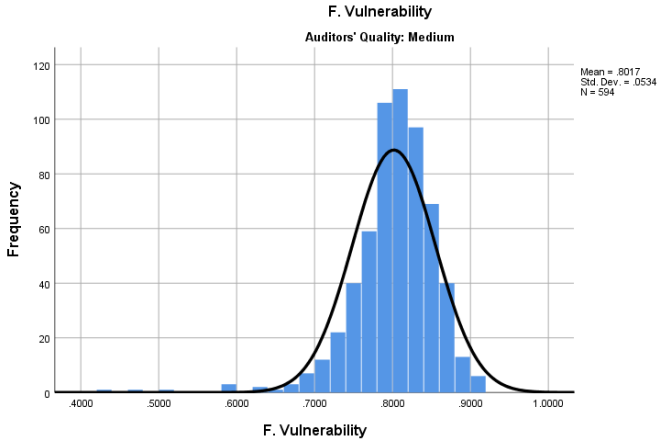


Exhibit F. Histograms Financial Vulnerability by Auditors' Quality Level





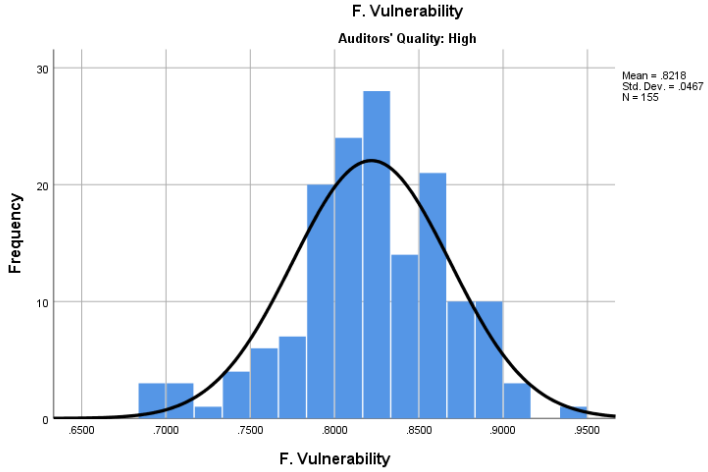
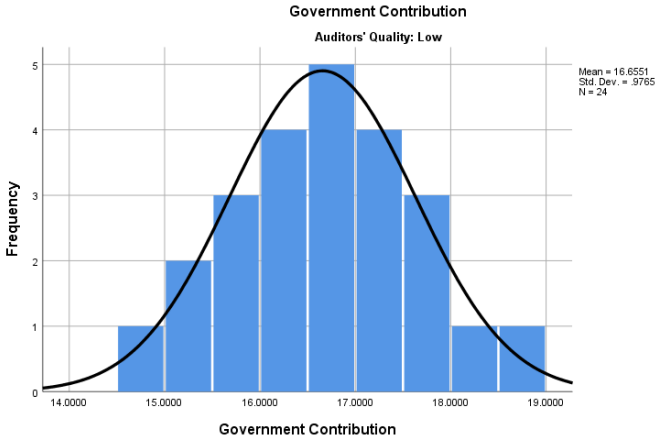
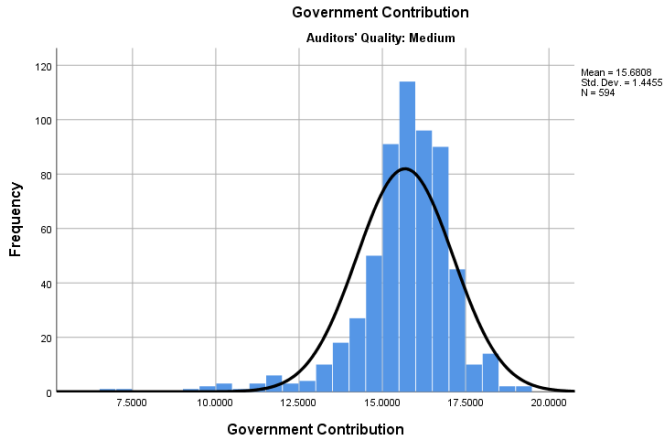


