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Walden University

College of Management and Human Potential

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Martin D. Purvis

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2024

Abstract

Relationship Between Resource Allocation and Financial Viability in Nonprofit Organizations

by

Martin D. Purvis

MBA, University of Colorado, Colorado Springs, 2000

BS, Walla Walla University, 1978

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2024

Abstract

Nonprofit executives need to discern how financial ratios influence both organizational viability and mission fulfillment. Nonprofit organization leaders who fail to understand the connection between financial ratios and organizational success can affect a nonprofit organization's financial sustainability. Grounded in resource dependence and stewardship theories, the purpose of this quantitative correlation study was to examine the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability ratio. The sample included 92 human services organizations in Ohio that reported financial results on IRS Form 990. The results of the multiple linear regression were significant: $F(5,86) = 264.147$, $p = <.001$, $R^2 = .939$. In the final model, one predictor was significant: debt-to-asset ratio ($t = 36.23$, $p = <.001$, $\beta = .971$). A key recommendation is for nonprofit leaders to effectively use debt by strategically acquiring assets that produce positive returns for the organization they manage for continued organizational viability. The implications for positive social change include the potential to enhance human services organizations through strategic debt management to increase service delivery in the communities they serve.

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Dedication

I dedicate this achievement to my late father and mother, Earnest and Agnes Purvis, who exemplified that education is a lifelong endeavor. My mother's family left Oklahoma during the dust-bowl years nearly a century ago to join relatives in Washington state, where she met my father. After their marriage in 1938, they struggled to make ends meet. My father sold books door-to-door and supplemented that income by earning 30 cents an hour picking fruit. Later, with only a high school education, they began teaching grade school. However, they attended college each summer, graduating in 1964 with a Bachelor of Arts in elementary education. They planned to attend college full-time in 1966 to obtain their master's degrees. However, we were in an automobile accident in February 1966 that took their lives. Nearly 60 years ago, three months before the accident, they established a trust to pay my educational expenses with their limited assets, "even to a doctoral degree." They firmly believed in higher education and wanted to give their youngest son opportunities they never had. Fifty years after beginning college, I have achieved their goal for me. They taught me the value of perseverance, dedication, and hard work at all stages of life. I know their legacy has already been sealed through future generations of the students they taught and the family they raised.

I thank God for impressing my parents to establish the trust and provide for my education. I would never have completed this milestone without their commitment to higher education and my desire to achieve their plans for me. They exemplified and I have experienced this quote paraphrased from E. G. White: "We have nothing to fear for the future, except as we shall forget the way the Lord has led us in the past."

Acknowledgments

I want to acknowledge the involvement of many people who directly and indirectly supported me in this doctoral journey. I sincerely thank my committee chair, Dr. Roger Mayer, for his expertise and guidance during this process. We share an interest and are involved in nonprofit organizations. He was committed to the dual goals of assisting me with completing this project and producing a study that could enhance nonprofit organizational viability. I especially appreciate his ability to creatively address research challenges when I could not resolve a problem. I thank Dr. Michelle Preiksaitis for her availability, speedy responses, and perceptive questions that significantly improved this final product. I truly appreciated the structured environment and coursework at Walden University that provided the foundation for my doctoral research, especially after comparing my experience with those currently participating in other doctoral programs.

My family members have provided encouragement and support throughout this project. My wife, Barbara, and my children, Shastin, Jessica, and Jasmine, have provided love and support during the doctoral program. They were willing to allow me to take the time to accomplish this task while forgoing some of their expectations of me during the past few years.

I also thank my professional colleagues and clients who were supportive and patient with me during the stresses and challenges of this accomplishment. I am grateful to everyone who encouraged me to pursue this lifelong personal goal.

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Section 1: Foundation of the Study

Leaders of nonprofit organizations (NPOs) often face operational and financial challenges that affect their ability to manage their organizations effectively and ensure financial sustainability. NPOs must maintain financial health to serve their communities and fulfill their missions (Rottkamp, 2020). Additionally, NPO leaders should have integrity, interpersonal relations skills, and a wide range of management skills (Hunter & Decker-Pierce, 2021). A leader exhibiting a wide range of personal characteristics may not have significant financial management skills to make decisions that contribute to organizational financial viability. The study results provide NPO leaders with financial information to support operational decisions that contribute to organizational viability, which enhances positive social change by equipping NPOs for service enhancement and mission achievement.

Background of the Problem

NPOs often encounter challenges that can affect long-term sustainability. NPOs operate in environments of complexity, ambiguity, and economic limitations (Aboramadan et al., 2021). NPOs face challenges including obtaining adequate funding (Amagtome & Alnajjar, 2020), developing appropriate governance structures (McMullin & Raggo, 2020), maintaining operational capacity (Nordin et al., 2022), attracting and retaining employees (Slatten et al., 2021), and cultivating engaged employees, leaders, and board members (R. Wang, 2022). However, many leaders of NPOs become consumed with these challenges and may not consider critical financial factors affecting the organization's vulnerability.

Nonprofit leaders must understand and create strategies to address an organization's financial vulnerabilities and effectively govern the organization. NPOs use business logic attempting to increase economic sustainability (Beaton, 2021). If a nonprofit leader does not understand an organization's financial position, it can be challenging to plan for the future (Cashwell et al., 2019). Organizational leaders and board members must understand the financial indicators that provide information regarding potential vulnerabilities to make decisions that enhance the organization's future sustainability.

Researchers and analysts regularly use ratios to evaluate the financial status of for-profit businesses. However, NPO leaders may not be aware of or use financial indicators that may improve an organization's financial capacity and sustainability. Altman (1968) developed a formula for commercial businesses using discriminant analysis of five ratios to produce a Z-score that predicted corporate bankruptcy. Altman and Hotchkiss (2006) modified the Altman Z-score to assess the financial vulnerability of service organizations. Tuckman and Chang (1991) also developed a nonprofit vulnerability model using four financial parameters. However, an overall vulnerability score for an NPO does not provide nonprofit leaders with specific data for decision-making. NPO leaders need relevant information that assists them in making effective resource allocation and financial management decisions.

Problem and Purpose

The specific business problem addressed in this research was that some nonprofit stakeholders may not understand the relationship between nonprofit revenue source

diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability ratio. Therefore, this quantitative correlational study was conducted to examine the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Population and Sampling

The population for this study was 278 human services organizations in Ohio that filed Internal Revenue Service (IRS) Form 990s for the year 2022 with annual revenues from $2,000,000 to $15,000,000. The systematic method using probabilistic sampling began with a random selection of the first target, then a systematic algorithm to complete target selection (Berndt, 2020). The G*Power 3 analysis software calculates sample size and statistical power for research studies (Faul et al., 2007; Kang, 2021). The G*Power a priori power analysis with a medium effect size (f^2=.15), error probability $\alpha = .05$, and five predictor variables requires 92 targets to reach a power of .80. I used a systematic method using probabilistic sampling to select 92 target NPOs for testing. The IRS releases Form 990 information (Internal Revenue Service [IRS], n.d.-b) for NPOs, and ProPublica (Suozzo et al., n.d.) provides public access to downloaded information. I used information from Form 990s downloaded from ProPublica to generate the data for the study variables and evaluate the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability

ratio.

Nature of the Study

I chose a quantitative methodology to address the research questions in this study. This approach was appropriate because it is a scientific method to obtain enumerative data about behaviors or opinions to understand events of interest. A researcher uses quantitative research to gather data, produce statistics, and then apply the information to a larger population (Byrne, 2016). The quantitative method was justified because of the need to test relationships between financial vulnerability ratios and sustainability in an NPO. Qualitative research is an inquiry using non-numerical data to understand and explore instead of manipulating variables (Nassaji, 2020). Researchers may choose a mixed-method approach integrating qualitative and quantitative study to provide further insights into the research topic rather than analyzing qualitative or quantitative data alone (Kajamaa et al., 2020). I used numerical data to identify relationships between variables, so a qualitative study, including the qualitative component of a mixed-method study, was not appropriate for this study.

I chose a correlational design for this study. A researcher uses this design to examine the relationships between two or more independent and dependent variables and attempts to measure correlations between variables (Bloomfield & Fisher, 2019). However, researchers cannot use correlational studies to provide inferences between variables (Carr et al., 2019). A researcher can use an experimental or quasi-experimental design to identify a cause-and-effect relationship between variables (Bloomfield & Fisher, 2019). In this study, I identified the relationships, not causality, between

independent and dependent variables, so an experimental or quasi-experimental design was inappropriate.

Research Question

What was the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio?

Hypotheses

Null Hypothesis (H_0): There was no statistically significant relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Alternative Hypothesis (H_1): There was a statistically significant relationship between at least one of nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Theoretical Framework

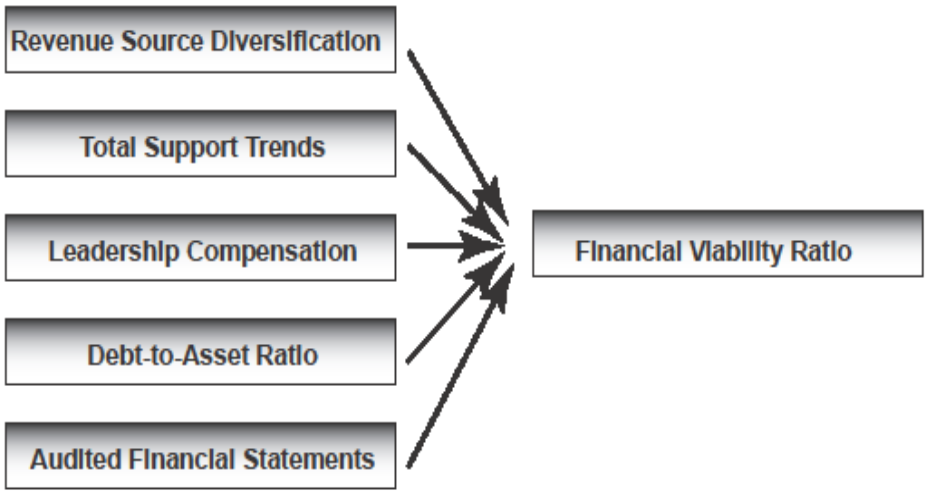
The theories that grounded this study included concepts of the resource dependence theory (RDT) and the stewardship theory (ST). Pfeffer and Salancik (1978) introduced the RDT in 1978. An organization is dependent on external entities to access resources that affect organizational behavior (Bryan, 2019). Leaders can increase their influence and enhance continuity by identifying resources and addressing resource dependencies (Kohtamäki, 2019). Davis et al. (1997) advanced the theory that leaders

will act as responsible stewards for the resources they control in 1989. The ST suggests that leaders with autonomy and responsibility have implicit incentives to work in a way that enhances the organizational mission (Rouault & Albertini, 2022). In applying these frameworks to my study, I anticipated that NPO access to revenue resources and leadership decisions regarding the allocation of expenditures were related to the financial viability of an organization.

Figure 1 depicts the potential relationships between independent study variables and the financial viability ratio of the organization.

Figure 1

Independent and Dependent Study Variables



The revenue source diversification and public support trend independent study variables related to an NPO's ability to access and utilize external resources to further the organizational mission. The other three variables also indicated the potential impact of NPO leadership stewardship decisions regarding revenues, expenditures, and fund

allocations to enhance the organization's financial viability. The resource dependency and stewardship theories provided the lens to evaluate how NPO decisions involving organizational resources and expenditures affect organizational sustainability.

Operational Definitions

Financial vulnerability: Financial vulnerability is a measure of an NPO's capability to endure unanticipated financial or operational crises.

Financial sustainability: Financial sustainability is the capability to maintain positive financial results over a period of time.

Operational capacity: Operational capacity is an NPO's ability to produce results and the practices, resources, and capabilities necessary to achieve its mission (Nordin et al., 2022).

Nonprofit organization: An NPO is a legal entity organized without a profit motive, distributing no organizational income to members, directors, or officers (Cornell Law School, n.d.).

Public support trends: Public support trends are the changes in levels of public support over a period of five years, as identified in Form 990, Schedule A.

Revenue source diversification: Revenue source diversification is an NPO's use of multiple sources of revenue attempting to reduce risks of dissolution (Lu et al., 2020).

Assumptions, Limitations, and Delimitations

Assumptions

Scholars utilize assumptions in their research for two purposes: (a) to develop the problem-solving process by constraining information connected to a problem and (b) to

identify the elements the researcher believes to be true when solving a problem (Verostek et al., 2022). I made five assumptions in this study. The first assumption was that a combination of resource dependency and stewardship theories is the best lens to evaluate the study data. The second assumption was that a quantitative approach is the best method for this study. The third assumption was that many NPOs and accountants with possible varying approaches prepare the information found in IRS Form 990. However, for purposes of this study, I assumed those who prepare the financial information for the IRS forms use a similar methodology to report the data. The fourth assumption was that the sample used for this study from human service organizations in Ohio reflected full population results. The fifth assumption was that the modified Altman Z-score of financial viability accurately reflected the levels of financial viability in Ohio nonprofit human service organizations.

Limitations

All research studies have limitations, which are weaknesses that may influence the outcomes and conclusions of the study (Ross & Bibler Zaidi, 2019). This quantitative study exhibited four limitations. The first limitation was that this study used data from 92 nonprofit human service organizations in Ohio that appeared in a data retrieval from 2022, which may not have reflected the nonprofit human service population within the state or nationally. Additionally, this study may have identified relationships in the data that were unique to NPOs in Ohio and not replicable in other states. The second limitation was that a correlational quantitative study can identify dependence between many variables, but researchers should not use dependence between variables to infer

causality (Carr et al., 2019). Statistical relationships between variables in this study do not imply causality between the independent and dependent variables. The third limitation was that other independent variables may exhibit a stronger correlation with the dependent variable than the ones I selected for this study. The fourth limitation was that while researchers have used the modified Altman Z-score in other studies of NPOs, this variable may not accurately reflect their relative financial viability.

Delimitations

The delimitations in this quantitative study were the boundaries I established, which limited the extent of the study population, the timeframe for the study, the chosen geographic area, and the selected type of NPO. Within this study, I limited the target population to human service organizations in Ohio, so the delimitations excluded organizations of different sizes, organizations not reporting 2022 data, organizations outside of Ohio, and non-human services NPO types. These delimitations were necessary to reduce the scope of the study to a manageable size, include organizations reporting the most recent available data, and reduce the potential for including dissimilar NPOs with data unrelated to the dependent variable. However, due to these delimitations, study results may not apply to NPOs outside the study population of human service organizations in Ohio that may have different characteristics or contexts.

Significance of the Study

This study was significant because its results may assist nonprofit stakeholders in determining the impact of leadership decisions on resource allocation and financial ratios on the organization's future sustainability. The study results contribute to positive social

change by providing information that nonprofit leaders and board members can use to make decisions that extend the viability of mature organizations and increase the potential of financial stability for growing organizations. Because many NPOs contribute to the social good of society, information that helps NPOs improve sustainability contributes to positive social change by increasing the organization's ability to deliver vital services.

Contribution to Business Practice

NPOs often do not have the administrative staff to evaluate the financial impact of business decisions. Additionally, in a recent study, many leaders in NPOs were trained in nonfinancial management fields, so they were not skilled in making financial management decisions (Einolf, 2022). This resource allocation and financial viability study identified financial ratios and management choices that may contribute to NPO financial viability. NPO leaders can make management decisions based on relevant financial information that may lead to increased operating margins.

The results of this study may also provide practical information NPO boards can use to evaluate and prioritize resource allocation within the organization. Certain independent variables used in this study may have a stronger relationship with the dependent variable of financial viability. NPO leaders and board members could compare organizational statistics with study results in developing a strategic plan to enhance organizational viability. Using the results of this study, nonprofit human service organization stakeholders can focus on the specific asset, revenue, or expense elements that best contribute to the financial sustainability of the NPO.

Implications for Social Change

Human service organizations have faced challenges in maintaining financial viability. The COVID-19 epidemic caused challenges that risked human service organizations' ability to provide long-term societal contributions due to funding reductions and unpredictability (Bennett et al., 2023). Human service organizations engaged in programmatic and strategic changes during the COVID-19 pandemic, attempting to fulfill the urgent needs of society (Y. Ma & Beaton, 2023). Human service agency managers can leverage partnerships and creative methods to benefit the communities they serve (Neely-Barnes et al., 2021). The negative financial status of a human service NPO can impact the organization and its community.

This study on human service organizational viability may provide organizational leaders and stakeholders with information to select financial options leading to enhanced sustainability. If the organization enhances its financial stability, it can contribute to community sustainability. The human service organization provides needed services and programs to less fortunate community members, promoting positive social change for the organization and its community.

A Review of the Professional and Academic Literature

This quantitative correlational study considers the relationship between resource allocation and organizational viability in nonprofit human service organizations. NPOs need a well-developed business strategy that contributes to long-term financial sustainability (McDonald et al., 2021). I developed the theoretical framework by studying prior research on resource dependency and stewardship theories and determining their

connection to financial viability in medium-sized nonprofit human service organizations. This section highlights the history and scholarly literature regarding the two theories, the methods researchers used to apply them, their pertinence to NPO leadership financial decisions, and the measurement criteria I used in the study.

Literature Search Strategy

In preparation for this study, I extensively reviewed existing literature and found numerous resources related to my study. I regularly used the ABI/INFORM Collection; EBSCO Databases, including Academic Search Complete and Business Source Complete; ProQuest Databases, including Accounting, Tax & Banking Collection, and ProQuest Central; Google Scholar; Sage Journals; and Taylor & Francis Online databases to discover information relevant to this study. When evaluating the theoretical bases for this study, I extended the research to include time frames that covered the development of the theories. Otherwise, I limited my research to information in publications dating from 2019 to the present. Additionally, I used the citations in published journal articles and the relationships in connectedpapers.com (Connected Papers, n.d.) to identify further research related to this study.

The databases and reference documents contained significant information about the theoretical and alternative frameworks related to this study. However, the research information available regarding quantitative resource allocation studies in NPOs was limited. I used search terms singly and in combination to find journal articles of interest. In researching independent variables, I selected individual and combinations of these search terms: *revenue diversification, public support, leadership compensation, debt-to-*

asset ratio, audited statements, nonprofit, and *organizations.* I used *resource dependence, stewardship, stakeholder, agency, benefits, balanced scorecard, theory,* and *nonprofit* singly and in combination when I considered the theoretical foundation of the research. When I studied the financial vulnerability of NPOs, I chose search terms such as *Altman Z-score, discriminant analysis, financial, performance, vulnerability, distress, viability, Form 990, failure, performance, bankruptcy,* and *nonprofit.* Table 1 displays the literature I identified, which included seminal research on the foundation of theories and current applications of the theories relevant to my research.

Table 1

Literature Review Sources Content

Literature Review Content	Total #	# Between 2020-2023	% Between 2020-2023
Peer-Reviewed Articles	202	163	81
Books—Seminal Works	4	0	0
Other Books	10	5	50
Online Resources—15 Undated	16	1	6
Total	232	169	73

Theoretical Framework

I chose the RDT and ST as the theoretical frameworks for this study. Pfeffer and Salancik (1978) proposed the RDT, which postulates that all organizations depend on external resources and must transact with these resources to assure organizational survival. The RDT frames the use of limited resources, and the ST helps frame the

management of these resources. Nonprofit decision makers must effectively oversee external resources but are also responsible for appropriately managing internal resources. The ST extends RDT to incorporate management of all resources and expenditures of the organization. The ST maintains that leaders will act to achieve organizational objectives and benefit other stakeholders of the organization (Davis et al., 1997). While neither the resource dependency nor the stewardship theories alone provide a complete lens for evaluating nonprofit resource allocation and financial vulnerability, the combination addresses the appropriate management of resources and actions that potentially impact nonprofit viability.

RDT

Researchers consider Pfeffer and Salancik (1978) to be the seminal authors of the RDT. However, Emerson (1962) previously described resource dependence between individuals from a sociological perspective. Emerson stated that the influence one individual has on another is due to power dependency. Emerson theorized that if an individual depends on another for resources, the resource holder maintains influence over the other. Similarly, an entity exerts influence over an organization if that entity controls resources essential to the success of the other. The primary difference between the two theories is whether the entity holds or needs the resources. Emerson developed a framework based on the resource holder's influence. In contrast, Pfeffer and Salancik addressed resource dependency from the perspective of an organization dependent on others for resources, theorizing that the resource holder influenced organizations having lower power and higher dependence on external resources.

Resource Availability. A firm must access adequate resources to produce a marketable product or service. These resources include capital items such as financing, cultural, natural, human, physical, and public resources (Beninger & Francis, 2022). Commercial firms are increasingly concerned about their vulnerability to disruptions in raw material supply chains (Wallard, 2020). A firm may have resources such as social alliances with upstream providers (Q. Liu & Kim, 2022) or access to intellectual capital (Smriti & Das, 2022), which contribute to the firm's success. Business leaders choose the most effective and efficient methods to access resources that best contribute to financial results. Firms attempt to maximize profits by utilizing resources to contribute to competitive advantage (Rashid et al., 2020). A firm that loses access to resources like raw materials may significantly negatively impact profitability. For example, the auto industry suffered a significant decline in sales in 2021, primarily due to semiconductor supply shortages (O'Trakoun, 2022). Business leaders must constantly monitor external resources and adjust to changing conditions affecting availability.

Management of Resources. Leaders face significant challenges when responding to environmental uncertainties affecting resources. The environmental uncertainty level influences organizational strategies, ultimately affecting organizational performance (Ansmann et al., 2021). When business principals identify risks of resource deficits, organizational stakeholders expect the leaders to respond to the potential resource disruption and preserve business revenues. Executives address resource disruption by developing strategies to protect resource access and reacting quickly to identified resource shortages. Nonprofit decision-makers must effectively oversee external

resources but are also responsible for appropriately managing internal resources. Due to the wide range of resource dependencies in different types of organizations, leaders use varying strategies to address resource disruptions specific to the resources and businesses they manage.

