NONPROFIT REVENUE DIVERSIFICATION AND ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY OF NEW JERSEY HUMAN SERVICES AND COMMUNITY IMPROVEMENT ORGANIZATIONS

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ABSTRACT OF THE DISSERTATION

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Examining nonprofit revenue diversification is important not only in understanding nonprofit financial management dynamics but also in informing nonprofit financial sustainability. This study draws on nonprofit financial management theories to propose three research questions, and develops and empirically tests an integrated model that investigates how contextual factors – organizational structure and capacity, managerial experience, fund development effort and investment, and operating environment – affect nonprofit revenue diversification and financial sustainability.

Questionnaires were administered to executive directors of 1,115 New Jersey human services and community improvement organizations. Using data from 501 responding organizations, this study found certain organizational and environmental characteristics have a significant influence on nonprofit revenue diversification. As expected, some capacity, management, investment and environment measures have a positive impact on funding variety, but fewer measures have a positive effect on revenue balance. Multiple regression analyses reveal that most of the hypotheses regarding predictors of financial sustainability are not confirmed which suggests that the research model does not include other factors that significantly impact nonprofit financial sustainability.

Major findings of the study include: (a) organizational structure and capacity, such as employee size, years of operation, board involvement, and internal development, are positively related to nonprofit revenue diversification, particularly funding variety; (b) managerial factors, including management's attitude toward revenue diversification, management's influence on fund development strategies, and recent operational cutbacks, have significant impact on funding variety, but less so on revenue balance; (c) using designated fund development staff and developing good relationship with outside stakeholders enhance revenue diversification; and (d) revenue diversification does not help organizations maintain financially sustainable. Although these findings are only suggestive, this study is a significant step forward in the development of a theory of nonprofit financial performance including the analysis of revenue diversification which will lead to a better understanding of a number of topics that have been understudied and thus not well understood.

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Psalms 1:3: And he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season; his leaf also shall not wither; and whatsoever he doeth shall prosper.

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CHAPTER ONE

Chapter 1 presents an overview of this dissertation research. This chapter explains the research background and the purpose of the study, discusses the theoretical and practical importance of the study, and provides an outline of the dissertation.

1.1 Research Background

How are nonprofit organizations faring as the current economic downturn reduces government budgetary spending, household incomes, and corporate revenues? Since the inception of the economic recession at the beginning of 2008, the nonprofit community has been increasingly concerned about their resource acquisition due to a sharp drop in available funds from various sources they have been traditionally relying on. Nonprofit organizations have been similarly concerned about their sustainable development in the near future. Diversifying revenue structure has been increasingly proposed as a special strategy to enhance nonprofit organization's revenue generation capacity and to improve nonprofit financial sustainability.

Examining the determinants of nonprofit revenue diversification provides useful knowledge to inform fund development strategies for nonprofit managers and professionals. Moreover, donors, funders, and policy makers have increasingly paid attention to the influence of different funding sources on nonprofit revenue pattern. However, extant literature offers mixed results as to the relationships among nonprofit funding sources, while no theoretical construct has been offered to explain the causal complexity between contextual factors and revenue structure. Very few studies have empirically examined the organizational and environmental determinants of nonprofit revenue pattern and findings of these studies are inconclusive due to data limitations.

Exploring the predictors of nonprofit financial sustainability provides novel information about managerial strategies nonprofit managers and professionals can depend on to sustain their organizations in terms of resource acquisition and programmatic development. Financial sustainability, as a measure of nonprofit financial performance and more broadly nonprofit organizational performance, merits more research.

However, no comprehensive research effort has been made to evaluate network relationships among nonprofit characteristics – institutional and environmental, nonprofit revenue diversification, and nonprofit financial performance. As a result, it is important to conduct a rigorous, theoretical investigation into contextual factors affecting nonprofit revenue diversification and financial sustainability.

1.2 Purpose of the Study

The overall purpose of this study is to introduce empirical evidence that will shed light on the network relationships among contextual characteristics, revenue diversification, and organizational performance of nonprofit organizations. In other words, the study aims to explore the determinants of nonprofit revenue diversification, and its influence on nonprofit performance, particularly, how the level of diversification impact nonprofits' ability to survive and thrive during the current economic downturn. The study examines three research questions.

- 1. How does government funding affect nonprofit revenue generation patterns?
- 2. How do structural factors, managerial factors, and environmental factors affect nonprofit revenue diversification?
- 3. How do nonprofit revenue diversification, structural factors, managerial factors, and environmental factors affect nonprofit financial sustainability?

The first step of the study is better understanding the true relationship between government funding and other nonprofit funding sources. Previous analyses are mainly based on national statistics that do not distinguish between specific nonprofit sectors, and most extant empirical studies fail to provide a convincing sampling frame. This study intends to achieve a more clarified understanding by focusing only on two specific nonprofit sectors – human services and community improvement – exclusively in the state of New Jersey. It is expected that such a design helps to generate results directly applicable to these two sectors in a more methodologically rigorous way, and that the results can also be used as a meaningful reference to other sectors.

One primary goal of this study is to empirically examine the determinants of nonprofit revenue diversification. Existing literature provides very limited information about what factors predict or drive a nonprofit organization's level of revenue diversification, and no theoretical framework is available to formulate systematic investigation into the determining factors of revenue diversification. It is therefore necessary to develop a model to explain variations of revenue diversification and empirically test the model to shed more light on future research on the topic.

Another major topic of the study is the effect of revenue diversification on nonprofit financial performance. There have historically been two seemingly contradictory proposals in nonprofit financial management theory. The first one holds that revenue diversification has a positive effect on nonprofit financial performance, while the other proposes that a more diversified funding pattern might negatively impact nonprofit performance. Very limited empirical research has specifically looked at the relationship between nonprofit financing and nonprofit performance. This study attempts to present a model so as to facilitate better understanding of this topic and hence providing additional information for nonprofit managers in making decisions about revenue generation strategies.

It is expected that the aforementioned analyses would yield some interesting findings on these subjects and this study would stimulate more scholarly dialogue on the topics of nonprofit funding strategies, revenue diversification, and financial performance.

1.3 Significance of the Study

This study makes several contributions to both knowledge building and practice improvement in nonprofit financial management.

First, from a theoretical standpoint, this study proposes a comprehensive

framework of studying nonprofit financial performance that links structural, managerial and environmental factors with nonprofit revenue diversification and then with financial performance of nonprofit organizations.

Second, this study contributes to the research on nonprofit revenue diversification. Extant literature fails to provide a good, clarified definition of revenue diversification, and the use of this term has been rather inconsistent in existing empirical studies. This study fills this gap by providing a clear definition of what revenue diversification means for nonprofit organizations and empirically testing the definition.

Third, this study enhances our understanding of funding strategies, particularly that of revenue diversification, and their relationship with financial sustainability. The results from the analysis can be usefully applied by nonprofit organizations seeking to design and implement more effective funding strategies in order to achieve more satisfactory performance outcomes. In particular, this study brings new evidence and some methodological refinements to bear on the linkage between nonprofit revenue diversification and nonprofit performance. Suggestions are then provided as to how future research can further develop and test the relationships explored in this study.

Finally, this study implemented an original research design that incorporates two different survey methods with mixed groups to test the effect of these methods on survey results. The comparative analysis of the methodological design provides useful information for nonprofit researchers in their future survey studies.

1.4 Outline of the Dissertation

Following this introduction, Chapter 2 provides a survey of relevant literature for the study. This chapter reviews the literature on conceptual framework on government-nonprofit relationships in a dynamic societal context primarily drawn from the rational choice theory in the field of economics. It then provides an overview of related studies on nonprofit financial strategic pattern, revenue diversification, organizational performance, and performance measurement of nonprofit organizations. It also reviews the factors influencing nonprofit performance that have been examined in previous studies. Finally, the chapter identifies research gaps that need to be addressed.

Drawn from the literature reviewed, Chapter 3 proposes a conceptual framework of nonprofit performance that links nonprofit organizational and environmental factors and nonprofit revenue diversification with nonprofit financial sustainability measures. Based on the relationships demonstrated in the framework, this chapter discusses the research questions and presents all research hypotheses designed to answer the broad research questions.

Chapter 4 presents a detailed analysis of research design. The chapter introduces data sources of the study and sample selection for the survey study. This chapter includes a detailed description of survey instrument design and operationalization of the variables. Data collection procedures and statistical techniques are described here as well.

Chapter 5 reports data analysis results, including survey response rate,

descriptive statistics, and hypothesis testing results. By using multiple revenue diversification and financial sustainability measures, regression coefficients are estimated based on OLS specifications. The chapter interprets the findings from statistical analyses, and then concludes with a discussion of hypothesis testing results.

Chapter 6 discusses theoretical contributions, managerial implications, and methodological improvements. The chapter highlights this study's contributions to the literature of nonprofit financial management that includes topics such as nonprofit funding pattern, nonprofit revenue diversification, and nonprofit financial performance. The chapter also assesses limitations of the study and suggests directions for future research.

CHAPTER TWO

This chapter provides a survey of relevant literature and theoretical foundations for the study. The chapter starts with a brief review of America's nonprofit sector. One dimension of the significance of the nonprofit sector is its developing scale in recent years. According to the National Center for Charitable Statistics (NCCS) at the Urban Institute, approximately 1.57 million¹ nonprofit organizations have been recognized by the Internal Revenue Service (IRS) as of 2009 tax year. Meanwhile, nonprofit America is a sizable part of the American economy. The sector has never been richer if measured in private contributions and government grants and contracts (Light, 2000). The visibility of the sector is highlighted by its scale of employment as well – the sector has a substantial impact on employment (of both paid employees and unpaid volunteers). As of 2006, nonprofit organizations employed 12.9 million paid employees, nearly 10 percent of the U.S. (Wing et al., 2006).

All nonprofit organizations are recognized as tax-exempt according to Section 501(c) of Title 26 of the U.S. Tax Code, and this formal exemption from paying federal income taxes is the primary feature of a nonprofit entity. The IRS categorizes nonprofit

¹ This number includes 997,579 public charities, 118,423 private foundations, and 453,570 other types of nonprofit organizations, such as chambers of commerce, fraternal organizations and civic leagues.

organizations under 27 different sub-sections of Section 501(c). For example, social welfare organizations are categorized as 501(c)(4), business leagues 501(c)(6), and fraternal beneficiary societies 501(c)(8).

