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## Fundamental Reporting Differences in Nonprofit Operating Models

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FUNDAMENTAL REPORTING DIFFERENCES IN  
NONPROFIT OPERATING MODELS

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Angelica G. Castro Cardenas

2024

## Dedication

*To my parents:* for their love, for their powerful education, and for providing the structure to reach my goals.

*To my children (Antonio, Sofia):* for encouraging me to fly high and trusting that we would get to a better place through this journey.

*To my husband (Michael):* for your incredible patience and immeasurable brilliance supporting my work.

*To my mentors and Dissertation Committee members:* for sharing your knowledge and guiding me on my research journey.

*To David Folsom:* for your never-ending words of encouragement, for the time you took to guide me through the research world.

And to *Karl Putnam, Ph.D. (1947 – 2017)*, for sparking in me the belief that I could achieve my lifelong dream.

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NONPROFIT OPERATING MODELS

by

Angelica G. Castro Cardenas, CPA

DISSERTATION

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## **Abstract**

Not all nonprofit organizations rely on donations to achieve their social mission. Some nonprofit organizations, which Dart (2004) classifies as social enterprises, generate revenue through commercial transactions. This study identifies significant operating, monitoring, and efficiency differences between traditional fundraisers and social enterprises. Using panel data and fixed effects regressions, I find that social enterprises report more revenue persistence and better program ratios - a common metric for evaluating nonprofit performance - than traditional fundraisers. I also find that social enterprises are less likely to audit their financial statements than traditional fundraisers. Furthermore, when evaluating operating efficiency, social enterprises appear to have a higher asset turnover to program revenues, suggesting that this model may be more concerned with the operating efficiency of the social program. These results provide evidence that if the operating model is not considered, financial information can give misleading results when comparing traditional fundraisers and social enterprises. Additionally, the operating model may drive management decisions about investments, operations, and external monitoring, defining different goals in nonprofit behavior.



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## Chapter 1: Introduction

Nonprofit organizations cover a gap in society's needs not addressed by private or government sectors; their mission is to provide goods and services to thriving communities, promoting economic stability and mobility. This sector contributes more than 10 percent of the total employment in the United States, being the third highest employing industry in the country.<sup>1</sup>

<sup>2</sup> According to the Internal Revenue Service, in 2022 there were 1.97 million nonprofit organizations, with total revenues of 2.4 trillion dollars.<sup>3</sup> Donors, grantors, and other stakeholders base important decisions using financial information, often without awareness that nonprofit organizations are not a homogenous group; significant differences may arise from different organizations' operating models.

Nonprofit organizations attract varied streams of revenue, such as donations, grants, endowments, and fees. While standard setters and researchers have acknowledged this diverse mix, they have primarily focused on the relationship with contributors: donors, grantors, and government. There are relevant advances in research indicating how contributors respond to an organization's financial reported information and what affects or improves its usefulness. Standard setters have prompted the classification of revenues and expenditures by nature and functionality and required informing of the availability of net assets, which helps assess an organization's resources and how it carries its social mission. Many contributors require financial audits to attest

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<sup>1</sup> Lester M. Salamon and Chelsea L. Newhouse, "The 2020 Nonprofit Employment Report," *Nonprofit Economic Data Bulletin* no. 48. (Baltimore: Johns Hopkins Center for Civil Society Studies, June 2020). Available at [ccss.jhu.edu](https://ccss.jhu.edu).

<sup>2</sup> Bureau of Labor Statistics

<sup>3</sup> Department of the Treasury Internal Revenue Service, "Statistics of Income", *Publication 5331 (Rev. 7-2023)* *Catalog Number 72046Q*. Available <https://www.irs.gov/pub/irs-pdf/p5331.pdf>

to the reliance on financially reported information and monitor how well an organization directs its contributions toward the fulfillment of its mission.

However, there are some nonprofit organizations that are not primarily reliant on contributions.<sup>4</sup> These organizations use a commercial approach to deliver benefits to society, charging fees for the services or products they provide. These organizations focus more on attracting customers and less on attracting contributors, facing business competition through price, supply, and demand. The use of financial reported information may be different when a customer purchases goods and services because the relationship with the nonprofit organization switches from donor to customer. The environment in which the organization competes and generates revenue prompts a different operation and an alternative focus on investments, resulting in evident differences between traditional fundraisers and organizations using commercial revenues.

Thus, the choice of revenue sources has a profound impact on the structure and operating decisions of an organization, deriving in fundamental differences across organizations. These differences may be evident in financial reported information and may affect users' assessment of an organization's performance, efficiency, and structure. Differences in reported financial information between the two operating models may reduce comparability across organizations. Furthermore, if most attention has focused on the traditional nonprofit model and the commercial model is significantly different, we may be limiting our understanding of nonprofit organizations, leaving the field of commercial nonprofits unexplored.

This study provides evidence that organizations relying primarily on program revenues experience different contingencies relative to the flow of revenue and the costs to raise it. Because these organizations do not rely mainly on donations, they are not subject to the same audit

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<sup>4</sup> Dart (2004) labeled organizations using commercial philanthropy as "social enterprises."

requirements, possibly affecting governance oversight and the quality of financial reported information. Furthermore, these organizations demonstrate structural variations from the traditional model in attracting and maintaining revenue. This study identifies that the two operating models are present in every activity sector, highlighting a stronger commercial presence in education, health, mutual benefits, and human services. Given that research on the commercial model of nonprofit organizations is scarce, these findings prompt future studies to observe how these organizations operate, what drives their choices in structure, and their goals for efficient operation.

Using data extracted from tax filing Form 990, I identify how social enterprises and traditional fundraisers experience differences in revenues, expenditures, and monitoring requirements and how these differences affect their use of resources to satisfy their social missions.

<sup>5</sup> Users of financial information, research, and resource providers may be able to observe these differences and arrive at important conclusions that have not been analyzed in the past, given the stronger emphasis on studying the traditional fundraising model.

Traditional fundraisers and social enterprises operate under different environments given their primary source of revenue, consequently affecting decisions about how they attract and retain revenue and how they allocate and use their resources. The predictability of future revenue affects management choices regarding planning, budgeting, operations, and investments. I hypothesize and find that social enterprises experience more revenue persistence in a three-year window compared to traditional fundraisers, observing a positive and significant correlation between future and current revenues. Additional test work reports how external factors, such as changes in tax laws, have a lower impact on total revenues for social enterprises. Using a differences-in-

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<sup>5</sup> I wish to give a special acknowledgment to Gregory Saxton for sharing the data used in this study.

differences analysis, my empirical results show that total revenue of traditional fundraisers experience a material decline, a year after the adoption of tax law changes in the Tax Cuts and Jobs Act (2017), which affected taxation benefits for donations. These results contrast with a positive coefficient in total revenue for social enterprises in the post-adoption period.

In addition, operating costs behave differently in both revenue-generation models. An organization will direct its resources to generate and attract more revenue, influencing the allocation of expenses and costs. Thus, financial ratios commonly used to measure performance in nonprofit organizations may vary according to the operating model. The *program ratio* is a financial ratio that calculates the relationship between program costs and total expenses. Traditional fundraisers will raise fundraising revenue through fundraising expenses. Social enterprises, on the other hand, will not incur substantial fundraising expenses because their primary source of revenue is not raised through fundraising activities. Fundraising expenses increase total expenses in the program ratio equation, impairing comparability between operating models. My empirical results evaluating how program ratios are affected by operating model demonstrate that, on average, social enterprises are favored with greater program ratios, impairing the comparability between organizations using different operating models.

I hypothesize that external monitoring also varies depending on the operating model used by each nonprofit organization. Monitoring is how external agents observe, control, and make decisions about an organization. Third parties providing resources to the organization want to assess how well the organization is using these funds. For those organizations reliant on fundraising revenues, these monitoring controls often involve auditing financial statements or complying with government audits. In contrast to traditional fundraisers, social enterprises depend on customer satisfaction and may not require the same monitoring requirements. Reliance on donor

resources makes traditional fundraisers subject to donors' monitoring controls and agency costs, while social enterprises are mainly controlled by customer preferences. Test work comparing financial and government audits confirms that social enterprises are less likely to audit their financial statements compared to traditional fundraisers, albeit showing a positive indicator that their accounting fees are greater.

Investment decisions are motivated by an organization's perception of efficiency. I expect to find that the operating model affects these decisions and the organization's use of resources to satisfy their respective social missions. For traditional fundraisers, efficiency focuses on maximizing revenue through fundraising activities. Social enterprises are motivated to enhance customer satisfaction and focus their investments on fixed assets that will lower costs and increase the quality of their program services and products. As I predict, my empirical results show that social enterprises favor investments in fixed assets and present greater returns for fixed asset investments compared to traditional fundraisers, even when matching organizational characteristics by size, age, and industry. These differences demonstrate that an organization's operating model affects investment decisions and operating structure, further impairing the comparability of financial reported information.

The results from this study support the idea that traditional fundraisers and social enterprises are fundamentally different and that users of reported financial information should consider these differences when analyzing nonprofit performance, operations, and structure. The chosen operating model affects management decisions about operations, investments, and external controls. Future research should separate organizations based on their primary source of revenue to improve accuracy and inferences from statistical analysis using financial reported information. Additionally, this study highlights that while past research has produced important advances in



understanding nonprofit behavior, funding interactions, and management choices, more work observing the environment and factors affecting social enterprises can provide new answers and increase our understanding of nonprofit organizations.

## Chapter 2: Theoretical Background

Nonprofit organizations strive to improve living conditions for the community. These organizations emerged from the community's altruistic desire to help others in need. Peter Frumkin defines *nonprofit organizations* as entities that operate in an area where "... individual and social efforts are united, through the gap between market and state procurement to society..." (Frumkin 2009). In England, these organizations date back to the Middle Ages, with recognized incorporation during the Renaissance in 1597. The first models appeared as an extension of religion, royalty, and nobility that attracted private donations to give shelter or religious education and provide basic needs for people experiencing poverty. Eventually, other humanitarian causes arose for sickness, old age, orphans, and unemployed workers.<sup>6</sup> Townspeople set up organizations to build infrastructure, such as roads and bridges. This development challenged the existing legal structures. The increasing amounts of resources devoted to charities required accountability, giving way to the first legislation in charity law.<sup>7</sup>

The English legal structure for charities transferred to the United States with the start of the colonies in the 1600s. When the first American colonies emerged, the government used private philanthropy to attenuate social ailments. After the colonies gained independence from England, the newly formed states kept the legal recognition of charitable organizations (Miller 1961; Fishman 1985), albeit exercising certain limitations on accumulated wealth and use of resources.<sup>8</sup>

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<sup>6</sup> "1601 Poor Law", UK Parliament 2023. <https://www.parliament.uk/about/living-heritage/evolutionofparliament/2015-parliament-in-the-making/get-involved/2015-banners-exhibition/rachel-gadsden/1601-poor-law-gallery/>

<sup>7</sup> The Poor Law Act of 1834 attempted to impose accountability on public charities and reduce the cost of charitable operations. "1834 Poor Law", The National Archives. <https://www.nationalarchives.gov.uk/education/resources/1834-poor-law/>

<sup>8</sup> Each state law regulates what constitutes a nonprofit status for that state, which results in regulating variations between states. To increase standardization, some states adopted the California Model Nonprofit Corporation Law (1980).