Organizational leaders use various tactics to maintain the availability of scarce resources for the organization. A business can improve operational performance by establishing crucial relationships with partners through supply chain management and achieving competitive advantage (Saragih et al., 2020). Leaders can improve organizational performance by developing internal structures that support more efficient access to external resources. Businesses that generate strong internal support and cooperative strategies for cloud-based supply chain management reduced cycle times and organizational performance (M. Lin et al., 2021). From a resource dependency perspective, an organization that controls access to the ultimate customers has power over a supplier and can use shared goals to affect the pattern of dependence between the organizations (G. Liu et al., 2022). While organizations may control access to the ultimate customer, the organization may not be able to exercise this power when experiencing a scarcity of resources.

While resource deficiencies of for-profit entities often include access to raw materials, NPOs can experience resource deficiencies in human capital. Uncertainty in resource availability threatens an organization's continued operation (Pfeffer and Salancik, 1978). For example, when German hospitals experienced uncertainty in the availability of physician specialists, they used broadened recruitment strategies and other

retention measures to address these resource shortfalls (Schnack et al., 2022). Other researchers have applied the RDT to boards of directors, suggesting that board members are essential to a firm's success. Board members provide human and relational capital (Doyle et al., 2021), provide more links and access to outside resources (Pucheta-Martínez & Gallego-Álvarez, 2020), and provide more opportunities for internationalization (Sukumara-Panicker & Upadhyayula, 2021). Organizational executives can moderate the risk of resource shortages by actively developing structures to improve access to raw materials, promoting activities that enhance internal resources, and capitalizing on stakeholder links to outside resources.

Resource Dependency in Nonprofit Organizations. NPOs also depend on outside entities for resources to support their nonprofit activity. NPOs are typically dependent on external financial resources such as government grants, donation revenue, investment income, and program service revenue (Shon et al., 2019). A nonprofit executive using the RDT would attempt to reduce reliance on one form of revenue, such as donations, by attempting to diversify into other sources of revenue. NPOs often need to find other commercial revenue sources, such as product sales or sponsorships, to reduce dependency on a few resource providers and diversify their revenue sources to improve the chances of long-term survival (Yan et al., 2022). According to the RDT, NPOs are influenced by their dependence on diverse resources (Ilyas et al., 2020). NPOs use resource development processes under RDT to manage dependence on external parties, attempting to control and access resources and minimize uncertainty (Bryan, 2019). While revenue diversification may reduce long-term risks to the organization, it

may incur additional expenses. Nonprofit revenue diversification increases administrative costs and reduces expenses related to program services (Shon et al.). If a nonprofit leader chooses to diversify revenue sources under the RDT, organizational stakeholders may develop an incorrect perception of the organization. In its attempt to secure additional resources, the organization may lose sight of its core mission (Pilon & Brouard, 2022) and reduce existing resources. Under the RDT, a nonprofit leader should attempt to diversify revenue sources to reduce dependence on individual revenue sources, establish control over the sources of revenue, and balance the combination of revenue sources to maintain mission focus and assure the organization's long-term viability.

ST

Organizational theorists have developed multiple theories to describe the relationships between ownership, governance, and organizational operations. Davis et al. (1997) proposed the ST as an alternative to agency theory, which maintains that each principal acts with self-interest, rationality, and risk aversion (Eisenhardt, 1989). Davis et al. held that principals and agents serve with pro-organizational behavior that places higher utility on cooperation and collectivism rather than self-serving individualism. ST challenged the conflict of interest between principals and agents inherent in the agency theory, replacing it with the trust-based congruence of goals (Torfing & Bentzen, 2020). Owners, boards of directors, executives, and employees working within the ST place organizational goals ahead of personal ambitions.

ST Development. Researchers have applied ST to multiple relationships between individuals and businesses. Researchers studying ST often applied the theory to family

businesses due to the congruence between family member goals regarding the family firm. Family members exhibit high levels of trust and informal agreements based on the other parties' intentions, and nonfamily employee stewards empower themselves by participating in the family organizational structure (Alves et al., 2021). Family members may have a religious basis for participating in business and a family dynamic that focuses on the close ties between family members in harmony with economic intentions (Carradus et al., 2020). Nonfamily employees in family firms with a stewardship culture exhibited more robust pro-social behavior (Bormann et al., 2021). Löhde et al. (2020) proposed that family relationships influence a transition to stewardship orientation as family firms develop over time. Researchers have also applied ST to individuals and organizations committed to a perceived greater good. Stakeholders may support environmental goals or elements of corporate social responsibility and apply the ST individually and corporately to benefit future generations (Wei et al., 2021). Management in stewardship organizations applies a more holistic approach to the organization's relationship with society and emphasizes connections with relevant stakeholders (Nijhof et al., 2019). In a stewardship organization, leaders focus on employee intrinsic rewards, such as growth, achievement, and self-actualization, to motivate individuals to have a stewardship orientation to the organization (Caldera et al., 2022). Scholars have applied ST to relationships between leaders, family members, and other individuals from the perspective of family firms and analyzed compatibilities between these groups that contribute to stewardship behaviors that benefit the family enterprise.

ST in Nonprofit Organizations. Researchers have applied multiple theories to

the governance and operations of NPOs. However, ST uniquely integrates leadership and stakeholders' organizational and individual motivations to achieve shared goals in NPOs. Employees of specific NPOs are motivated by intrinsic and altruistic rewards rather than career advancement (Ronquillo et al., 2021). Employees are intrinsically motivated when they see that their actions align with the organization's mission (Reinhardt & Enke, 2020). Stewardship behaviors of trustworthiness, collectivism, and pro-organizational actions stress team performance over individual goals and align individual goals with a shared mission in NPOs (Eiselein & Dentchev, 2020). NPOs benefit from collaboration between individuals and teams to pursue a shared mission.

Nonprofit leaders can provide an inspirational environment whereby individuals and teams can contribute to organizational goals. The leaders act as resource custodians by allocating goods for the organization's financial, spiritual, ethical, and societal needs (Sama et al., 2022). Scholars approach ST from the individual, leadership, governance, and stakeholder perspectives. Researchers have often applied ST when addressing the relationships between these perspectives to identify linkages that enhance stewardship. Executives identified (a) empowering work practices through transformational leadership approaches of communication and connecting daily work with organizational ambitions, (b) fostering interdepartmental collaboration and coherence with humility and adaptability, and (c) nurturing interpersonal communication and networks to develop mutual trust between individuals as enablers of stewardship within an organization (Simpkins et al., 2021). Uddin et al. (2019) stated that levels of employee organizational stewardship attitudes could affect individual and team performance. The authors noted

that individual senses of affiliation and team participation contribute to organizational success or failure. Nonprofit executives use the ST when building relationships within the organization to encourage stakeholders to choose a shared mission instead of individual self-interest.

Researchers use the ST to define a shared purpose with organizational stakeholders beyond leaders and employees. NPO leaders are responsible for leading, coaching, training, and supporting the board of directors so the board can engage with the leaders to become partners in governance with shared goals (Mason & Kim, 2020). This partnership arrangement is strengthened by mutual trust between leaders and board members. The principles of ST can create high-trust relationships when leaders promote internal accountability through bottom-up relationships between frontline workers, leaders, and board members (Rouault & Albertini, 2022). Board members and managers can build on their trusting relationships to achieve organizational goals. Under the ST, they can actively collaborate to develop organizational strategies (Castellanos & George, 2020). Leaders can also apply stewardship principles to a larger group of stakeholders. Organizational leaders can be stewards using ethical leadership for a broader group of stakeholders to initiate positive change and value creation (Sama et al., 2022). Using the ST, an effective leader can influence stakeholders within and outside the organization.

The Stewardship Organization. In most cases, researchers apply the ST to organizational leaders and employees. However, Lehrer and Segal (2020) proposed a definition of a stewardship organization that extends beyond top managers to a dominant organizational mode of operation. So, a stewardship organization would build on the

shared purpose and higher calling of individuals within the entity to reflect similar characteristics to stakeholders outside the organization. Because of their shared goals, leaders use the ST to distribute authority to human capital within the organization to strengthen their involvement with external stakeholders (Nijhof et al., 2019). An entity working toward an objective demonstrating the ST is intrinsically motivated to higher performance levels (Schillemans & Bjurstrøm, 2020). Employees of NPOs with a stewardship orientation commit to a higher purpose. They are intrinsically motivated to perceive their actions as contributing to the nonprofit mission (Reinhardt & Enke, 2020). As stewards of the organization, employees are intrinsically motivated to take steps that contribute to organizational goals and act appropriately. The stewardship organization builds on relationships between leaders, employees, board members, and stakeholders to achieve a shared, collective mission rather than individualistic goals.

The stewardship organization requires trusting relationships between all stakeholders to achieve value. Business managers must develop more pluralistic and inclusive methods that synthesize stakeholder interests by considering the implications of disclosing or hiding information because they are the trust-keepers of the organization (Dumay et al., 2018). The stewardship organization exhibits low goal and information conflicts between supervisors and subordinates, providing an environment for trusting relationships (Jankauskas, 2022). When organizational stakeholders share similar values, leaders can enhance their legitimacy by using the soft controls of ST instead of hard controls to manage their subordinates (Abbott et al., 2020). The ST integrates stakeholder trust, goal congruence, shared values, low information conflict, inclusion, and motivation

to instigate positive change and create value for the organization.

Theoretical Lenses to Evaluate Resource Allocation and Financial Viability

Nonprofit leaders face challenges in managing available resources to maintain the financial viability of an organization. The combination of RDT and ST provides a lens to evaluate a nonprofit leader's financial decisions to increase the potential for nonprofit success. The RDT addresses the resources available to an organization and the choices nonprofit leaders must make to enhance the availability of needed resources. From a financial perspective, the primary resource for an NPO is revenue from external sources. NPOs receive revenue from government grants, donations from individuals and corporations, fees for services, and investment income (Shon et al., 2019). NPOs also benefit from nonfinancial resources, including volunteers (Ilyas et al., 2020), intellectual capital (Stock & Erpf, 2022), and human resources (Roumpi et al., 2019). Using the RDT, the nonprofit executive must determine effective organizational responses to disruptions in access to these resources. This study addresses the relationship between the types of resources NPOs receive and the financial viability of the organizations. This analysis may provide a nonprofit leader with information to develop revenue sources that have a greater potential for enhancing the organization's financial viability.

While researchers use the RDT to address revenue sources for an NPO, under the ST, a nonprofit leader will pursue a shared goal of maintaining continued viability for the organization. An NPO using the ST that is pursuing nonconflicting goals with stakeholders must comply with external guidelines for financial accountability (Albrecht et al., 2023). However, this may challenge the compatible goal-oriented relationships

between nonprofit leaders and followers under the ST. An NPO can use ST theory to develop a reporting system that builds trust and aligns the intrinsic motivations of leaders and workers. (Rouault & Albertini, 2022). Leaders can also use financial transparency with stakeholders using initiatives demonstrating efficient and effective use of resources to foster stakeholder trust (Krah & Mertens, 2023). A nonprofit leader applying ST principles can build a trust-based relationship with stakeholders by developing a transparent financial reporting system showing effective use of resources and meeting external accountability requirements. Leaders can build trust under the ST by effectively using organizational resources but need appropriate financial information to influence their decisions.

A steward-leader pursuing organizational viability can develop a shared, collective goal for the organization by connecting quantitative measures to organizational strategy. The balanced scorecard (BSC) is a planning and management system that converts strategic objectives into measures integrated into the management system (Bochenek, 2019). Scholars use the BSC in evaluating for-profit and NPOs (Moores et al., 2022). The BSC approaches strategic management by developing measures applicable to the organization from the customer, financial, service, and learning and growth perspectives (Gusnardi & Muda, 2019). If an organizational leader identifies appropriate financial measures under the BSC that contribute to organizational success, the leader exercises ST by effectively utilizing the resources entrusted to the organization. An organization that implements a BSC can improve performance by allowing managers to respond immediately to achieve the shared objectives of the

organization (Oliveira et al., 2021). A nonprofit leader can identify and share appropriate measures with employees of an NPO to achieve a shared, collective strategic objective under the ST. In this quantitative study, I aimed to identify financial measures under the BSC contributing to financial viability, allowing nonprofit leaders to engage employees and build trust in achieving a shared goal. A steward-leader will allocate resources and collaborate to generate value for the organization, provide services that enhance social good, and achieve the mutual goals of organizational stakeholders.

Alternative Theories to the Theoretical Framework.

Researchers have identified other theories besides the resource dependency and stewardship theories relevant to nonprofit financial and organizational management. Agency, stakeholder, resource dependence, stewardship, democratic, and public interest theories are governance theories related to accountability in NPOs (Pilon & Brouard, 2022). Researchers have extended their studies of nonprofit governance into other theoretical perspectives, including the benefits, economics, strategic management, group process and team development, and individual behavior theories (Hung & Berrett, 2023; Renz et al., 2023). Researchers have often used one or a combination of these theories when studying the financial management of NPOs. Benefits and stakeholder theories provide a lens to evaluate revenue and accountability in NPO resource allocation.

Benefits Theory

The benefits theory of nonprofits addresses the linkages between revenue sources and the behavior of NPOs. Weisbrod (1977) provided the foundation of the benefits theory by suggesting that voluntary NPOs supplement the public and private sectors by

providing an alternative to the collective goods that for-profit or governments do not produce. He extended this understanding by presenting the theme that there is a strong connection between the sources and the outputs of nonprofit revenue (Weisbrod, 1988). Young (2007) used these connections to propose a theory that nonprofit income sources correspond with the benefits that resource providers receive. Young identified four types of benefits linked to specific types of income sources: (a) private benefits, with individual clients willing to pay for services or products; (b) group benefits, with benefits for the group for which donors are willing to pay; (c) public benefits, which benefits the general public with government financial support; and (d) trade benefits, which benefits groups or institutions who provide resources related to their interests or missions. The benefits theory addresses the benefits that external entities receive and the services NPOs provide. Benefits theory maintains that the resources a nonprofit receives from external entities or financing are directly linked to the benefits external entities receive from nonprofit services.

Researchers have broadened elements of the benefits theory to address various nonprofit activities. The benefits theory provides the basis for a relationship between revenue sources and nonprofit operations (Searing, 2023). Park and Peng (2020) stated that nonprofits should focus on income sources that match their services and benefits. Nonprofits should align revenue sources with benefits provided by resource providers (M. Kim et al., 2018). According to the benefits theory, an NPO should consider its mission to identify the types of services it provides, match its services with the class of benefits, and focus on the resource providers of the benefit class. The benefits theory

assumes that an NPO can enhance revenue and organizational sustainability by linking its operational activities with revenue sources.

The NPO, utilizing the benefits theory, develops a relationship with entities providing sources of revenue to the organization. The NPO can use a unique benefit mix of tangible services and intangible benefits, such as mission or image, to develop a competitive advantage and develop transactional relationships with resource providers (Q. Liu & Kim, 2022). The partnership between an NPO and its stakeholders in a benefits relationship must provide utility or compensation in a transactional exchange (Stühlinger & Hersberger-Langloh, 2021). The benefits theory addresses the transactional exchange relationship between providers of resources such as individuals, donors, governments, and associations and the goods or services that nonprofits provide to the resource providers. A nonprofit leader can use the transactional component of revenue generation as one method to manage resource allocation within an organization.

Nonprofit leaders can use the benefits theory to evaluate the linkages between the type of revenue from providers and the services delivered by the organization. Under the benefits theory, leaders should strategically link the mission of the NPO to the diverse revenue from resource providers or payers because benefit-based financing appears to strengthen the fiscal health of NPOs (Q. Liu & Kim, 2022). In a study of the benefits theory in nonprofit hospitals, Park and Peng (2020) found that private contributions were linked to hospital spending on low-income individuals, and governmental grants were associated with services to larger communities. While researchers have established general links between revenue sources and services delivered, they have not established a

framework supporting increasing the provision of services through mission development to increase participation of resource providers or focusing on resource providers to enhance revenue sources supporting the delivery of goods or services associated with the revenue sources. The benefits theory targets linkages between sources and applications of funds but does not address NPO management decisions regarding revenue sources and organizational viability.

Stakeholder Theory

Researchers attribute the origin of the stakeholder theory to R. Edward Freeman. Freeman (1984) identified multiple relationships between individuals and groups that affect an enterprise's success. Freeman traced the origins of the stakeholder concept to Stanford Research Institute researchers in 1963, who argued that executives needed to understand the concerns of stakeholder groups to develop objectives addressing their concerns, which contribute to organizational survival. The stakeholder theory extends accountability in business beyond shareholders to the concept of creating value for other stakeholders, including customers, employees, suppliers, and communities. (Freeman & Elms, 2018) The stakeholders of an organization include all internal and external groups and individuals who can contribute to the organization's success. The stakeholder theory extends moral leadership accountabilities beyond legal responsibility (Pilon & Brouard, 2022). In this context, executives must enhance organizational worth beyond financial measures to social issues that create value for stakeholders besides company owners.

Traditionally, companies have reported ownership value by reporting wealth to corporate owners. However, stakeholder theory moves beyond creating value for

shareholders by stressing that the company should also provide value to customers, suppliers, and local communities (Menezes et al., 2022). A firm exercising stakeholder theory should recognize that it should function for those indirectly affected by organizational decisions (Rentschler et al., 2021). Leaders face the challenge of balancing shareholder needs and stakeholders who may receive value or are affected by the company. A company focusing on stakeholders creates tension between activities that enhance shareholder value and those addressing stakeholder needs.

While Freeman's proposed stakeholder theory (Freeman, 1984) has existed for nearly 40 years, many researchers consider it a perspective, not a theory (Barney & Harrison, 2020). The authors stated that researchers had not established a consensus on even the fundamental ideas of stakeholder theory. Scholars have identified recent challenges in the stakeholder theory, including influential stakeholders not allowing managers to balance all stakeholder interests (Bridoux & Vishwanathan, 2020), how a firm can build or erode trust across multiple stakeholders by actions toward a single stakeholder (Crane, 2020), and how to develop a structure that potentially values stakeholder capital (Hatherly et al., 2020). Leaders have a significant challenge in balancing the needs of all stakeholders when the stakeholders often have competing interests. Business executives should balance the economic necessities of the firm with a stakeholder perspective while attempting to build shareholder and stakeholder value.

Researchers have debated the conflicting views of shareholder versus stakeholder orientation within for-profit enterprises. They have also applied the stakeholder concept to NPOs that do not have the same ownership and profit motive as commercial

businesses. NPOs are considered excellent examples of multi-stakeholder organizations because of their extensive relationships with resource providers or recipients of their services (Mato-Santiso et al., 2021). However, stakeholders in NPOs have different power structures. Stakeholders that hold power relative to an NPO include community networks, individual supporters, internal constituents, and internal professionals (Schubert & Willems, 2021). Within these categories, nonprofit experts and leaders identified sponsors, donors, executives, and umbrella organizations as having the most stakeholder power and government agencies and boards as having high stakeholder representation levels within the NPO. NPOs are facing increased calls for accountability and scrutiny over organizational performance (Cody et al., 2022). Under the stakeholder theory, NPO leaders, like commercial firm executives, should provide value to stakeholders of the organization, which extends beyond financial and operational accountability. Because NPO executives are accountable to boards and donors, the NPO leaders provide value under the stakeholder theory by providing financial accountability to these oversight groups.

Leaders of NPOs under the stakeholder theory are accountable to multiple groups within and outside the organization, which can create value for the NPO. The numerous stakeholder groups may have interests that align with NPO leadership. However, while most stakeholder groups are concerned about organizational viability, stakeholder groups such as service recipients or the general public are less interested in the financial methods NPO leaders use to enhance organizational viability. The stakeholder theory provides a broad lens for NPO leaders to identify and address the needs of varying groups outside

and within the organization. However, the theory lacks the specificity to evaluate NPO financial choices regarding financial viability.

Comparison of Theories

The combined theories of resource dependency and stewardship provide the best theoretical lens for a researcher to evaluate resource allocation and financial viability in NPOs. I used the RDT to evaluate NPO decisions regarding revenue diversification and its effect on organizational viability. In a literature review, Hung and Hager (2019) found that balancing revenue streams creates value for NPOs. The RDT provides a means to evaluate revenue streams and decisions regarding internal resources such as personnel, ultimately impacting organizational viability. I used the ST as a lens to assess how leaders act as stewards in determining the allocation of funds based on the shared intrinsic motivation of board members, executives, and employees, which contribute to the organization's long-term sustainability. I synthesized these two theories to provide a combined lens for managing external factors through the RDT and the governance practices and internal financial mechanisms through the ST to evaluate the relationship between resource allocation and financial viability.

Researchers use the benefits theory to address the linkages between the types of revenue generated and services provided by NPOs. I addressed types of revenue generated in general categories such as contributions, services, and unrelated business income. However, the data I obtained from IRS Form 990 did not provide information to establish a link between revenue sources and services delivered. While the benefits theory provides a lens for specific elements of NPO revenue and related services, it does

not provide the holistic view of organizational financial dynamics that the RDT and STs offer.

Scholars use stakeholder theory to identify the interests of various stakeholders and the relationships they maintain with the NPO. Stakeholders do exercise influence on NPO leadership decision-making but do not have the same level of influence on the NPO leadership financial decisions as NPO leaders have under the RDT or ST. I used the combination of the RDT and STs as a lens targeted toward the financial management challenges of organizational viability through an analysis of available resources and the role of individuals in allocating resources to enhance financial viability.

Measurement

Researchers have increasingly used the IRS Form 990 in studies on NPOs. The IRS calls the form *Return of Organization Exempt from Income Tax* (IRS, n.d.-c). The IRS provides a downloadable version of the form at https://www.irs.gov/pub/irs-pdf/f990.pdf. Form 990 is a comprehensive, 12-part document that contains detailed financial and nonfinancial information to the IRS about an exempt organization (Abu-Khadra & Olsen, 2023). I have listed the 12 parts of the Form 990 in Table 2. In addition to Form 990, the IRS requires exempt organizations to provide additional information on one or more supporting schedules (IRS, n.d.-c). Form 990 discloses extensive information regarding an NPO's governance, operations, and financial status.