About half of nonprofits in the U.S. are charitable organizations that are exempt under Section 501(c)(3). This status permits donations to these organizations to be tax-deductible to the donor. These organizations qualifying under section 501(c)(3), together with the 501(c)(4) organizations, are of greatest interest to most nonprofit researchers, because nonprofits under these two sections are generally dedicated specifically to public charity and social welfare. 501(c)(3) subsection includes two types of organizations: public charities and private foundations. As of April 2010, 501(c)(3) public charities include 509,231 filing organizations² involved in a wide range of service fields such as the arts, education, health care, and human services. The 88,879 filing 501(c)(3) private foundations³ are primarily grant-making organizations that make grants to other nonprofit organizations. The nonprofit research community traditionally treat these two types of organizations separately, with more research attention targeted toward the 501(c)(3) public charities.

501(c)(3) organizations that report gross receipts of less than \$25,000 in a fiscal year were once not required to file a Form 990 with the IRS. This policy was recently changed. A federal law – the Pension Protection Act of 2006 – now requires that all

 ² Source: IRS Business Master File (modified by NCCS) 04/2010, retrieved from http://nccsdataweb.urban.org/PubApps/nonprofit-overview-sumRpt.php?v=sum&t=pc&f=0
 ³ Ibid.

organizations file tax forms with the IRS the following year, regardless of their annual revenue amount. Those that fail to do so for three consecutive years will lose their tax-exempt status.

With a view to facilitating data collection and analysis and providing better quality information for the nonprofit sector and for society at large, NCCS developed the National Taxonomy of Exempt Enterprises (NTEE) system to classify nonprofit organizations. The NTEE⁴ classification system breaks down the nonprofit universe into 26 major groups under 10 broad categories as follows:

I. Arts, Culture, and Humanities A II. Education – B III. Environment and Animals - C, D IV. Health - E, F, G, H V. Human Services - I, J, K, L, M, N, O, P VI. International, Foreign Affairs - Q VII. Public, Societal Benefit - R, S, T, U, V, W VIII. Religion Related - X IX. Mutual/Membership Benefit - Y X. Unknown, Unclassified - Z

It needs to be noted that the study population of the current research are 501(c)3 public charities. The purpose of this chapter is to summarize findings within nonprofit financing and nonprofit performance disciplines that inform the conceptual framework and research design of this study. The rest of this chapter is organized as follows. The first section is an overview of nonprofit financing, including a discussion

⁴ Sources: http://www.guidestar.org/npo/ntee.jsp

of revenue categories and funding sources, followed by an exploration of relevant studies on nonprofit revenue diversification. Next, nonprofit organizational performance is discussed, with particular attention to nonprofit financial performance and financial performance measurement. A discussion of factors influencing nonprofit performance is provided to understand why certain practices are recommended to enhance nonprofit performance. Finally, the chapter concludes with a discussion of gaps in the reviewed research and how this study attempts to address these issues.

2.1 Nonprofit Financing

The key to organizational survival is the ability to acquire and maintain resources (Pfeffer and Salancik, 1978 in Froelich, 1999). Financial resource acquisition has always been a priority for nonprofit organizations as they try to solicit financial support to pay for the programs they create and implement. It is widely accepted in the nonprofit research community that the most fundamental and critical challenge that nonprofit America has confronted is a significant fiscal squeeze. Lane (2006) defined financial stress as an imbalance between revenue and expenses that threatens a nonprofit's effectiveness in program and service delivery, and even the organization's survival. According to Salamon (2003), "fiscal distress has been a way of life for (the nonprofit) sector throughout its history." Young (2007) easily found stories of fiscal stress and failure of nonprofit organizations, particularly of some prominent ones.

It is not difficult to find some "hard data" to empirically support this scholarly

perception. In their 2003 report on the Indiana nonprofit sector, Grønbjerg and Clerkin identified top three "major challenges" for different groups of nonprofit organizations. "Obtaining funding" was the most visible challenge across the board: it was the top one challenge for human service nonprofits (76%) and mutual benefits nonprofits (100%); number two challenge for health nonprofits (73%), and arts, culture, and humanities nonprofits (80%); and number three challenge for education nonprofits (48%). As the American nonprofit sector is now trying to survive the most critical economic recession it has ever been facing, obtaining sufficient funding is of even more particular importance. In a 2009 survey by McLean and Brouwer, more than half of organizations reported having experienced a decrease in contributions during the period from October 2008 to February 2009, compared to the same period a year earlier. Eight percent of responding organizations were having trouble making their ends meet and were "in imminent danger of closing their doors because of a lack of financial resources (McLean and Brouwer, 2009)."

As the nonprofit sector is experiencing the current economic downturn, it is a good time to revisit some important questions in nonprofit financial management, such as: What sources are nonprofits relying on? How difficult it is for nonprofits to obtain and secure these funding sources? And what are effects of these sources on an overall nonprofit revenue structure as well as organizational performance?

2.1.1 Funding Sources of Nonprofit Organizations

Nonprofit organizations rely on a variety of sources to finance their daily operations. Examining scholarly work on nonprofit finance reveals two general typologies of nonprofit revenue sources. Some scholars (Froelich, 1999; Guo, 2006) categorize nonprofit income into three broad types: government funding, private contributions, and commercialized income. These three broad revenue categories can be further broken down into more different sources (Fischer et al., 2007; Froelich, 1999; Pratt, 2005; Sherlock and Gravelle, 2009; Young, 2007). For example, private contributions can come from individual donors, corporate donors, grant making foundations, and more.

This study develops and summarizes eight general revenue archetypes largely from the work of Froelich (1999) and Pratt (2005) to further differentiate within the three broad revenue categories. These eight funding sources are: government funding, individual donations, corporation contributions, foundation grants, the United Way grants, fees including membership dues, service charges, bank loans, and other that include investment income. Figure 2.1 illustrates the two typologies to present the correspondence between them. Government funding stands by itself as the first revenue category for nonprofit organizations; individual donations, corporation contributions, foundation grants, and the United Way grants are grouped under the second category which is private contributions; and fees, bank loans, as well as all other types of income are grouped under the third category which is commercialized income.

Three Broad Categories (Froelich 1999, Guo 2006)	Eight Funding Sources (developed from Froelich 1999, and Pratt 2004)		
Government Funding	1. Government Funds & Contracts		
Private Contributions	2. Individual Donations 3. The United Way 4. Foundation Grants 5. Corporate Contributions		
Commercialized Income	6. Fees, sales, membership dues 7. Bank Ioans 8. All other income (asset income, etc.)		

Figure 2.1 Typologies of Nonprofit Funding Sources

Nonprofit organizations are far from uniform in their dependence on these different funding sources (Young, 2007), and distribution of nonprofit revenue – percentage of total income derived from different funding sources – varies with service fields. For example, nonprofits in fields such as education are, on average, most heavily dependent on fees, while human services organizations rely mainly on government funding. The following sections review the relevant literature on government funding, private contributions, and commercialized income separately.

<u>1. Government Funding</u>

Government has been increasingly devolving the provision of public programs and delivery of public services to cross-sectoral collaborations among public, private for-profit, and nonprofit organizations. The collaborative relationship forged between government and the nonprofit sector – a major collaborator with government – has emerged as a new institutional arrangement through which to deal with a variety of social concerns ranging from education, health care, to environmental protection. Collaboration formed by government agencies and nonprofit organizations has become the most popular mode of intersectoral collaboration at various levels. Nonprofit managers are generally aware that government can be a good source of support for their operation and development (Rushton and Brooks, 2007).

Government support for nonprofits come from different levels – federal, state and local, and with various forms – direct funding such as grants and contracts for service, as well as indirect assistance such as purchased services like Medicare payments. Traditionally, government funding has been a prominently visible funding source for the nonprofit sector across the board, only to different degrees, among all types of nonprofit organizations. With regard to service field – an area that needs attention when examining the funding relationship between government and nonprofits, it is reasonable to expect substantial variation in this relationship among different substantive fields. For instance, Boris and Steuerle (1999) have noted that government funding in such areas as health and human services is much more extensive than in other areas like arts and advocacy; thus, nonprofits operating in health and human services might display different relationship with government from those in the other areas. Industry differences have actually been recognized as a significant variable in different nonprofit models and it is believed that there are systematic differences across service fields in terms of nonprofit

governance and performance.

Nonprofit funding from government sources could vary and has been varying over time with changes in political environment, political leadership and policy initiative (Salamon, 2003). Still, government has been a largely reliable and sustainable funder for the nonprofit sector because government funding does not result in a serious problem of revenue volatility like other sources such as private contributions (Froelich, 1999). According to resource dependence theory, nonprofit organizations are constrained by the resource environment as a consequence of their resource needs. If a certain type of funding source is considered to be volatile, there is a risk associated with a heavy reliance on this funding source. Although dependence on government funding is not associated with revenue volatility, there are still such concerns regarding its negative effects like changes in nonprofits' internal processes and structures, bureaucratization and loss of administrative autonomy, and goal displacement (Froelich, 1999). Practically, certain special demands are associated with a nonprofit revenue pattern dominated by government funding including maintenance of political relationships and possibly political skewing of mission or programs due to heavy dependence on inflexible funding and necessary compliance with government funders.

Empirical evidence provides mixed results as to what kind of impact government funding might have on other nonprofit revenue sources and it is still not well understood whether government subsidies displace or leverage private giving or the two sources of funds are independent (Brooks, 2000). Government support may diminish public support to a nonprofit by taking responsibility for its funding, and can potentially cause it to reduce its fund development efforts which will result in diminished revenue from non-governmental sources. This phenomenon is referred to as crowding-out. Another intuition on the effect of government funding on other financial sources for nonprofits is that government support can serve as a signal of quality and reputability that stimulates fund generation from other sources. This is what we call crowding-in. There seems to be little consensus regarding this as a number of studies find significant crowding-out effects while other studies find empirical evidence of crowding-in (Sherlock and Gravelle, 2007). Brooks (2000) have found that for human and social welfare as well as health organizations, federal spending does not have a significant impact on private contributions while state spending crowds out statistically significant in private contributions; for nonprofits operating in education, arts and culture, neither federal spending nor state spending has a statistically significant impact on private contribution. Brooks (2000) concluded these findings by stating that government funding "tends to displace private giving more for necessities than 'luxuries'..." In another study, Smith (2007) found that government grants have the potential to crowd-in private donations to performing arts organizations. These findings suggest that the impact of government support varies with service field, and that this effect is sensitive to some methodological techniques such as sampling and estimation method.

2. Private Contributions

Private contributions⁵ are another very important revenue category for the nonprofit sector. This category mainly includes funds from individual donors, corporate donors, foundations, and other grant-making organizations such as the United Way. There has been considerable stability in the source of private contributions over time in the United States. Compared to cutbacks in government financial support, private giving to the nonprofit sector has considerably growing over the past decade (Salamon, 2003).