Individual donors are not the only ones who make contributions to charities. Social causes attract diverse funds through grants, foundation contributions, independent donors, and commercial exchanges. Nonprofit organizations use fundraising activities to raise donations and direct them to relieve social needs (Frumkin and Kim 2001), after using a portion of these funds to cover for administrative and miscellaneous costs. This traditional model has historically been the most common and popular model for nonprofit organizations. The 2019 Summary of The National Council of Nonprofits (NCN) confirmed that most nonprofit funding is still provided by donations and grants.

Donations stem from an altruistic motivation; it is a disinterested effort in which a donor receives no direct benefit (product or service) in exchange for the funds donated.<sup>9</sup> Research work has helped us understand donor behavior in the traditional fundraising model. In their seminal work, Weisbrod and Dominguez (1986) identified the motivators for donor contributions, observing that donors are most concerned about the net effect of donations. The net donation is the aftermath of fundraising efforts, taxes, and expenses unrelated to the social mission. In other words, this model proposes that donations are positively associated with fundraising efforts and taxes, and inversely associated with administrative or miscellaneous expenditures.

Further research observing donor behavior supported the idea that donors are interested in the organization's use of donated resources (Tinkelman and Mankaney 2007). Thus, organizations want to provide relevant information to current and prospective donors (Parsons 2007; Saxton, Kuo, and Ho 2012; Saxton and Wang 2014; Harris, Neely, and Saxton 2021) as a communication channel to inform donors how efficiently they use the resources received.

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<sup>9</sup> FASB Topic 958-605

Financial statements, or tax reporting Form 990, are helpful for this assessment (Parsons 2003; Yetman and Yetman 2013). Government agencies and other external agents use financial ratios and performance metrics extracted from financial information to observe nonprofit organizations and assess their social output or achievement of the social mission (Coupet 2018; Coupet and Schehl 2022).<sup>10</sup> Many individual donors may not be well versed in calculating financial metrics, and they will then use watchdog agencies that rate organizations based on their financial information and other characteristics (Gordon, Knock, and Neely 2009; Harris and Neely 2015) to facilitate donor decisions.

Although fundraising revenue is a common source of income, it is also risky and volatile, and organizations are constantly uncertain about future donations (Froelich 1999). Donor contributions are difficult to predict because they respond to personal motivations and economic, governmental, and legislative changes (Chang and Tuckman 1991). Additionally, competition for donations has significantly increased, given the rapid growth of nonprofit organizations in recent decades. Only in the United States have nonprofit organizations jumped from less than 10,000 organizations at the beginning of the 20th Century to 1.5 million in current years.

While the traditional model dependent on donor contributions is widely operated, a new operating model evolved in recent decades. This model exchanges social benefits for fees, collecting program revenues through the delivery of social goods or services. The setup is similar to profit-bearing businesses because those paying for social benefits become a customer to the organization. Initially, these commercial transactions emerged as supplementary income for nonprofit organizations and were used to counteract the vulnerability of donor contributions (Crimmins and Keil 1983). However, political and economic changes in recent years increased the

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<sup>10</sup> An organization provides benefits to society in the form of social output. “Social output” stands for the resources destined for the social mission (Weisbrod and Dominguez 1986).

presence of these transactions. The National Council of Nonprofits study from 2019 indicates that 49 percent of nonprofit income is collected through fees exchanged for services or products.

## **Social Enterprises**

Research has followed the rise of the commercial model (see Pfeffer and Salancik 1974; Weisbrod 1980; Hansmann 1980; Crimmins and Keil 1983; Salomon 1993; Weisbrod, 2000; Dart 2004, among others) and has dedicated more attention in recent years. Crimmins and Keil (1983) introduced the term nonprofit enterprises to explain how some nonprofit organizations expanded their funding options through income-producing transactions. Hansmann (1980) proposed the term commercial nonprofits and distinguished them from donative organizations, which receive most income from grants or donations. As the commercial nonprofit model evolved, research did not agree on a standard defining label. The idea of a commercial character drew terms such as enterprises or entrepreneurships, but the defining characteristics varied from one author to another. In 2004, Dart evaluated the diverse terms and adopted the label "social enterprises" to identify organizations that use commercial exchanges to deliver their social mission. He explained that these organizations differ from traditional fundraisers in strategy, structure, norms, and values because they adopt a business-like setup and use revenue-generation strategies. Dart indicated that these organizations are more market and client-driven and are comparatively more self-sufficient because of their lower reliance on donor contributions.<sup>11</sup>

Salomon (1993) and Fishman (1985) detail the evolution of traditional fundraisers and social enterprises and explain that in the beginning, nonprofit organizations in the United States were supported primarily by private donations. Private donations were later supported by

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<sup>11</sup> Khumawala and Shroff (2023) use the term donative not-for-profits and commercial not-for-profits to refer to organizations with primary sourcing through donations and grants or those with primary sourcing from the sale of goods and services.

government funds after some economic events pressured the federal government to increase its funding; during the Great Depression in the 1930s, the government facilitated funds to carry out social benefits that private contributions alone could not sustain.

Government funding through social programs peaked in the 1960s, becoming the primary contributor for nonprofit organizations (Gilbert 1984).<sup>12</sup> This funding pattern changed during the Reagan administration, and the partnership between government and nonprofit organizations overcame a severe reorganization. In an effort to control escalating government deficits, the federal government limited funding to health services and housing assistance. This policy attempted to incentivize state, local agencies, and private donations to increase contributions to the other sectors and relieve federal budgets. Although states and individual donors reacted favorably and increased their support, the effect was lower than intended, and organizations faced funding shortages. When revenue is scarce, competition tightens; many nonprofit organizations searched for alternative sources of income. The intended effect of the drastic cut in federal spending forced some nonprofit organizations to favor program revenue as the primary source of income. The reported revenue growth in nonprofit organizations from 1977 to 1989 resulted from a 55 percent increase in commercial transactions (Froelich 1999).

Nonprofit organizations are not solely dependent on one income. They commonly operate through a mix of revenue sources, mainly fundraising, program, and investment income (Chang and Tuckman 2010; Calabrese 2011a). At its inception, an organization will choose an operating structure and align its management decisions around it (Meyer and Rowan 1977; Hannan and Freeman 1977; Pfeffer and Salancik 1978). This choice may define an inclination towards fundraising or program revenue while using other types of income as complementary funding.

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<sup>12</sup> Gilbert (1984) shares that government expenditures in public social welfare increased from \$52.3 billion to \$428 billion in the two decades following 1960, representing 18.5 of GNP in 1979.

Organizations that mainly receive contributions to support the social mission will focus on generating fundraising revenue and search for maximum efficiency from fundraising efforts (Frumkin and Kim 2001; Khumawala and Shroff 2023). Organizations with a stronger concentration on program revenue will focus on raising program revenue through the business transaction of social goods and search for an efficient operation that attracts more customers (Crimmins and Keil 1983; Ecer et al. 2017). Under these circumstances, observing operation and evaluating performance in nonprofit organizations using financial information should consider the differences between operating models, because they will direct different efforts to raise revenue and maximize their efforts to raise it.

Assessing performance in the nonprofit environment is attempting to find the holy grail (Forbes 1998). Performance metrics seek to identify how efficiently a nonprofit organization achieves its social mission with its available resources; yet, performance is the unobservable variable because neither audited financial statements nor Form 990 include a total count of social output, which could help users assess an organization's social reach. Social output is the quantification of delivered social benefits in a period. Without a count of social output, it is impossible to identify if the organization performs and satisfies its social mission. Financial information is helpful because it measures the cost of social output, reported as program expenses.

<sup>13</sup> However, program expenses represent the cost but not social output; without the corresponding count of social output, it is impossible to assess whether program expenses successfully produced

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<sup>13</sup> Earlier research in nonprofit organizations focused on understanding the operations and factors affecting donor decisions (Weisbrod and Dominguez 1968; Parsons 2003); current research is now working on identifying performance metrics to evaluate nonprofit performance (Tinkelman and Donabedian 2009; Coupet and Berrett 2019). Tinkelman and Donabedian (2009) proposed an integrative metric to observe nonprofit performance using a ROA formula, similar to the Dupont model. Their model combines social outcome, donations, and manager compensation. Although the model proposes a complete and integrative performance evaluation, it requires the count of social output, which limits the scope for stakeholders not able to gather the information on the organization's social output.

social welfare (Kaplan 2001). In other words, the value rendered by program expenses does not provide enough information to know if program expenses have procured a great amount of social benefits or if the organization has incurred in great expenses but delivered low social output. One may not distinguish an organization efficiently using resources, reporting high program expenses and high social output from another with an equal amount of expenses not efficiently used that deliver a low and unsatisfactory social output.

As the search for optimal performance metrics continues, stakeholders for nonprofit organizations use financial information to make decisions related to an organization. Financial information provides reliable information about the organization's operations through which stakeholders can observe how much revenue is generated, the efforts and operating costs incurred, and the organization's structure. Users of financial information calculate financial ratios extracted from financial statements or Form 990 as a tool to evaluate nonprofit operations.

Most evaluation procedures observe an organization through varied characteristics including financial performance ratios (Cameron 1981; Connolly, Conlon, and Deutsch 1980), which evolved from the model proposed by Weisbrod and Dominguez (1986). The most common analysis using financial information is through the program ratio, which calculates the relationship of program expenses to total expenses incurred in the period. This value indicates how much of the available resources are used for the social mission (program expenses) compared to the total amount spent (total expenses). If an organization presents a low program ratio, the value indicates that the organization is spending less on its social mission and more on other expenses, signaling that administrative or fundraising expenses may be costly and prioritized, reducing the outcome value of a donation. Research has demonstrated how donors use financial reported information



when making donation decisions (Parsons 2003, 2007) as a tool to evaluate if organizations are making effective use of donations.<sup>14</sup>

The rise of the commercial model in social enterprises prompts the question of whether we can evaluate resources, costs, and performance metrics across organizations independent of the operating model they use or if this is an impairment to comparability across organizations. Evaluations using financial ratios may lack comparability because an organization's operating model can determine different performance targets, use of resources, and driving costs, generating a critical gap between organizations. If the operating model is not considered, financial ratios can deliver misleading results when comparing a traditional fundraiser to a social enterprise.

Regardless of the operation, social procurement remains the main goal for every exempt organization, net from administrative and fundraising costs; if the goal of a nonprofit is to allocate resources received to alleviate social needs, the aftermath in social benefits should be similar using either type of revenue (Dart 2004). However, financial reported information evaluations may differ when comparing the two models. If traditional fundraisers derive income from fundraising expenditures, and social enterprises survive from self-generated program revenues, significant differences may exist between their financial reported information. To this date, users of nonprofit financial information and researchers observe nonprofit organizations through their financial reported information and evaluate performance metrics often without separating the significant differences between operating models. Failing to consider these differences may incorrectly rely

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<sup>14</sup> Because nonprofit analysis is complex and may be cumbersome for individual donors, many external agents (“watchdog agencies”) provide ratings for this purpose with the intent that an individual or unsophisticated donor can compare between nonprofit organizations and make a more informed decision about a donation. Research has demonstrated how donors are sensitive to agency ratings and respond positively (negatively) to high (low) metrics (Gordon et al. 2009; Harris and Neely 2015).

on the premise that resources, use of funds, and performance goals are the same for all organizations.

### **Chapter 3: Hypotheses Development**

While nonprofit organizations all strive to benefit society, they are not homogeneous, and research may miss relevant informational differences if it groups all entities into one category. Past research pointed out that the diverse characteristics of the nonprofit sector presented a challenge for research studies (Froelich and Knoepfle 1996). Thus, research often incorporates industry sectors or main activity groups (Tinkelman and Mankaney 2007; Tinkelman and Neely 2011), such as the National Taxonomy of Exempt Entities.<sup>15</sup> However, Weisbrod warned against this industry classification, explaining that heterogeneity among these groups may significantly affect statistical results (Weisbrod 1980). Alternatively, grouping organizations by their operating model may provide a sound basis to understand their structure and operating decisions, given that their operations will affect revenue, operating costs, and investments (Khumawala and Shroff 2023).