Exhibit G. Histograms Government Contribution by Auditors' Quality Level





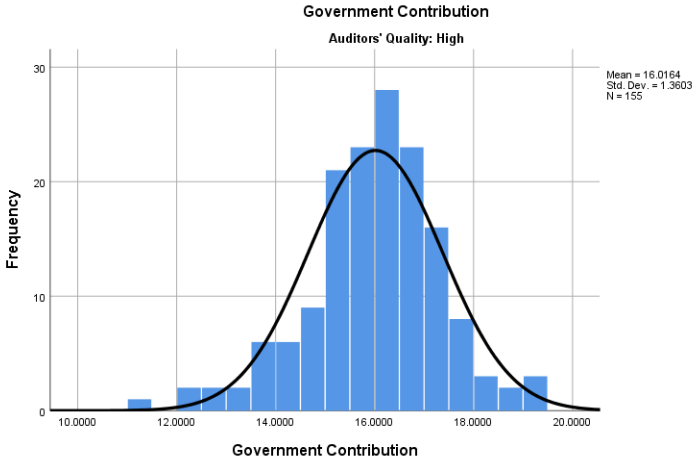


Exhibit H. Histograms Public Contribution by Auditors' Quality Level

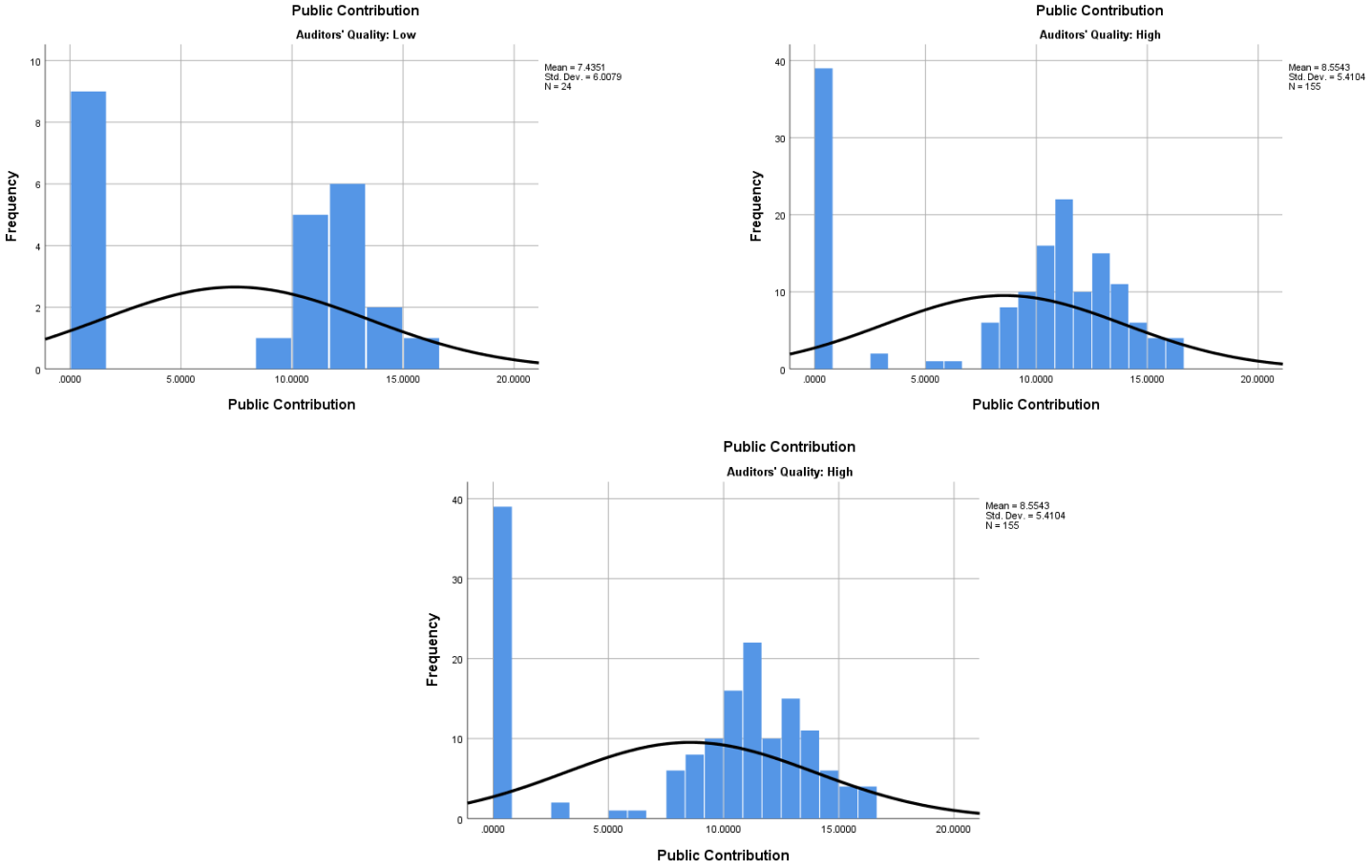
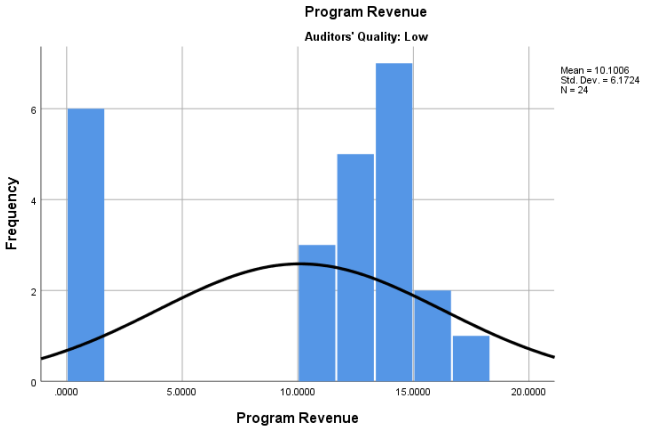
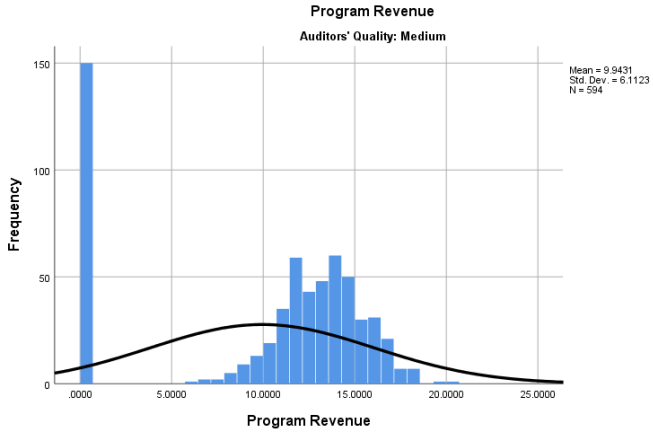