While obtaining and maintaining government funding usually does not incur high costs on nonprofit organizations, generating private contributions requires some expenditure on fundraising. There has recently been an increased concern about excessive fund-raising costs in some organizations. In addition to this concern, two major constraints are associated with nonprofits' dependence on private contributions: revenue volatility and goal displacement (Froelich, 1999). Revenue volatility is particularly marked in individual and corporate donations due to the unpredictability and instability of these two types of contributions. This volatility has been particularly pronounced in the current economic crisis. There are two key elements of revenue volatility, one is the gross amount of revenue fluctuations in a given period of time, for example, in every month or year, and the other is the extent to which these fluctuations

⁵ Some use the terms "private donations" or "public support" to refer to this type of nonprofit revenue category.

are related to cyclical changes in the economy. Compared to those in government funding and commercialized income, the fluctuations in private contributions are more related to cyclical economic ups and downs. As to the risk of goal displacement, Kelly (1998) suggested that nonprofit organizations might have to alter their organizational goals or priorities to acquire or sustain a particular contribution or foundation grant. Empirical findings provide mixed results regarding this. For example, in their study on the effect of funding changes on nonprofit organizations' program service delivery, Hughes and Luksetich (2004) concluded that greater reliance on private donations and corporate donations does not significantly change spending patterns nor affect level of spending on programs and services.

3. Commercialized Income

In addition to seeking funding from government agencies and private donors and donor agencies, nonprofit organizations nowadays increasingly engage themselves in various commercial activities for revenue generation, such as selling products to customers and charging fees for program services. Just like the other two major nonprofit revenue categories, commercialized revenue generation has its advantages and disadvantages. Studies suggest that there is significantly less revenue volatility or goal displacement associated with nonprofit commercial activities. Table 2.1 is part of Froelich's revenue strategy profiles that show the level of revenue volatility and goal displacement effects of the three revenue categories.

	Government Funding	Private Contributions	Commercialized Income
Revenue volatility	Low	High	Moderate
Goal displacement effects	Moderately strong	Strong	Weak

 Table 2.1 Revenue Strategy Profiles (Froelich 1999)

While the benefits of commercialized income are easy to see, there are potential costs to these revenues as well. Nonprofit researchers have identified two types of unintended consequence of commercialized income – potential financial risk and a potential loss of values distinctive to the nonprofit sector. Research has recommended attention to potential financial risk associated with nonprofit venture failure, especially of those small, start-up nonprofits. While very few studies have examined the consequence, some empirical research has been conducted to evaluate the effect of commercialized income on nonprofit performance (Hughes and Luksetich, 2004; Smith, 2007). Using a sample of 155 human services organizations, Guo (2006) examined what kind of effect commercialized income might have on organizational performance, and the study revealed some mixed results. On one hand, commercial activities have a significant and positive impact on organization's self-sufficiency, reputation, and its ability to attract and retain paid employees; on the other hand, commercial activities do not seem to significantly contribute to an organization's ability to attract and retain donors and volunteers, nor help mission attainment and program and service delivery. The ongoing process of commercialization needs to be better understood, and the longitudinal impact of commercialization on organizational performance is to be

examined in additional future research.

The answer to the critical question – does commercialization contribute to nonprofit organization's core mission – varies. Existing literature provides examples of both that support nonprofit mission and that do not. Success stories about creating commercial activities to supplement funding and sustain mission achievement are however rare (Foster and Bradach, 2005).

Despite the ongoing debate regarding the so-called optimal financing strategy for nonprofits, the fact is that nonprofit organizations have been increasingly involved in multiple funding strategies to generate money as they strive to reduce their vulnerability to income uncertainties and the influence of resource providers. When nonprofits are moving away from concentrated dependence on a single revenue strategy (Froelich, 1999), the topic of revenue diversification has been called to the forefront. One potential answer to the question "how nonprofit organizations could have better prepared themselves for the increasingly challenging and fierce resource environment" is by diversifying their revenue structure, that is, seeking funds via a variety of sources in order to support their missions.

2.1.2 Nonprofit Revenue Diversification

Revenue diversification is a key concept in economics, finance, and public budgeting literatures. Financial literature notes that it is important for investors to build an appropriate mix of investments so that their overall portfolio can achieve a maximum return on investment without undo exposure to risk. Economists Harry Markowitz and William Sharpe crafted Modern Portfolio Theory with intent to identify what they called the efficient frontier which is a specific mix of assets that results in the highest return recognizing the level of risk the investor is willing to accept. Revenue diversification refers to the process of changing the level of diversity of revenue structure (Siegel et al., 1995) and this concept has been applied to numerous other areas within economics and finance. Revenue diversification has been advocated in the realm of public administration as a desirable practice for both state and local governments. Over the half past century, sub-national governments have been increasingly relying on multiple sources of revenue (Carroll, 2005). Like corporate financing and public budgeting research, nonprofit research generally views positively the rhetoric and practice of revenue diversification. Several scholars have studied nonprofit revenue diversification but it stills remains to be an understudied area where an overall theory of nonprofit dependence on difference funding sources is missing (Fischer et al., 2007).

Definition and Measurement

Prior to developing a measure of nonprofit revenue diversification for empirical analysis, it is essential to provide an explicit definition of the term, which is unfortunately difficult to find within the extant literature on nonprofit research. Two different definitions of this term diversification vaguely emerge from reviewing studies on nonprofit funding. Revenue diversification refers to *funding variety* in some scholarly work, and *revenue balance* in some other scholarly work (Carroll, 2009; Crittenden, 2000;

Fischer et al., 2007; Hager, 2001).

The usage of the term diversification has been inconsistent in nonprofit study. Nonprofit researchers have proposed and used two different measures of nonprofit revenue diversification that are related to the definitions discussed above. One simple approach is to count the number of revenue sources relied upon by a certain nonprofit. From a statistical point of view, there might be a caveat to this purely mathematical method – it does not take into account the proportion of each resource that is included in a nonprofit's revenue structure. It is arguable whether reliance on all major sources is surely a more diversified structure than that on fewer sources. Even nonprofits that rely on same number of revenue sources are not necessarily at the same level of revenue diversification since some can have a revenue structure with relatively equal reliance on each source while others may present heavy reliance on only one source with minor reliance on the others.

Some scholars (Carroll, 2009; Fischer et al., 2007) introduced a concentration index as another measure of nonprofit revenue diversification that incorporates all revenue categories used in their studies to define diversification. This index is developed from the Herfindahl-Hirschman Index (HHI) and writes as:

$$RD = \frac{1 - \sum_{i=1}^{n} R_i^2}{(N-1)/N}$$

where N is the total number of revenue categories, R_i is the fraction of revenue generated by each of the revenue categories. This measure implies that higher values of RD indicate grater levels of diversification of nonprofit revenue structures.

However, these are two caveats that must be attended with this modified HHI measure. First, this measure of revenue diversification implies that each organization is equivalent in its ability to diversify the revenue structure, which is not true in many cases. Second, the revenue diversification measure assumes that each organization utilizes each of the revenue categories for generating income. Again, this is not always the case. For example, a certain organization is not involved in any commercial activities to generate money. Therefore, when it is the case that an organization does not generate revenue from one of the categories included in the HHI measure, the value of R_i associated with that revenue category will equal zero. Aside from exhibiting a lower score pertaining to the organization's level of revenue diversification, the implication of this result is that an organization that does not have commercialized income and an organization that does not have government funding could potentially show a comparatively equivalent level of revenue diversification, even though the volatility of the revenue structures between the two organizations could differ significantly. In such cases, it would be difficult to determine the extent to which nonprofit revenue diversification aids in preparing nonprofits for financial crises. These two issues could be controlled for in the empirical model through the use of dichotomous variables.

In addition, whether a revenue pattern in which total revenue is equally distributed in all revenue categories is necessarily the optimal structure for nonprofit organizations is still questionable. Fischer et al. (2007) suggested that the best revenue structure for a nonprofit may not be the most diversified, but rather the one that reflects the importance of the various objectives of the organization.

Factors Influencing Revenue Diversification

Insufficient attention has been paid to examining the determining factors of the overall level of revenue diversification for nonprofit organizations. Chang and Tuckman (1996), in their early study on nonprofit revenue diversification, found that the activity of a non-profit and the proportion of its expenditures that it devotes to fund-raising affect its ability to diversify its financing pattern. Fischer and his colleagues (2007) proposed a relationship between the nature of services provided and the revenue mix of nonprofit organizations. The financing of nonprofit organizations is significantly related to the publicness as determined by the nature of services and benefits associated with the services (Fischer et al., 2007). The service field in which a nonprofit organization, may also affect the level of revenue diversification.

In addition to the intrinsic characteristic of nonprofit programs and services, scholars suggested a number of other organizational characteristics that might influence revenue diversification. Less mature organizations are not as likely as established organizations to seek and manage multiple funding sources due to a lack of experience (Fischer et al., 2007). Larger organizations are more likely to adopt diversification strategies because of the sufficient capacity they can employ in fund development. Organizations are better equipped to function independently with a higher level of organizational resources and therefore rely less on government funding.

Pros and Cons of Revenue Diversification

Revenue diversification in the nonprofit sector has been largely motivated by efficiency and organizational performance improvement. Many nonprofit organizations now engage in a wide array of activities to provide the financial support necessary for continued pursuit of their organizational missions. In addition, relying on different revenue sources allows nonprofits to diversify risks and stabilize revenue streams (Carroll and Stater, 2009; Greenlee and Trussel, 2000; Grønbjerg, 1993; Tuckman and Chang, 1991), which in turn will enhance nonprofit outcomes. Most of these arguments are based on findings from analysis that heavily relies on panel data sets generated from IRS 990 form information. Very few researchers have attempted to examine revenue diversification by gathering original information directly from organizations, and Crittenden's 2000 study was probably the only such research effort to do so. The findings of this study (Crittenden, 2000) include: a positive relationship existed between revenue diversification and organizational performance of social service nonprofits; less successful organizations were less diversified in terms of funding sources and more dependent upon government support, and successful organizations tended to be more balanced in their sources of revenue. These seem to support the findings and conclusions derived from the panel data analyses that nonprofit organizations should proactively develop a diversified funding pattern and that they should probably focus more on non-governmental funding sources.
However, this motivation for diversifying revenue structures is arguably at odds with the concern held by some nonprofit researchers that revenue complexity will result in nonprofit financial illusions and even disasters. The organization often times has to trade off each source against the other, and as indicated by Froelich (1999), although revenue diversification has its appeal, it also carries constraints and sometimes risks. For instance, satisfying the funding criteria of each provider is very likely to result in goal conflicts, not to mention the increase in overheads of nonprofits (DiMaggio, 1986; Tuckman, 1992; and Weisbrod, 1998a). Some researchers concluded that, compared to a diversified financing pattern, there are benefits to relying on a more concentrated revenue structure such as lower administrative structure and less fund-raising expenses (Fischer et al., 2007). In addition, there has been much discussion as to whether changing revenue sources (from largely a government-dominated pattern to develop more sources for support) will have an effect on nonprofit's behavior such as management and then on goals like program service delivery. Dealing with multiple funding relationships obviously increases management complexity (DiMaggio, 1986; Grønbjerg, 1993) and nonprofits may be confronted with increasing goal conflicts due to varying requirements from different funders (Ferris and Graddy, 1989; Weisbrod, 1998a).