Hannan and Freeman (1977) advocate categorizing organizations based on the environment in which they operate because they will face common challenges that shape their behavior, structure, and operating systems (Marshak and Radner 1972; McKelvey 1982). Resource dependence theory (Pfeffer and Salancik 1978) explains that environments provide the resources necessary for an organization's survival and that these resources are provided by external agents that control their supply. These agents will exert control over the organization through the availability of resources and will closely monitor the organization's operations. This behavior will reflect on the organization's decisions, affecting its choices for attracting and retaining revenue, the operating costs to generate revenue, and how the organization defines efficiency. These choices should be evident in the organization's reported financial information.

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<sup>15</sup> The National Center for Charitable Statistics developed the National Taxonomy of Exempt Entities (NTEE) as a three-digit code to categorize an organization's purpose.

Resource dependence theory argues that revenue defines management's decisions. Current revenues impact the organization's activities and operating costs. Future revenues affect planning and budgeting, defining future costs and expenses. Based on this theory, traditional fundraisers rely on donations for their survival, which may not provide a stable flow of resources. For example, Chang and Tuckman (1991) observed that donor preferences are easily affected by a great variety of factors, such as social trends, economy, tax policies, or politics, making this revenue subject to high volatility. This changing environment is not the same for social enterprises. Social enterprises operate a commercial setup that is less vulnerable to donor preferences. Dart (2004) explains that social enterprises are more market-driven, self-sufficient, and supported by customers because they emulate a commercial, for-profit business operation. Because social enterprises are less reliant on donor contributions, they should experience a more even flow of revenue. Thus, factors affecting the revenue stream will differ for social enterprises compared to traditional fundraisers, and social enterprises may have higher revenue persistence than traditional fundraisers.

Prior research describes earnings persistence as the ability of current earnings to determine future earnings (Dechow and Dichev 2002; Dichev and Tang 2009; Frankel and Litov 2009). Dichev and Tang (2009) observe how firms operating under low earnings volatility exhibit higher earnings persistence.<sup>16</sup> Measuring revenue persistence in both operating models can provide evidence that the factors affecting revenue differ across models and highlight that these two models are not comparable.

Operating costs vary according to the source of revenue because they search to satisfy the resource providers (Pfeffer and Salancik 1978). In a commercial setup, resource providers are customers. In a traditional nonprofit organization, the resource providers are donors and grantors.

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<sup>16</sup> There are other variations of this formula, substituting earnings with revenues or cash flow (Sloan, 1996).

Traditional fundraisers will use fundraising activities to raise fundraising revenue, which is reflected on financially reported information as fundraising expenses.<sup>17</sup> Social enterprises generate revenue through program expenses and do not require fundraising expenses for survival. Their dependence on commercial transactions focuses attention on customer satisfaction, and customers' preferences will define their continued operations. While both models incur program expenses to satisfy their social mission and deliver benefits to society, they will not equally incur fundraising expenses. These operating choices will affect the values in total expenses reported on financial information.

Current evaluation metrics use the program ratio to assess how an organization utilizes its resources. The program ratio measures the relationship between program expenses and total expenses incurred in one period.<sup>18</sup> Fundraising activities in traditional fundraisers will increase the value of total expenses, affecting the calculation of the program ratio. Hence, fundraising activities should impair the comparability of program ratios between operating models. Since social enterprises do not incur significant fundraising expenses related to their total revenue, program ratios should generally be greater for social enterprises than traditional fundraisers.

Based on their operations, revenues and operating costs should be different for social enterprises and traditional fundraisers.

***H1 (a): Social enterprises have more revenue persistence than traditional fundraisers.***

***H1(b): Due to differences in operating costs, social enterprises have greater program ratios compared to traditional fundraisers, ceteris paribus.***

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<sup>17</sup> Tinkelman (2006) explains a non-linear relationship between fundraising income and fundraising expenses, where higher fundraising expenses have a reduced correlation with a positive reaction to fundraising income.

<sup>18</sup> Research has dedicated extensive attention explaining the inadequacy of program and overhead analysis; however, a lack of quantifiable reported social output does not facilitate the use of alternative metrics (Coupet and Berrett 2019; Mitchell and Calabrese 2020; Harris, Neely and Parsons 2022).

Monitoring controls for both operating models will also present fundamental differences depending on their environment. Agency theory (Jensen and Meckling 1976) explains that shareholders incur monitoring costs to ensure optimal firm performance and reduce information asymmetry. A nonprofit organization does not have shareholders; therefore, agency theory for nonprofit organizations is not the same as in the for-profit literature.<sup>19</sup> The lack of shareholders causes a shift in the agency relationship between owners and management; no shareholders are concerned with the organization's optimal performance (Neely, Saxton and Maharaj 2023). However, agency costs remain because other stakeholders are concerned with the organization's operations. Research has demonstrated that donors want to confirm that an organization uses donations to deliver the most benefits to society (Weisbrod and Dominguez 1986; Neely et al. 2023). Reported financial information is helpful for this purpose. The auditing of financial statements helps attest to the accuracy of the information reported by an organization (Garven, Beck and Parsons 2018; Mitchell and Calabrese 2020).<sup>20</sup> Large donors and grantors will often require audited financial statements, and governments will impose compliance with government audits.<sup>21</sup> Additionally, prior research has found that nonprofit organizations are often incentivized to audit financial information to convey operating transparency to the public and attract more donors (Mitchell and Calabrese, 2020; Harris and Neely 2021; Coupet and Schehl 2022; Neely, Saxton and Maharaj 2023).

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<sup>19</sup> See Neely, Saxton and Maharaj (2023) for an extensive analysis on nonprofit regulation and monitoring.

<sup>20</sup> See Elder and Yebba (2023) for a comprehensive overview of research in auditing of nonprofit entities.

<sup>21</sup> Federal grants are regulated by the Single Audit Act which imposes annual compliance to organizations receiving \$750,000 or more from federal grants in a year. The Single Audit Act (1984) was amended in 1996, then modified by the Uniform Guidance (2013). The reporting requirements have changed since 1984 along with the minimum reporting threshold; however, the main goals still continue: to increase grantee accountability and decrease the administrative compliance burden for grantees. For a detailed explanation on the historical development of the Single Audit requirements, refer to Tassin, Waymire and Hines (2019).

Comparatively, social enterprises do not receive their primary income from donations. They may not be required to audit their financial statements, or they may find no benefit from conveying operating transparency. Consumers will generally not require audited financial statements to make a purchase decision or compare financial ratios. Market forces regulate social enterprises (Dart 2004; Mitchell and Calabrese 2020), and their survival depends on customer satisfaction, achieved through the exchange between a fair price and the quality of the products and services rendered. This idea is conveyed in the following hypothesis:

**H2:** *Social enterprises are less likely to audit their financial statements than traditional fundraisers.*

In the traditional fundraisers' context, when donors and grantors control the use of resources, many organizations strive to appear as efficient as possible through calculated financial ratios. Operating performance is commonly measured using program ratios (Jones and Roberts 2006; Calabrese 2012; Vansant 2016; Hager, Rooney, and Pollak 2002; Parsons, Pryor, and Roberts 2017), which measure the proportion of resources used for the social mission compared to other expenses. Higher program ratios indicate a larger proportion of resources directed to the social mission. Because higher program ratios are favored, many organizations undergo an exaggerated effort to reduce other expenses, such as overhead and administrative expenses, and decrease the total revenue in the denominator. Reduced administrative and overhead expenses will, over time, produce an administrative starvation cycle (Lecy and Searing 2015), sacrificing administrative efficiency to present better metrics in program ratios.

The motivation for efficient operation is different for social enterprises, and they may not be as prone to the starvation cycle. Social enterprises depend on customer satisfaction, and their operating efficiency will focus on their customers and commercial transactions (Malatesta 2014; Hillman, Withers, and Collins 2009; Ecer et al. 2017; Berrett and Holliday 2018). Contrary to

traditional fundraisers, social enterprises may favor investments in fixed assets if they support customer satisfaction and reduce program costs. Therefore, social enterprises will focus on efficiency produced from the revenue returns on fixed asset investments. This idea is represented in the third hypothesis below:

**H3:** *Social enterprises have a greater return of program revenue on fixed operating assets than traditional fundraisers.*



## Chapter 4: Research Design

### 4.1 Data and Sample Construction

The data for the current study extracts information from Form 990 that nonprofit organizations report to the IRS for tax compliance and includes tax filings from 2010 to 2019, available through GuideStar National Nonprofit Research Database.<sup>22 23</sup> The original data contains 1,588,175 observations. This study excludes organizations filing simplified Form 990 EZ whose gross receipts are less than \$50,000 dollars since these filings do not include detailed information relevant to the test work. Following Tinkelman and Neely (2011), the data does not include negative program or fundraising revenue or total expenses. As part of the cleaning process, the data excludes observations where one category of revenue or expenses is larger than the total or when the summary does not match the detail in the schedules. Setting up the study through panel data closely analyzes how the same organization operates across the observed period. The dynamic panel modeling estimation requires complete firm-year observations across the observing period, arriving at 472,200 observations from 47,220 organizations from 2010 to 2019. The data-cleaning process is consistent with prior research (Calabrese 2011, 2012; Tinkelman and Neely 2011); however, the condition to use only balanced panel data restricts the ending number of observations included in the test work. Table I summarizes the sample selection and the data cleaning process. Panel B provides a count of both models for each year in the data. The total count of traditional fundraisers by year is consistently higher than the total count of social enterprises in the data,

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<sup>22</sup> A special acknowledgement and gratitude to Dr. Greg Saxton for sharing nonprofit data for this study.

<sup>23</sup> Mercado, Parsons and Smith (2022) comprehensively detail the evolution of nonprofit research and data available to the public. Research analysis commonly uses Form 990 for data sources. Past studies compare the differences between values reported to the Internal Revenue Service and audited financial statements (Froelich and Knoepfle 1996; Froelich, Knoepfle, and Pollack 2000; Gordon et al. 2006) and provide validation to this data, warning that specific and detailed expense categories may have reduced accuracy, but general categories remain comparable to audited financial values. Although information from Form 990 is the main source of nonprofit data, it is important to note that these are not audited values and some values may be implausible.

making up 57 percent of the total sample. However, the sample demonstrates that the social enterprise count increases progressively every year, except in the last year of observations. Given that this study observes the same organizations over a ten-year consecutive period, it is possible to observe some operating switching over the years; some organizations switch from the traditional fundraising operations to the social enterprise model.