Table 2

Description of the Parts of IRS Form 990

Form 990 Part	Form 990 Description
I	Summary
II	Signature Block
III	Statement of Program Service Accomplishments
IV	Checklist of Required Schedules
V	Statements Regarding Other IRS Filings and Compliance
VI	Governance, Management, and Disclosure
VII	Compensation of Officers, Directors, Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors
VIII	Statement of Revenue
IX	Statement of Functional Expenses
X	Balance Sheet
XI	Reconciliation of Net Assets
XII	Financial Statements and Reporting

Researchers have chosen to perform studies using Form 990 due to its availability. The IRS requires exempt organizations with receipts exceeding $50,000 to file a Form 990 annually (Qu et al., 2020). The IRS also requires exempt organizations to share their Form 990s upon request and provides extensive financial information about organizations for a minimal cost (Cashwell et al., 2019). The IRS states that *nearly all of the information an organization reports on Form 990, along with its schedules and attachments, is available for the public to review.* Additionally, the header on the first page of Form 990 states that it is *open to public inspection* (see Appendix A). Although the IRS implemented the form in 1941, it was only available for widespread research once private organizations made it available in the 1990s (Ely et al., 2023). I used this publicly available information as secondary data for independent and dependent variables to research the information NPOs provide on Form 990s filed with the IRS.

A researcher can obtain the IRS Form 990s and attachments from multiple sources. The IRS will provide copies of Form 990 and requires that NPOs provide the forms upon request (IRS, n.d.-a). The IRS also provides the data in datasets so researchers and organizations can access the Form 990 information (IRS, n.d.-b). Organizations such as Charity Navigator (Blevins et al., 2022; Charity Navigator, n.d.), Candid (Candid, n.d.), Economic Research Institute (ERI Economic Research Institute, n.d.), and ProPublica (Suozzo et al., n.d.) acquire, evaluate, and provide online access to Form 990 information. The IRS also offers downloadable Form 990 returns on its website (IRS, n.d.-b). I chose the ProPublica Nonprofit Explorer (Suozzo et al., n.d.) for data collection because I could select Form 990 data by geography, NPO type, and gross revenue.

I used Form 990 returns for 2022 because NPOs with a fiscal year ending during 2023 used the 2022 IRS Form 990. If I could not obtain the 2022 Form 990 for the selected NPO from the ProPublica site, I obtained the form directly from the IRS or the affected organization. The publicly available Form 990s and associated schedules provided the data for the independent and dependent variables in my quantitative research.

The IRS has taken additional steps to allow researchers to evaluate larger data sets. Recently, the IRS has required NPOs to electronically file (e-file) their Form 990s, which has provided researchers with the capability to perform direct financial quantitative analysis on NPO data (Ely et al., 2023). However, NPOs are not required to obtain financial audits of Form 990 submittals, and the form incorporates self-reported

data (Coupet & Schehl, 2022). Scholars using existing e-filed Form 990s for analysis may encounter generalizability concerns and focus on larger NPOs (Qu et al., 2020). The researchers using Form 990s may exclude portions of the nonprofit landscape, such as religious congregations, which may create bias in the study results (Searing & Berkovich, 2022). Researchers can access a larger pool of data, but the data may be compromised because of inconsistencies between organizations and data samples from an incomplete universe of NPOs.

Despite the limitations affecting quantitative research, Form 990 data is an essential source of information for NPO research. Cashwell et al. (2019) stated that financial ratios obtained from Form 990 data could provide information regarding resource utilization and allow comparisons across time and among entities. The Form 990 data can also be used in large-scale studies, which may provide information about the financial accountability and performance of NPOs (McConville & Cordery, 2022). The IRS Form 990 can be a valuable tool for NPO analysis if researchers recognize and address the data limitations when performing their studies.

Independent Variables

Diversified Revenue Source. An NPO may generate revenue from single or multiple sources. An NPO typically receives its primary source of revenue from delivering the services for which the NPO was organized. However, the NPO may generate ancillary revenue from ancillary services associated with the primary purpose of the NPO. A human service organization may receive revenue from donor grants and admissions but may generate additional revenue from gift or snack shop sales. An

increased number of revenue sources indicates greater diversification of revenue.

The IRS Form 990 on page 9 lists multiple revenue sources from which an NPO may generate revenue. The diversified revenue source variable is an interval variable showing the number of revenue sources based on nonzero values entered on specific fields on Form 990. A higher number indicates greater diversification of revenue sources. The human services organization as described would have an interval variable of 3, based on three sources of revenue: (a) Donor grants entered on Form 990, Part VIII, Line 1(f)—Contributions, (b) Admission sales entered on Form 990, Part VIII, Line 2(a)—Program Service Revenue, and (c) Gift/Snack shop sales entered on Form 990, Part VIII, Line 10(c)—Income or Loss from Sale of Inventory. Table 3 indicates the revenue sources and interval variable calculation for the diversified revenue source.

Table 3

Diversified Revenue Source Interval Variable Calculation

Independent Variable	Form 990 Location	Description of Variable	Variable Calculation
Diversified Revenue Source	Part VIII, Lines 1a–1f, 2a–2f, 6(d), 8(c), 9(c), 10(c), 11a(A)-11c(A)	Interval variable identifying the total revenue sources of Federated campaigns (1a), Membership dues (1b), Fundraising events (1c), Related organizations (1d), Government grants (1e), Contributions (1f), Program service revenue (2a-2f), Rents 6(d), Fundraising income 8(c), Gaming income 9(c), Inventory income/loss 10(c), Miscellaneous Revenue 11a(A)–11c(A).	If a nonzero value is in a variable cell, the interval variable is the total of all the nonzero cells.

Note. See Figure B1 for the data location on the IRS form.

Researchers have suggested that NPOs receiving revenue through diverse funding sources increase their potential for viability. Nonprofit revenue groups primarily include contributed revenues and revenues from services (Ranucci & Lee, 2019). An NPO can

diversify revenue sources, increasing autonomy and enhancing the entity's management (Abínzano et al., 2023). Scholars have tested and debated the concept of revenue diversification in for-profit and nonprofit entities (Guan et al., 2021). A nonprofit with different sources of revenue experiences varying risks and costs (Jaafar et al., 2021). An NPO may choose to diversify revenues by focusing on increasing donor contributions or types of services. However, an NPO that diversifies revenue sources may not achieve enhanced financial results.

Researchers have found inconsistent results when testing revenue diversification strategies on financial viability. Jaafar et al. (2021) found that a revenue diversification strategy partially mitigated the financial challenges in Malaysian universities. NPOs using revenue diversification strategies display highly inconsistent results on financial health and a minimal effect on vulnerability (Lu et al., 2019). However, Lu et al. (2020) found that nonprofits with diversified revenue sources have lower dissolution rates and maintained that revenue diversification positively impacted organizational stability and longevity. Many scholars consider revenue diversification valuable for NPOs, but in a literature review of 40 articles, Hung and Hager (2019) found that revenue diversification had a negligible effect on NPOs and may be harmful in some conditions. I used this study to evaluate if revenue diversification is related to organizational viability in selecting NPOs. The IRS Form 990 provides indicators of revenue diversification, which I can evaluate to determine the relationship between revenue diversification and organizational viability.

Public Support Trends. An organization’s revenues indicate its viability. The

revenues of an enterprise have an essential impact on supporting outputs (Alrawi, 2020). Changes in nonprofit revenue patterns affect the chances of survival of the organization (Mayer, 2022). Schedule A is a required attachment for 501(c)(3) organizations that file an IRS Form 990 (IRS, n.d.-d). Like the IRS Form 990, Schedule A includes a notation that the form is open to public inspection. The NPO reports revenues on Schedule A over five years on pages 2 and 3 of the form. Table 4 indicates the total support revenues for each year between 2017 and 2021.

Table 4

Public Support Trends Ratio Variable for 2017-2021

Independent Variable	Form 990 Location	Description of Variable	Variable Calculation
Trend of Total Support	Schedule A, Part II, Section B, Lines 7a-10a sum, 7b-10b sum, 7c-10c sum, 7d-10d sum, 7e-10e sum or Schedule A, Part III, Section B, Lines 13a–13e	A ratio variable from an average percentage change of five years of revenue data 2017, 2018, 2019, 2020, and 2021 from Schedule A, Part II or Schedule A, Part III	An average percentage change of the total revenue for years 2017, 2018, 2019, 2020, and 2021 from Schedule A, Part II or Schedule A, Part III

Note. See Figure B2 and Figure B3 for the data location on the IRS form.

Business owners and leaders understand that if an enterprise experiences lower annual gross income over multiple years, the business may not survive. NPOs have lost revenue during the COVID-19 pandemic, increasing stakeholder concerns about future viability (Johnson et al., 2020). The IRS Form 990 provides multiyear revenue data that a researcher can evaluate to determine a revenue trend for a 5-year period. A researcher can use the IRS data to perform an analysis of the revenue trends to produce a percentage ratio variable demonstrating increased, stable, or lowered revenue trends for the organization.

If an NPO experiences increased revenues throughout the study, a researcher would expect NPOs to be less vulnerable to dissolution if leaders control expenses. However, an NPO with declining revenues would likely have increasing threats to sustainability. I evaluated NPO revenue trends and viability by testing the relationship between the independent variable of a percentage change in NPO revenue trends and my dependent variable of the modified Altman Z-score for NPOs.

Leadership Compensation Level. An NPO must report total leadership compensation to the IRS on Form 990. Donors expect organizations to compensate leaders appropriately but will modify their giving patterns if they determine that the NPO gave inappropriate compensation (de Azevedo & de Aguiar, 2021). The IRS tracks leadership compensation and requires additional reporting for highly compensated employees (IRS, n.d.-e). The IRS Form 990, Part IX, Line 5 provides compensation data for key employees, and Lines 6 and 7 show compensation data for other NPO employees. Table 5 shows the source and calculation of the leadership compensation level independent variable.

Table 5

Leadership Compensation Level Ratio Variable Calculation

Independent Variable	Form 990 Location	Description of Variable	Variable Calculation
Leadership Compensation Level	Part IX, Lines 5(A), 6(A), and 7(A)	A ratio variable of the leadership compensation (5A) as a percentage of total compensation 5(A) + 6(A) + 7(A).	A calculated percentage using the following ratio. (5A) ÷ (5A + 6A + 7A)

Note. See Figure B4 for the data location on the IRS form.

In small NPOs, leadership compensation may be a large portion of the

organization's total compensation. If a higher percentage of total employee compensation is used to compensate the leader, the NPO may be overextending its limited resources on the leader to the detriment of the remainder of the organization. Lines 5(A)— Compensation of current officers, directors, trustees, and key employees, 6(A)— Compensation not included in Line 5(A) to disqualified persons, and 7(A)— Other salaries and wages provide the data for calculating leadership percentage of total employee payroll. I used the leadership percentage of the total employee payroll percentage to determine if a relationship exists with the modified Altman Z-score of NPO viability.

In for-profit environments, leadership compensation is often tied to the organization's size and profitability. Smaller NPOs do not have clear legal guidelines for executive compensation, so they have leeway in establishing compensation levels (Shon et al., 2019). The IRS limits executive compensation in NPOs and only requires reasonable leadership compensation (Gertner, 2023). Researchers have presented varying viewpoints regarding appropriate executive compensation. M. Kim and Charbonneau (2020) theorized that some NPOs did not compensate employees fairly, reducing professionalism by pursuing efficiency. NPO leadership compensation levels vary within NPOs, so I expected that levels of leadership compensation would not affect the organization's viability.

Other researchers have studied the relationship between leadership compensation and organizational viability. Lu et al. (2020) found a curvilinear relationship between compensation levels and NPO dissolution and stated that nonprofits would likely fail by

investing too little or too much in employee compensation. I determined that a curvilinear relationship did not exist between the leadership compensation percentage and the modified Altman Z-score dependent variable for NPOs.

Debt to Assets Ratio. NPOs report debts and assets of the organization on IRS Form 990. The debt-to-asset ratio indicates an entity's financial capability to liquidate assets and pay off debt (Tenney & Kalenkoski, 2019). A lower debt-to-asset ratio indicates lower financing through debt, and a higher ratio shows higher financing through debt (Husna & Satria, 2019). Higher leverage can increase an NPO's vulnerability to financial damage (Feng & Neely, 2023). Researchers have found mixed relationships between an entity's debt-to-asset ratio and profitability (W. Ma et al., 2020; Mazanec, 2023; Wu et al., 2023). The IRS Form 990, Part X, Line 26(B) shows total liabilities, and Part X, Line 16(B) provides the total assets for the NPO. Table 6 shows the source and calculation of the debt-to-asset ratio independent variable.

Table 6

Debt to Assets Ratio Variable Calculation

Independent Variable	Form 990 Location	Description of Variable	Variable Calculation
Debt to Asset Ratio	Part X, Line 26(B) and Line 16(B)	A ratio variable of total liabilities (26B) as a percentage of total assets 16(B).	A calculated percentage using the following ratio. (26B) ÷ (16B)

Note. See Figure B5 for the data location on the IRS form.

A few scholars researching NPOs have found relationships between the debt-to-asset ratio and financial viability. In a study of 23 South African public universities, Bunting (2020) found that a ratio of assets to liabilities was a significant indicator of

financial viability. However, significant assets and debt were less predictive for moving an early-stage NPO toward viability than net income (Searing & Lecy, 2022). Larger NPOs with lower debt levels likely have reserves that could cover operations longer (M. Kim & Mason, 2022). Many researchers studying debt-to-asset ratios have not found consistent results in various sizes of NPOs, but they can provide insights into organizational risk profiles and financial health.

Some researchers have identified relationships between NPO types, sizes, and debt-to-asset ratios. Qu (2020) found distinct differences in debt-to-asset ratios in various NPOs. Qu stated that museums typically have the lowest debt-to-asset ratio while hospitals and universities have the highest due to their dependence on debt financing. NPOs with more tangible assets, liquidity, profitability, or volatility in profitability have lower debt levels (Garcia-Rodriguez et al., 2022). This indicates that a researcher may need to stratify NPOs by size and type when evaluating debt ratios. Otherwise, a researcher would likely not establish consistent relationships between debt ratios and organizational viability.

NPO leaders have crucial reasons to consider debt levels within their organizations. NPOs can use debt to an advantage despite the potential risks because debt can provide low-cost capital for an organization to support expansion and obtain additional revenues (Mitchell & Calabrese, 2019). However, the authors state that NPOs often conform to fiscal probity norms, which may constrain resources available for their missions. NPOs can use increased debt to enhance organizational viability, but NPOs experience varying results from incurring or reducing debt depending on the type and

size of the organization. NPO leaders must be selective in debt decisions to ensure their choices contribute to organizational viability.

The debt-to-asset ratio in an NPO is an essential element that may play a role in organizational viability depending on the type and size of the organization. I used this variable to research its relationship with the modified Altman Z-score viability calculation. Nonprofit leaders managing small NPOs can use the results of this study to determine the potential impact of utilizing debt to finance organizational activities in small NPOs.

Independent Audit or Review of Financial Statements. NPOs use the services of independent auditors to enhance the information summarized in financial statements. Independent auditors review or audit financial statements to enhance the transparency of financial accounts and lower the risk of inappropriate decisions based on financial statement information (Abbas et al., 2023). Unlike for-profit organizations, NPOs in the United States do not have a requirement to obtain an independent audit to maintain their nonprofit status (Blevins et al., 2022). However, the IRS requires NPOs to report their choice to have an independent accountant compilation, review, or audit of the organizational financial statements. The IRS Form 990, Part XII, Lines 2a and 2b provides information regarding the NPO's decision to have an independent accountant review or compile the organization's financial statements or if the NPO elects to have an independent audit of the statements. Table 7 shows the nominal variables used to evaluate the relationship between independent accountant analyses of financial statements and the independent variable—the modified Altman Z-score for NPOs.

Table 7

Independent Accountant Compilation, Review, or Audit of Financial Statements Nominal Variable Calculation

Independent Variable	Form 990 Location	Description of Variable	Variable Calculation

Completion of Financial Review or Audit	Part XII, Line 2a & 2b	A nominal variable showing independent accountant compilation or review of financial statements (2a) and independent accountant audit of financial statements (2b).	If (2a & 2b) = No, Value = 0
			If (2a) = Yes, Value = 1
			If (2b) = Yes, Value = 2
			If (2a & 2b) = Yes, Value = 3

Note. See Figure B6 for the data location on the IRS form.

Researchers have found links between an NPO's choice to have an external financial statement preparer and the incidence of fraud and inaccuracies in NPO financial statements. NPOs using an external preparer for Form 990 had lower reported incidences of fraud (Eining, 2020). Organizations that used a professional accountant to compile or review financial statements reduced the probability of experiencing significant fraud (Abu Khadra & Delen, 2020). In a study of 215 NPOs, Fraud was over 50% higher in organizations without independently audited financial statements (Lamothe et al., 2023). NPOs that use independent accountants to prepare, review, or audit financial statements have established governance procedures to reduce potential fraud. An NPO may be vulnerable due to fraudulent activities within the organization that could impact its financial results.

An independent compilation, review, or audit of an NPO enhances the accuracy of financial reports. In a study of 14,217 NPOs, Harris and Neely (2021) found that an independent auditor audited 87% of the organizations. External auditors play an essential

role in verifying the accuracy of financial statements and lowering the level of information risk for those analyzing the statements (Abbas et al., 2023). NPO stakeholders can rely on accurate data to improve decision-making, positively contributing to an NPO's financial performance (Dell et al., 2022). While performing this study, I anticipated that NPOs using independent accountants to prepare or audit financial statements would have accurate data that support managerial decision-making. NPO leaders who use accurate data to support their managerial decisions will make choices that contribute to positive financial results and improved organizational viability.

Dependent Variable

Modified Altman Z-Score. The Altman Z-score is a calculation using financial ratios to estimate the financial viability of an enterprise. Altman (1968) initially developed the Altman Z-score to predict corporate bankruptcies. Later, Altman and Hotchkiss (2006) modified the Altman Z-score to include ratios appropriate for NPO measurement of organizational vulnerability. The ratios include working capital, equity financing, margin return on assets, and revenue return on assets. The data to calculate the Modified Altman Z-score for NPOs is available from IRS Form 990, Parts VIII, IX, and X. Table 8 identifies the location of each variable on IRS Form 990, the ratio calculation, and Modified Altman Z-score formula calculation.

Table 8

The Modified Altman Z-score of Organizational Viability Ratio Variable Calculation

Working Capital Ratio	Part X, Lines 1(B), 2(B), 3(B), 4(B), 8(B), 11(B), 17(B), 18(B), and 16(B)	A ratio variable of *Working Capital*— [Current Assets (Cash (1B) + Savings (2B) + Pledges Receivable (3B) + Accounts Receivable (4B) + Inventories (8B) + Investments (11B) – Accounts Payable (17B) – Grants Payable (18B)] divided by *Total Assets* (16B)	A calculated percentage of ((1B) + (2B) + (3B) + (4B) + (8B) + (11B) – (17B) – (18B)) ÷ (16B)
Equity Financing	Part X, Lines 32(B) and 33(B)	A ratio variable of *Retained Earnings* (32B) divided by *Total Assets* (33B)	A calculated percentage of (32B) ÷ (33B)
Operating Margin Return on Assets	Part VIII, Lines 1h(A), 2g(A), 8c(A), 9c(A), 10c(A), 11e(A), Part IX, Lines 25(A), 22(A), and Part X Line 16(B)	A ratio variable of *Total Operating Income*— [Contributions (Pt.8.,1hA) + Program Service Revenue (Pt.8.,2gA) + Fundraising Income or Loss (Pt.8.,8cA) + Gaming Income or Loss (Pt.8.,9cA) + Inventory Net Income or Loss (Pt.8.,10cA) + Miscellaneous Revenue (Pt.8.,11eA) – Functional Expenses (Pt.9,25A) + Depreciation Expense (Pt.9,22A)] divided by *Total Assets* (Pt.10,16B)	A calculated percentage of [(Pt.8.,1hA) + (Pt.8.,2gA) + (Pt.8.,8cA) + (Pt.8.,9cA) + (Pt.8.,10cA) + (Pt.8.,11eA) – (Pt.9,22A) + (Pt.9,22A)] ÷ (Pt.10,16B)
Revenue Return on Assets	Part VIII, Lines 1h(A), 2g(A), 8c(A), 9c(A), 10c(A), 11e(A), and Part X Line 16(B)	A ratio variable of *total Revenue*— [Contributions (Pt.8.,1hA) + Program Service Revenue (Pt.8.,2gA) + Fundraising Income or Loss (Pt.8.,8cA) + Gaming Income or Loss (Pt.8.,9cA) + Inventory Net Income or Loss (Pt.8.,10cA) + Miscellaneous Revenue (Pt.8.,11eA)] divided by *Total Assets* (Pt.10,16B)	A calculated percentage of [(Pt.8.,1hA) + (Pt.8.,2gA) + (Pt.8.,8cA) + (Pt.8.,9cA) + (Pt.8.,10cA) + (Pt.8.,11eA)] ÷ (Pt.10,16B)

Note: The dependent variable is calculated based on the Altman Z-Score as modified by Altman and Hotchkiss (2006) for nonpublic industries. The formula used for the calculation is Z = 6.56(Working Capital Ratio) + 3.26(Equity Financing) + 6.72(Operating Return on Assets) + 1.05(Revenue Return on Assets). See Figures B7 through B12 for the data location on the IRS form.

The Altman Z-score uses four ratios to determine the financial viability of an enterprise. The Z-score uses a statistical technique called Multiple Discriminant Analysis (MDA) that utilizes a linear combination of multiple ratios to develop a model identifying an entity's financial status (Zizi et al., 2020). MDA applies coefficients to ratios similar to multiple regression analysis, so larger coefficients have more power in determining the function results (Vazquez-Brust & Plaza-Úbeda, 2021). Altman (1968) used MDA to identify a set of discriminant coefficients that a researcher can apply to financial ratios to classify the calculations into mutually exclusive groupings. I used the modified Altman Z-Score (Altman & Hotchkiss, 2006) for nonpublic entities, as shown in Equation 1, to calculate the dependent variable.

$$Altman\ Z\text{-}Score = 6.56\ (X1) + \ 3.26\ (X2) + \ 6.72\ (X3) + \ 1.05\ (X4) \quad (1)$$

where $X1$ = working capital / total assets
$X2$ = retained earnings / total assets
$X3$ = total operating income / total assets
$X4$ = total revenue / total assets

The dependent variable for each NPO in a sampled group of NPOs reflects the financial viability of each organization. I tested the relationship between five independent variables and the Altman Z-Score for the NPOs in this quantitative study.