In addition to the impact on organizational performance, some scholars have noticed revenue structure's influence on board performance. Hodge and Picolo (2005) observed variations in board practices among nonprofits that are dependent on government funding, private contributions, and commercialized income. Executives of organizations that largely depend on private contributions tend to use significantly more board involvement practices than those organizations that are dependent on government funding and commercialized income (Hodge and Picolo, 2005).

2.2 Nonprofit Organizational Performance

The nonprofit sector has been growing quickly in recent years, and nonprofit management has undergone self-examination aimed at better organizational performance (Frumkin, 2001; Salamon, 2003). However, performance is an elusive term for any organization, particularly for nonprofit organization. Performance is the action or process of carrying out or accomplishing a task, function, or mission, and organizational performance is therefore dependent on objectives and missions assumed by organizations. Performance measurement in the private business sector is much simpler because its pursuit of profit makes gauging mission achievement straightforward. The multiple services and goals however make the performance of nonprofits more ambiguous.

Nonprofit performance is therefore multi-dimensional and not easily quantifiable (Brooks, 2002). Prior research has been trying to identify different dimensions of organizational performance for nonprofit organizations. Forbes (1998) identified goal attainment and resource acquisition for nonprofits. Herman and Renz (2004) put forward two parallel theoretical perspectives on nonprofit performance – goal approach and system resource approach. Kushner and Poole (1996) devised a model of

nonprofit organizational performance which contains four elements – resource acquisition, efficiency of operations, goal attainment, and client satisfaction. Nobbie and Brudney (2003) proposed five performance dimensions based on previous scholarly works – goal achievement, financial viability and resource acquisition, internal process, CEO job satisfaction, and CEO performance. Shoham et al. (2006) suggested that performance should account for both internal dimension like input and output and external dimension such as stakeholder satisfaction. Two broad dimensions of performance emerge from the review: mission achievement and financial performance.

The significance of the financial aspect of nonprofit performance is highlighted by some of the big challenges the nonprofit community has been facing recently – tighter funding streams and rising expenses that have made nonprofit operations more difficult and might affect the long term viability and effectiveness of individual organizations and even the sector as a whole (Center for Non-Profit Corporations, 2005).

2.2.1 Nonprofit Performance Measurement

Performance evaluation is a difficult task in any organization. For nonprofit organizations, performance measurement has further complications due to several significant limitations. First, nonprofit performance is a multidimensional concept combining both financial and non-financial dimensions. Nonprofit status itself limits the accuracy and legitimacy of relying exclusively on financial performance indicators that have been commonly used for corporate performance (Brooks, 2002; Brown, 2005). Second, there is no single simple "best practices" way that is applicable to all types of nonprofits that operate in tremendously varying programmatic and service areas.

While there is unfortunately a lack of clearly defined and comprehensive model of nonprofit organizational performance, a comprehensive and easily applicable performance measurement system is still to be developed despite considerable rhetoric about the significance of measuring nonprofit performance. Prior studies investigating nonprofit organizational performance usually adopt multiple assessment strategies to address the limitations discussed above. In correspondence to the two dimensions of nonprofit performance – mission achievement and financial performance, there are two approaches of nonprofit performance measurement – one is outcome oriented and the other is resource-oriented (Forbes, 1998; Herman and Renz, 2004; Tuckman and Chang, 1991).

A renewed interest in performance measurement brought about by the appeal of outcome-based management results in a body of literature that is mostly descriptive and normative. Many nonprofit scholars have observed that nonprofit organizations are under increasing pressure to demonstrate their efficiency and effectiveness, as the current funding environment increasingly stress the importance of nonprofit accountability and measuring nonprofit performance (Salamon, 2003; Smith and Lipsky, 1993).

A set of criteria is developed to evaluate an organization's socially oriented performance such as organizational growth and stakeholders' satisfaction. Nonprofit performance could be ideally measured in terms of accomplishing goals and missions established by nonprofit management for the organizations. In reality, nonprofit executives are commonly pulled in different directions by competing values of different stakeholders – funding agencies, board, public and private donors, and their service consumers. Although increasing attention has been given to non-financial indicators such as goal attainment and constituency satisfaction, the focus of nonprofit performance measurement still lies in financial area, partially given the difficulties described above.

Terms used	Measures	Authors
Financial Performance	Total revenue	Jackson and Holland, 1998
	Annual operating budget	
	Financial reserves	
Institutional Performance	Total revenue	Olsen, 2000
	Gift income	
Financial Performance	Equity ratio	Tuckman and Chang, 1991
(Financial Vulnerability)	Revenue concentration index	
	Administrative cost ratio	
	Surplus margin	
Financial Performance	Total assets	Trussel, 2002
	Debt ratio	
Financial Performance	Total revenue – total expenses	Brown, 2005
	Total revenue – total contributions	
	Total revenue – fundraising expenses	
Efficiency	Ratio of admin/total expenses	Callen et al., 2003
	Ratio of fundraising/total expenses	
	Ratio of program/total expenses	
Performance Efficiency	Private donations/total contributions	Frumkin, 2001
	Administrative/total expenses	
Financial Performance	Direct public support/fundraising expenses	Ritchie and Eastwood, 2006
	Total revenue/fundraising expenses	Ritchie and Kolodinsky, 2003
	Total contribution/total revenue	
	Direct public support/total assets	
	Total revenue/total expenses	
	Total contributions/total expenses	

 Table 2.2 Summary of "Nonprofit Financial Performance" Measures

There are multiple dimensions of nonprofit financial performance: input, output, and outcome. Nonprofit input and output can be measured through accounting information that allows nonprofit managers to compare key variables such as revenues and costs, and to conduct further financial analysis. Previous studies use different combinations of financial criteria to assess nonprofit financial performance based on accounting information from IRS 990 forms. Table 2.2 offers some of the commonly used measures identified from the literature. In nonprofit management and nonprofit performance measurement, input and output are two dimensions that are usually difficult to differentiate. Resource acquisition that encompasses both input and output has long been regarded as a powerful indicator of both board performance and nonprofit management (Callen et al., 2003; Nobbie and Brudney 2003; Olsen, 2000; Ritchie and Kolodinsky, 2003). Tuckman and Chang (1991), in their seminal work on nonprofit financial vulnerability, provided a number of performance measures for nonprofits. A nonprofit is financially vulnerable if it is likely to cut back its service offerings immediately when it experiences a financial shock. They use four financial criteria to examine the financial vulnerability of a national sample of nonprofits. Nonprofits with inadequate equity balances (the amount left over when liabilities are subtracted from assets), lower revenue concentration, low administrative/total expenses ratio, and low or negative operating margins are considered to be financially vulnerable.

2.2.2 Factors Influencing Nonprofit Performance

Organizational performance is determined by multiple contextual factors. Organizational research has examined performance extensively in business field which lend us a rich resource to investigate nonprofit performance. Weiner and Mahoney (1981) created a comprehensive model of corporate performance that contains environmental, organizational, and leadership factors and proposed that external influences, organizational characteristics, and leadership contribute to corporate performance. Nonprofit literature fails to provide a parallel model for analyzing performance of nonprofit organizations, yet it would be useful to approach nonprofit performance from those dimensions identified in corporate performance literature like theirs.

<u>1. Funding Sources and Revenue Structure</u>

The relationship between government and nonprofits is recognized to be impacting nonprofit governance and ultimately impacting nonprofit performance. However, this relationship has not been systematically studied and existing research provide rather mixed results as to the impact of government funding on revenue structure and nonprofit performance.

Previous studies suggested there are some unintended consequences from government funding on nonprofit management in terms of nonprofit's legitimacy and ability to generate revenue from non-governmental sources (Brooks, 2005; Hughes and Luksetich, 2004). Economists have found that "an extra dollar in (government) subsidies crowds out between 5 - 40 cents in private donations." (Brooks, 2005) One explanation for this "crowding out" effect is that government funders usually tend to place some restrictions on nonprofits so as to prohibit spending not directly associated with program provision and service delivery. This however presents a dilemma because nonprofits generally do not fundraise sufficiently (Brooks, 2005; Thornton, 2006), while limiting the uses of government funds might affect the performance of nonprofits.

Compared to organizations relying principally on government funding, those that rely on private donations are less efficient (Callen et al., 2003). Some scholars (Hughes and Luksetich, 2004; Massarsky and Beinhacker, 2002) argue that a greater reliance on private funding does not necessarily divert funding from program service delivery. Hughes and Luksetich (2004) found that whether funds come from government or private sources seems to have little impact on management expenses or fundraising activities and does not significantly change nonprofit spending patterns.

Operating in a highly competitive and increasingly market-driven environment, nonprofits are under pressure to rely on a much more diversified revenue structure to generate funds ranging from earned income to individual donations. If the degree of revenue diversification has a positive impact on performance, public administrators as well as nonprofit managers might find it more politically palatable to invest resources into fund raising and increase operating budgets that would attract more donors and contributors. However, the issue of how revenue diversification affects non-profits has not been fully explored. Chang and Tuckman (1996) found that diversified revenue sources are more likely to be associated with a strong financial position than are concentrated revenue sources. However, some researchers asked whether revenue diversification is important to nonprofit performance and it is still not very clear what effects diversification has on organizational outcomes (Fischer et al., 2007). By reexamining Tuckman-Chang's vulnerability measures, Hager (2001) studied a group of arts organizations to explore the reasons of organizational demise of nonprofits. For all subsectors except dance organizations, the average failing organizations had a greater concentration of revenues than the average survivor, which suggests that a balanced revenue structure improves nonprofits' performance.