**Table I. Sample Selection**

**Panel A: Sample selection (reporting years from 2010 to 2019)**

Organization-year observations from NCCS website	<b>1,588,175</b>
Observations with errors on total revenue and expenses, negative fundraising or program revenue, sum of program and fundraising revenue equals zero.	<b>47,159</b>
Organizations without continued Form 990 reporting between 2010 to 2019	<b>1,541,016</b>
Total sample observations	<b>472,200</b>
Total organizations in the sample	<b>47,220</b>

**Panel B: Count by operating model and year in the sample data**

<b>Year</b>	<b>Traditional fundraisers</b>	<b>Social enterprises</b>	<b>Total by year</b>
<b>2010</b>	27,202	20,018	47,220
<b>2011</b>	27,202	20,018	47,220
<b>2012</b>	27,321	19,899	47,220
<b>2013</b>	27,159	20,061	47,220
<b>2014</b>	26,980	20,240	47,220
<b>2015</b>	26,918	20,302	47,220
<b>2016</b>	26,820	20,400	47,220
<b>2017</b>	26,777	20,443	47,220
<b>2018</b>	26,665	20,555	47,220
<b>2019</b>	27,050	20,170	47,220
<b>Total</b>	270,094	202,106	472,200

**Panel C: Count by activity sector (NTEE)**

NTEE major groups (10): (AR) Arts, culture, and humanities; (ED) Education; (EN) Environment; (HE) Health; (HU) Human services; (IN) International; (MU) Mutual benefit; (PU) Public and societal benefit; (RE) Religion; (UN) Unknown

	TF			SE		Total
<b>AR</b>	27,551	74%		9,739	26%	37,290
<b>ED</b>	36,595	49%		38,205	51%	74,800
<b>EN</b>	14,997	84%		2,933	16%	17,930
<b>HE</b>	35,213	41%		50,167	59%	85,380
<b>HU</b>	97,843	53%		85,267	47%	183,110
<b>IN</b>	6,433	87%		957	13%	7,390
<b>MU</b>	574	47%		636	53%	1,210
<b>PU</b>	36,664	78%		10,196	22%	46,860
<b>RE</b>	14,148	78%		3,932	22%	18,080
<b>UN</b>	82	55%		68	45%	150
<b>Total</b>	270,094			202,096		472,200

Panel C parts the data by activity sector: arts, education, environment, health, humanities, international, mutual benefit, public and societal benefit, religion, and unknown. The table shows that social enterprises are present in every activity, predominating in education and health activities and with a lower presence in international, environmental, religious, and public benefit.

All variables are transformed using natural logarithms to address outliers skewing results, approximating a more normal distribution. Independent and control variables have potential simultaneity with the dependent variable; to address this matter, these variables are lagged one period (Tinkelman and Mankaney 2007). Table II presents descriptive statistics of scaled and logged main variables used in the statistical models described next. Panel A reports data for all organizations while Panel B reports descriptive statistics by operating model.

**Table II. Descriptive Statistics**

Panel A provides descriptive statistics for all organizations, showing million dollars and these values converted to their natural logarithm. Panel B separates sample organizations by their operating model: traditional fundraisers and social enterprises.

**Panel A. All organizations**

<b>Scaled variables</b>	<b>Obs</b>	<b>Mean</b>	<b>(by million dollars)</b>			<b>Logged variables</b>			
			<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>
Total revenue (CY)	472,200	2,030	627,000	(0)	262,000,000	14.23	2.14	0.00	24.86
Program revenue (CY)	472,200	162	16,600	-	2,930,000	10.23	6.21	0.00	24.85
Fundraising revenue (CY)	472,200	1,830	627,000	-	262,000,000	11.54	4.51	0.00	21.97
Investment revenue (CY)	472,200	0	19	(1,050)	11,700	7.27	4.65	0.00	22.09
Total expenses (CY)	472,200	2,030	627,000	(0)	262,000,000	14.18	2.11	0.00	24.83
Program expenses (CY)	472,200	1,990	627,000	(0)	262,000,000	13.91	2.37	0.00	24.79
Fundraising expenses (CY)	472,200	22	4,560	(0)	1,350,000	5.23	5.67	0.00	19.44
Management expenses (CY)	472,200	11	1,350	(19)	438,000	11.20	3.82	0.00	22.05
Average total assets	472,200	45	541	0	74,400	14.65	2.26	0.00	25.03
Age	472,200	35	30	-	369	35	30	0	369

**Panel B. By operating model**

<b>Traditional Fundraisers</b>		<b>(by million dollars)</b>				<b>Logged variables</b>			
<b>Scaled variables</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>
Total revenue (CY)	270,094	3,180	817,000	0.00	262,000,000	13.70	1.88	0.00	22.78
Program revenue (CY)	270,094	5	592	0.00	129,000	6.84	6.05	0.00	21.40
Fundraising revenue (CY)	270,094	3,110	817,000	0.00	262,000,000	13.26	2.17	0.00	21.97
Investment revenue (CY)	270,094	0	25	-1,050.00	11,700	7.06	4.49	0.00	22.09
Total expenses (CY)	270,094	3,190	817,000	0.00	262,000,000	13.62	1.82	0.00	22.46
Program expenses (CY)	270,094	3,130	817,000	0.00	262,000,000	13.30	2.20	0.00	22.30
Fundraising expenses (CY)	270,094	37	5,940	0.00	1,350,000	6.18	5.57	0.00	19.44
Management expenses (CY)	270,094	7	596	-19.30	95,000	10.68	3.41	0.00	20.34
Average total assets	270,094	21	472	0.00	74,400	14.23	2.03	0.00	25.03
Age	270,094	32	26	0.00	369	32	26	0	369

<b>Social Enterprises</b>		<b>(by million dollars)</b>				<b>Logged variables</b>			
<b>Scaled variables</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>
Total revenue (CY)	202,106	398	26,200	0.00	2,930,000	14.93	2.27	0.00	24.86
Program revenue (CY)	202,106	388	25,900	0.00	2,930,000	14.75	2.30	0.69	24.85
Fundraising revenue (CY)	202,106	8	1,400	0.00	397,000	9.23	5.66	0.00	21.97
Investment revenue (CY)	202,106	0	10	-2,680.00	3,020	7.56	4.84	0.00	21.83
Total expenses (CY)	202,106	392	26,200	0.00	2,930,000	14.92	2.25	0.00	24.83
Program expenses (CY)	202,106	374	25,100	0.00	2,930,000	14.71	2.36	0.00	24.79
Fundraising expenses (CY)	202,106	1	179	0.00	37,700	3.95	5.55	0.00	19.11
Management expenses (CY)	202,106	17	1,950	0.00	438,000	11.89	4.20	0.00	22.05
Average total assets	202,106	78	622	0.00	52,300	15.21	2.42	0.00	24.68
Age	202,106	40	35	0.00	359	40	35	0	359

Average total assets are considerably different between models. Social enterprises present a larger average of total assets compared to traditional fundraisers. This condition transforms scaled data using average total assets, observing that total scaled revenues are higher for traditional fundraisers compared to social enterprises. However, gross values indicate that social enterprises receive greater total revenues than traditional fundraisers.

Gross data helps observe the environment where an organization operates. Grouping organizations by the operating model within each NTEE sector shows the different patterns in revenue sources. Figure 1 displays four main NTEE sectors to highlight these differences. Panel A reports data for organizations in the education sector. While both operating models attract a similar amount of fundraising revenues, social enterprises generate significantly higher revenue through commercializing program services. The arts, culture, and humanities sectors shown on Panel B illustrate the focus on program revenue for social enterprises, which has spiked growth in this sector in the last five years. Reliance on program revenues in the healthcare sector dramatically contrasts with the traditional fundraising model, evidencing a continued growth absent in the traditional model, as shown in Panel C. This situation is also demonstrated in Panel D, which observes revenue behavior in the public and societal benefits sector.

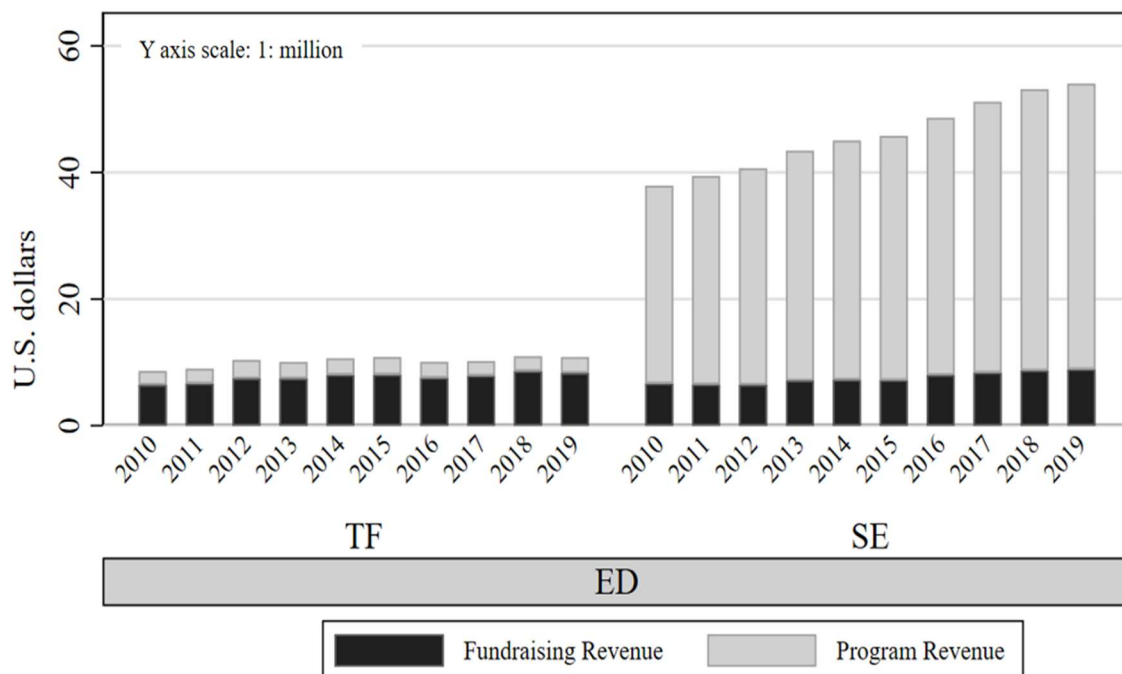


Figure 1. Education. Fundraising and Program Revenue by NTEE Sector, Traditional Fundraisers (TF) and Social Enterprises (SE).

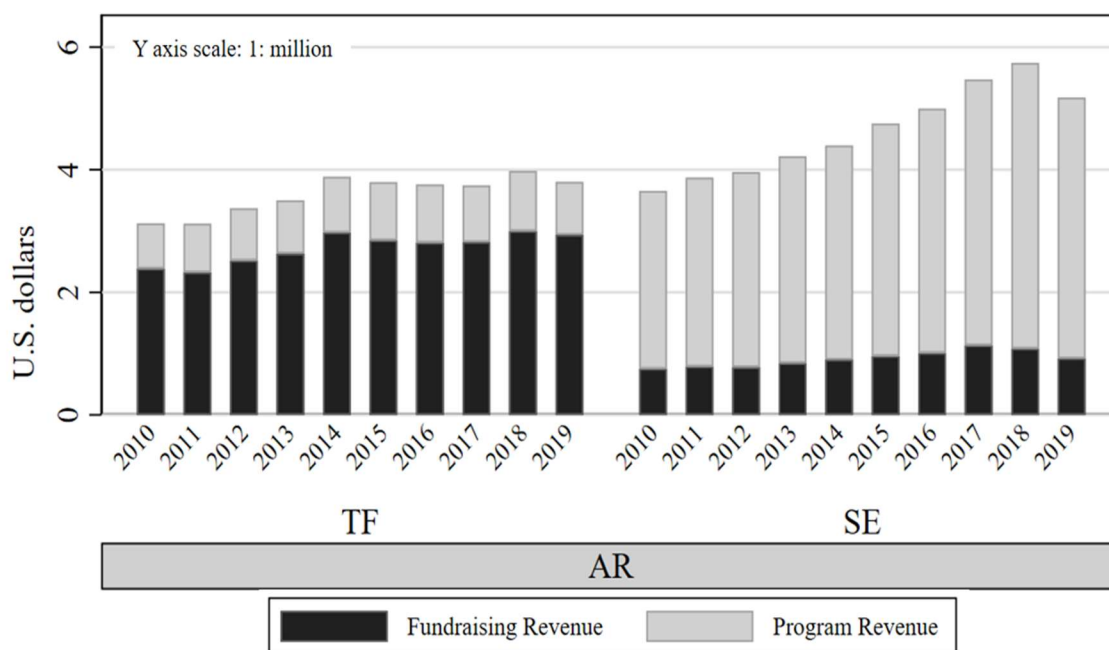


Figure 2. Arts, culture, and humanities: Fundraising and Program Revenue by NTEE Sector, Traditional Fundraisers (TF) and Social Enterprises (SE).