Since Edward Altman developed the Z-Score over 50 years ago, researchers have tested the formula's validity, and Altman has refined the formula for various industries, including service enterprises. In 2018, Altman stated that lenders, bondholders, stock strategists, security analysts, regulators, auditors, advisors, researchers, managers, and risk assessors had used the Z-Score model to identify measures of financial distress

(Altman, 2018). Researchers have used the Z-Score to evaluate nonprofit financial vulnerability in hospitals (Puro & Feyereisen, 2020), nursing homes (Lord et al., 2020), and social enterprises (Gelashvili et al., 2020). While researchers have primarily used the Z-Score to evaluate the financial vulnerability of nonprofit healthcare institutions, the Altman Z-Score ratios of working capital, equity financing, margin return on assets, and revenue return on assets should provide scores regarding relative financial vulnerability in other NPOs that I used for the dependent variable in my quantitative research.

Transition

NPO leaders often become consumed with the day-to-day challenges of managing an organization and may not consider financial factors affecting organizational viability when making decisions affecting the organization. The purpose of this quantitative correlational study was to understand the relationship between the financial indicators of nonprofit revenue diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and the modified Altman Z-score, which indicates the financial viability of the organization. My research addressed a gap in the current literature by using quantitative methodology to evaluate the financial viability of medium-sized NPOs. In the next section, I address the context of the research, data collection, and the research methodology I used to ensure the accuracy, internal and external validity, and reliability of the research results.

Section 2: The Project

This correlational quantitative research project was designed to evaluate the relationship between the leadership allocations of resources and organizational viability in nonprofit human service organizations. Before I collected the study data, I considered my potential bias in the research, the data sources, the research design, including population and sampling, the data collection and analysis process, and the steps to ensure internal and external validity. In this section, I describe the research, data gathering and analysis, and the methods used to confirm the reliability of the data used in this study.

Purpose Statement

This quantitative correlational study was conducted to examine the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Role of the Researcher

A researcher performing a correlational quantitative study using secondary data has differing considerations in research planning, data collection, and research interpretations than a researcher using primary data. Secondary data analysis has advantages, including increased efficiency, developing or clarifying hypotheses and research questions, and addressing areas of sensitivity in a population (Wickham, 2019). However, a researcher must maintain secondary data methods that reduce factors that may bias or influence the findings (Bloomfield & Fisher, 2019). A researcher must be aware of research practices with secondary data, such as adjusting methods to achieve

statistically significant results, selectively reporting significant results, and viewing past events as predictable (Baldwin et al., 2022). As a researcher evaluating relationships between resource allocation and financial viability in NPOs, I developed hypotheses prior to the research, objectively evaluated the data obtained from IRS Form 990s without preconceptions regarding study results and avoided any temptation to use study results to modify previous predictions.

In a quantitative research study using secondary data, a researcher should also identify and select data relevant to the research topic. Additionally, the researcher should use methods to ensure the reliability and validity of the data (Bloomfield & Fisher, 2019). A researcher should establish a process to confirm that the data used in the study is appropriate and provides information for decision-making (Simard et al., 2023). The researcher should process the data to establish that the data does not have errors or missing values (Barroga et al., 2023). I evaluated and processed the data for my research to confirm that it was appropriate, valid, and reliable to develop conclusions about relationships between the variables in this study.

My professional background in NPOs provided a basis to analyze and interpret the information effectively to develop conclusions from this research. I worked in nonprofit financial management for over 30 years and am a certified public accountant. During this time, I prepared IRS Form 990s that reported the data used to calculate the independent variables in this study. As an executive director of an NPO, I submitted this form to the IRS. I selected independent variables from Form 990 for this study that I anticipated were related to nonprofit organizational viability.

Finally, quantitative researchers should attend to ethical implications while pursuing essential and relevant issues and choose a method that assists them in achieving research goals (Edwards, 2020). The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979) prepared *The Belmont Report* to identify ethical principles surrounding and guidelines for biomedical and behavioral research of human subjects (U.S. Department of Health and Human Services, n.d.). *The Belmont Report* incorporated three principles regarding the moral treatment of human subjects, including (a) respect for persons, (b) beneficence, and (3) justice (Beauchamp, 2020). *The Belmont Report* includes sections regarding (a) research boundaries regarding human subjects, (b) basic ethical principles governing research, and (c) application of ethical principles in human research studies (Beauchamp). Researchers must consider and apply ethical principles in human subject research; however, I used secondary data that does not incorporate human subject research. I used secondary data that did not utilize human subjects as a data source for the public data set. The IRS Form 990 and related forms filed by NPOs were the source documents for this research. Since the IRS provided the forms for public review, various public service organizations provide copies online for public review. The IRS also requires that NPOs provide copies of these forms to the public upon request. I accessed this secondary data through the ProPublica (Suozzo et al., n.d.) website, and if forms were unavailable for the 2022 tax year, I obtained them directly from the NPO.

Participants

This study did not incorporate data obtained from human participants. Social and

cultural entities maintain digital archives that are rich quantitative data sources, often with searchable information that a researcher can use to parse quantitative information (O'Connor, 2020). Researchers using secondary analysis can benefit from the investment of time and financial resources others expend in collecting data, the national databases that produce higher quality data than individual researchers, and the large datasets that provide access to specific subpopulations (Renbarger et al., 2019). In this study, I did not collect data from primary data sources. While I accessed secondary data primarily from the ProPublica website, the data are also publicly available on websites such as candid.org, citizenaudit.org, and erieri.com. The IRS also requires that NPOs provide this information to the public upon request (IRS, n.d.-a). I obtained the publicly available data for this research from archival data released by the IRS and provided on these websites.

Research Method and Design

Research Method

In the initial stages of research planning, a scholar chooses a type of study, which in most cases will be a qualitative, quantitative, or mixed-method approach (Saunders et al., 2023). Quantitative researchers develop studies to test a hypothesis by determining the influence of independent variables on dependent variables (Mohajan, 2020). Researchers measure quantitative data numerically and analyze the data using statistical and graphical techniques (Saunders et al., 2023) to draw inferences about a population of interest (Edwards, 2020). Researchers using the quantitative method attempt to dissociate themselves from the research process to pursue objectivity (Nassaji, 2020). In this current study, I used numeric data to test hypotheses regarding relationships between

independent and dependent variables and analyze the relationships using statistical and graphical techniques; therefore, the quantitative method was appropriate.

Researchers use the qualitative method to identify how individuals perceive their environment and make sense of their lives and experiences (Jahja et al., 2021). Generally, a qualitative researcher collects categorical, non-numerical data, and scholars may or may not immerse themselves in the research (Khaldi, 2017). In the quantitative research process, researchers separate themselves from the research to achieve objectivity, while qualitative scholars actively engage in the research (Nassaji, 2020). In this study, I used numerical data from IRS Form 990, and because I used secondary data, I did not consider the lived experiences of individuals. I did not examine individual perceptions or sensemaking, immerse myself in the research, or use non-numerical data in this research. Therefore, a qualitative research method was not appropriate for this study.

Researchers also use a mixed-method approach that integrates qualitative and quantitative methods. This method allows a researcher to use the strengths of each paradigm and minimize their weaknesses in a single study (Wambugu & Njoroge, 2022). In a mixed-method approach, researchers integrate quantitative and qualitative data to provide a deeper understanding than using a single analysis method (Kajamaa et al., 2020). Since this study uses only quantitative data to address the research question, a mixed-method approach incorporating qualitative data was inappropriate.

Research Design

A researcher planning quantitative research has a choice of four designs to perform a study. Quantitative research includes (a) descriptive, (b) correlational, (c)

quasi-experimental, and (d) experimental designs (Mohajan, 2020). Experimental and quasi-experimental research designs are used to explore if a cause-and-effect relationship exists between study variables (Rogers & Revesz, 2020). Researchers use experimental research to determine whether a link exists between cause and effect (Siedlecki, 2020). I evaluated the relationships between independent and dependent variables without identifying causality, so an experimental or quasi-experimental study was not appropriate for my research.

Using a descriptive quantitative design, researchers evaluate an experience at a specific place and time (Mohajan, 2020). A descriptive study design supports acquiring information about a population phenomenon in a particular setting without manipulating the variables (Bloomfield & Fisher, 2019). I did not use descriptive measurements to test the hypotheses in my study, so a descriptive research design was inappropriate for my study.

In my research, I analyzed the relationship between five independent variables and a dependent variable. Correlational tests are practical statistical tools to identify interdependencies between variables (Carr et al., 2019). The correlation coefficient measures the degree of linear relationship between two variables (le Cessie et al., 2020). I accessed the IRS Form 990 to obtain variables and test the relationships between sets of variables. I chose a research question that addresses the relationship between variables, so a correlational research design was appropriate for this study.

Population and Sampling

The IRS released over 600,000 Form 990 nonprofit tax returns for the 2021 tax

year (Ward & Clerkin, 2023). I selected a subset of these returns based on the following criteria: (a) organizations located in the state of Ohio, (b) organizations with a National Taxonomy of Exempt Entities code identifying the entities as human service organizations, and (c) organizations with $2,000,000 to $15,000,000 in annual revenue. The National Center for Charitable Statistics developed this code, and the IRS uses the code to classify NPOs (Giving Compass Insights, n.d.). I used the ProPublica (Suozzo et al., n.d.) online nonprofit listing to select the study population based on my identified criteria. This target population of 278 NPOs aligned with the overarching research question because the population includes NPOs that may reflect relationships between independent variables reflecting management expense allocation decisions and organizational viability.

Researchers use sampling techniques to reduce the costs and time necessary to complete a study representative of a much larger population (Rahman et al., 2022). A researcher can choose between two primary methods to provide an appropriate sample for study—probability or nonprobability sampling (Abrahamson, 1983; Stratton, 2021). However, probability sampling is more suited for confirmatory research and documenting statistical inference of relationships between variables (Berndt, 2020). A researcher can choose a correctly sized sample that reflects a target population accurately by using a probability sampling technique, which ensures the data collected are reliable and valid (Bloomfield & Fisher, 2019). I used the probabilistic method to select a sample for this study to enhance the reliability and validity of the study results.

Researchers have a choice of probabilistic sampling methods when selecting a

sample from a population. The five primary probability sample designs are simple random, stratified random, systematic, cluster, and multistage sampling (Bhardwaj, 2019; Saunders et al., 2023). A stratified random sampling design increases precision by dividing the target population into subgroups based on unique characteristics but is not applicable when the population does not exhibit identifiable unique characteristics (Berndt, 2020; Lynn, 2019). A simple random sample is better suited to a target population greater than a few hundred (Saunders et al.). A cluster sample typically covers a large geographic area divided into smaller groups for analysis but is most suitable for market or agricultural research (Nanjundeswaraswamy & Divakara, 2021). Multistage sampling is a cluster sampling method that subdivides a population into smaller groups and then randomly or systematically samples subgroups (Rahman et al., 2022). I used a systematic sample to evaluate NPOs in this study because I had a target population of 278 NPOs, smaller than the recommended size for a random sample. The other sampling methods require further division of the target population into nonexistent clusters or strata.

A scholar should consider an appropriate sample size necessary to ensure the accuracy of the research study and make inferences about the relationship between study variables. If a sample size is incorrect, a researcher may make incorrect conclusions, waste economic resources, or inconvenience research subjects (Kang, 2021). G*Power is a free statistical software that can provide the researcher with computation of effect sizes and graphical results of power analyses (Ledolter & Kardon, 2020). I used G*Power version 3.1.9.7 (Faul et al., 2007) to determine the minimum sample size for this study

based on the following assumptions. An a priori analysis, with a medium effect size (f^2=.15), error probability α = .05, and five predictor variables required 92 targets to reach a power of .80. To achieve a power of 99, the sample size necessary is 184 targets (Appendix A).

The choice of a small, medium, or large effect size significantly impacts the minimum sample size for this study. For example, a large effect size (f^2=.35) reduces the minimum sample size to 43, and a small effect size (f^2=.05) increases the minimum sample size to 647. Though there are few articles in accounting journals reporting a specific effect size (Dyckman & Zeff, 2019), in a similar study using Form 990 data in NPOs, Brown and Rhodd (2020) used a medium effect size (f^2=.15) for their sample calculations. For this study, I used the same medium effect size (f^2=.15). as the Brown and Rhodd research and selected 92 targets using a systematic sample of 278 human service NPOs to achieve a power level of .80. The ProPublica sorted listing (Suozzo et al., n.d.) displays human service NPOs of largest to smallest revenue. I used a systematic sampling protocol to select a sample representing a range of varying-sized organizations. After numbering the 278 NPOs, I flipped a coin and randomly chose even target organizations for the study.

Ethical Research

Academicians have had an increased interest in research ethics and integrity in recent years (Armond et al., 2021). Researchers face unsettled ethical issues in using data sources regarding the anonymity of individually identifiable information when considering consent, privacy, and human subjects research (Stewart, 2021). While

Stewart addresses the ethics of maintaining individual participant privacy and reducing individual harm in research, NPOs are entitled to similar ethical considerations as research study subjects. Since I performed a quantitative research study with publicly available secondary data, I accumulated numeric data from multiple nonprofit human service organizations. I collected all data in this study from publicly available databases or directly from identified organizations, so organizational consent to evaluate this data is unnecessary.

A researcher should be aware of the potential for bias in research studies and take appropriate measures to prevent bias from affecting the study results. X. Wang and Cheng (2020) define bias as a systematic error resulting in incorrect outcomes in a research study. They identify two types of bias: (a) selection bias, when the sample data for the study does not reflect the overall population, and (b) information bias, when the researcher inaccurately collects, measures, or interprets study data. I eliminated selection bias from this study by rigorously using systematic sampling to select a sample reflecting the study population. I resolved information bias using structured data collection, measurement, and interpretation protocols.

I maintained NPO privacy and reduced interpretive bias by establishing a procedure to maintain a separate file identifying each NPO with a unique number while performing the study. I accumulated the research variables in a separate file that identifies each organization by this unique number to reduce personal bias toward that organization in interpreting study results. Additionally, I will securely maintain the data used to identify relationships between variables for 5 years after I complete the study. I obtained

Walden Institutional Review Board approval for this study on December 13, 2023, approval number 12-13-23-1167880.

Data Collection Instruments

I used secondary data obtained from NPO Form 990s filed with the IRS and maintained in an online archive at ProPublica (Suozzo et al., n.d.). Therefore, I did not use a published data collection instrument to obtain the data required for this study. In place of a data collection instrument, I collected numerical data from the forms directly or indirectly through calculations for the variables for quantitative analysis. I used nominal, interval, or ratio variables for this study's independent or dependent variables. In this study, I used the diversified revenue source interval variable and the independent accountant compilation, audit, or review of financial statements nominal variable. The remaining variables of public support trend, leadership compensation level, debt-to-asset ratio, and the modified Altman Z-score financial viability were calculated ratio variables. I collected this information from filed Form 990s for 2021, selected the appropriate nominal and interval variables, and performed the proper ratio calculations for each NPO identified in the systematic sample of Ohio health service organizations.

Data Collection Technique

A well-designed study is a primary factor in obtaining high-quality data, and a researcher should pay close attention to data collection procedures (Derraik et al., 2021). The advantages of collecting secondary data included efficiency of data collection, unobtrusive measurement capabilities, increased researcher time to analyze and interpret the data, and data permanence for independent verification (Saunders et al., 2023).

Saunders et al. also stated that disadvantages included a lack of control over data quality and possible mismatches between the original data collection and data supporting a researcher's research question. I collected financial data from IRS Form 990s submitted by NPOs that complied with IRS reporting requirements. I accessed this data using the ProPublica (Suozzo et al., n.d.) database, which catalogs and distributes archived copies of NPO Form 990s. I obtained data from the ProPublica database for the study population of 278 human service organizations operating in Ohio with revenues of $2,000,000 to $15,000,000. I used Microsoft Excel spreadsheets to calculate and accumulate the variables of the sample population for determining statistical relationships.

Data Analysis

Before utilizing the quantitative data from IRS Form 990s, I considered methods to ensure the data would be acceptable for study objectives. A researcher must process raw quantitative data with appropriate analysis and interpretation techniques to make the data useful for research purposes (Saunders et al., 2023). A researcher performing data analysis should (a) state a strong theoretical hypothesis, (b) assess psychometric properties, (c) plot and analyze univariate distributions, (d) prepare a scatterplot to match the hypothesis, I study the residuals, (f) interpret parameters and effect sizes, (g) decide on data significance, and (h) replicate with new data (Fife, 2020). After developing a research question, the quantitative researcher should select an approach to gather numerical data that enables statistical analysis of data trends and patterns (Lari et al., 2019). A scholar uses correlational research to evaluate the relationship between two or more variables to recognize trends or patterns in the data without proving causation

(Barroga et al., 2023). I analyzed the data and performed correlational statistical tests on the data collected from IRS Form 990s to evaluate trends and patterns and respond to the research questions of this study.

Research Question

What is the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio?

Hypotheses

Null Hypothesis (H_0): There was no statistically significant relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Alternative Hypothesis (H_1): There was a statistically significant relationship between at least one of nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio.

Methods of Analysis

A researcher must select an appropriate statistical method to ensure valid, reliable, and quality results (Mishra, Pandey, et al., 2019). A scholar chooses the statistical test based on the data type, the research hypothesis, and the quantity of measurements being compared (Ranganathan, 2021). Additionally, a researcher uses parametric tests for numerical data and nonparametric tests for data that is not normally distributed, typically

with categorical data (Saunders et al., 2023). I used nominal, interval, and ratio parametric data in the variables for this study with multiple regression analysis to determine relationships between the variables.

A researcher can use parametric statistical testing if the assumptions of independence, normality, and homogeneity of variance regarding the research data are met (Cichoń, 2020). If these assumptions are not met, a researcher performing a correlational study can use an alternative nonparametric test (Deng et al., 2022), if one is available, a bootstrapping method (Lumley et al., 2002), or a resampling method, including permutations, which may require fewer assumptions (Fieberg et al., 2020). Since a nonparametric alternative to a multiple linear regression is not available (Malone & Coyne, 2019), I could have used a bootstrapping or resampling method to address violations of assumptions in the collected data. However, I found no violations of independence, normality, or homogeneity of variance in the sampled data.

A researcher can choose multiple linear regression, *t*-test, analysis of variance (ANOVA), and chi-square tests to evaluate the relationships between variables. A chi-square test is a nonparametric test determining correlations between non-numeric variables (Nihan, 2020). A chi-square test would be inappropriate for this study since I used a parametric test to identify relationships between numeric variables. A researcher uses a *t*-test to compare the differences in means and determine if the differences are significant (Mishra, Singh, et al., 2019). I did not evaluate the means of multiple data sets, so I did not perform a *t*-test as the primary statistical methodology for this study. Researchers use ANOVA tests to determine if a statistical difference exists between

groups with a categorical independent variable—one-way ANOVA—or multiple categorical independent variables—two-way ANOVA—and a continuous dependent variable (Connelly, 2021). Since I compiled noncategorical variables in my research and did not evaluate the difference between variables, an ANOVA test was inappropriate for my work. Multiple regression analysis is appropriate for forecasting and determining relationships between independent and dependent variables for a study (Maulud & Abdulazeez, 2020). I performed a multiple regression analysis for this study to evaluate relationships between independent and dependent variables.

Multiple Linear Regression Assumptions

I used multiple linear regression to evaluate the relationship between my study's five independent variables and the dependent variable. A researcher should not violate assumptions of multivariate normality and independence of variables for nonexperimental studies to be valid (Green & Salkind, 2017). Additionally, assumptions of linearity, reliability of measurement, and homoscedasticity must be met to achieve a valid study (Osborne & Waters, 2019). While multicollinearity may not be an assumption violation, it may affect research results if not appropriately addressed (Lindner et al., 2020). A researcher must consider factors concerning the type of statistical analysis performed and address those that could negatively affect study results.

Multivariate Normality and Linearity

A multiple regression analysis can only be valid if the relationships between independent and dependent variables are linear (Osborne & Waters, 2019). Green and Salkind (2017) combined the concepts of normality and linearity, stating that if the

assumption of multivariate normality is met, a linear statistical relationship is established, so a nonlinear relationship indicates a violation of the assumption of multivariate normality. As Green and Salkind recommended, I examined scatterplots between each independent and the dependent variable to determine if nonlinearity exists.

Independence of Variables and Multicollinearity

A scholar should consider the independence of variables and multicollinearity when considering the data used for a study. Variables are not independent if the identified variable data is not independent of the other data for the same variables (Green & Salkind, 2017). Green and Salkind stated that an *F* test will produce inaccurate *p* values if the data violates this independence assumption. I enhanced the study's validity by implementing procedures to select variables randomly and evaluating scatterplots to verify randomness in the variables.

Multicollinearity in variables is another issue that may negatively affect study results. Multicollinearity occurs when a strong linear relationship exists between independent variables in a multiple linear regression study (Román et al., 2020). Multicollinearity causes the variances of regression coefficients to increase, making them statistically insignificant and enlarging their confidence intervals (J. H. Kim, 2019). A researcher can evaluate variance inflation factors to evaluate inflation of error terms if a linear regression model shows multicollinearity (Lindner et al., 2020). A scholar can evaluate the variance inflation factor exceeding 5 to 10, and a condition number exceeding 10 to 30, to determine multicollinearity (J. H. Kim). I evaluated the variables using the variance inflation factor and condition number to determine if multicollinearity

existed in the data selected for this study and did not find evidence of it in the multiple linear regression independent study variables.