Structure and Capacity

Organizational structure of nonprofit organizations refers to the ways a nonprofit is organized in terms of governance and management. Organizational capacity of nonprofit organizations refers to the resources a nonprofit enjoys for operation and management. Nonprofit organizations with less efficient structure and fewer resources may find it more difficult to achieve their missions. Higher level of capacity indicates an organization's capability to operate on its own as well as the level of attention from potential donors and funders. Size is one capacity measure commonly used in nonprofit research and has been found to be related to organizational effectiveness (Herman and Renz, 1998).

Boards make a difference in nonprofit performance, but it is still not very clear how they do this. Any variation in board composition and governance is likely to influence the structure and functioning of nonprofit organizations, and ultimately organizational performance. In their study of a group of New York City based nonprofit organizations, O'Regan and Oster (2002) found that nonprofit boards with high degrees of government funding tend to focus less on some of the traditional functions – like fund-raising - and more on fiduciary and boundary-spanning kinds of activities such as financial monitoring and advocacy. Percentage of major donors on the board of a sample of large sized⁶ New York state nonprofits was found to have a negative impact on performance as board members of such organizations are more likely to be concerned with the external fundraising environment rather than with internal efficiency issues (Callen et al., 2003). Their study also discovered that nonprofits with a larger board and nonprofits of a smaller size are more likely to have a higher level of fundraising/total expenses ratio. Olsen (2005) identified some board characteristics as determinants of nonprofit performance and found that board size, average tenure of board, and business executive background on a board significantly improve financial performance of nonprofit higher education institutions. However, some studies did not find any significant relationship between board and nonprofit performance. For example, Herman and Renz (1998) studied a sample of health and welfare charities that receive some funding from the local United Way and did not find a relationship between board performance and organizational performance.

Ritchie and Eastwood (2006) specifically examined the effect of executive

⁶ Over \$2.5 million in1992 contributions, and direct contribution exceeded 10% of total 1992 receipts.

functional background on nonprofit performance. Drawing survey data from chief executives of university and college foundations, they found that executive's prior experience in the functional areas of accounting, production, and marketing significantly enhanced the organization's financial performance.

<u>Management</u>

Management of nonprofit organizations refers to the process a nonprofit employs to achieve its missions. Although our intuition would be that use of correct management practices is related to better performance, there might not be any simple "best practices" way to improve nonprofit performance. Herman and Renz (1998) concluded that using more practitioner-identified correct management procedures and more change management strategies are associated with a higher level of organizational effectiveness. Strategic management attributes as demonstrated in strategy formulation and strategic processes are also related to financial success of nonprofit organizations (Crittenden, 2000). Keating and Frumkin (2003) recommended nonprofits create effective internal management with a view to improving efficiency and outcome.

Gathering and evaluating data provides nonprofit organizations with information to develop management strategies and techniques which can ultimately improve operation and performance (Carman, 2005). At the same time, if nonprofits are better able to utilize their evaluation information, including information of their financial performance, resource providers will be more informed and therefore more likely to connect positively with nonprofits. Nonprofits will benefit in terms of resource acquisition which can further contribute to organizational performance.

Market orientation that has been studies extensively in the private business sector was found to be a driver of performance for nonprofit organizations (Shoham et al., 2006). They hence recommended that nonprofits should now start considering implementing market oriented strategies to enhance their organizations' performance. In their 2008 study of a national sample of 1,434 churches, White and Simas (2008) found that market orientation has a significantly positive effect on church performance. Crittenden (2000) suggested that a marketing orientation is advantageous for nonprofits to obtain resources and make better decisions.

Executive characteristics are another factor that could impact organizational performance because top managers are able to influence organizational change and performance through strategic choices (Ritchie and Eastwood, 2006). Executive functional experience could be meaningfully associated with some performance measures like resource acquisition, particularly if executive expertise is in marketing, accounting, and production areas (Ritchie and Eastwood, 2006).

Fund Development Effort

The past twenty years have witnessed a growing professionalization of charitable fund-raising (Salamon, 2003). Nonprofit organizations nowadays devote themselves to more serious fund development efforts in order to attract and secure more charitable resources to facilitate their organizational operation. Fund development for nonprofits requires not only various strategies, but also people and institutional arrangements they use to generate grants and contributions (Hager et al., 2002). Hager and his colleagues (2002) have found from a large sample of nonprofits of various sizes and service fields that most nonprofits do not have a full-time fundraising staff person; however, using a dedicated fundraising staff enhances involvement with fundraising of those non-fundraising staff including executive directors, volunteers, and other professional staff members. The presence of fund development professionals can sometimes serve as an impetus for moving the fund development agenda forward to result in more success in revenue generation.

Previous studies have consistently found a positive relationship between fund-raising investment or effort and charitable donations achieved (Tinkelman and Mankeney, 2007; Weisbrod and Domingues, 1986). Fundraising efforts have both a direct positive effect on donations, and an indirect smaller lagged negative effect.

Other Factors

In addition to the funding relationship between government and nonprofits as well as nonprofit revenue diversification, which actually present contradiction for researchers to further investigate, there are some other factors that have an impact on nonprofit financial performance. Organizational age, geographic location, and local economic and political features are all the variables examined in the literature. Age has not been found to have a strong relationship with organizational performance (Herman and Renz, 1998). Carroll and Stater (2009) found some of the exogenous factors have influence over nonprofit financial health, such as urban location and state context. Ongoing and effective communication with significant stakeholders is important to organizations in terms of enhancing understanding of these stakeholders and providing outcomes that meet or exceed stakeholder expectation (Herman and Renz, 2004; Keating and Frumkin, 2003).

Nonprofit financial performance is obviously a highly complicated mechanism that requires a systematic examination. No one comprehensive model has ever been developed and empirically evaluated to capture the structure of the nonprofit financial performance.

2.3 Research Gaps

The review of existing literature reveals that there are several important research topics in the study of nonprofit revenue strategies and organizational performance. This section identifies a number of research gaps that this study tries to address to contribute to current theoretical base.

First, revenue diversification has become an increasingly important concept and practice in nonprofit research and management. The existing literature fails to provide a clear definition of "revenue diversification," and the use of this concept has been rather inconsistent. This study defines revenue diversification as a reliance on multiple funding sources and a relatively balanced revenue structure and empirically tests these two dimensions of diversification by investigating their relationship with other variables.

Second, the determinants of nonprofit revenue diversification have not been

systematically studied. Insufficient attention has been paid to examine the factors that impact the level of revenue diversification for nonprofit organizations. There is therefore a need in developing a conceptual model that explains complex causal relationships between various contextual factors and revenue diversification. This study fills in this research gap by exploring the impact of organizational and environmental factors on revenue diversification.

Third, previous studies have identified a number of structural and environmental factors that affect nonprofit financial performance. However, relatively little research has been conducted to systematically examine the impact of various contextual factors on financial performance and an overall theory of nonprofit financial performance remains to be developed. Some nonprofit scholars have proposed diversifying revenue base to reduce financial stress and improve organizational performance. Unfortunately there has been very fragmented empirical evidence to evaluate this diversification-performance proposal. This study proposes an integrated model to explore the predictors of nonprofit financial sustainability by including an analysis of revenue diversification as a potential determining factor of performance.

Finally, nonprofit financial performance has been largely studied by utilizing input and output measures. As noted in relevant literature, performance measurement in nonprofit organizations is being more approached from outcome perspective. Hence, it is useful to further explore the proposed relationships by focusing on outcome oriented performance measures, such as level of financial stress and organization's ability to maintain programs and services to predict whether an organization is financially sustainable.

CHAPTER THREE

Conceptual Framework and Research Hypotheses

This chapter provides the theoretical framework for examining the relationship between nonprofit revenue strategies and nonprofit organizational performance. Specifically, it discusses how different contextual factors of nonprofit organizations – organizational structure and capacity, management, fund development efforts, and operating environment – affect nonprofit financial strategic pattern, and then, in turn, how the financing strategies comprising this pattern affect organizational performance of nonprofits; it also discusses the effects of these organizational factors on organizational performance.

3.1 Theoretical Framework and Research Questions

Figure 3.1 Theoretical Framework for the Study



Figure 3.1 provides a simplified diagram of the theoretical framework adopted in this study that includes three major components. The first component discusses contextual factors of nonprofit organizations including organizational structure and capacity, management, fund development efforts, and operating environment. The second component considers the joint effects of these contextual factors on nonprofit financial strategic pattern conceptualized as nonprofit revenue diversification. The third component is a multidimensional view of nonprofit organizational performance through which the joint effects of contextual factors and financial strategic pattern on performance are discussed.

This study examines nonprofit revenue structure, financial sustainability, as well as the network relationships among revenue strategic pattern, revenue diversification, and nonprofit financial performance. Three broad research questions are therefore being investigated:

- (1) What is the effect of government funding, or other dominant funding sources, on nonprofit revenue structure?
- (2) What are the effects of structural factors, managerial factors, and environmental factors on nonprofit revenue diversification?
- (3) What are the effects of revenue diversification, structural factors, managerial factors, and environmental factors on nonprofit financial sustainability?

Figure 3.2 provides a comprehensive model to demonstrate the relationships between various factors with revenue diversification and financial sustainability. This study predicts that variation in revenue diversification is correlated with different types of contextual factors of nonprofit organizations. First, level of revenue diversification is associated with organizational structure and capacity. Secondly, managerial behaviors and experiences of organizations, particularly those that exert direct influence on nonprofit financing, have some impact on revenue diversification. Third, efforts and investments made by nonprofits in generating funds from various sources have a significant impact on nonprofit revenue diversification. Fourth, characteristics of the external environment in which nonprofits operate are associated with revenue diversification.



Figure 3.2 Model of Nonprofit Revenue Diversification and Financial Performance

Another set of relationships shown in the above figure is that of nonprofit revenue diversification and organizational performance. First, revenue diversification is expected to influence the level of financial stress nonprofits are going through these days. Secondly, revenue diversification is predicted to impact the likelihood of nonprofit organizations maintaining their current level of programs and services. Finally, nonprofit organizations' future funding success is considered to be related to revenue diversification.

In order to understand how nonprofit revenue strategies and performance differ with respect to the underlying variables and how revenue diversification impacts performance, a number of hypotheses are derived from these theoretical perspectives to explore the key variable relationships demonstrated in Figure 3.2. Having illustrated the conceptual framework and research questions, the rest of this chapter introduces all hypotheses and their rationales.