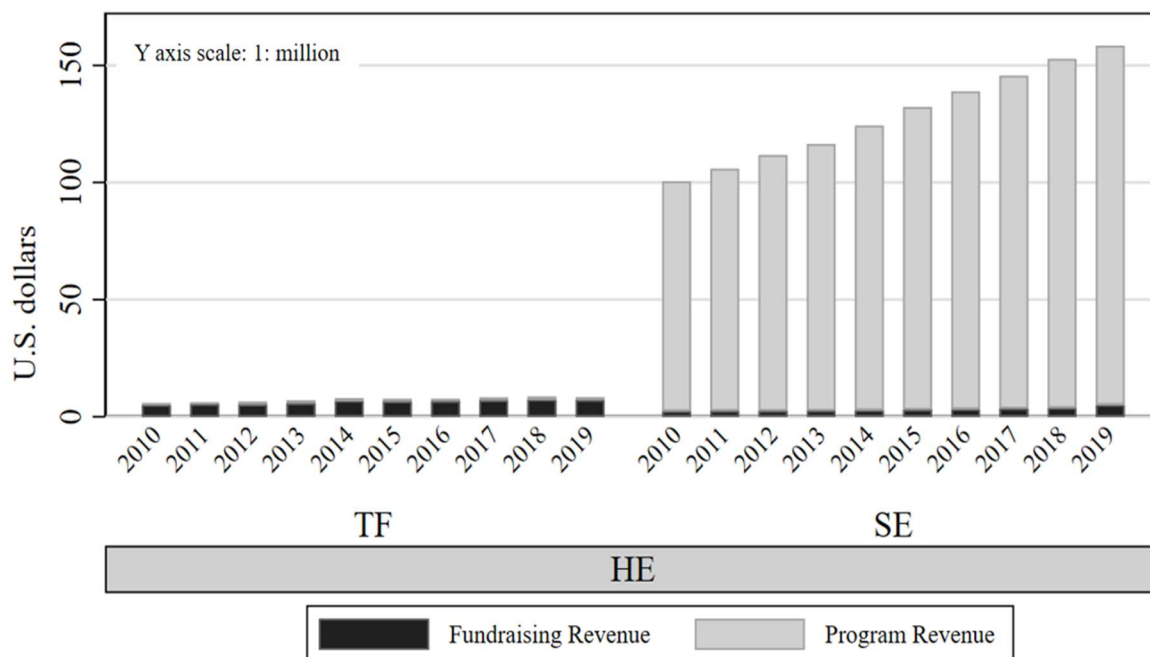


Figure 3. Health: Fundraising and Program Revenue by NTEE Sector, Traditional Fundraisers (TF) and Social Enterprises (SE).

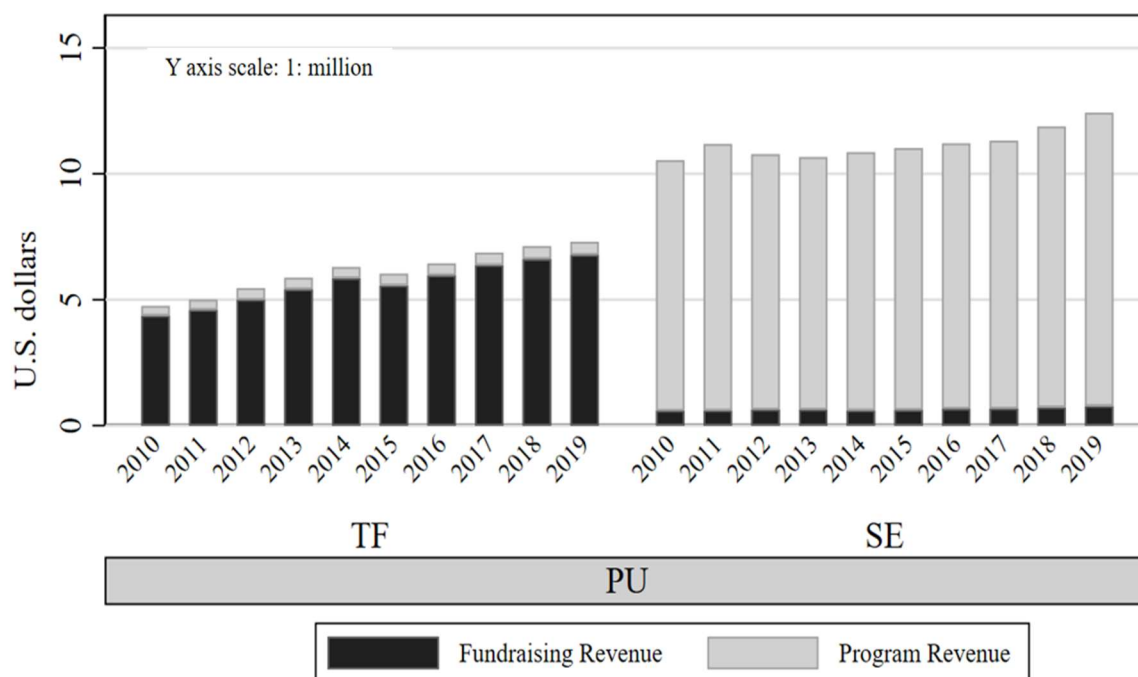


Figure 4. Public, societal benefits: Fundraising and Program Revenue by NTEE Sector, Traditional Fundraisers (TF) and Social Enterprises (SE).



Another interesting fact in the data is the average age reported for both models. Social enterprises are older than traditional fundraisers on average, suggesting that the commercial model has more preference among older organizations. Comparing the expenses mix, traditional fundraisers present greater fundraising expenses, as expected, while the logged values of program expenses portray lower numbers for traditional fundraisers (13.30) compared to social enterprises (14.71); this is also the case for management expenses. This comparison shows that traditional fundraisers allocate more resources to the fundraising activity, suggesting that they prioritize fundraising over program (social benefits) and administration (office expenses, employee salaries, or other related activities), consistent with prior literature (Ecer et al. 2017).

Pearson and Spearman correlations in Table III indicate high and significant interactions between the variables used in the models, confirming that program revenue is negatively correlated with fundraising revenue and positively correlated with management expenses and the program ratio. Fundraising revenue is expectedly positively correlated with fundraising expenses but negatively correlated with the program ratio. Interestingly, the correlation between program revenue and fixed assets turnover ratio observes a negative coefficient. These correlations are later observed in greater detail through the test work addressing Hypothesis 3, which demonstrates that the program revenue on fixed assets is greater connected with the social-enterprise model.

## **4.2 Variables and Empirical Models**

This study suggests that operating models behave differently observed through fundamental accounting values: operations, monitoring, and efficiency. To best understand the differences between the models, a binary value identifies social enterprises from the rest of the organizations. The binary identifier separates organizations that rely more on program revenue from those with a higher concentration on fundraising income or a mix of revenue sources; this is

an arbitrary assumption to highlight the proposed differences between operating models. However, it is important to caution that nonprofit organizations often favor diversifying revenue sources (Chang and Tuckman 1991; 1994). Partitioning the data by revenue concentration helps identify the primary operating model and the challenges each model faces. Reliance on more than 50 percent on one type of revenue may be a helpful indicator of an organization's operating model.<sup>24</sup> However, many organizations may use a mix of resources without committing to one specific revenue category. In those cases, organizations will balance the environments and challenges under varied revenues, attenuating the negative conditions affecting a particular type of revenue. This study focuses on identifying the primary differences in operations when an organization relies more strongly on fundraising or program revenue, acknowledging the work from Chang and Tuckman (1991; 1994) on organizations with diversified sources of income.

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<sup>24</sup> Untabulated additional test work repeated the primary econometric tests using a ratio of 60% reliance on program revenue to define the binary variable identifying social enterprises. The results are consistent with the findings for each hypothesis and support the analysis and conclusions arrived at for each test work.

**Table III. Pearson and Spearman correlations**

This table presents Pearson and Spearman correlations for the main variables tested in the empirical models used to evaluate hypotheses I, II, III

	Spearman correlations														
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Pearson correlations															
Total revenue	1	0.6689*	0.5961*	0.4714*	0.9796*	0.9689*	0.3635*	0.8535*	0.7674*	0.3586*	-	0.0308*	0.1525*	0.0123*	0.3164*
Program revenue	0.5177*	1	0.0520*	0.2505*	0.6849*	0.6870*	0.0696*	0.6266*	0.5359*	0.2988*	0.0291*	-	0.1194*	0.0135*	0.1171*
Fundraising revenue	0.3533*	0.1253*	1	0.3291*	0.5704*	0.5576*	0.5610*	0.5087*	0.4377*	0.2582*	0.1175*	-	0.4342*	0.0742*	0.2699*
Investment revenue	0.4735*	0.1570*	0.2498*	1	0.4412*	0.4272*	0.3246*	0.4359*	0.6499*	0.3900*	0.1271*	-	0.2116*	0.0716*	0.0412*
Total expenses	0.9534*	0.5418*	0.3367*	0.4451*	1	0.9910*	0.3575*	0.8635*	0.7539*	0.3575*	0.0148*	-	0.1410*	0.0536*	0.3094*
Program expenses	0.8818*	0.5223*	0.3039*	0.3985*	0.9312*	1	0.3305*	0.8212*	0.7404*	0.3508*	0.0717*	-	0.1083*	0.0253*	0.2986*
Fundraising expenses	0.3026*	0.0031*	0.4711*	0.2915*	0.2990*	0.2612*	1	0.3613*	0.3154*	0.2542*	0.3093*	-	0.9279*	0.2858*	0.2014*
Management expenses	0.6429*	0.3623*	0.3166*	0.3512*	0.6631*	0.5745*	0.3236*	1	0.6929*	0.3653*	0.3871*	-	0.1740*	0.4049*	0.2975*
Average total assets	0.7604*	0.4100*	0.2663*	0.6447*	0.7583*	0.6870*	0.2785*	0.5343*	1	0.3736*	0.0772*	-	0.1266*	0.0535*	0.0073*
Age	0.3738*	0.2605*	0.2248*	0.3854*	0.3777*	0.3471*	0.2662*	0.2964*	0.4097*	1	0.0855*	-	0.1492*	0.0825*	0.0347*
Program ratio	0.0857*	0.1136*	0.0648*	0.0609*	0.1235*	0.3379*	0.1921*	0.2944*	0.0066*	0.0187*	1	-	0.3895*	0.9143*	0.0990*
Fundraising ratio	0.0188*	0.2286*	0.2294*	0.1081*	0.0373*	0.0879*	0.5883*	0.0578*	0.0150*	0.0223*	0.4142*	-	1	0.3497*	0.1871*
Overhead ratio	0.1016*	0.0579*	0.0237*	0.0060*	0.0533*	0.1929*	0.1772*	0.3212*	0.0148*	0.0222*	0.8090*	-	0.3424*	1	0.0909*
Fixed assets turnover	0.0333*	0.1115*	0.0582*	0.0135*	0.0209*	0.0203*	0.0500*	0.0217*	0.0647*	0.0944*	0.0022	-	0.0719*	0.0265*	1