Homoscedasticity

A quantitative researcher should ensure that the assumption of homoscedasticity is met when evaluating the data used in multiple linear regressions. If the independent variables have the same variance of errors across all levels of the variables, the assumption of homoscedasticity is met (Osborne & Waters, 2019). A researcher can identify if the assumption of homoscedasticity is met by evaluating residual dependence plots after collecting the data (Fife, 2020). Fife stated that another advantage of residual dependence plots is to determine linearity in study variables. A researcher can use plots of residuals to check normality and homoscedasticity, which are also important factors in ensuring the validity of statistical inferences (Abulela & Harwell, 2020). I used residual dependence plots when evaluating the independent variable data to determine if the assumption of homoscedasticity was met.

Data Collection Issues

When I collected and evaluated the data, I discovered entities that reported incomplete data and found errors in the data reporting or collection process. Unfortunately, data errors are inevitable and occur in unexpected and creative circumstances (Chai, 2020). If a researcher uses low-quality data, the information extracted from it may be invalid or incorrect, so the researcher must take measures to detect the low-quality data and implement methods to correct the errors (Ding et al., 2022). Chai stated that a researcher can make inferences by analyzing contradictory

information in variables and outliers to address data errors. I closely examined the data for outliers and extreme values through manual evaluation and used IBM SPSS Statistics (Version 28) to analyze statistical data. I did not anticipate missing data on the Form 990s because the IRS requires electronic filing and provides immediate confirmation that the form is acceptable (Ely et al., 2023). However, if a form did not contain the information necessary for my research, I selected the next NPO filed Form 990 containing complete information after the incomplete Form 990.

Inferential Results Interpretation

A researcher must consider how the collected data accurately reflects the chosen sample and make inferences between the selected sample and the study population. Scholars use inferential statistics to generalize sample data, often using calculated degrees of certainty (Garg et al., 2020). A researcher should avoid using poor quality data, missing data, and invalid data measurement, which impacts sample reliability, issues that are essential elements of making valid inferences regarding the study population (Abulela & Harwell, 2020). A researcher can evaluate how inferences derived from the sample population apply to the study population by using manual and statistical methods to evaluate the sample data.

A researcher can use statistical analysis software to calculate the probability that chance affected the study result (Saunders et al., 2023). Saunders stated that larger sample sizes are more likely to reflect the study population. I used IBM SPSS (Version 28.0) to obtain inferential statistical parameters, including R^2, *F*-statistics, *p*-values, standardized and unstandardized coefficients, and confidence intervals.

A researcher uses a linear regression model to analyze the associations between several independent variables and one dependent variable (Nieminen, 2022). The *F*-statistic tests if a regression model is helpful by indicating whether it better fits the data than a model with no independent variables (Sureiman & Mangera, 2020). The *p*-value indicates that the data is congruent with a null hypothesis with a typical threshold value of $p \leq .05$ (Di Leo & Sardanelli, 2020).

The unstandardized coefficient is the level of change in an outcome variable based on a single-unit change in a predictor variable (Olsen et al., 2020). However, Olsen stated that since a scholar uses calculations for the unstandardized coefficient on a predictor's variable scale, the researcher can standardize all the variable variances to equal the value of one, allowing the researcher to determine relative predictive validities of all the variables—standardized coefficient. A researcher uses a confidence interval calculation and notes the average distance that observed values fall from the regression line to determine the precision of predictions based on the slope of the regression line (Olsen et al.).

Study Validity

Before researchers can begin collecting data for a study, they must assess research validity and reliability to enhance study quality. Research quality in a quantitative study relates to validity, which refers to the appropriateness of measures, accuracy of analysis, and generalizability of the findings, while reliability is the consistency and replication of results (Saunders et al., 2023). Bougie and Sekaran (2020) stated that validity and reliability demonstrate the level of scientific rigor that a researcher has placed in the

research study. A researcher should consider evaluating quantitative data using the criteria of internal and external validity, reliability, and objectivity (Tenny et al., 2022). I collected and prepared research data while maintaining internal and external validity, reliability, and objectivity to ensure scientific rigor in the research process and soundness of study results.

A researcher should be aware of potential threats to the validity of statistical conclusions, which may increase error rates affecting the hypotheses in the research study. A scholar encounters a Type I error when the null hypothesis is true but rejected—a false positive—and a Type II error is not rejecting the null hypothesis when it is false—a false negative (X. Wang & Ji, 2020). Statistical validity threats develop from the evidence and processes a researcher uses to make inferences about study results (Goodman et al., 2020). A well-designed study with appropriate design parameters allows a researcher to design a research project with a sample size of a significance level of .05 and a power of 80 to 90 percent, which can minimize Type I and II errors (X. Wang & Ji). I used a significance level of .05 to reduce Type 1 errors and a power of 80 to reduce the potential for Type II errors. I used G*Power version 3.1.9.7 to determine a minimum sample size of 92 targets to minimize Type I and Type II errors.

A researcher should consider the requirements for internal validity of the collected data when designing a study. Internal validity refers to the authenticity of cause-and-effect relationships in a research study (Bougie & Sekaran, 2020). A survey might demonstrate internal validity when the researcher establishes a causal relationship between two variables, showing that an intervention statistically leads to an outcome

(Saunders et al., 2023). Since this study on NPOs is based on correlational design, I evaluated relationships between variables. I did not assess causal relationships, so significant threats to internal validity did not exist in this study.

External validity of a study refers to the extent to which a researcher can draw inferences from a study sample to a broader population (Findley et al., 2021). A researcher must judge the quality and transparency of the evidence supporting the use of research data collected to support external validity (Lewis, 2022). The researcher can assess the reliability and validity of secondary data by considering the organization providing the data and evaluating it before use (Saunders et al., 2023). Saunders et al. stated that researchers have a temptation to generalize the study beyond the sampling frame of the study. I accessed the ProPublica (Suozzo et al., n.d.) database of NPOs filing Form 990 tax returns to perform my research. The Form 990 database contains over 600,000 tax returns for the 2021 tax year (Ward & Clerkin, 2023). However, I narrowed the population for this study to 278 Ohio human service organizations with annual revenues from $2,000,000 to $15,000,000. I sampled 92 human service organizations, allowing me to make inferences about the 278 Ohio human service organizations. However, I would encounter a statistical threat to external validity if I had attempted to apply research findings to NPOs of a size, type, or geographic location different from the sample population.

Transition and Summary

In Section 2, I considered data collection methodology in this correlational quantitative research project evaluating the relationship between NPO leadership

resource allocation choices and financial viability. A researcher must consider important project components, including the research design, sources of data, the population and sampling process, and steps to reduce personal bias and enhance the validity and reliability of research results. After assessing the framework for the research project, the next section of this study incorporates the research findings, applications to professional practice, implications for positive social change, and recommendations for future use of this research to enhance NPO activities or further understanding of NPOs.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this quantitative correlational study was to examine the relationship between the independent variables of nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and the dependent variable of a modified Altman Z-score financial viability ratio. The target population for this study was 278 human service organizations in Ohio that filed IRS Form 990s for the year 2022 with annual revenues from $2,000,000 to $15,000,000. In this study, I rejected the null hypothesis that there was no statistically significant relationship between the independent variables and dependent variable and accepted the alternative hypothesis, finding that there was a significant relationship between the independent and dependent variables. In the remaining parts of this section, I present the findings of this quantitative study, including descriptive statistics and testing of assumptions, inferential statistics, study conclusions, applications to professional practice, recommendations for action, recommendations for further research, implications for social change, and the conclusions of this study.

Presentation of the Findings

In the following subsection, I present descriptive statistics, the testing assumptions, and inferential statistics using publicly available secondary data obtained from IRS Form 990s for NPOs. I used IBM SPSS software to perform a multiple linear regression analysis and evaluated the relationship between five independent variables and one dependent variable. I found that a linear combination of diversified sources of

revenue, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion significantly related to an Altman Z-score financial viability ratio, which supported the alternative hypothesis for this study. I also found a statistically significant relationship between the debt-to-asset ratio dependent variable and the Altman Z-score independent variable.

Descriptive Statistics

The variables for this study included information collected and calculated from IRS Form 990s for Ohio human service organizations with gross revenues between $2 million and $5 million. The calculated variables included diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, independent accountant compilation, review, or audit of financial statements, and a modified Altman Z-score indicating the level of financial viability. Table 9 provides the descriptive statistics for the study variables.

Table 9

Descriptive Statistics of the Independent and Dependent Variables

Variable	Mean	Standard Deviation	Number
Revenue Source Diversification	6.97	2.91	92
Public Support Trends	0.25	0.43	92
Leadership Compensation Level	0.12	0.13	92
Debt to Asset Ratio	0.79	5.10	92
Independent Accountant Compilation, Review, or Audit of Financial Statements	1.80	0.65	92
Z-score	10.83	22.28	92

Tests of Assumptions

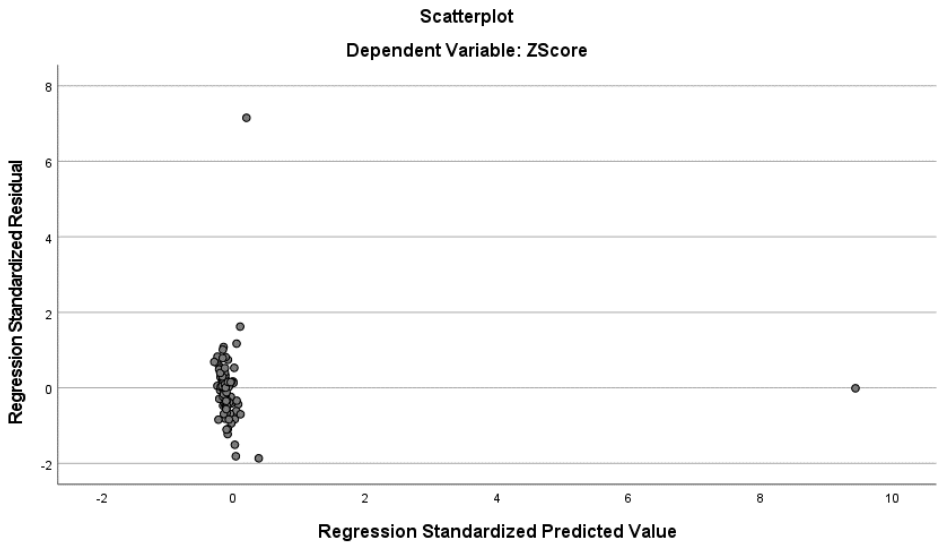
A researcher must evaluate the data and perform tests of assumptions to ensure valid statistical results from a study. If the researcher does not perform statistical methods to evaluate reliability, account for missing data, and consider non-normal data, it may be difficult to replicate the data in the study (Abulela & Harwell, 2020). I evaluated the data in this study to determine if outliers or multicollinearity existed and if the assumptions of linearity, homoscedasticity, and normality were met.

Linearity and Homoscedasticity

I evaluated the assumptions of linearity and homoscedasticity using a plot of standardized residuals. A scholar measures linearity by checking the random dispersion of data points along the regression line (x-axis) and homoscedasticity by checking for similar variability of data points while moving along the x-axis away from the *y*-axis (Privitera, 2023). A scholar can use sound graphics to identify instances of nonlinearity (Fife, 2020). Figure 2 depicts a scatterplot of the residuals surrounding the mean value. I found that the data points were randomly distributed along the regression line, indicating that the assumption of linearity was met. The data distribution with a mean average of the residuals close to zero when moving from left to right indicated that the assumption of homoscedasticity was met.

Figure 2

Residual Scatterplot to Evaluate Linearity and Homoscedasticity



Outliers

I tested for outliers in the variables using Cook's distance. A researcher uses Cook's distance to assess the impact an outlier variable has on regression coefficients by deleting the variable and evaluating the impact the variable has on the parameter estimate (El-Masri et al., 2021). Most statistical software can identify Cook's distance for each variable, and high Cook's distance variables indicate potential outliers (Santos, 2020). I found one outlier with a Cook's distance of 2.14, with the remaining distances ranging from 0.00 to 0.64. However, the linear regression results were unchanged when I excluded the outlier from the sample.

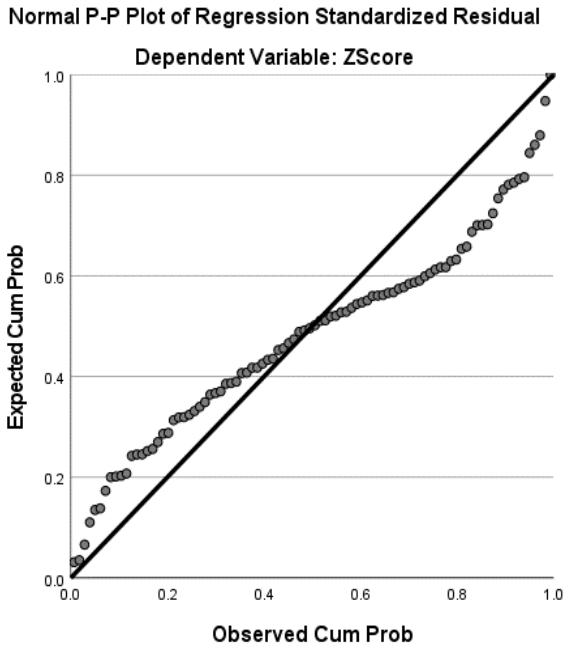
Normality

I evaluated to determine if the assumption of normality was met with the selected sample. Figure 3 shows a normal probability plot (P-P) of the regression standardized

residual with data points following a diagonal trend from lower left to upper right. However, the data points were clustered at points diverging from the trend line, suggesting that the assumption of normality may not have been met for sample data. Despite this concern, researchers like Knief and Forstmeier (2021) found that violations of normality of the residuals rarely create problems for hypothesis testing. With an increased sample size, a multiple correlation coefficient test may produce reasonable *p* values despite a violation of normality (Green & Salkind, 2017).

Figure 3

Scatterplot for Normality of the Residuals for the Regression Model

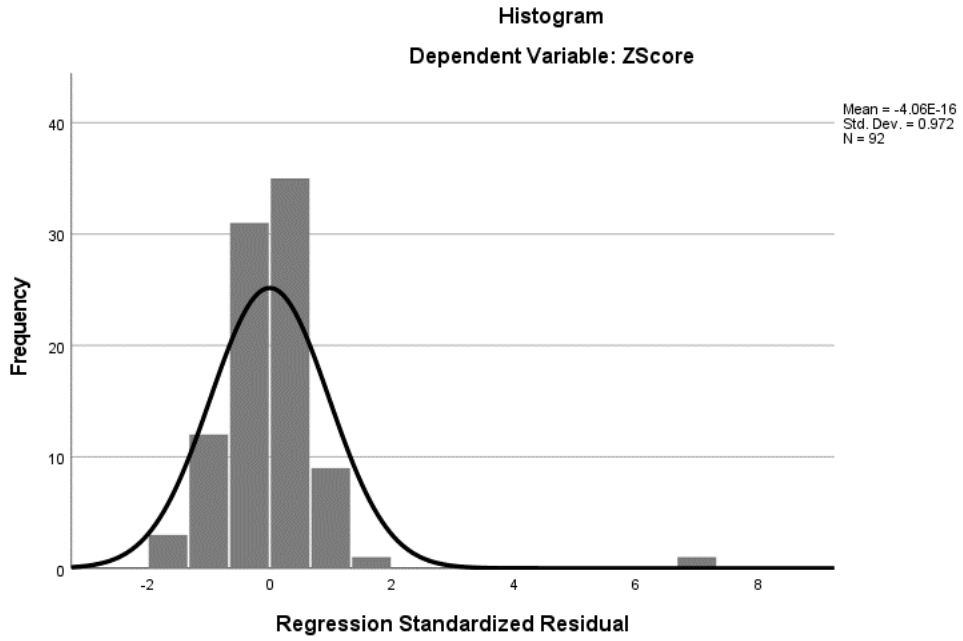


I also generated a histogram plotting the frequency of the standardized regression residuals, which indicated that the residuals were normally distributed (see Figure 4). Due to the moderate sample size, the variance in the regression standardized residuals was not

large enough to cause the potential normality assumption violation to negatively affect the data set.

Figure 4

Histogram Showing Frequency of Residuals



Multicollinearity

A scholar may find inappropriate relationships between independent variables when performing research. When groups of independent variables are linearly dependent in a regression model, called multicollinearity, variance inflation factors (VIF) of the sample matrix can assist a researcher in identifying levels of multicollinearity (C. Lin et al., 2021). Typically, a VIF value exceeding 5 to 10 indicates there may be a problem with collinearity of the independent variables (James et al., 2021). Table 10 shows the largest VIF for revenue source diversification as 1.20, well below the VIF level of 5, which establishes that the assumption of multicollinearity was not violated.

Table 10

Variance Inflation Factors for Independent Variables

		Collinearity Statistics	
Model	Independent Variable	Tolerance	VIF
1	Diversified Sources of Revenue	.830	1.204
	Public Support Trends	.945	1.058
	Leadership Support	.895	1.118
	Debt to Assets Ratio	.990	1.010
	Independent Accountant Compilation, Review, or Audit of Financial Statements	.868	1.152

Note: Dependent Variable: Z-score

Inferential Results

I used standard multiple linear regression, $\alpha = .05$ (two-tailed), to examine the efficacy of nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, and independent accountant compilation, review, or audit of financial statements in predicting a modified Altman Z-score financial viability ratio. The independent variables were nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, and independent accountant compilation, review, or audit of financial statements. The dependent variable was a modified Altman Z-score financial viability ratio. The null hypothesis was that no statistically significant relationship existed between nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, and independent accountant compilation, review, or audit of financial statements, and a

modified Altman Z-score financial viability ratio. The alternative hypothesis was that a statistically significant relationship existed between nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, and independent accountant compilation, review, or audit of financial statements, and a modified Altman Z-score financial viability ratio. I performed a preliminary analysis to assess whether the assumptions of multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals were met, and I noted no serious violations (see Tests of Assumptions).

The model as a whole was able to significantly predict a modified Altman Z-score financial viability ratio, $F(5,86) = 264.147$, $p = <.001$, $R^2 = .939$. The R^2value indicated that approximately 94% of variations in a modified Altman Z-score financial viability ratio were accounted for by the linear combination of the predictor variables (diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, and independent accountant compilation, review, or audit of financial statements). In the final model, only the debt-to-asset ratio ($\beta = .971$, $p = <.001$) independent variable provided a statistically significant contribution to the model. The other four variables of diversified sources of revenue, public support trends, leadership compensation level, and independent accountant compilation, review, or audit of financial statements did not provide a statistically significant contribution to variances in the modified Altman Z-score dependent variable. Tables 11–13 summarize the results of the multiple linear regression model.

Table 11

Summary of the Regression Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42413.871	5	8482.774	264.147	<.001[b]
	Residual	2761.795	86	32.114		
	Total	45175.666	91			

a. Dependent Variable: Z Score

b. Predictors: (Constant), Independent Accountant Compilation, Review, or Audit of Financial Statements, Debt to Asset Ratio, Public Support Trends, Leadership Compensation Level, Diversified Sources of Revenue

Table 12

Model Summary of the Regression[b]

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change
1	.969[a]	.939	.935	5.667	.939	264.147	5	86	<.001

a. Predictors: (Constant), Independent Accountant Compilation, Review, or Audit of Financial Statements, Debt to Asset Ratio, Public Support Trends, Leadership Compensation Level, Diversified Sources of Revenue

b. Dependent Variable: Z-score

Table 13

Coefficient Estimates for the Linear Regression[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.768	2.274		3.416	<.001
	Diversified Sources of Revenue	.316	.224	.041	1.411	.162
	Public Support Trends	1.652	1.397	.032	1.182	.240
	Leadership Compensation Level	1.938	4.951	.011	.391	.696
	Debt to Asset Ratio	4.238	.117	.971	36.230	<.001
	Independent Accountant Compilation, Review, or Audit of Financial Statements	-1.745	.981	-.051	-1.779	.079

a. Dependent Variable: Z Score

Analysis Summary

The purpose of this quantitative correlational analysis was to determine if there was a statistically significant relationship between nonprofit diversified sources of revenue, public support trends, leadership compensation level, debt-to-asset ratio, independent accountant compilation, review, or audit of financial statements, and a modified Altman Z-score financial viability ratio. I performed an analysis of the assumptions of multiple linear regression and noted no serious violations of the

assumptions. I determined that the linear regression model correlated to the viability of NPOs using the modified Altman Z-score had an R^2 value of .939, meaning that 94% of the change in the Z-score was due to the independent variables in the study. The null hypothesis (H_0) was that no relationship existed between the independent and dependent study variables. Since I found a statistically significant relationship between the dependent and independent variables, the null hypothesis was rejected and the alternative hypothesis (H_1) was accepted.

I also evaluated the independent variables to determine if a relationship existed between each independent variable and the dependent variable. I found a statistically significant relationship between an NPO's debt-to-asset ratio and the modified Altman Z-score of organizational viability. The simple linear regression formula provided in the form $\gamma = \beta_0 \pm \beta_1 X_1$ illustrating this relationship is shown in Equation 2.

$$\gamma = 7.77 + 4.24X \qquad (2)$$

where γ = the value of the dependent variable
β_0 = the constant, γ intercept, the value of 7.77
$+$ = the positive slope of the regression line
β_1 = the slope or unit change of γ of 4.24 for every change of X
X = the value of the independent variable

In other words, an increase in the debt-to-asset ratio dependent variable in the human service NPOs I studied demonstrated enhanced organizational viability due to the increased Z-score dependent variable. A positive linear relationship between these two variables would seem counterintuitive since Ogachi et al. (2020) stated that the debt ratio is a significant factor in bankruptcies. Garcia-Rodriguez et al. (2022) found that the larger and the most profitable NPOs carry less debt. However, another researcher (W. Ma et al.,

2020) found that the debt ratio does not significantly affect profitability. The linear relationship between the debt-to-asset ratio and Z-score may be due to the human services type of organization. Many human services organizations have capital assets that may require a financially viable NPO to borrow funds as a strategic business decision. NPO leaders also might choose to obtain debt to increase revenues because other sources of capital accessed by for-profit entities are unavailable to the NPO.