Exhibit I. Histograms Program Revenue by Auditors' Quality Level





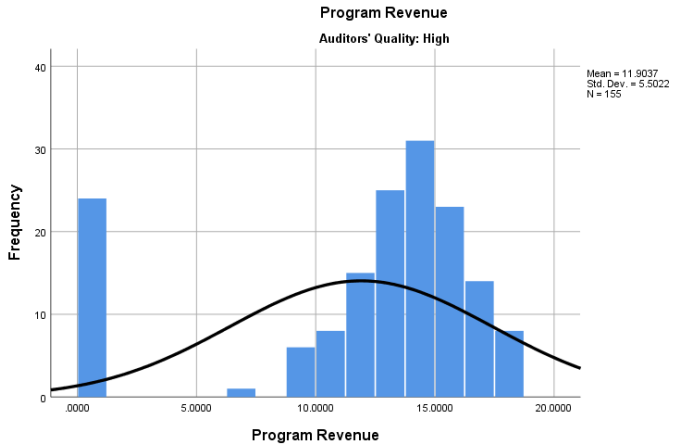
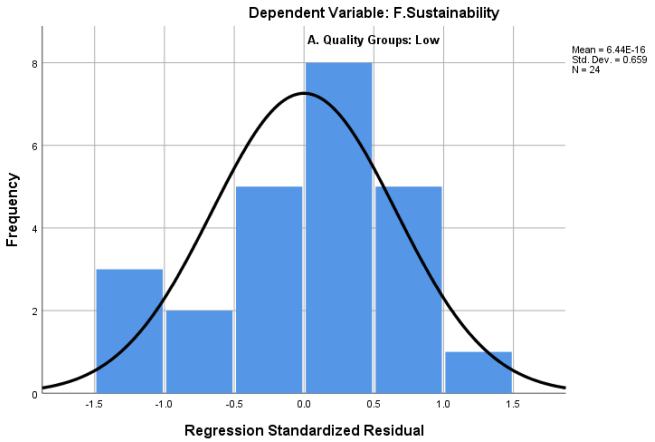
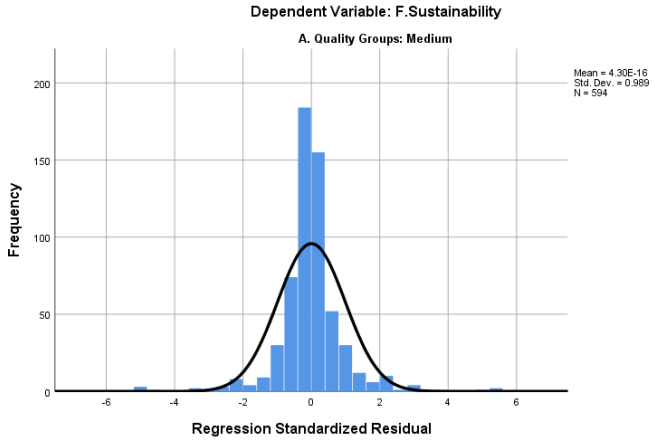


Exhibit J. Financial Sustainability Histograms by Auditors' Quality Level





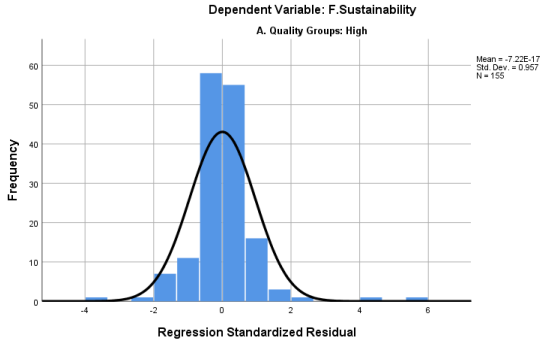
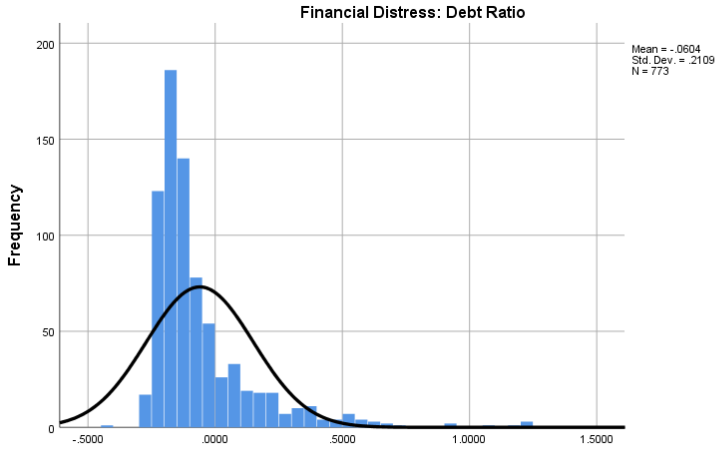