To calculate the concentration of program revenue, the first step is to observe the Diversification Index from Chang and Tuckman (1991), using program revenue and fundraising revenue, excluding investment income. Chang and Tuckman (1991) propose an adaptation of the Herfindahl-Hirshman Index, which is defined as the Diversification Index. This index measures how an organization's revenue is diversified, calculating the opposite of a concentration metric. Therefore, the concentration ratio used in this study first measures the proportion of program revenue to the sum of program revenue and fundraising revenue but does not integrate the diversification component from Chang and Tuckman. The formula does not include investment income because investment sources may be present in either operating model but will not define the organization's operational structure. Having investment revenue may mitigate some of the behavioral patterns proposed in this study, which conservatively may count against the results found in the test work.<sup>25</sup> Additionally, the values presented in investment income in Form 990 are net from investment expenses, while fundraising and program revenue are not. Combining net investment income already adjusted by investment expenses into the calculation of the proportion to gross revenue can mask the concentration of the other two sources of revenue. The formula to identify the concentration of program revenue is as follows:

$$Program\ Revenue\ Concentration = Prog\_revenue_{it} / \sum (Prog\_rev + Fund\_rev)_{it}$$

$$SE = \sum_{i=1}^3 PRC > 50\%$$

The concentration ratio resulting from the above description identifies organizations with 50 percent or more of program revenue, and classifies as social enterprises those organizations

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<sup>25</sup> Calabrese (2011) has evaluated that organizations will supplement income and alleviate hardships using investment income.

that present at least three consecutive years of program revenue concentration at or above 50 percent.<sup>26</sup> This requirement prevents organizations with temporary shifts from one type of revenue concentration or another from falling into a category that does not define their operating model.

The program ratio in this study is measured as program revenue over total revenue.<sup>27</sup> These values are winsorized at the 1st and 99th percentiles to address outliers in the data:

$$Program\_ratio_{it} = Prog\_rev_{it} / Total\_rev_{it}$$

## 4.3 Empirical Models

### 4.3.1 Revenue Persistence Model

The first hypothesis predicts that the source of revenue affects the challenges faced by each operating model. Hypothesis 1(a) evaluates if social enterprises demonstrate higher revenue persistence than traditional fundraisers. The following equation shows the statistical model, observing the relationship between future and current total revenue, including the interaction effect between current total revenue and social enterprises. The observed periods include +1, +2, and +3 future years. The equation controls for organizational characteristics. It includes the real gross domestic product indicator per year provided by the Bureau of Economic Analysis to control for economic factors affecting total revenue persistence.<sup>28</sup> The expectation is to find a positive coefficient from the interaction between current revenue and social enterprises.

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<sup>26</sup> The choice of 50 percent concentration ratio is consistent with prior research (Ecer, Magro and Sarpca 2017).

<sup>27</sup> As explained by Tinkelman (1998), the program ratio simplifies the price variable in the determinants model in Weisbrod and Dominguez (1968), where price stands for the cost of donations. Price is equal to the inverse of the ratio of total expenses to program expenses if the donor's tax rate holds constant for all donors. In this study, the program ratio is calculated as the ratio, not the inverse, of program expenses to total expenses where a higher coefficient indicates more funds used to achieve the social mission.

<sup>28</sup> Gross Domestic Product, Bureau of Economic Analysis, retrieved in October 15, 2023. URL: <https://www.bea.gov/data/gdp/gross-domestic-product>

$$Rev_{t+1} = \beta_0 + \beta_1 Rev_t + \beta_2 SE * Rev_t + \beta_3 Controls + e \quad (1)$$

As an additional test to observe how operating models face different revenue flows, this study uses an exogenous shock to fundraising income upon changing taxation regulations from the Tax Cuts and Jobs Act in 2017. Changes in tax law may be applicable to all organizations and individuals, unless a group is specifically excluded. Changes in the deductibility of charitable contributions through the Tax Cuts and Jobs Act of 2017 applied to all individual taxpayers. The incentive to donate to charity was negatively affected when standard deductions base increased, making itemized deductions less attractive as a tax planning strategy. This law affected nonprofit revenues because it affected donor behavior. However, given that social enterprises do not strongly rely on donations, their total revenue should not have been negatively impacted as strongly as traditional fundraisers.

Using a difference-in-differences regression, the expectation is that a shock to fundraising revenue does not negatively affect total revenue for social enterprises as strongly as for traditional fundraisers. The difference in differences model evaluates the reaction from social enterprises and observes the exogenous shock on total revenue using one year after the initial year of adoption, which is the tax filing year 2019. Controls for this equation consist of prior year investment income and prior year expenses: management, program, and fundraising. The model also includes controls for organizational characteristics that could affect the impact on revenue. The expectation is that the interaction between the post-adoption period in tax year 2019 and social enterprises will result in a positive coefficient that demonstrates how social enterprises experienced a lesser negative impact upon the adoption of the new tax law, compared to traditional fundraisers:

$$Rev = \beta_0 + \beta_1 TCJA + \beta_2 SE + \beta_3 TCJA\_SE + \beta_4 Controls + e \quad (2)$$

### 4.3.2 Program Ratios Model

Hypothesis 1(b) analyzes the differences between social enterprises' operating costs and traditional fundraisers. Traditional fundraisers will use fundraising efforts to generate fundraising income; however, social enterprises do not depend on fundraising income for survival and will not dedicate as much effort to this purpose. Because fundraising expenses increase the sum of total revenue, program ratios should be different for each operating model. To observe how fundraising expenses affect operating differences between both models, this study observes if social enterprises generally have greater program ratio values compared to traditional fundraisers. The model controls for unrelated business income, total revenue, and investment income plus organizational characteristics which could affect the values in program ratio:

$$Program\_Ratio = \beta_0 + \beta_1 SE + \beta_2 Controls + e \quad (3)$$

### 4.3.3 Monitoring Controls Model

Hypothesis 2 proposes that social enterprises face different monitoring controls than traditional fundraisers. Large donors and grantors require audited financial statements or compliance with government audits; therefore, observing the correlation between social enterprises and monitoring controls can identify if social enterprises experience different monitoring requirements than traditional fundraisers.

Form 990 requires organizations to indicate if they audited their financial statements for the reporting year and if they performed a government audit. Observing the relation between audit compliance and the binary variable identifying social enterprises could capture if social enterprises performed more or fewer audits than traditional fundraisers. The coefficient identifying social

enterprises in this equation controls for organizational characteristics related to audit risk, such as size, age, debt, and unrelated business income (UBI).<sup>29</sup>

$$Audited\_FS = \beta_0 + \beta_1 SE + \beta_2 Controls + e \quad (4)$$

#### 4.3.4 Operating Efficiency Model (Fixed Assets Turnover Ratio)

Organizational theories predict a constant pursuit of operating efficiency. Efficiency measures how well an organization accomplishes its objectives given the resources used (Pfeffer and Salancik 1978). Because social enterprises operate in a market environment, the market disciplines around operating efficiency affect their behavior. Social enterprises must provide competitive services or products to attract funds, which may incentivize them to make higher investments in operating assets that will support operative efficiency. One way to identify if social enterprises favor investments that support program revenue can be by comparing the return on assets. The model observes the return on fixed assets calculated as the ratio of program revenue over gross average fixed assets. The expectation is to find a positive correlation between social enterprises and program return on fixed assets across organizations; this indicates that social enterprises are more focused on providing a return on their fixed assets investments confirming prior research observing that traditional fundraisers tend to “starve” investments (Lecy and Searing 2015).

$$FAT\_Ratio = \beta_0 + \beta_1 SE + \beta_2 Controls + e \quad (5)$$

The models described above use balanced panel data and incorporate fixed effects to control for unobservable characteristics not captured in the variables, adding robust standard errors

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<sup>29</sup> Unrelated business income is defined in Form 990 as “income from a trade or business, regularly carried on, that is not substantially related to the charitable, educational, or other purpose that is the basis of the organization’s exemption. Unrelated business income tax may trigger a higher propensity to be audited as it can indicate greater operating complexity.



to address concerns of heteroskedasticity between the independent variables used in each model.

All variables are described in detail in Appendix 1.

## Chapter 5: Results

### 5.1 Hypotheses Tests

To identify the different persistence in total revenue across models, Equation (1) observes total revenue persistence and the interaction with the binary identificatory for social enterprises. The results are shown in Table IV, Panel A. Total revenues for traditional fundraisers from year +1 to year +3 are uneven and indicate a change in sign from one period to the other. The second year does not report a significant coefficient, suggesting that the relationship between future and current revenues is not constant. On the other hand, the coefficient reporting the interaction between social enterprises and total revenue is significant throughout the three years, presenting consistent signs across the observed periods<sup>30</sup>. To support this analysis, Panel B compares revenue variance between the two observed groups. The group of social enterprises shows greater program revenue variance, while traditional fundraisers present greater variance in fundraising revenue; altogether the total revenue variance is greater for traditional fundraisers. The test work includes a test of equality of variance comparing total revenue between both groups using Levene's robust test statistic (Levene 1960). The results indicate that there is a significant difference between both variances, supporting the idea that the variation of revenue is not the same across the groups.

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<sup>30</sup> An alternative model using dependent variables for lead year +1, +2, +3 and current year total revenue for each operating model shows a stronger correlation between these variables for social enterprises on years +1 and +2, with a consistent positive direction. Traditional fundraisers demonstrate a significant correlation over the three periods, however the relationship is weaker and the direction is not constant, as it presents a change in signs.

**Table IV.**

Panel A presents regression results of future revenue (+1, +2, and +3 years) on current revenue to observe persistence in total revenue. The interaction term between SE and Total revenue is calculated through the binary value applied to organizations with higher concentration of program revenue (above 50%) for three consecutive years. All variables are transformed using their natural logarithms. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

<b>Panel A. Total revenue persistence</b>			
<b>VARIABLES</b>	<b>(1) Year +1</b>	<b>(2) Year +2</b>	<b>(3) Year +3</b>
Social enterprises (SE)	-1.044*** (0.144)	-0.626*** (0.128)	-0.367** (0.152)
Total revenue	0.0980*** (0.0118)	-0.00555 (0.0101)	-0.0369*** (0.0104)
SE * Total revenue	0.0785*** (0.0103)	0.0485*** (0.00920)	0.0291*** (0.0109)
Investment income	-0.00111** (0.000538)	-0.000281 (0.000600)	-0.000386 (0.000664)
Average total assets	0.0742*** (0.00547)	0.0438*** (0.00487)	0.0214*** (0.00494)
Age	9.54e-05 (0.000388)	0.000579 (0.000383)	0.000185 (0.000331)
Real GDP	-7.30e-06 (5.52e-06)	-1.20e-05* (6.37e-06)	-2.51e-05*** (7.78e-06)
Constant	11.75*** (0.164)	13.76*** (0.156)	14.80*** (0.173)
Fixed effects (time and entity)	Yes	Yes	Yes
Observations	381,000	334,000	287,000
Adjusted R-squared overall	0.834	0.594	0.003
Adjusted R-squared within	0.035	0.013	0.009
Adjusted R-squared between	0.909	0.693	0.003

**Panel B. Comparative table of revenue variance for social enterprises and traditional fundraisers.**  
This table presents total variance and by type of revenue classified by operating model, revenue values correspondingly scaled.