Applications to Professional Practice

Nonprofit leaders must understand the financial, operational, and strategic decisions necessary to maintain organizational viability. They can apply the principles of resource dependency and stewardship theories to enhance their opportunities for organizational success. I chose independent variables reflecting elements of these theories, attempting to identify financial elements leading to increased financial viability. This study revealed that the combined independent variables contributed to enhanced financial viability in human service organizations. Additionally, an increase in the debt-to-asset ratio independent variable is statistically related to the organization's financial viability. Human services organization leaders can make stewardship decisions that contribute to organizational viability by recognizing that they can effectively use debt in an organization. However, an NPO leader must also be aware of the risks of increased debt and strategically utilize debt to acquire assets producing greater returns, not use additional debt to finance operational expenses. The findings of this study may encourage leaders to strategically manage organizational liabilities, thereby enhancing the viability of the NPOs they manage.

While the study findings reveal financial information NPO executives can use to manage their organizations effectively, leaders should not limit their management decisions to financial information alone. Accounting ratios are a blunt instrument to describe a complex organizational process (Searing et al., 2021). Searing et al. stated that NPO leaders should incorporate tactics in financial, human resources, outreach, service evaluation, and leadership skills to deliver services in a challenging environment. This study about using certain quantitative financial variables is a small portion of the information a leader can use to structure an organization effectively for success.

Implications for Social Change

NPO boards and executives need additional tools to make decisions that contribute to the viability of their organizations. This study identifies potential financial measures that may provide constructive options for decision-making. Previously, researchers have primarily performed large-scale studies on financial indicators of NPO dissolution. However, NPOs include cooperatives, religious institutions, museums, universities, third-sector institutions, civil rights groups, trade unions, hospitals, and voluntary agencies (Treinta et al., 2020). With this diversity of NPOs, a researcher may find it challenging to apply large-scale study findings to a specific type of organization. This study addresses organizational viability for human service organizations, and further studies could address other organization types and study variables that may be related to enhanced financial viability. Increased financial viability will enhance organizations as they deliver needed services, contributing to positive social change in the NPO sector and the communities they serve.

Recommendations for Action

This correlational study evaluated the relationships between financial variables calculated from IRS Form 990 filings and a modified Altman Z-score variable showing financial viability. While the five variables combined had a statistical relationship with the Z-score, only the debt-to-asset ratio independent variable had a statistically significant relationship with the Z-score of financial viability. Most NPO leaders are concerned about the daily challenges of managing the organization, including human resources, financing, fund-raising, and stakeholder interests, but may not consider the impact of their financial decisions. The study results highlight a need for NPO leaders to consider the financial elements that support the future viability of the organization. Mitchell and Calabrese (2022) found that while excessive borrowing may create challenges, strategic increases in debt may benefit an NPO by allowing it to dedicate funds to increased capacity and improve the impact of its mission. Organization leaders and board members should evaluate the potential impact of liabilities on the organization and recognize that responsibly assuming additional debt to fund organizational growth may allow an NPO to provide added services to the community it serves. After I complete this project, I plan to work with my chair to prepare a presentation for academic conferences and peer-reviewed journals.

Recommendations for Further Research

In this study, I focused on 92 human service organizations in Ohio with revenues from $2 million to $5 million, which reported financial information on IRS Form 990 filings. Future researchers could expand the scope of this study to larger or smaller

organizations or those located outside the state of Ohio to verify if their findings support this study. Researchers could also similarly test other categories of NPOs to determine if the study findings extend to other organizational types. I believe the research evaluating the relationship between financial variables from the IRS Form 990 and the modified Altman Z-score is one of the first quantitative studies using Form 990 data. The IRS Form 990 provides significant information that researchers could use in future studies to assist NPO leaders by providing statistical results that support business decisions.

While this study provided fascinating information about the relationships between data obtained from the IRS Form 990, it is subject to limitations that may be resolved in future research. The scope of this study was necessarily limited to a chosen population of 278 human service organizations in Ohio. A future researcher would need to expand the scope to other organizational sizes and types to determine if this study's findings can be replicated in a larger-scale study. In this study, I found that only one variable, the debt-to-asset ratio, had a statistical relationship with the modified Altman Z-score. Other researchers may find that other independent variables have a stronger relationship with the dependent variable.

I selected the Altman Z-score for the dependent variable to reflect the financial viability of the sampled NPOs. Researchers have previously used the Altman Z-score (Altman, 1968; Altman & Hotchkiss, 2006) to identify probabilities of business failure in for-profit and NPOs. Altman and Hotchkiss identified healthy service organizations as having Z-scores exceeding 2.60. However, of the 92 human service organizations in this study, only four NPOs scored less than 2.60; the highest measured Z-score was 214.60.

One limitation of this study may be that the Altman Z-score may not accurately reflect the relative vulnerability of the 88 healthy service organizations included. This may have impacted the identified statistical relationship between the independent variables and the Altman Z-score dependent variable. Future research could further evaluate the relationships between the Altman Z-score and relative vulnerabilities in NPOs.

Reflections

In this study, I considered the relationships between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, and audited financial statement completion, and a modified Altman Z-score financial viability ratio. My planning and research process included three phases. I have had an interest in leadership actions that enhance the viability of NPOs. I planned to perform a qualitative study on how NPO leadership can strengthen management succession processes to maintain organizational continuity and viability. However, I realized I could better understand the factors driving NPO success by performing a quantitative study.

In phase two, I focused on small nonprofit arts organizations with annual revenues between $500,000 and $2,000,000. However, I did not find significant statistical relationships between independent variables and the financial viability of arts organizations, perhaps due to differences between the composition or reporting methodologies in these organizations. In preparing for phase three, I attempted to find a category of NPOs with increased homogeneity and further development. After examining the various categories of NPOs, I anticipated that the population of human service organizations with revenue from $2,000,000 to $15,000,000 would be more likely to

produce statistically significant relationships between the independent and dependent variables.

I selected the independent variables for this study because I believed they potentially had the best chance of having a significant relationship with organizational viability. However, I learned that I cannot perform research by attempting to prove my arguments. I discovered in a quantitative study that I must follow the data and build from what the data provides instead of forcing unsupported conclusions. I also learned to be flexible and willing to change directions during the research process if an initial research strategy is unsuccessful.

Conclusion

The purpose of this quantitative correlational study was to examine the relationship between nonprofit revenue source diversification, public support trends, leadership compensation level, debt-to-asset ratio, audited financial statement completion, and a modified Altman Z-score financial viability ratio in human service organizations. I used the resource dependency and stewardship theories as lenses to evaluate the relationships between independent and dependent variables. I performed a multiple linear regression with IBM SPSS version 28, which revealed that the five independent variables were highly related to the dependent variable. The independent variable of the debt-to-asset ratio was strongly related to the Alman Z-score viability ratio, indicating that nonprofit leaders in human service organizations should strategically consider the appropriate debt levels that can contribute to the increased viability of their organizations.

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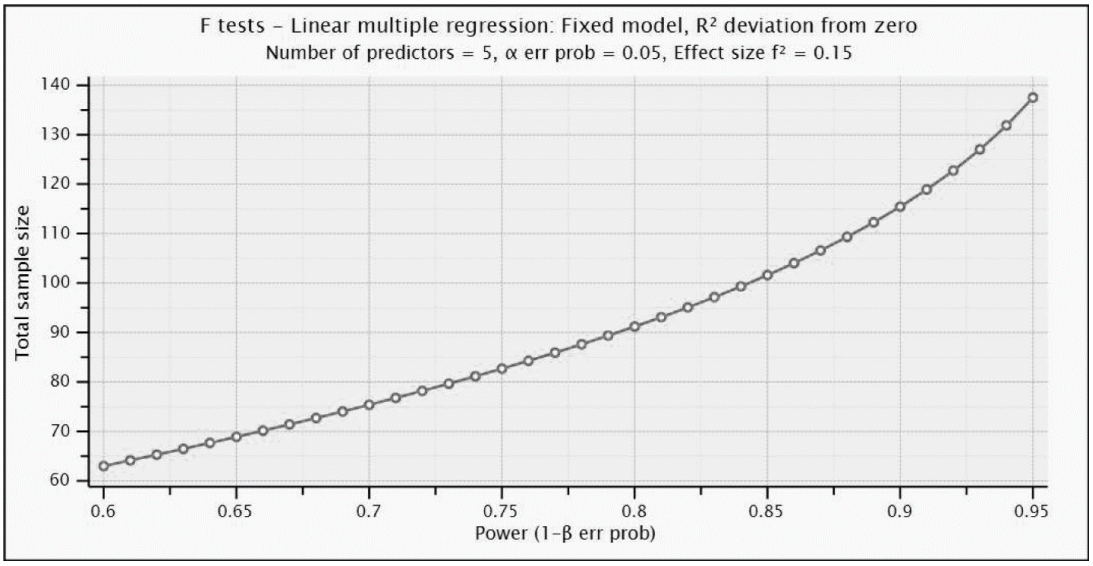
Appendix A: Power as a Function of Sample Size

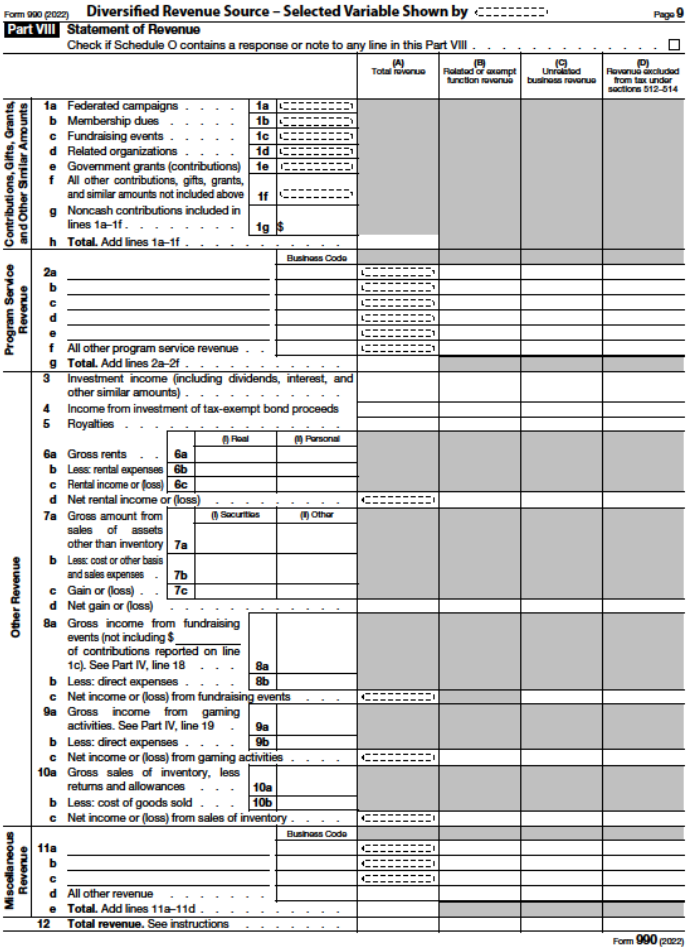


Appendix B: Sources of Variables from Internal Revenue Service Forms

The following figures show the locations on IRS Form 990 and Form 990, Schedule A, used to calculate this study's independent and dependent variables. I have identified the selected data with a dashed oval symbol.

Figure B1

Form 990, Page 9, Part VIII Showing Diversified Sources of Revenue Independent Variable



Form 990 (2022) **Diversified Revenue Source – Selected Variable Shown by** ⟨ Page **9**

Part VIII Statement of Revenue

Check if Schedule O contains a response or note to any line in this Part VIII . . . . . ☐

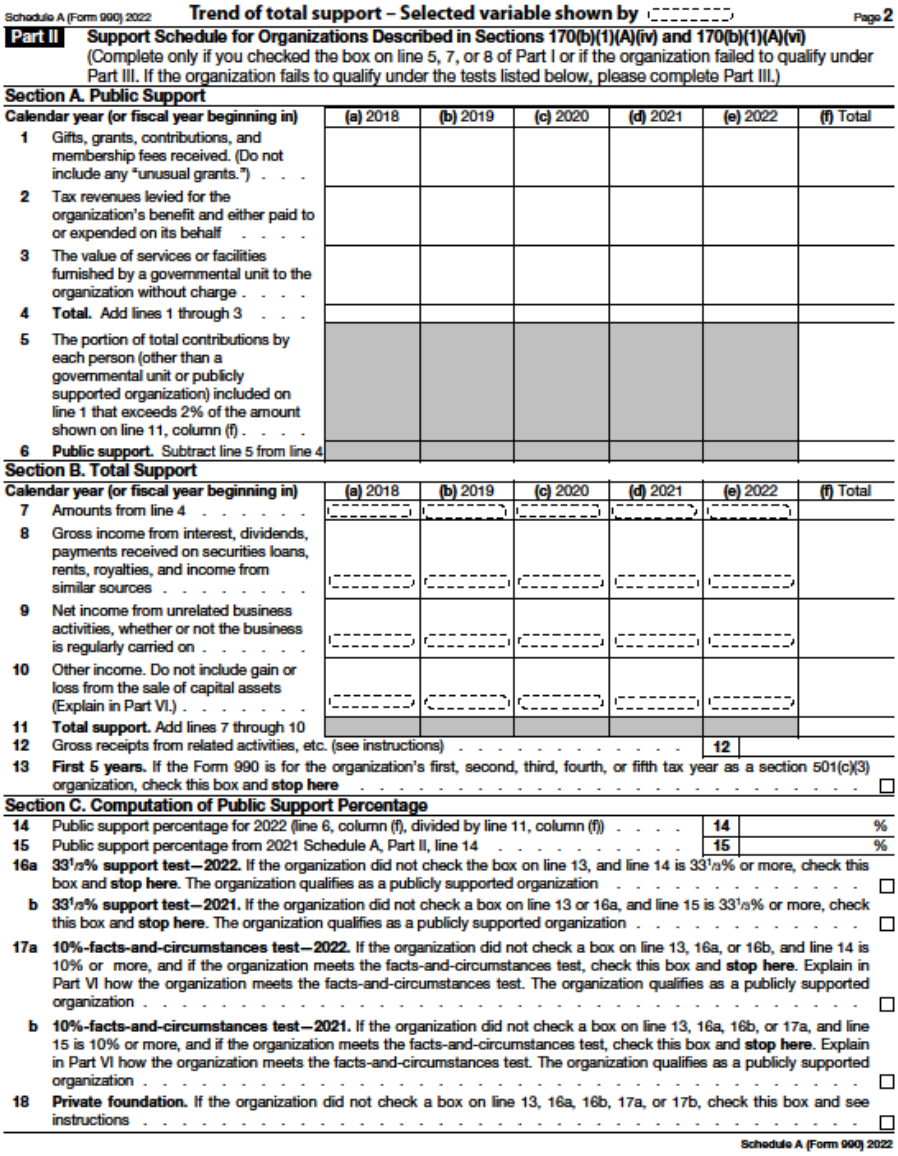
				(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512–514
Contributions, Gifts, Grants, and Other Similar Amounts	1a	Federated campaigns	1a				
	b	Membership dues	1b				
	c	Fundraising events	1c				
	d	Related organizations	1d				
	e	Government grants (contributions)	1e				
	f	All other contributions, gifts, grants, and similar amounts not included above	1f				
	g	Noncash contributions included in lines 1a–1f	1g $				
	h	**Total.** Add lines 1a–1f					
Program Service Revenue			Business Code				
	2a						
	b						
	c						
	d						
	e						
	f	All other program service revenue					
	g	**Total.** Add lines 2a–2f					
Other Revenue	3	Investment income (including dividends, interest, and other similar amounts)					
	4	Income from investment of tax-exempt bond proceeds					
	5	Royalties					
			(i) Real / (ii) Personal				
	6a	Gross rents 6a					
	b	Less: rental expenses 6b					
	c	Rental income or (loss) 6c					
	d	Net rental income or (loss)					
			(i) Securities / (ii) Other				
	7a	Gross amount from sales of assets other than inventory 7a					
	b	Less: cost or other basis and sales expenses 7b					
	c	Gain or (loss) 7c					
	d	Net gain or (loss)					
	8a	Gross income from fundraising events (not including $ of contributions reported on line 1c). See Part IV, line 18 8a					
	b	Less: direct expenses 8b					
	c	Net income or (loss) from fundraising events					
	9a	Gross income from gaming activities. See Part IV, line 19 9a					
	b	Less: direct expenses 9b					
	c	Net income or (loss) from gaming activities					
	10a	Gross sales of inventory, less returns and allowances 10a					
	b	Less: cost of goods sold 10b					
	c	Net income or (loss) from sales of inventory					
Miscellaneous Revenue			Business Code				
	11a						
	b						
	c						
	d	All other revenue					
	e	**Total.** Add lines 11a–11d					
	12	**Total revenue.** See instructions					

Form **990** (2022)

Note. The interval variable indicating revenue diversification is a value of 1 to 15 based on the number of nonzero variables in the cells identified with dashed ovals. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B2

Form 990, Schedule A, Page 2, Part II Showing Source of Trend of Total Support Independent Variable



Schedule A (Form 990) 2022 **Trend of total support – Selected variable shown by** [ ] Page **2**

Part II **Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)**
(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization fails to qualify under the tests listed below, please complete Part III.)

Section A. Public Support

Calendar year (or fiscal year beginning in)	(a) 2018	(b) 2019	(c) 2020	(d) 2021	(e) 2022	(f) Total
1 Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.")						
2 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
3 The value of services or facilities furnished by a governmental unit to the organization without charge						
4 **Total.** Add lines 1 through 3						
5 The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f)						
6 **Public support.** Subtract line 5 from line 4						

Section B. Total Support

Calendar year (or fiscal year beginning in)	(a) 2018	(b) 2019	(c) 2020	(d) 2021	(e) 2022	(f) Total
7 Amounts from line 4	[ ]	[ ]	[ ]	[ ]	[ ]	
8 Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources	[ ]	[ ]	[ ]	[ ]	[ ]	
9 Net income from unrelated business activities, whether or not the business is regularly carried on	[ ]	[ ]	[ ]	[ ]	[ ]	
10 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.)	[ ]	[ ]	[ ]	[ ]	[ ]	
11 **Total support.** Add lines 7 through 10						
12 Gross receipts from related activities, etc. (see instructions)					12	

13 **First 5 years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** ☐

Section C. Computation of Public Support Percentage

14 Public support percentage for 2022 (line 6, column (f), divided by line 11, column (f)) 14 %

15 Public support percentage from 2021 Schedule A, Part II, line 14 15 %

16a **33 1/3% support test—2022.** If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and **stop here**. The organization qualifies as a publicly supported organization ☐

b **33 1/3% support test—2021.** If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and **stop here**. The organization qualifies as a publicly supported organization ☐

17a **10%-facts-and-circumstances test—2022.** If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and **stop here**. Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization ☐

b **10%-facts-and-circumstances test—2021.** If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and **stop here**. Explain in Part VI how the organization meets the facts-and-circumstances test. The organization qualifies as a publicly supported organization ☐

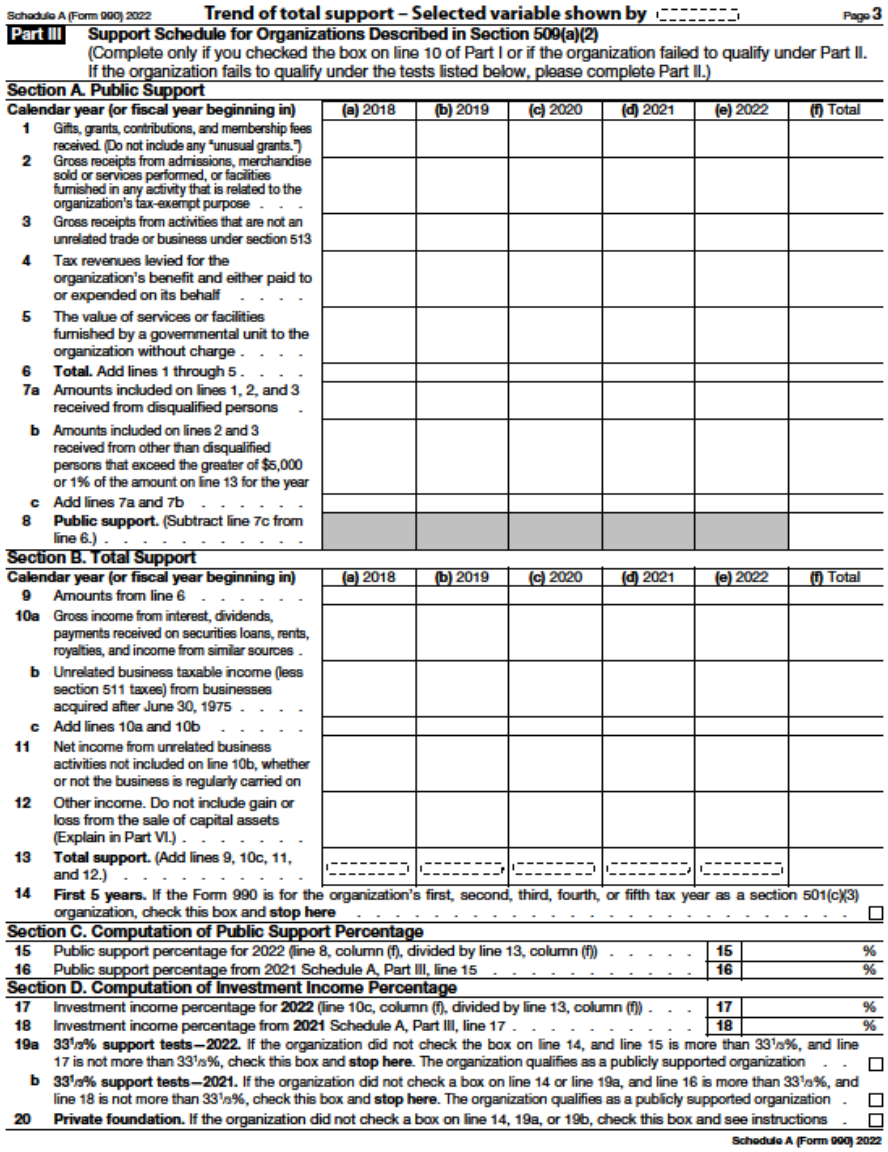
18 **Private foundation.** If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions ☐

Schedule A (Form 990) 2022

Note. The ratio variable is a percentage change calculation of the revenue trends shown of the sum of cells on lines 7(a) through 10(a), 7(b) through 10(b), 7(c) through 10(c), 7(d) through 10(d), and 7(e) through 10(e) identified with dashed ovals. From IRS, *Schedule A (Form 990), Public charity status and public support,* (https://www.irs.gov/pub/irs-pdf/f990sa.pdf).