3.2 Determinants of Nonprofit Revenue Diversification

This study defines and measures nonprofit revenue diversification from two dimensions – "funding variety" and "revenue balance." First, revenue diversification is defined as a reliance on multiple funding sources (funding variety); and second, it is defined as a relatively equal reliance on different revenue categories (revenue balance). This study adopts two typologies of nonprofit funding sources, as shown in Figure 2.1 in the previous chapter, to address the questions related to the two different aspects of nonprofit revenue diversification. First, nonprofit revenue is broadly categorized into three groups: government funding, private contributions, and commercialized income. These three nonprofit revenue categories are further broken down to eight nonprofit funding sources: (1) government funding, (2) individual donations, (3) the United Way, (4) foundations, (5) corporations or business, (6) fees/sales/dues, (7) banks, lending institutions, and (8) all other income, such as asset income or rental income.

3.2.1 Impact of Various Funding Sources

The interrelationships between various funding sources can be complicated when it comes to the impact on revenue diversification. This study predicts that reliance on any single revenue source that is dominant in nonprofit organizations' financing pattern is associated with a weaker representation of different types of funding sources in this pattern. Therefore, this study predicts that:

> H1: Organizations that have a dominant single funding source are more likely to have fewer funding sources and a lower level of revenue diversification.

3.2.2 Organizational Structure and Capacity

Organizational capacity is a prevalent concept in nonprofit research. This study proposes that organizational capacity is a significant factor in predicting level of nonprofit revenue diversification. Organizational capacity can be approached from multiple perspectives. A prominent measure of nonprofit capacity used extensively in nonprofit literature is budgetary size. This study uses real expenditure as a proxy of budgetary size. Smaller organizations – that is, organizations with a smaller budgetary size – tend to take advantage of every funding opportunity regardless of the amount of money that might be generated. On the other hand, organizations with extra resources,

particularly financial resources, are more likely to invest in and develop new funding relationships and pursue higher values rather than short-term, instrumental ones. However, the story is different with revenue balance. While smaller organizations can have multiple funding sources to financially support their operation, they may lack the capacity and incentive to strategically manage these revenues so to maintain a balanced revenue structure. Therefore, this study predicts that:

- H2a: There is a curvilinear relationship (\cup Shaped) between budget size and funding variety.
- H2b: Organizations with large budgets are more likely to have a higher level of revenue balance.

Capacity of nonprofit board is another measure of organizational capacity that has an effect on nonprofit financing. If board members are able to bring in a variety of resources for an organization and are actively involved in decision making process, it is more likely for the organization to be effective in funds generation and revenue management. This study predicts that:

- H3: Organizations that have larger boards are more likely to have more funding sources and a higher level of revenue balance.
- H4: Organizations that have more board meetings each year are more likely to have more funding sources and a higher level of revenue balance.

If an organization has experienced a great deal of growth in terms of programs and services for a relatively long period of time, which may indicate an increased capacity for the organization, it is more likely for the organization to invest in diversifying its revenue structure and strategically manage its revenue base. Therefore, this study predicts that:

H5: Organizations that have experienced greater growth of programs and services are more likely to have more funding sources and a higher level of revenue balance.

In a similar vein, if an organization has been doing a good job in its internal development, such as organizational structural improvement, leadership development, and internal management improvement, it is more likely to have higher level of revenue diversification.

H6: Organizations that do a good job in its internal organizational development are more likely to have more funding sources and a higher level of revenue balance.

3.2.3 Management

Managerial behaviors and experience have a significant impact on an organization's revenue strategic pattern. Better managed organizations have more resources and are therefore more efficient in generating operational funds. Successful organizations are more likely to position themselves strategically in management and seek to follow the so-called best practices recommended for nonprofit organizations. This study predicts that:

H7: Organizations that enjoy greater managerial success are more likely to have more funding sources and a higher level of revenue balance.

Managerial attitude toward the concept of "revenue diversification" is expected

to have a positive effect on the real level of diversification. If revenue diversification is recognized by nonprofit executive, managers, and directors as an important strategy to pursue, they will be motivated to develop more fund opportunities from different sources as well as to balance the revenue structure to optimize the benefit of this structure for their organization. This study therefore proposes that:

> H8: Organizations that attach more importance to revenue diversification are more likely to have more funding sources and a higher level of revenue balance.

Nonprofit management literature indicates that different stakeholders – nonprofit executive, nonprofit board, clients, donors, etc. – have their own standpoints at various stages of nonprofit operation. Their attitudes toward whether nonprofits should adopt a more diversified revenue pattern can vary depending on their positions in the entire nonprofit operation environment. And this variation will lead to different decisions regarding nonprofit financing strategies that will then influence revenue diversification. Therefore, this study predicts that:

H9: Greater influence of ED and staff on revenue generation strategy is associated with a greater funding variety and a higher level of revenue balance.

Many nonprofit practitioners and scholars anticipate that a fiscal squeeze might push nonprofit organizations in developing new funding strategies that include more revenue sources than they previously had to make ends meet, if not for any other objectives. This study uses operational cutbacks to gauge whether an organization is feeling a severe fiscal squeeze. Organizations that have recently experienced any operational cutbacks are more likely to seek new or additional funding sources and try to balance the revenue base. This study therefore proposes that:

H10: Organizations that have recently experienced operational cutbacks are more likely to have a greater funding variety and a higher level of revenue balance.

3.2.4 Fund Development Efforts

How nonprofit organizations implement financing strategies, particularly those directly related to fund development efforts and activities, is greatly related to nonprofit financial performance. If organizations employ fund development professionals working in functional areas such as fund-raising, media and public relations, and grant writing, it is more likely for them to achieve greater success in generating revenues. In addition to having designated staff members working on fund-raising and other related activities, nonprofits can hire external fund development consultants whose adequate experience, sufficient knowledge, and superior judgment can significantly help nonprofits raise the money they need. Therefore, this study predicts that:

- H11: Organizations that have internal fund development staffs are more likely to have more funding sources and a higher level of revenue diversification.
- H12: Organizations that use external fund development consultants are more likely to have more funding sources and a higher level of revenue diversification.

Fund development efforts require that nonprofits not only invest in human

capital, but also dedicate monetary resources for purposes of marketing, advertising, and relationship building with potential donors or funding agencies. Nonprofit organizations might spend a certain percentage of their organizational budget for such purposes. This study therefore predicts that:

> H13: Organizations that spend more budgetary resources in fund development and other related activities are more likely to have a greater funding variety and a higher level of revenue balance.

3.2.5 Environmental Factors

Nonprofit revenue diversification is also influenced by some external factors stemming from the outside environment in which nonprofits operate. Generally, if nonprofits are doing an excellent job in developing external relationships in funding and programmatic areas, they should be more successful in obtaining and securing funds from different sources.

H14: Organizations that have better relationship with external partners are more likely to have more funding sources and a higher level of revenue balance.

This study proposes that regional economy has an important bearing on nonprofit funding variety. An organization located in a county that enjoys economic stability will encounter less difficulty in generating revenue, particularly revenue from locally based funders.

H15: Regional economy is positively related to funding variety.

3.2.6 Other Institutional Factors

In addition to the organizational and environmental factors specified in previous sections, some other institutional characteristics are also anticipated to be associated with the variation of nonprofit revenue diversification, such as staff size, organizational age, service field, and geographic location. This study also analyzes the effects of these organizational demographics.

This study uses two operationalizations of staff size – the number of paid employees (both full time and part time employees) and the number of volunteers. Some types of nonprofits, such as certain human services organizations, rely on a large number of volunteers to carry out the daily operation of their programs despite a relatively smaller budgetary size, while some other nonprofits, like housing organizations, usually do not need to employ volunteer labors although they are quite sizable in terms of operating budget. It is therefore necessary to differentiate between these two dimensions in analyzing the impact of staff size on nonprofit financing strategy and pattern. This study hence predicts that:

H16a: Organizations that hire more employees are more likely to have more funding sources.

H16b: Organizations that have more volunteers are more likely to have more funding sources.

Maturity of organization is another story. When organizations grow up gradually in their service fields, they are usually better able to develop an extensive network with external partners and establish some reliable relationships that they can depend on for long term financial support. At the same time, more established organizations usually have greater managerial expertise and are more likely to adopt practices proposed by nonprofit scholars to improve organizational performance. Therefore, this study predicts that:

H17: Older organizations are more likely to have more funding sources and a higher level of revenue balance.

3.3 What Predict Nonprofit Financial Sustainability?

Nonprofit organizational performance and performance measurement have increasingly become two related research topics of great interest to scholars and practitioners in public administration and nonprofit management. Reviewing relevant literature reveals that multiple approaches have been developed and various measures have been used to evaluate nonprofit organizational performance. This study focuses on the financial aspect of nonprofit performance, and specifically evaluates financial sustainability as a particular measure of nonprofit financial performance. This study is interested in exploring what factors predict that nonprofit organizations are financially sustainable. Understanding how nonprofit organizations can improve their financial sustainability is of particularly significance during the current economic recession. This study proposes a number of factors are related to nonprofit financing that have direct impact how nonprofits perform these days. This study systematically examines the effects of these factors on the three measures of financial sustainability: financial stress, likelihood to maintain services, and future funding success.

3.3.1 Effect of Revenue Diversification on Financial Sustainability

Financial stress has been quite prevalent in the nonprofit sector in recent years. This study agrees with previous research that revenue diversification has a positive effect on organizational performance, and further postulates that keeping a more diversified and healthier revenue generation strategy and pattern reduces the level of financial stress of nonprofit organizations.

H18a: More funding sources are associated with a lower level of financial stress.
H18b: A more balanced revenue structure is associated with a lower level of financial stress.

Consequently, this study proposes that organizations that have a more diversified and healthier revenue generation strategy and pattern are better able to maintain their current level of programs and services.

- H19a: Organizations with more funding sources are more likely to maintain the level of programs and services.
- H19b: Organizations with a more balanced revenue structure are more likely to maintain the level of programs and services.

Diversifying nonprofit revenue structure has been proposed as a special and good strategy to help nonprofits sustain financial success by maintaining a more flexible revenue generation. Organizations that maintain a more diversified and balanced revenue pattern are in a better position to garner funds in the near future, and therefore are more likely to be optimistic to report that their organization will be successful in obtaining funds.

H20a: Organizations that have more funding sources are more likely to be successful in fund-raising.
H20b: Organizations that have a more balanced revenue structure are more likely to be successful in fund-raising.

3.3.2 Organizational Structure and Capacity

This study hypothesizes that organizational capacity is positively associated with financial sustainability. This study examines the effect of budgetary size on nonprofit financial sustainability.