**Social Enterprises, revenue variance**

(1)	(2)	(3)	
Total Revenue	Program Revenue	Fundraising Revenue	
381	371	8	<i>Scaled by 1,000,000</i>
25,700	25,300	1,420	<i>Scaled by 1,000,000</i>
660,000	641,000	2,010	<i>Scaled by 1,000,000,000,000,000</i>

**Traditional Fundraisers, revenue variance**

(1)	(2)	(3)	
Total Revenue	Program Revenue	Fundraising Revenue	
3,260	6	3,190	<i>Scaled by 1,000,000</i>
829,000	600	829,000	<i>Scaled by 1,000,000</i>
687,000,000	360	686,000,000	<i>Scaled by 1,000,000,000,000,000</i>

**Variance equality using Levene (1960) model**

W0 =	11,474.132	df(1, 472198)	Pr > F = 0
W50 =	11,216.293	df(1, 472198)	Pr > F = 0
W10 =	11,321.785	df(1, 472198)	Pr > F = 0

Panel C reports the results from Equation (2), analyzing the impact of an exogenous shock in fundraising revenue through the taxation law changes in TCJA17 affecting marginal tax benefits for charitable contributions one year after adoption. While traditional fundraisers experienced a negative impact on total revenue (-0.0608), social enterprises recorded a positive coefficient (0.0414), suggesting that the impact of the tax law changes did not negatively affect social enterprises. These coefficients are significant at the 1 and 99 confidence intervals. A difference-in-difference design requires a parallel-trends assumption using a strong, random, exogenous shock (Atanasov and Black 2016). To mitigate the concern that the exogenous shock from TCJA17

is the only-through condition and that other conditions do not affect the results, un-tabulated results test the reaction between the treatment and control group on random periods, where the coefficient for social enterprises total revenue follows the same sign as total revenue for traditional fundraisers, supporting the results of the opposite signs (positive for social enterprises and negative for traditional fundraisers) when testing the adoption year 2018 for TCJA17.

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**Panel C. Exogenous shocks to fundraising revenue**

This table observes the effect of an exogenous shock to total revenues from the Tax Cuts and Jobs Act (2017) law, one year after adoption. Treatment firms are social enterprises. Post adoption period is one year after the implementation of TCJA, for the years 2019 and 2020. All variables are transformed using their natural logarithms. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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VARIABLES	(1) TCJA 2019
Social enterprises (SE)	-0.00169 (0.0117)
TCJA (one year after adoption)	-0.0608*** (0.00526)
SE * TCJA (one year after adoption)	0.0414*** (0.00799)
Fundraising expenses	0.00212*** (0.000685)
Program expenses	0.0394*** (0.00501)
Management expenses	-0.000668 (0.00249)
Investment income	-0.0143*** (0.000696)
Average total assets	-0.0405*** (0.00415)
Real GDP	-1.79e-05*** (2.44e-06)
Constant	12.27*** (0.368)
Observations	439,000
Adjusted R-squared overall	0.098
Adjusted R-squared within	0.013
Adjusted R-squared between	0.117

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**Table V. Program Ratio**

Panel data regression results of program ratio on social enterprises. The binary value for social enterprises identifies organizations with higher concentration of program revenue (above 50%) for three consecutive years. All variables are transformed using their natural logarithms. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<b>Panel A. Program ratio on social enterprises</b>	
VARIABLES	Program ratio
Social enterprises (SE)	0.00341*** (0.00101)
Program expenses	0.0750*** (0.000911)
Average total assets	-0.0117*** (0.000647)
UBI	-0.000239*** (7.58e-05)
Age	4.81e-05 (7.59e-05)
Total revenue	-0.00907*** (0.000520)
Investment income	-0.000321*** (5.31e-05)
Grants	-0.000202*** (6.14e-05)
Real GDP	-5.43e-06*** (2.68e-07)
Constant	0.177*** (0.0121)
Fixed effects (time and entity)	Yes
Observations	472,200
Adjusted R-squared overall	0.161
Adjusted R-squared within	0.399
Adjusted R-squared between	0.133

**Panel B. By quartiles of revenue and assets and entropy balanced matching regression**

Panel regression results partitioning the sample by size. Columns (1) to (4) show revenue quartiles where Qtr 1 is the lowest and Qtr 4 is the highest revenue in the sample. Columns (5) to (8) show total assets quartiles where Qtr 1 is the lowest and Qtr 4 is the highest total assets in the sample. Entropy balance using size (total assets), total revenue (fundraising and program), investment income, grants received, and age moment conditions. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

(1) Revenue (Prog + Fund Rev) by quartiles Qtr1	(2) Qtr2	(3) Qtr3	(4) Qtr4	(5) Qtr1	(6) Qtr2	(7) Qtr3	(8) Qtr4	(9) Entropy Balance
0.0329*** (0.00108)	0.0382*** (0.000881)	0.0119*** (0.000773)	-0.0152*** (0.000668)	0.0278*** (0.000924)	0.0206*** (0.000879)	0.0160*** (0.000825)	-0.00493*** (0.000841)	0.0305*** (0.000562)

The results from Equation (3) observing if the operating costs affect program ratios are shown in Table V. The dynamic panel coefficients in Column (1) indicate a positive and significant relationship for social enterprises affecting the program ratio. Additional test work observes how the behavior changes at various levels of revenue. Using the sum of program and fundraising revenues only, these values are divided by quartiles, where the first quartile corresponds to the lowest values of revenue and the fourth quartile corresponds to the largest values. The same procedure uses total assets to assess if size affects the relationship between program ratio and social enterprises.

Interestingly, the results demonstrate that social enterprises have a positive and significant relationship with the program ratio for the first three quartiles of revenue and assets. However, this relationship reverses in the fourth quartile. These results suggest that while social enterprises positively impact the program ratio, for those organizations with higher revenue or assets, the operating model does not positively impact the program ratio. Comparing the coefficients between models by entropy balancing organizations matching first moment conditions for individual characteristics in revenue (adding program and fundraising revenue), investment income, grants received, size measured by total assets, and age, the results confirm a positive and significant coefficient (0.0305) in the relationship between the program ratio and social enterprises.

The results from Equation (4) observing if social enterprises are less likely to audit their financial statements are reported in Table VI. Column (1) shows the results from the Equation identifying the relationship between audited financial statements and social enterprises, controlling for robust standard errors with fixed entity and time effects. The results report a negative coefficient for the variable identifying social enterprises, with significance levels at 10%. The same model is used to observe if there is a similar relationship between social enterprises and external



accounting fees, as reported on Form 990. Form 990 requires organizations to report the amount of external accounting fees paid during the year. If social enterprises do not audit their financial statements, this may reduce the amount of accounting fees to external parties. Interestingly, the coefficient observing social enterprises and external accounting fees is positive and significant (Column 2), suggesting that social enterprises pay higher external accounting fees than traditional fundraisers, even with lower audit compliance. It is possible that even when social enterprises do not perform financial audits, the size and complexity of accounting work may raise external accounting fees. However, these results may also result from reporting choices. Accounting fees increase administrative expenses, which reflect negatively on the program ratio. Research related to reporting choices for certain expenses that may negatively affect performance metrics, such as the program ratio or fundraising efficiency, may cause some organizations that incur external accounting fees to report them as program expenses instead of the corresponding administrative category (Varsant 2016; Yetman and Yetman 2006).

A logit regression supports the results from the dynamic panel model, reported in columns (3) and (4), demonstrating a negative probability of reporting audited financial statements for social enterprises; however, this also confirms that social enterprises are more prone to face greater external accounting fees. Using entropy balance matching with the same covariates as in the previous model for Equation (3), the results confirm these findings.

**Table VI. Monitoring Controls**

Regression results observing audited financial statements (FS Audited) and accounting fees on social enterprises. Columns (1) and (2) determine the coefficients resulting from a panel OLS regression. Column (3) observes the logit probability of audited financial statements on social enterprises. Entropy balance in columns (5) and (6) matches first moment conditions for assets, age, revenue (program revenue + fundraising revenue), investment income, and grants received. Independent variables lagged one year, to reduce heteroskedasticity. All variables are transformed to their natural logarithm. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS - Panel data		Logit		Entropy Balance	
VARIABLES	FS Audited	Accounting Fees	FS Audited	Accounting Fees	FS Audited	Accounting Fees
Social enterprises	-0.00442*	0.0742**	-0.130***	0.272***	-0.0284***	0.114***
	(0.00259)	(0.0325)	(0.0101)	(0.00924)	(0.00150)	(0.0188)
Fundraising expenses	0.00166***	0.0235***	0.0283***	0.0324***		
	(0.000238)	(0.00307)	(0.000912)	(0.000768)		
Avg. total assets	0.0204***	0.107***	0.422***	0.0277***		
	(0.00143)	(0.0158)	(0.00345)	(0.00279)		
Grants	0.000677***	0.00679***	0.0602***	0.0183***		
	(0.000171)	(0.00226)	(0.000806)	(0.000679)		
UBI	3.04e-05	-0.00279	-0.0158***	0.0154***		
	(0.000182)	(0.00340)	(0.00363)	(0.00221)		
Liabilities	0.00184***	0.0199***	0.143***	0.0427***		
	(0.000270)	(0.00303)	(0.00114)	(0.00104)		
Age	-0.00200***	0.00509***	0.00367***	0.00211***		
	(0.000156)	(0.00193)	(0.000186)	(0.000151)		
Total revenue	0.00851***	0.0788***	0.289***	-0.136***		
	(0.000771)	(0.00945)	(0.00381)	(0.00327)		
Constant	0.307***	4.161***	-10.82***	1.970***	0.762***	7.724***
	(0.0214)	(0.245)	(0.0495)	(0.0329)	(0.00113)	(0.0165)
Observations	472,200	472,200	472,200	472,200	472,200	472,200
Fixed effects	Yes	Yes				
Adj. R sq. overall	0.159	0.081	.	.		
Adj. R sq. within	0.005	0.002	.	.		
Adj. R sq. between	0.184	0.109	.	.		
R-squared					0.001	0.000

Table VII presents the results observing efficiency measured through the return of program revenue on fixed assets (fixed assets turnover ratio), addressed in Hypothesis 3. From the

descriptive statistics in the data observing each model (Table II, Panel B), social enterprises report greater averages of total assets. Analyzing the return of revenue on fixed assets provides insightful information about the differences in structure and investment decisions between models. Traditional fundraising models generate total revenue with less average total assets, evidenced by the descriptive statistics in Table II, Panel B, which may be supported by the idea that fundraising revenue does not require much support from fixed assets. However, social enterprises rely on customer satisfaction and may be more incentivized to invest in fixed assets to generate program revenue. Social enterprises report higher program revenues generated with their averaged fixed assets with a significant positive coefficient (1.479).

Table VII, Panel (B) indicates that this positive relationship is present in all quartiles of revenue and assets, demonstrating that social enterprises are generally more efficient in returning the investment in fixed assets. The breakdown by quartiles for total revenue, given the sum of program and fundraising revenues, informs that the results hold for all levels of revenue. However, it is reduced for organizations in the first quartile. When observing the results for total assets, the fixed asset turnover ratio is lower for organizations with larger assets. Nonetheless, the results are still positive and significant. Entropy balance matching using the first-moment condition in total assets, investment income, revenue (program revenue plus fundraising revenue, grants received, and age confirms the results from the dynamic panel regression, as reported in Column (9), Panel B. These results suggest that social enterprises may be more focused on maximizing the investment in fixed assets by generating program revenues.