Exhibit K. Histograms Financial Distress Measures: 1 of 2



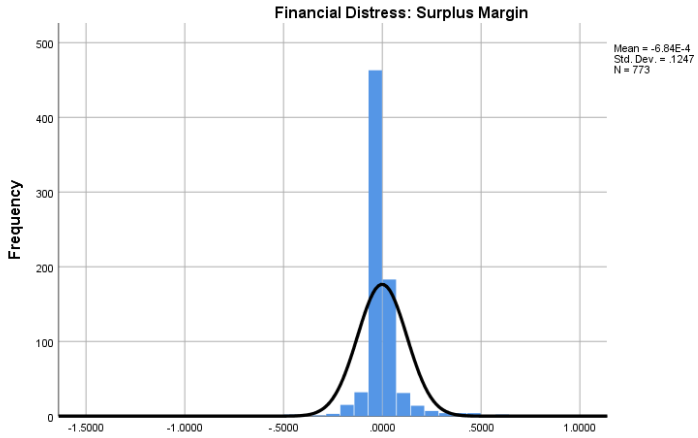
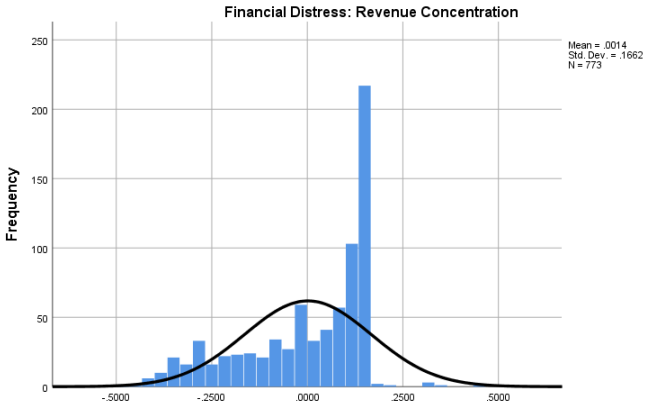
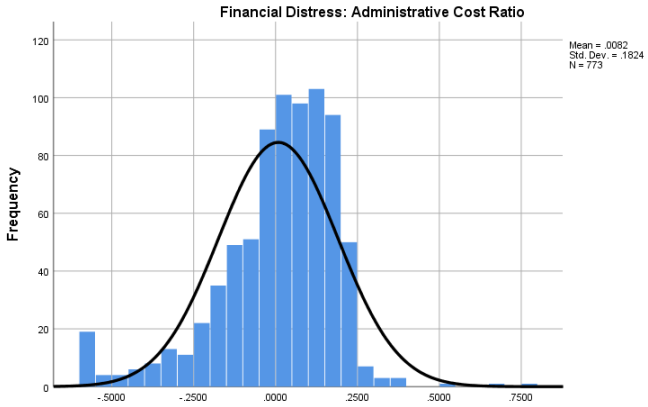
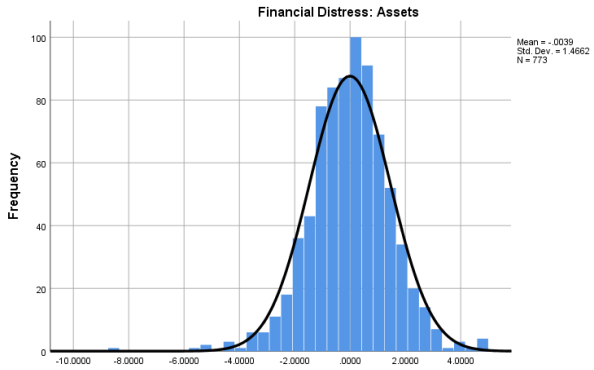


Exhibit L. Histograms Financial Distress Measures: 2 of 2







VITA

MARIANO HERRERA
Austin, Texas 78748

2020-2023	Doctor of Business Administration Florida International University Miami, Florida *Dissertation Title: A Closer view to The Nonprofit Industry's Accounting: The Financial Sustainability of The Development Related Nonprofit Organizations*
2003-2006	Master in Business Administration Major, Financial Accounting; Major, Corporate Finance Graduate School of Business, University of Puerto Rico San Juan, Puerto Rico *Thesis Title: Longitudinal Study of The Health Reform of Puerto Rico*
1998-2002	Bachelor in Business Administration Major, Finance; Minor, Business Management University of Puerto Rico Carolina, Puerto Rico

PUBLICATIONS AND ACADEMIC CONTRIBUTIONS

Herrera, M. (2022). *A Closer View to The Nonprofit Industry's Accounting: The Financial Sustainability of the Development Related Nonprofit Organizations*. Engaged Management Scholarship, Guadalajara, Mexico.

Herrera, M. (2006). *Estudio Longitudinal de la Reforma de Salud de Puerto Rico* [Master thesis]. Graduate School of Business, University of Puerto Rico, San Juan, Puerto Rico.