- H21a: Organizations with a large budget are less likely to experience financial stress.
- H21b: Organizations with a large budget are more likely to maintain the level of programs and services.
- H21c: Organizations with a large budget are more likely to enjoy funding success in the future.

Board has been repeatedly explored as an importance factor in nonprofit performance. Board members are expected to bring in different types of resources to the organization that contribute greatly to the organization's sustainable development. They are also expected to be closely involved in decision-making process to leverage their expertise so as to improve nonprofit efficiency and outcomes. Therefore, this study predicts that:

H22a: Organizations with a large board are less likely to experience financial stress.

- H22b: Organizations with a large board are more likely to maintain level of programs and services.
- H22c: Organizations with a large board are more likely to enjoy funding success.
- H23a: Organizations that have more board meetings each year are less likely to experience financial stress.
- H23b: Organizations that have more board meetings each year are more likely to maintain level of programs and services.
- H23c: Organizations that have more board meetings are more likely to enjoy funding success.

3.3.3 Management

Administration and management has long been considered a significant determining factor of organizational performance. Managerial experience is strongly associated with performance and this study proposes that managerial success can predict financial sustainability:

- H24a: Organizations that enjoy greater managerial success are less likely to experience financial stress.
- H24b: Organizations that enjoy greater managerial success are more likely to maintain level of programs and services.
- H24c: Organizations that enjoy greater managerial success are more likely to enjoy funding success.

3.3.4 Fund Development Efforts

How much financial resource organizations can deploy to operate their

programs is a director indicator of whether the organizations are financially sustainable.

Fund development efforts and investment significantly enhances organization's ability to

obtain financial resources, therefore, this study predicts that:

H25: Nonprofits that invest more in fund development are more likely to be financially sustainable.

3.3.5 Operating Environment

Literature indicates that the environment in which nonprofits operate has an influence on nonprofit performance. A supportive and healthy environment – politically, culturally, and economically – can tremendously improve nonprofit performance by providing sufficient resources, particularly financial resource, necessary for a sustainable development.

- H26a: Organizations that have better relationship with external partners are less likely to experience financial stress.
- H26b: Organizations that have better relationship with external partners are more likely to maintain level of programs and services.
- H26c: Organizations that have better relationship with external partners are more likely to enjoy funding success.
- H27a: Regional economy is negatively associated with nonprofit financial stress.
- H27b: Regional economy is positively associated with the likelihood to maintain level of programs and services.
- H27c: Regional economy is positively associated with funding success.

3.3.6 Intervening Effect of Nonprofit Revenue Diversification

This study investigates several intervening factors in the relationship between revenue diversification and nonprofit financial performance. The following hypotheses take into account the factor of economic/financial condition of nonprofits while examining the specific effect of revenue diversification on nonprofit performance. Specifically, this study predicts that the potential performance-boosting effect from revenue diversification is more significant as nonprofit organizations' budgetary size increases.

H28a: The effect from funding variety on financial sustainability increases significantly as budgetary size increases.
H28b: The effect from revenue balance on financial sustainability increases significantly as budgetary size increases.

3.3.7 Other Factors

It is hypothesized that some other organizational factors – mostly demographical characteristics – have significant effects on nonprofit financial sustainability. For example, this study predicts that staff size is positively related to financial sustainability. This suggests that organizations with more employees and more volunteers are less likely to experience financial stress, and more likely to be able to maintain programs and services as well as to be successful in future revenue generation. Likewise, older organizations tend to be under less financial stress, and are more likely to maintain services and generate revenue in the future. This study also examines different service fields and the potential sectoral effects on nonprofit financial sustainability.

CHAPTER FOUR DATA AND RESEARCH METHODS

This chapter outlines the research methods, instruments, and procedures developed to explore the research questions and test the research hypotheses. Given the relative scarcity of empirical research on topics being examined in this study and the mixed results of prior research on relevant topics, this study is designed to adopt a predominantly quantitative methodology that has two overall objectives. One is to describe the general status and variation of key variables. The other is to examine the relationships among the variables, and to search for the model that best fits the data. This chapter has seven sections: (1) unit of analysis, (2) data sources, (3) sample selection and sampling, (4) survey instrument, (5) measurement, (6) survey data collection procedures, and (7) data analysis procedures.

4.1 Unit of Analysis

The unit of analysis is the major entity that is being analyzed in the study. It is the element about which one observes and collects data. The unit of analysis in this study is (nonprofit) organizations and the study is designed as a type of organizational behavioral research. By measuring individual nonprofit organization's self-reported revenue structure, contextual characteristics, and organizational performance, this study intends to explore the pattern among these three broad themes as well as the internal mechanism within each topic.

4.2 Data Sources

The data for this study come from two sources. Part of the financial data was obtained from "GuideStar Premium" – a large database of IRS 990 forms maintained by GuideStar. Subscription to GuideStar Premium allows full access to the contact information and financial portfolio of nonprofit organizations as they report to the IRS through 990 forms. Other financial information and organizational data were collected through a survey sent to the person in charge of day-to-day management of the organizations, such as executive director, chief executive officer, or other top level administrator. These individual directors, administrators, and managers have extensive knowledge about the variables in this research. In particular, they are actively involved in financial management process such as fund raising and related activities and hence are able to provide first hand information about nonprofit revenue strategy and financial performance.

The researcher decided to supplement IRS 990 data by survey data based on three considerations. First, IRS 990 forms do not provide some information about organizational management and performance this study intends to analyze. Secondly, the way nonprofit revenue sources are categorized in IRS 990 form is not consistent with the aims of this study. And thirdly, there is a concern of mis-reporting of the IRS 990 form information that might skew the data and data analysis significantly. Underreporting of nonprofit fundraising expenses was found to be prevalent (Krishnan et al., 2006) and will provide inaccurate and misleading information.

Prior studies of nonprofit organizational effectiveness and financial performance rely heavily on panel data sets exclusively drawn from IRS 990 forms. This study, however, uses a design that is cross-sectional.

4.3 Population and Sampling

This section explains the selection criteria used to construct a study sample. Given the purpose of this study, human services and community improvement organizations were selected because of (1) their visibility among all types of nonprofits, (2) their traditional and relatively heavy reliance on government as a major funding source, and (3) their provision of similar goods and services primarily consumed by local residents (Grønbjerg, 1993). The population of interest for this study includes the following eight groups of nonprofit organizations:

Under NTEE Category V:

I. Crime & Legal-Related, J. Employment, K. Food, Agriculture & Nutrition, L. Housing & Shelter, M. Public Safety, Disaster Preparedness & Relief, O. Youth Development, and P. Human Services; And under NTEE Category VII:
S. Community Improvement & Capacity Building

"Recreation & Sports" under Category V was eliminated because the programs and services provided by these organizations are more recreational than humanitarian in nature, and hence do not present a comparable group to other groups included in this study. By contrast, "Community Improvement & Capacity Building" under Category VII is highly similar to those under Category V in terms of the nature of programs and services and the social significance they symbolize. This group was therefore included in the study.

Finally, the decision was made to focus only on nonprofit organizations in New Jersey due to access and budget constraints. GuideStar Premium, from which a sampling frame was developed for the study, does not allow a nationwide search for organizations; in other words, any search within the database is limited to a single state. The survey population was defined to include human services and community improvement organizations located in the State of New Jersey.

4.3.1 Selecting the Sample

A sampling frame was developed primarily from Guidestar Premium, and the researcher then verified this information by checking other sources, such as the organization's official websites. The researcher downloaded from GuideStar Premium information on all organizations that meet the following four sampling selection requirements:

- (1) The organization is located in the State of New Jersey;
- (2) The organization's NTEE code is one of the eight groups identified above, that is, I,J, K, L, M, O, P, and S;
- (3) IRS subsection of the organization is defined as 501(c)3 Public Charity; and
- (4) The organization's annual income (of the most recent record year available in the GuideStar Premium database) is no less than \$100,000.

2,050 organizations were retrieved from the database by using the above four selection criteria. The researcher removed small sized organizations (that report annual income less than \$200,000) to retain only medium and large size organizations. After evaluating this original dataset, the researcher made some additional deletions and corrections.

First of all, the researcher deleted 53 organizations whose NTEE codes do not lie into any of the eight groups but are listed as one of them mistakenly, and then rearranged the dataset by reassigning another 48 organizations that are misclassified but belong to one of the eight groups anyway.

Next, the researcher decided to eliminate certain subgroups based on some theoretical considerations. The researcher excluded 7 labor unions in group J, on the theoretical ground that labor unions are primarily, if not entirely, reliant on membership fees for organizational operation and that labor union is a unique political factor in the U.S. and labor unions differ tremendously from other human services organizations in terms of services provided. The researcher then removed 112 organizations in group M24 (Fire Prevention/Protection/Control). The third group that needed modification was P33 (Child Day Care). This group contained 210 organizations and was the largest subgroup (10.5%) in the frame of 2,050 organizations. Because day care centers primarily depend on fees instead of other sources of revenues, the researcher decided not to have the entire subgroup included so as to avoid over-representing this subgroup and hence distorting the data. The researcher randomly selected 30 organizations out of the 210. Due to the same concerns, the researcher also sub-sampled group L22 (Senior Citizens' Housing/Retirement Communities) by randomly selecting 49 from 102 such organizations (102 representing 5.1% of the 2,050). These modifications resulted in 1,295 organizations.

Ι	Crime & Legal-Related	46
J	Employment	48
Κ	Food, Agriculture & Nutrition	33
L	Housing & Shelter	186
М	Public Safety, Disaster Preparedness & Relief	23
0	Youth Development	95
Р	Human Services	527
S	Community Improvement & Capacity Building	157
Total		

 Table 4.1 Final Sample of the Study

Further examining the 1,295 organizations revealed that the information of some organizations as contained in the Guidestar Premium data base was not up-to-date – some going back to the 1990s. It was therefore necessary to exclude those that have not reported information since 2006, because it is very likely that organizations that did not

report their tax-related information with the IRS in recent years do not exist any longer or their revenue size had dropped below the \$25,000 cut-off point and hence they were exempt from filing. Removing those that failed to report with the IRS since 2006 and then several duplicates yielded a final sample of 1,115 organizations (Table 4.1).

4.3.2 Identifying Survey Recipients

When planning a survey to gather data for this study, the researcher was confronted with two very important logistics questions: how to identify the appropriate recipients within individual nonprofit organizations, and how to ensure a satisfactory response rate (Berry et al., 2003)? This study took some steps to ensure that surveys were to be mailed to the appropriate recipients.