**Table VII. Program Revenue Turnover on Fixed Assets**

Program revenue turnover (Fixed Assets Turnover; FAT) is the proportion of program revenues to average fixed assets (Column 1). This ratio is winsorized at the 1% and 99% levels. The model incorporates entity and time fixed effects, with robust standard errors. Column (2) presents the return of program expenses over average fixed assets, winsorized at the 1% and 99% levels. Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

VARIABLES	(1) FAT Program Revenue	(2) FAT Program Expenses
Social Enterprises (SE)	1.372*** (0.103)	0.238* (0.107)
Program revenue	0.174*** (0.0109)	-0.0289 (0.0384)
Fundraising revenue	-0.0281*** (0.0108)	0.0646** (0.0280)
Investment revenue	-0.00979** (0.00428)	0.0127 (0.0108)
Grants	-0.0219*** (0.00550)	0.0520** (0.0177)
Temporarily restricted assets	-0.0147*** (0.00466)	0.0171 (0.0132)
Permanently restricted assets	-0.00576 (0.00715)	-0.00536 (0.0113)
Age	0.00684 (0.00711)	-0.0254 (0.0270)
Constant	0.818*** (0.283)	0.0188 (0.0220)
Fixed effects (time and entity)	Yes	Yes
Observations	472,200	472,200
Adjusted R-squared overall	0.038	0.001
Adjusted R-squared within	0.008	0.000
Adjusted R-squared between	0.046	0.001

**Panel B. Revenue and Total Assets by Quartiles; Entropy balance matching**

Panel B observes the Program revenue turnover by size. Columns (1) to (4) group total revenue by quartiles (as the sum of program and fundraising revenue). Total assets by quartiles are reported in columns (5) to (8). Controls include revenue and entity characteristics, plus endowments in temporarily and permanently restricted assets. All variables are transformed into natural logarithms. The models include entity and time fixed effects, with robust standard errors. Entropy balance matches the first moment condition for total assets, investment income, revenue (program revenue + fundraising revenue), grants received, and age; these results are showing in column (9).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	Qtr1	Sum Prog + Fund Qtr2	Qtr3	Qtr4	Qtr1	Total Assets Qtr2	Qtr3	Qtr4	Entropy Balance
Social Enterprises (SE)	0.686*** (0.164)	1.302*** (0.197)	2.003*** (0.239)	1.130*** (0.211)	2.486*** (0.309)	1.083*** (0.191)	0.871*** (0.149)	0.449*** (0.116)	3.311*** (0.0377)

Panel A, Column (2) substitutes program revenue for program expenses in the regression model for Hypothesis (3) to add more insight into the efficient use of fixed assets. The idea is to observe how fixed assets support program expenses as a proxy of how an organization uses its resources to deliver social benefits. Column (2) reports a higher coefficient on the regression of fixed assets on program expenses for social enterprises, suggesting that the commercial model produces more program expenses with its investment in fixed assets, although the relationship is only significant at the 10% level.

## 5.2 Alternative Tests

To help observe the operating differences between models, Table VIII provides the results of the levels regression proposed by Tinkelman and Neely (2011). This equation observes the interaction between fundraising revenue sourced through donations and the other types of revenues, as a modified version of the model proposed by Weisbrod and Dominguez (1968). This or adjusted versions of the model help to analyze donor reactions and the crowding-out effect from other types of revenue (see Tinkelman and Neely 2018 for a complete literature review on this subject). A linear equation of the model is presented as:

$$\begin{aligned} Fundraising\_rev = & \beta_0 + \beta_1 grants_{t-1} + \beta_2 fundraising\_exp_{t-1} + \beta_3 program\_rev_{t-1} \\ & + \beta_4 other\_rev_{t-1} + \beta_5 inv\_net_{t-1} + \beta_6 age_t + \beta_7 ave\_assets_t + \beta_8 prog\_ratio_t \end{aligned} \quad (6)$$

Table VIII provides the results noting the interactions through the combined groups in column (1), demonstrating a strong and significant correlation between fundraising revenue and grants, fundraising expenses, and other revenue. A less significant correlation is present between fundraising revenue and the program ratio and age, while the relationship with average assets is negative. When breaking up the two groups by operating models, traditional fundraisers results are

consistent with the main findings in column (1), but social enterprises indicate that the relationship with fundraising expenses, other revenue, and age are weaker and no longer significant. These results highlight the differences that exist between the operating models through revenue and expenses and financial ratios.

**Table VIII. Donor reaction - Levels regression observed by operating model**

This equation adapts Tinkelman and Neely (2011) and Weisbrod and Dominguez to observe donations on fundraising expenses and price (program ratio). Column (1) uses all organizations in the sample, columns (2) and (3) separate the sample by operating model. Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

VARIABLES	(1) Combined groups	(2) Model: SE	(3) Model: TF
Grants	0.522*** (0.149)	0.657*** (0.239)	0.437** (0.189)
Fundraising expenses	1.153*** (0.0153)	0.0395 (0.0440)	1.157*** (0.0161)
Program revenue	-0.00514 (0.00328)	-0.000479 (0.000578)	2.233* (1.152)
Other revenue	1.457*** (0.0900)	0.276 (0.275)	1.457*** (0.0902)
Net investment income	0.240 (1.314)	0.147 (0.327)	-1.197 (1.632)
Age	-1.925e+09* (1.038e+09)	73,783 (430,893)	-3.222e+09* (1.738e+09)
Average total assets	-0.0851* (0.0456)	-0.000382*** (0.000120)	-0.0444 (0.0375)
Program ratio	1.426e+10* (7.513e+09)	2.082e+07*** (7.282e+06)	2.227e+10* (1.176e+10)
Constant	-3.483e+09* (1.817e+09)	-1.609e+07*** (5.702e+06)	-4.282e+09* (2.282e+09)
Observations	472,200	202,106	270,094
R-square	.	0.6872	0.0004
Robust standard errors in parentheses	*** p<0.01, ** p<0.05, * p<0.1		

## Chapter 6: Conclusions

Nonprofit organizations are not a homogeneous group. The operating model is directly connected to the challenges they face, their operational goals, the structure they invest in to meet these goals, and the monitoring they comply with. Given that accounting information reports the economic events during an organization's reporting period, financial information will reflect differently for organizations operating under one model or the other. This situation impairs comparability across organizations.

While there are many important and relevant studies dedicated to understanding the operating model for traditional fundraisers, there is little work understanding the motivation, structure and goals of organizations using the commercial model. Users of financial information may arrive at incorrect conclusions when analyzing financial information applying the same parameters as those for traditional fundraisers. Social enterprises will use less funds to attract donations and more funds to invest in assets that support program revenue, affecting commonly used financial ratios observing nonprofit efficiency.

Although research generally includes controls for activity sectors to group similar characteristics when analyzing financial information, separating by their operating models can provide an improved understanding of management's decisions and incentives for efficiency. This study shows that social enterprises experience a more persistent flow of revenues. Management decisions revolve around generating revenue and operating efficiency. A more stable flow of revenue benefits budget planning and facilitates long-term projections, promoting future growth. Additionally, an exogenous shock to one type of revenue may only affect one operating model while the other one remains unaltered.



Operating costs support revenue. This study demonstrates that operating costs are fundamentally different from both models because traditional fundraisers incur fundraising expenses that are not significantly present for social enterprises. Aside from impairing the comparability of the program ratio and fundraising ratio, the social enterprise model not incurring in fundraising efforts may use its funds towards the social mission and investment in fixed assets that support the social mission.

Social enterprises favor higher investments in fixed assets, and the analysis in this study indicates that they are more focused on using these assets to produce more program revenues than traditional fundraisers. Social enterprises' fixed asset turnover ratio is greater, describing their motivation for operating efficiently compared to traditional fundraisers.

Monitoring is how an external user evaluates management's compliance with operational goals and governance. Traditional fundraisers comply with financial and internal control audits. These audits attest the reliability of financial information reported by the nonprofit and help donors observe the adequate use of funds provided towards the satisfaction of the social mission. However, social enterprises are not as likely to require compliance with financial audits, potentially representing an area of oversight and lack of governance.

This study highlights the main reporting differences between models, observed through operations, monitoring, and efficiency. The focus on these factors brings awareness of how operating models affect the reporting information in an organization. However, it is not exclusive of other vital characteristics related to behavior, structure, and management. Additional studies may discover essential differences in these or other areas.

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## Appendix 1: Variable descriptions

Variable	Description
Accounting fees	Accounting fees paid to non-employees, as reported in Form 990.
Age	Calculated age using the year of formation.
FAT Ratio	Program revenue / Average fixed assets Fixed Assets Turnover Ratio, using program revenue or alternatively program expenses. This formula calculates the turnover ratio to assess the return of program revenue (program expenses) using the organization's investment in fixed assets.
Financial statements audited	Reported in Form 990, self-disclosure if the organization's financial statements were audited by an independent accountant.
Fixed assets	Land, buildings, and equipment reported in Form 990, page 11.
Fundraising expenses	Expenses incurred for raising contributions, generating fundraising revenue. Reported in Form 990, page 10.
Fundraising revenue	Contributions and grants, reported in Form 990, page 1.
Grants	Government grants (contributions), reported in Form 990, page 9.
Investment income	Net investment after reducing investment revenue with investment expenses. Reported in Form 990, page 1.
Permanently and temporarily restricted net assets	Assets restricted permanently (temporarily) by donor imposition, using the previous notation before FASB Accounting Standard Update (ASU) No. 2016-14, <i>Presentation of Financial Statements of Not-for-Profit Entities</i> . The new notation classifies net assets as either "net assets with donor restrictions" or "net assets without donor restrictions".
Program expenses	Expenses used for satisfying the social mission; this value records the cost of social output, or social benefits delivered to the community. Reported in Form 990, page 10.
Program ratio	Program revenue / Total revenue This formula calculates a common metric to evaluate nonprofit performance, popular in donor watchdog agencies and other analyses.
Program revenue	Program revenue reported in Form 990, page 1.
Program revenue concentration	$\text{Program revenue} / \sum (\text{Program revenue} + \text{Fundraising revenue})$ This variable measures the proportion of program revenue to the total of program and fundraising revenue, to assess the primary operating model for each organization for one period.
Real GDP	Real gross domestic product, reported by the National Business Bureau.
SE	Binary variable identifying organizations with high program revenue concentration (over 50%) during three consecutive years.
Total revenue	Total revenue summarized in Form 990, page 1.
Total assets	Total assets reported in Form 990, page 1.
UBI	Unrelated business income; taxable income from activities not pertaining to the social mission.

## Curriculum Vita

**Angelica G. Castro Cardenas** (agcastro@miners.utep.edu)

Angelica Castro is a Ph.D. candidate at The University of Texas at El Paso, with a extensive practical experience in accounting. She earned her bachelor's degree in accounting from the prestigious Instituto Tecnológico y de Estudios Superiores de Monterrey, Ciudad de México. Further, she enhanced her expertise by obtaining a master's degree in accounting with a focus on taxation from The University of Texas at El Paso.

Angelica's research pursuits are predominantly centered around nonprofit organizations and accounting standards, with a keen interest in advancing knowledge within the realm of accounting. Her dedication to exploring these critical topics underscores her commitment to making meaningful contributions to the field.

Angelica's professional journey is marked by a decade-long tenure in public accounting, during which she acquired invaluable insights and expertise in accounting services, auditing, and financial preparation. Holding a Certified Public Accountant (CPA) license in the state of Texas, she pursues proficiency and dedication in her professional endeavors.

Beyond her academic and professional roles, Angelica actively engages with professional organizations such as the Texas Society of Certified Public Accountants (TXCPA) and the American Institute of Certified Public Accountants (AICPA). Through her involvement in these esteemed organizations, she not only stays abreast of industry trends but also contributes to the advancement of the accounting profession.