Figure B3

Form 990, Schedule A, Page 3, Part III Showing Source of Trend of Total Support Independent Variable



Schedule A (Form 990) 2022 **Trend of total support – Selected variable shown by** [ ] Page 3

Part III Support Schedule for Organizations Described in Section 509(a)(2)

(Complete only if you checked the box on line 10 of Part I or if the organization failed to qualify under Part II. If the organization fails to qualify under the tests listed below, please complete Part II.)

Section A. Public Support

Calendar year (or fiscal year beginning in)	(a) 2018	(b) 2019	(c) 2020	(d) 2021	(e) 2022	(f) Total
1 Gifts, grants, contributions, and membership fees received. (Do not include any "unusual grants.")						
2 Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose						
3 Gross receipts from activities that are not an unrelated trade or business under section 513						
4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
5 The value of services or facilities furnished by a governmental unit to the organization without charge						
6 **Total.** Add lines 1 through 5						
7a Amounts included on lines 1, 2, and 3 received from disqualified persons						
b Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of $5,000 or 1% of the amount on line 13 for the year						
c Add lines 7a and 7b						
8 **Public support.** (Subtract line 7c from line 6.)						

Section B. Total Support

Calendar year (or fiscal year beginning in)	(a) 2018	(b) 2019	(c) 2020	(d) 2021	(e) 2022	(f) Total
9 Amounts from line 6						
10a Gross income from interest, dividends, payments received on securities loans, rents, royalties, and income from similar sources						
b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975						
c Add lines 10a and 10b						
11 Net income from unrelated business activities not included on line 10b, whether or not the business is regularly carried on						
12 Other income. Do not include gain or loss from the sale of capital assets (Explain in Part VI.)						
13 **Total support.** (Add lines 9, 10c, 11, and 12.)	[ ]	[ ]	[ ]	[ ]	[ ]	

14 **First 5 years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** ☐

Section C. Computation of Public Support Percentage

15	Public support percentage for 2022 (line 8, column (f), divided by line 13, column (f))	15	%
16	Public support percentage from 2021 Schedule A, Part III, line 15	16	%

Section D. Computation of Investment Income Percentage

17	Investment income percentage for **2022** (line 10c, column (f), divided by line 13, column (f))	17	%
18	Investment income percentage from **2021** Schedule A, Part III, line 17	18	%

19a **33 1/3% support tests—2022.** If the organization did not check the box on line 14, and line 15 is more than 33 1/3%, and line 17 is not more than 33 1/3%, check this box and **stop here**. The organization qualifies as a publicly supported organization ☐

b **33 1/3% support tests—2021.** If the organization did not check a box on line 14 or line 19a, and line 16 is more than 33 1/3%, and line 18 is not more than 33 1/3%, check this box and **stop here**. The organization qualifies as a publicly supported organization ☐

20 **Private foundation.** If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions ☐

Schedule A (Form 990) 2022

Note. The ratio variable is a percentage change calculation of the revenue trends shown in the cells on lines 13(a) through 13(3) identified with dashed ovals. From IRS, *Schedule A (Form 990), Public charity status and public support,* (https://www.irs.gov/pub/irs-pdf/f990sa.pdf).

Figure B4

Form 990, Page 10, Part IX, Showing Leadership Compensation Level Independent Variable

Form 990 (2022) **Leadership compensation level – Selected variable shown by** Page **10**

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns. All other organizations must complete column (A).

Check if Schedule O contains a response or note to any line in this Part IX . . . . . ☐

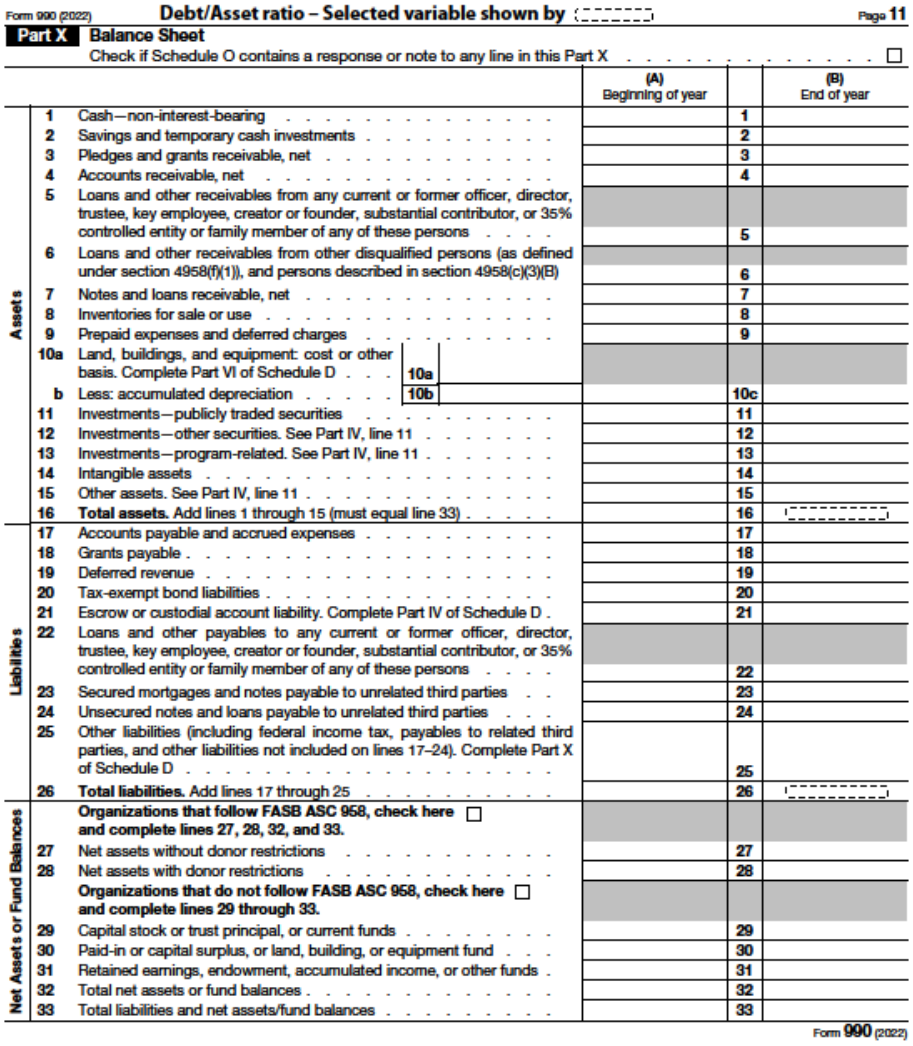
Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21				
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16				
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees				
6 Compensation not included above to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages				
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)				
9 Other employee benefits				
10 Payroll taxes				
11 Fees for services (nonemployees):				
a Management				
b Legal				
c Accounting				
d Lobbying				
e Professional fundraising services. See Part IV, line 17				
f Investment management fees				
g Other. (If line 11g amount exceeds 10% of line 25, column (A), amount, list line 11g expenses on Schedule O.)				
12 Advertising and promotion				
13 Office expenses				
14 Information technology				
15 Royalties				
16 Occupancy				
17 Travel				
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings				
20 Interest				
21 Payments to affiliates				
22 Depreciation, depletion, and amortization				
23 Insurance				
24 Other expenses. Itemize expenses not covered above. (List miscellaneous expenses on line 24e. If line 24e amount exceeds 10% of line 25, column (A), amount, list line 24e expenses on Schedule O.)				
a				
b				
c				
d				
e All other expenses				
25 **Total functional expenses.** Add lines 1 through 24e				
26 **Joint costs.** Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here ☐ if following SOP 98-2 (ASC 958-720)				

Form **990** (2022)

Note. The ratio variable indicating leadership is a calculated ratio of leadership compensation as a percentage of total compensation from the cells identified with dashed ovals. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B5

Form 990, Page 11, Part X, Showing Debt to Assets Ratio Independent Variable



Form 990 (2022) **Debt/Asset ratio – Selected variable shown by** (------) Page **11**

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X . . . . . ☐

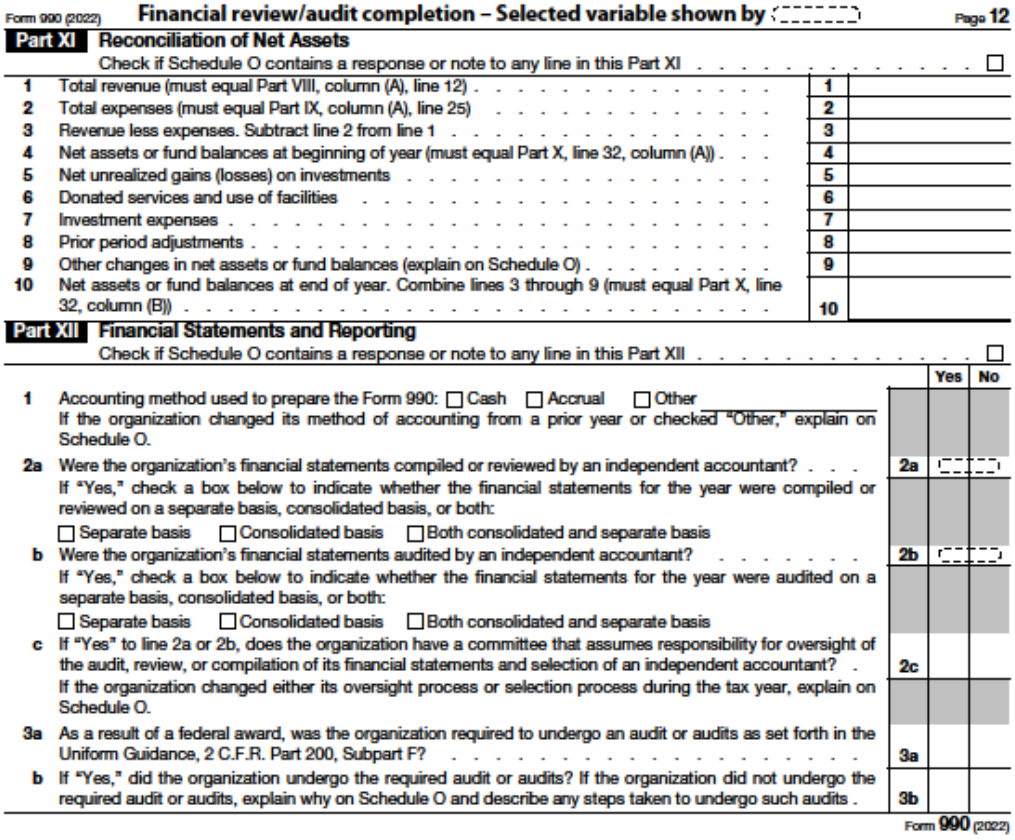
			(A) Beginning of year		(B) End of year
Assets	1	Cash—non-interest-bearing		1	
	2	Savings and temporary cash investments		2	
	3	Pledges and grants receivable, net		3	
	4	Accounts receivable, net		4	
	5	Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)		6	
	7	Notes and loans receivable, net		7	
	8	Inventories for sale or use		8	
	9	Prepaid expenses and deferred charges		9	
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D — 10a			
	b	Less: accumulated depreciation — 10b		10c	
	11	Investments—publicly traded securities		11	
	12	Investments—other securities. See Part IV, line 11		12	
	13	Investments—program-related. See Part IV, line 11		13	
	14	Intangible assets		14	
	15	Other assets. See Part IV, line 11		15	
	16	**Total assets.** Add lines 1 through 15 (must equal line 33)		16	(------)
Liabilities	17	Accounts payable and accrued expenses		17	
	18	Grants payable		18	
	19	Deferred revenue		19	
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability. Complete Part IV of Schedule D		21	
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17–24). Complete Part X of Schedule D		25	
	26	**Total liabilities.** Add lines 17 through 25		26	(------)
Net Assets or Fund Balances		**Organizations that follow FASB ASC 958, check here ☐ and complete lines 27, 28, 32, and 33.**			
	27	Net assets without donor restrictions		27	
	28	Net assets with donor restrictions		28	
		Organizations that do not follow FASB ASC 958, check here ☐ and complete lines 29 through 33.			
	29	Capital stock or trust principal, or current funds		29	
	30	Paid-in or capital surplus, or land, building, or equipment fund		30	
	31	Retained earnings, endowment, accumulated income, or other funds		31	
	32	Total net assets or fund balances		32	
	33	Total liabilities and net assets/fund balances		33	

Form **990** (2022)

Note. The ratio variable indicating debt-to-asset ratio is a calculated ratio of total liabilities divided by total asses from the cells identified with dashed ovals. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B6

Form 990, Page 12, Part XII, Showing Independent Financial Audit or Review Independent Variable



Form 990 (2022) **Financial review/audit completion – Selected variable shown by** ⬭ Page **12**

Part XI Reconciliation of Net Assets

Check if Schedule O contains a response or note to any line in this Part XI . . . . . ☐

1	Total revenue (must equal Part VIII, column (A), line 12)	1	
2	Total expenses (must equal Part IX, column (A), line 25)	2	
3	Revenue less expenses. Subtract line 2 from line 1	3	
4	Net assets or fund balances at beginning of year (must equal Part X, line 32, column (A))	4	
5	Net unrealized gains (losses) on investments	5	
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	
9	Other changes in net assets or fund balances (explain on Schedule O)	9	
10	Net assets or fund balances at end of year. Combine lines 3 through 9 (must equal Part X, line 32, column (B))	10	

Part XII Financial Statements and Reporting

Check if Schedule O contains a response or note to any line in this Part XII . . . . . ☐

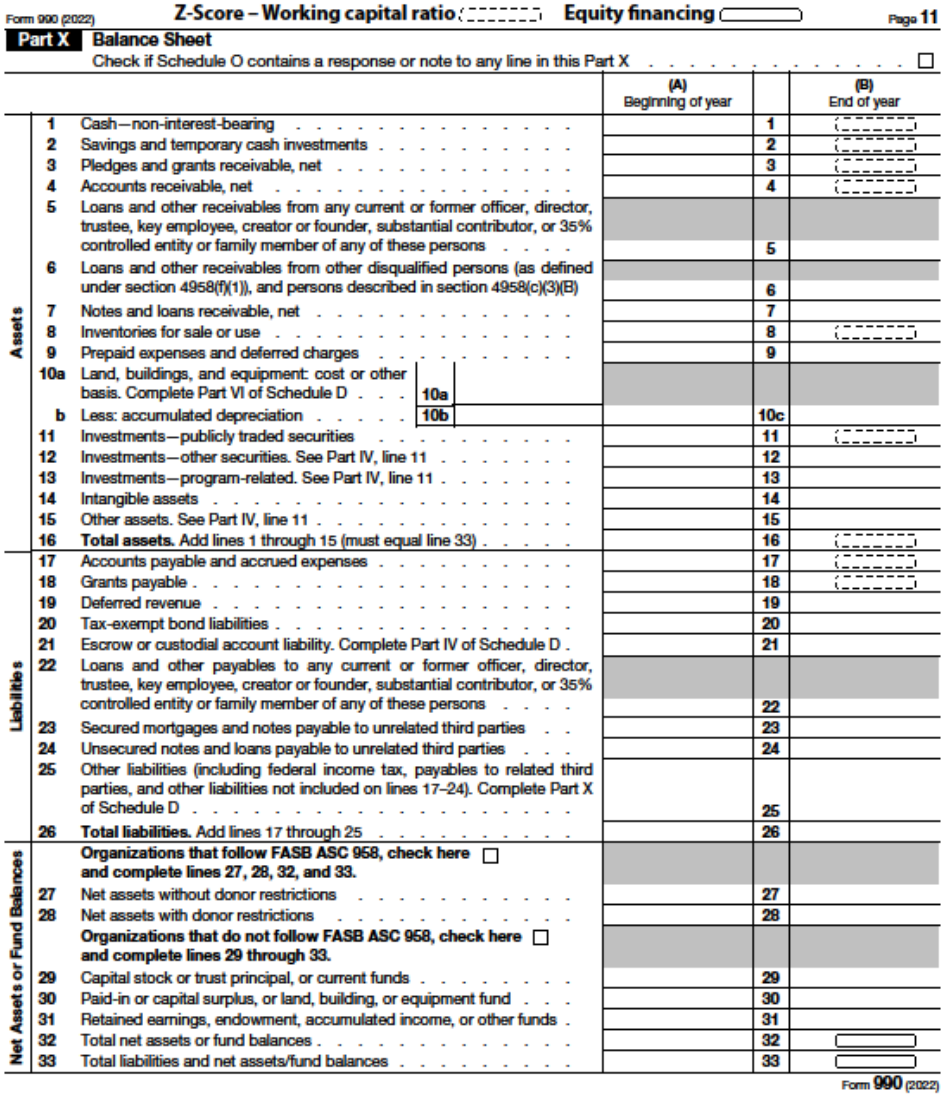
			Yes	No
1	Accounting method used to prepare the Form 990: ☐ Cash ☐ Accrual ☐ Other _____ If the organization changed its method of accounting from a prior year or checked "Other," explain on Schedule O.			
2a	Were the organization's financial statements compiled or reviewed by an independent accountant?	2a	⬭	
	If "Yes," check a box below to indicate whether the financial statements for the year were compiled or reviewed on a separate basis, consolidated basis, or both: ☐ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis			
b	Were the organization's financial statements audited by an independent accountant?	2b	⬭	
	If "Yes," check a box below to indicate whether the financial statements for the year were audited on a separate basis, consolidated basis, or both: ☐ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis			
c	If "Yes" to line 2a or 2b, does the organization have a committee that assumes responsibility for oversight of the audit, review, or compilation of its financial statements and selection of an independent accountant?	2c		
	If the organization changed either its oversight process or selection process during the tax year, explain on Schedule O.			
3a	As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Uniform Guidance, 2 C.F.R. Part 200, Subpart F?	3a		
b	If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why on Schedule O and describe any steps taken to undergo such audits	3b		

Form **990** (2022)

Note. The nominal variable indicating the level of financial audit or review is obtained from the cells identified with dashed ovals. The variables of 0 to 3 indicate an increasing level of independent preparation or analysis of the nonprofit financial statements. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B7

Form 990, Page 11, Part XI, Showing Working Capital and Equity Financing Ratios for Z-Score Calculation



Form 990 (2022) Z-Score – Working capital ratio Equity financing Page 11

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X ☐

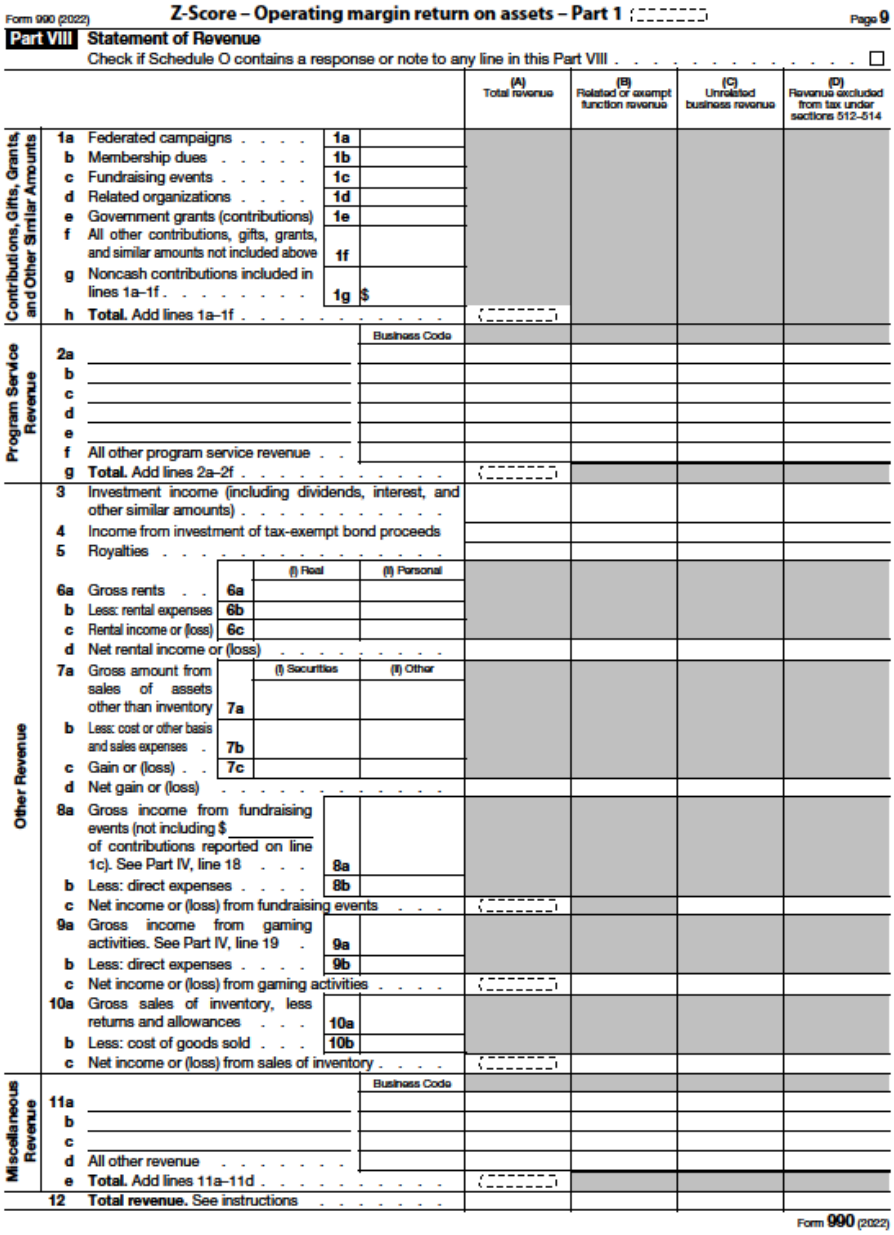
			(A) Beginning of year		(B) End of year
Assets	1	Cash—non-interest-bearing		1	
	2	Savings and temporary cash investments		2	
	3	Pledges and grants receivable, net		3	
	4	Accounts receivable, net		4	
	5	Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)		6	
	7	Notes and loans receivable, net		7	
	8	Inventories for sale or use		8	
	9	Prepaid expenses and deferred charges		9	
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D — 10a			
	b	Less: accumulated depreciation — 10b		10c	
	11	Investments—publicly traded securities		11	
	12	Investments—other securities. See Part IV, line 11		12	
	13	Investments—program-related. See Part IV, line 11		13	
	14	Intangible assets		14	
	15	Other assets. See Part IV, line 11		15	
	16	**Total assets.** Add lines 1 through 15 (must equal line 33)		16	
Liabilities	17	Accounts payable and accrued expenses		17	
	18	Grants payable		18	
	19	Deferred revenue		19	
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability. Complete Part IV of Schedule D		21	
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17–24). Complete Part X of Schedule D		25	
	26	**Total liabilities.** Add lines 17 through 25		26	
Net Assets or Fund Balances		**Organizations that follow FASB ASC 958, check here ☐ and complete lines 27, 28, 32, and 33.**			
	27	Net assets without donor restrictions		27	
	28	Net assets with donor restrictions		28	
		Organizations that do not follow FASB ASC 958, check here ☐ and complete lines 29 through 33.			
	29	Capital stock or trust principal, or current funds		29	
	30	Paid-in or capital surplus, or land, building, or equipment fund		30	
	31	Retained earnings, endowment, accumulated income, or other funds		31	
	32	Total net assets or fund balances		32	
	33	Total liabilities and net assets/fund balances		33	

Form 990 (2022)

Note. The ratio variable showing the working capital ratio is calculated from the ratio of assets to liabilities from the cells identified with dashed ovals. The ratio variable showing the equity financing ratio is calculated from cells 32(B) and 33(B) identified with solid ovals. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B8

Form 990, Page 9, Part VIII, Showing Sheet 1 of Operating Return on Assets for Z-Score Calculation



Form 990 (2022) **Z-Score – Operating margin return on assets – Part 1** Page 9

Part VIII Statement of Revenue

Check if Schedule O contains a response or note to any line in this Part VIII ☐

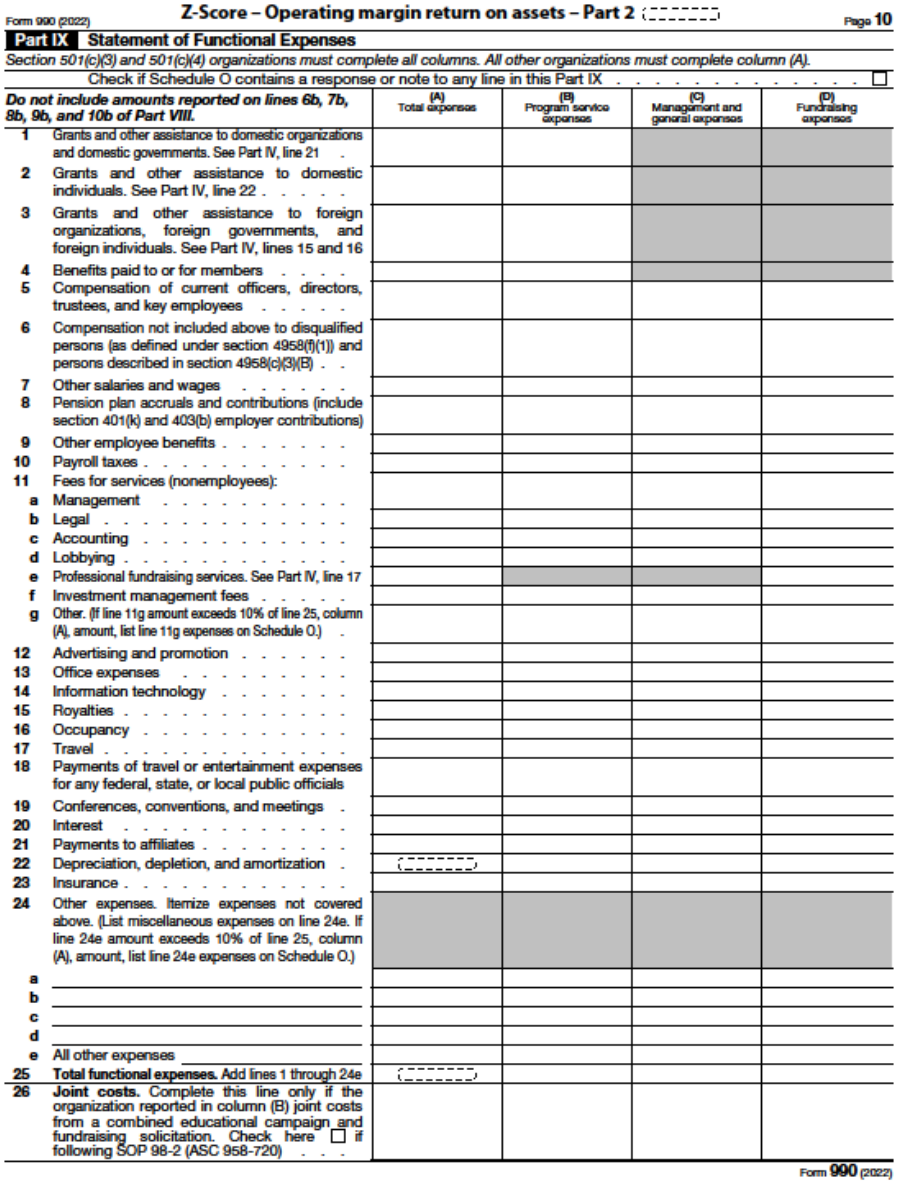
				(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512–514
Contributions, Gifts, Grants, and Other Similar Amounts	1a	Federated campaigns	1a				
	b	Membership dues	1b				
	c	Fundraising events	1c				
	d	Related organizations	1d				
	e	Government grants (contributions)	1e				
	f	All other contributions, gifts, grants, and similar amounts not included above	1f				
	g	Noncash contributions included in lines 1a–1f	1g $				
	h	**Total.** Add lines 1a–1f					
			Business Code				
Program Service Revenue	2a						
	b						
	c						
	d						
	e						
	f	All other program service revenue					
	g	**Total.** Add lines 2a–2f					
Other Revenue	3	Investment income (including dividends, interest, and other similar amounts)					
	4	Income from investment of tax-exempt bond proceeds					
	5	Royalties					
			(i) Real / (ii) Personal				
	6a	Gross rents 6a					
	b	Less: rental expenses 6b					
	c	Rental income or (loss) 6c					
	d	Net rental income or (loss)					
			(i) Securities / (ii) Other				
	7a	Gross amount from sales of assets other than inventory 7a					
	b	Less: cost or other basis and sales expenses 7b					
	c	Gain or (loss) 7c					
	d	Net gain or (loss)					
	8a	Gross income from fundraising events (not including $ _____ of contributions reported on line 1c). See Part IV, line 18 8a					
	b	Less: direct expenses 8b					
	c	Net income or (loss) from fundraising events					
	9a	Gross income from gaming activities. See Part IV, line 19 9a					
	b	Less: direct expenses 9b					
	c	Net income or (loss) from gaming activities					
	10a	Gross sales of inventory, less returns and allowances 10a					
	b	Less: cost of goods sold 10b					
	c	Net income or (loss) from sales of inventory					
			Business Code				
Miscellaneous Revenue	11a						
	b						
	c						
	d	All other revenue					
	e	**Total.** Add lines 11a–11d					
	12	**Total revenue.** See instructions					

Form **990** (2022)

Note. The ratio of operating return as a percentage of assets uses information from three pages of IRS Form 990. This figure shows the revenue entries from the cells identified with dashed ovals used for the calculation. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B9

Form 990, Page 10, Part IX, Showing Sheet 2 of Operating Return on Assets for Z-Score Calculation



Form 990 (2022) **Z-Score – Operating margin return on assets – Part 2** Page **10**

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns. All other organizations must complete column (A).

Check if Schedule O contains a response or note to any line in this Part IX . . . . . ☐

Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21				
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16				
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees				
6 Compensation not included above to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages				
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)				
9 Other employee benefits				
10 Payroll taxes				
11 Fees for services (nonemployees):				
a Management				
b Legal				
c Accounting				
d Lobbying				
e Professional fundraising services. See Part IV, line 17				
f Investment management fees				
g Other. (If line 11g amount exceeds 10% of line 25, column (A), amount, list line 11g expenses on Schedule O.)				
12 Advertising and promotion				
13 Office expenses				
14 Information technology				
15 Royalties				
16 Occupancy				
17 Travel				
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings				
20 Interest				
21 Payments to affiliates				
22 Depreciation, depletion, and amortization				
23 Insurance				
24 Other expenses. Itemize expenses not covered above. (List miscellaneous expenses on line 24e. If line 24e amount exceeds 10% of line 25, column (A), amount, list line 24e expenses on Schedule O.)				
a				
b				
c				
d				
e All other expenses				
25 **Total functional expenses.** Add lines 1 through 24e				
26 **Joint costs.** Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here ☐ if following SOP 98-2 (ASC 958-720)				

Form **990** (2022)

Note. The ratio of operating return as a percentage of assets uses information from three pages of IRS Form 990. This figure shows the expense entries from the cells identified with dashed ovals used for the calculation. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B10

Form 990, Page 11, Part X, Showing Sheet 3 of Operating Return on Assets for Z-Score Calculation

Form 990 (2022) **Z-Score – Operating Margin Return on Assets – Part 3** Page **11**

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X ☐

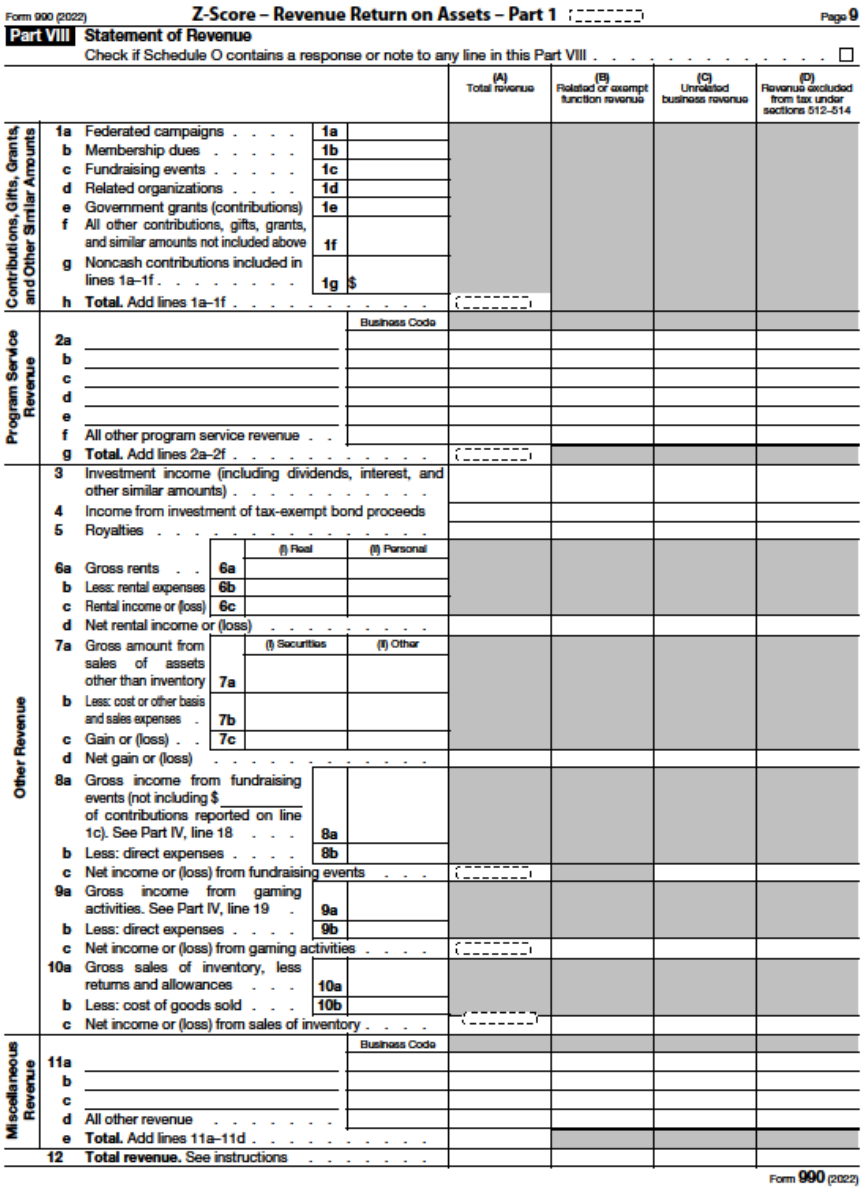
			(A) Beginning of year		(B) End of year
Assets	1	Cash—non-interest-bearing		1	
	2	Savings and temporary cash investments		2	
	3	Pledges and grants receivable, net		3	
	4	Accounts receivable, net		4	
	5	Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)		6	
	7	Notes and loans receivable, net		7	
	8	Inventories for sale or use		8	
	9	Prepaid expenses and deferred charges		9	
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D — 10a			
	b	Less: accumulated depreciation — 10b		10c	
	11	Investments—publicly traded securities		11	
	12	Investments—other securities. See Part IV, line 11		12	
	13	Investments—program-related. See Part IV, line 11		13	
	14	Intangible assets		14	
	15	Other assets. See Part IV, line 11		15	
	16	**Total assets.** Add lines 1 through 15 (must equal line 33)		16	
Liabilities	17	Accounts payable and accrued expenses		17	
	18	Grants payable		18	
	19	Deferred revenue		19	
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability. Complete Part IV of Schedule D		21	
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17–24). Complete Part X of Schedule D		25	
	26	**Total liabilities.** Add lines 17 through 25		26	
Net Assets or Fund Balances		**Organizations that follow FASB ASC 958, check here ☐ and complete lines 27, 28, 32, and 33.**			
	27	Net assets without donor restrictions		27	
	28	Net assets with donor restrictions		28	
		Organizations that do not follow FASB ASC 958, check here ☐ and complete lines 29 through 33.			
	29	Capital stock or trust principal, or current funds		29	
	30	Paid-in or capital surplus, or land, building, or equipment fund		30	
	31	Retained earnings, endowment, accumulated income, or other funds		31	
	32	Total net assets or fund balances		32	
	33	Total liabilities and net assets/fund balances		33	

Form **990** (2022)

Note. The ratio of operating return as a percentage of assets uses information from three pages of IRS Form 990. This figure shows the asset entry for the denominator of the ratio from the cell identified with a dashed oval used for the calculation. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B11

Form 990, Page 9, Part VIII, Showing Sheet 1 of Revenue Return on Assets for Z-Score Calculation



Form 990 (2022) **Z-Score – Revenue Return on Assets – Part 1** Page 9

Part VIII Statement of Revenue

Check if Schedule O contains a response or note to any line in this Part VIII . . . . . ☐

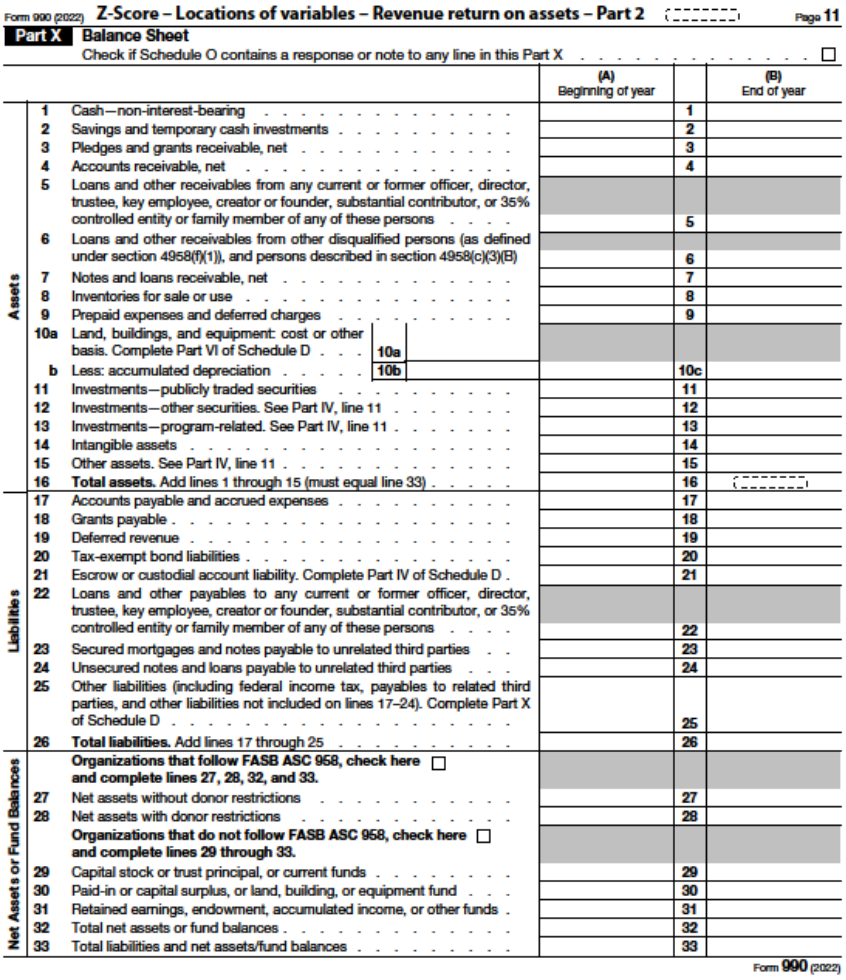
			(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512–514
Contributions, Gifts, Grants, and Other Similar Amounts	1a	Federated campaigns 1a				
	b	Membership dues 1b				
	c	Fundraising events 1c				
	d	Related organizations 1d				
	e	Government grants (contributions) 1e				
	f	All other contributions, gifts, grants, and similar amounts not included above 1f				
	g	Noncash contributions included in lines 1a–1f 1g $				
	h	**Total.** Add lines 1a–1f				
Program Service Revenue		Business Code				
	2a					
	b					
	c					
	d					
	e					
	f	All other program service revenue				
	g	**Total.** Add lines 2a–2f				
Other Revenue	3	Investment income (including dividends, interest, and other similar amounts)				
	4	Income from investment of tax-exempt bond proceeds				
	5	Royalties				
		(i) Real / (ii) Personal				
	6a	Gross rents 6a				
	b	Less: rental expenses 6b				
	c	Rental income or (loss) 6c				
	d	Net rental income or (loss)				
		(i) Securities / (ii) Other				
	7a	Gross amount from sales of assets other than inventory 7a				
	b	Less: cost or other basis and sales expenses 7b				
	c	Gain or (loss) 7c				
	d	Net gain or (loss)				
	8a	Gross income from fundraising events (not including $ ____ of contributions reported on line 1c). See Part IV, line 18 8a				
	b	Less: direct expenses 8b				
	c	Net income or (loss) from fundraising events				
	9a	Gross income from gaming activities. See Part IV, line 19 9a				
	b	Less: direct expenses 9b				
	c	Net income or (loss) from gaming activities				
	10a	Gross sales of inventory, less returns and allowances 10a				
	b	Less: cost of goods sold 10b				
	c	Net income or (loss) from sales of inventory				
Miscellaneous Revenue		Business Code				
	11a					
	b					
	c					
	d	All other revenue				
	e	**Total.** Add lines 11a–11d				
	12	**Total revenue.** See instructions				

Form **990** (2022)

Note. The ratio of revenue return as a percentage of assets uses information from two pages of IRS Form 990. This figure shows the asset entry for the denominator of the ratio from the cell identified with a dashed oval used for the calculation. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).

Figure B12

Form 990, Page 9, Part VIII, Showing Sheet 1 of Revenue Return on Assets for Z-Score Calculation



Form 990 (2022) **Z-Score – Locations of variables – Revenue return on assets – Part 2** Page **11**

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X . . . . . ☐

			(A) Beginning of year		(B) End of year
Assets	1	Cash—non-interest-bearing		1	
	2	Savings and temporary cash investments		2	
	3	Pledges and grants receivable, net		3	
	4	Accounts receivable, net		4	
	5	Loans and other receivables from any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		5	
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), and persons described in section 4958(c)(3)(B)		6	
	7	Notes and loans receivable, net		7	
	8	Inventories for sale or use		8	
	9	Prepaid expenses and deferred charges		9	
	10a	Land, buildings, and equipment: cost or other basis. Complete Part VI of Schedule D — 10a			
	b	Less: accumulated depreciation — 10b		10c	
	11	Investments—publicly traded securities		11	
	12	Investments—other securities. See Part IV, line 11		12	
	13	Investments—program-related. See Part IV, line 11		13	
	14	Intangible assets		14	
	15	Other assets. See Part IV, line 11		15	
	16	**Total assets.** Add lines 1 through 15 (must equal line 33)		16	
Liabilities	17	Accounts payable and accrued expenses		17	
	18	Grants payable		18	
	19	Deferred revenue		19	
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability. Complete Part IV of Schedule D		21	
	22	Loans and other payables to any current or former officer, director, trustee, key employee, creator or founder, substantial contributor, or 35% controlled entity or family member of any of these persons		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17–24). Complete Part X of Schedule D		25	
	26	**Total liabilities.** Add lines 17 through 25		26	
Net Assets or Fund Balances		**Organizations that follow FASB ASC 958, check here ☐ and complete lines 27, 28, 32, and 33.**			
	27	Net assets without donor restrictions		27	
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	29	Capital stock or trust principal, or current funds		29	
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	31	Retained earnings, endowment, accumulated income, or other funds		31	
	32	Total net assets or fund balances		32	
	33	Total liabilities and net assets/fund balances		33	

Form **990** (2022)

Note. The ratio of revenue return as a percentage of assets uses information from two pages of IRS Form 990. This figure shows the revenue entries from the cells identified with dashed ovals used for the calculation. From IRS, *Return of organization exempt from federal income tax,* (https://www.irs.gov/pub/irs-pdf/f990.pdf).