The researcher manually checked all organizations one by one to verify the following information (if available): organization's name, address, city, zip code, contact person's name, contact person's job title, contact person's email address, telephone number (preferably of contact person), organizational website address, EIN (employer identification number), and the most recent year of which the Guidestar Premium data base hosts the organizational information. The researcher relied on several other sources to do the verification. First, the researcher checked Guidestar Premium data base where the following information might be found: general information (organization's name, address, EIN, telephone number, website address, personal contact information such as name, email, and fax), people (name and job title of officers,

directors, trustees, and key employees as of the most recent fiscal year that information is available), and documents (IRS 990 form in PDF format of the last available ten years). Secondly, the researcher searched on the Internet to verify if this information, particularly website URL address and contact information, is correct. Then, the researcher searched online by using Google for missing information to complement that provided by the Guidestar Premium data base. If a conflict occurs between GuideStar Premium information and information obtained from Internet search, the researcher always relied on the information obtained from organizational website and made corrections accordingly when necessary.

Of the 1,115 organizations in the finalized mailing list, contact person's email addresses of 320 organizations were obtained; the remaining 795 organizations only have physical mailing addresses. Of these 795 organizations that email addresses are not available, 528 organizations' personal contact information was obtained. In order to implement a methodological experiment as part of the study, the researcher decided to randomly and evenly split the 320 email addresses into two groups. While one group – the "Web Survey" group – would be contacted through emails, the other would be merged into the "Mail Survey" group that would be contacted through regular mails. This would allow for an experiment to compare traditional mail surveys with newer web surveys as a method for studying nonprofit organizations.

The effort in acquiring names turned out to be successful and worthwhile. Finally, 76% (848 out of 1,115) of all surveys and 72% (688 out of 955) of the mail surveys went out with a personal name. The rest were generically addressed to "Executive Director/Chief Executive Officer" if an executive could not be identified by

	Group	Have Contact Person's Name?	Have Contact Person's Email Address?	Survey Mode	#
1	Web	Yes	Yes	Web	160
2	Mail 1	Yes	Yes	Mail	160
3	Mail 2	Yes	No	Mail	528
4	Mail 3	No	No	Mail	267
	Total				1.115

name. Table 4.2 summarizes the information of the four different survey groups.

Table 4.2 Summary	of Four Groups
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4.4 Survey Instrument

Survey research is one of the most important areas of measurement in public administration research. As Berry et al. (2003) suggested survey research can have "enormous advantages over many other forms of inquiry" if "solidly done." The evidence obtained from this survey was designed to have validity for both academic and practitioner communities. Selecting the type of survey is an important decision in many research contexts. By applying some rules and trying to balance the advantages and disadvantages of different survey types (including mail survey, web survey, group-administered questionnaire, personal interview, and telephone interview), I decided to use a combination of traditional mail survey and web survey for the current study.

Writing questionnaires is a critical part of survey research since a survey cannot succeed with poorly constructed questions. Following a suggestion by survey research

scholars (Berry et al. 2003; Dillman et al., 2008), an iterative process was adopted in writing questionnaire for this study. The development of the survey instrument proceeded in four stages: (1) literature and document review; (2) discussion with survey experts and nonprofit practitioners; (3) development of a draft survey instrument; and (4) pilot testing and finalization of the survey instrument. Technically, these steps were followed in designing and finalizing the questionnaire: first, determining what is going to be measured and generating an item pool; second, determining the format for measurement; third, having the initial item pool reviewed; fourth, considering including validation items; fifth, administering items to a development sample then evaluating the items; and if necessary, optimizing scale length.

It is of great importance to bridge the differences resulting from the academic-practitioner gap that characterizes much nonprofit research. The researcher would like to ground this research in such ways as to make the results relevant, useful, and applicable in real-world situations, and felt it imperative to rely on both scholarly work and real world experiences. In addition to consulting academic (dissertation committee members and some other professors in nonprofit study), the researcher drew experiences from some MPA students at Rutgers-Newark who are currently working with nonprofit organizations either as employees or board directors. Their input was then incorporated into the development of the survey questionnaire.

The draft survey was pilot tested with a number of nonprofit representatives to solicit comments and identification of questions that were unclear, confusing, or not appropriate, particularly those newly developed variables or items that had not been tested in previous research. The pilot study helped to identify possible problems for correction.

As length is a key factor in the response rate of a survey, the rule of thumb is to keep the questionnaire short and brief, so that it could be easily completed within about fifteen minutes. An eight-page survey instrument comprised of 35 questions, most of them being closed-ended questions, was determined. Questions are grouped in five Section 1 asks descriptive questions relating some basic organizational sections. characteristics including service field, geographic location, staff size, organizational age, board size, number of annual board meetings, and number of fund development Section 2 collects information about the organizations' funding professionals. environment such as annual budget and revenue sources, and also the perceived difficulty in obtaining revenues from different sources. In Section 3, respondents are asked to share their fund development experiences and strategies, like what percentage of the organizational budget goes to fund-raising and marketing activities, how much effort devoted to generating revenues, and how successful they think their organization will be Respondents are also asked to report their in fund development in the future. organizational performance indices regarding financial management and strategic development in Section 4. Finally, respondents' demographic information including gender, age, job title and tenure with their organizations are collected in Section 5. At the end of the survey, respondents are asked to provide their email address if they would

like to receive a copy of the survey results when they are released. Respondents are allowed to consult with their colleagues, for instance, financial manager and human resources manager, for assistance in answering survey questions when necessary.

This study uses direct or construct-specific labels for many questionnaire items to improve cognition. In designing the questions, efforts were made to provide balanced scales where categories are relatively equal distances apart conceptually. Several strategies were adopted to avoid respondent fatigue, such as: changing format, mixing Likert-scale and non-Likert-scale questions, and using both questions and statements. The questionnaire is included in Appendix 1.

The survey questionnaire was reviewed and approved by the Rutgers University Institutional Review Board (IRB) for the protection of human subjects in research under the provision of Federal Regulation 15 CFR 46. A copy of the letter of approval from the IRB is attached in Appendix 4.

4.5 Measurement

This section explains definitions and measures associated with the key variables of this study. Besides adopting tested items in nonprofit literature, this study develops new items for several constructs that have not been empirically tested to supplement the existing measures. In order to obtain desirable accuracy, validity, and reliability for the measurement, and particularly of the novel items, efforts were taken to make sure that: terms are defined precisely; ambiguous items or terms are eliminated; information requested is accessible to respondents; and directions are easy to follow (survey) (O'Sullivan et al. 2003).

This study chose to use a combination of 7-point and 5-point response scales to measure gradations of a variety of opinions, attitudes, and behaviors of respondents. Dillman et al. (2008) recommend limiting scales to four or five categories; but Peterson (2000) suggests that reducing the number of scale categories decreases the correlation coefficient between the variables being correlated. There is just no single, optimal number of response scale categories for all scaling situation (Cox, 1980).

4.5.1 Revenue Diversification Measures

This study examines the level of revenue diversification of human services and community improvement organizations, and aims to determine the driving factors of this diversification level. Two measures of revenue diversification are adopted in this study: "Funding Variety" measured as the number of funding sources, and "Revenue Balance" measured by a concentration index capturing the distribution of revenue categories. The range of possible nonprofit funding sources is from 1 to 8 as there are a total of eight categories of funding sources as in this study – government funding, individual donations, the United Way, foundations, corporations or businesses, program service revenues (fees/sales/dues), banks and lending institutions, and all other income.

One weakness with the method of merely counting the numbers is that it does

not take into consideration the percentage of each category, nonprofit funding source in this case. For example, a nonprofit that generates revenue equally from all the eight sources will have a same index value as another nonprofit that relies heavily on one or a few particular sources while obtaining a very small percentage of revenues from all other sources. The researcher therefore uses another measure – "Revenue Balance" – to fix this problem. The purpose of this variable is to better measure and control for the overall diversification of revenue pattern. This study adopts a revised measure of HHI to evaluate the diversity of nonprofit revenue streams, which is defined as

$$RB = \frac{1 - \sum_{i=1}^{3} R_i^2}{2/3}$$

where R denotes the share – in proportion of actual weight – of each of the three broad categories of nonprofit revenue – government funding, private contributions, and commercialized income. The reason that the "3 revenue categories" typology is preferred over the "8 funding sources" typology is that it makes more sense to expect or assume a relatively balanced distribution of total revenue among the three broad categories – government, private, and commercial, than that among the eight funding sources. The value of the Revenue Balance index ranges from zero to one with increasing values implying more balanced nonprofit revenue distribution among the designated revenue categories.

4.5.2 Financial Sustainability Measures

Having identified multiple dimensions from nonprofit performance measurement literature, this study designed a set of variables to measure nonprofit financial sustainability. This study uses internal measures to gauge an organization's performance. These measures are self-reported judgments rather than actual performance data. Survey respondents were asked to evaluate their organization's financial performance based on three indicators.

Financial Stress. Respondents were asked to rate the level of financial stress their organization was experiencing by using a ten point scale.

Likelihood to Maintain Programs/Services. Respondents were asked to predict how likely it is for their organization to maintain the current level of programs and services.

Funding Success. Respondents were asked how successful they anticipate their organization would be in generating revenues the following year from the various funding sources.

4.5.3 Contextual Factors

This study groups all the contextual factors into four categories: structure and capacity, management, fund development efforts, and operating environment.

Structure and Capacity

Organizational structure and capacity is examined by five variables: budget size,

board size, board meetings, organizational growth, and internal development.

Budget Size. This study uses the real expense as a proxy of nonprofit budget size. The data was obtained from GuideStar Premium database and the real expenses are as reported on the IRS form for the most recent filing year available when the search was conducted during the summer of 2009. Of the 501 organizations, 2006 data are used for 19 organizations, 2007 data for 367 organizations, and 2008 data for 115 organizations.

Board Size is measured as the number of board members.

Board Meeting is measured as the number of board meetings held each year.

Growth is measured by one question item about the growth of programs and services the organization has experienced over the past five years.

Internal Development is captured by three questions regarding organizational structure improvement, leadership development, and internal management improvement.

<u>Management</u>

Managerial factors consist of four measures: level of managerial success, management's attitude toward revenue diversification, influence from executive director and professional staff on funding strategies, and recent operational cutbacks.

Managerial Success is measured by six questions regarding management of the organizations in service delivery, mission achievement, peer excellence, and performance measurement.

Attitude toward RD is about management's perception of revenue

diversification as a special revenue strategy for nonprofit organizations. Respondents were asked to indicate on a 7-point scale to what extent they believe that having revenue from several sources is extremely important for organizations like theirs.

Influence from ED & Staff is measured by two questions about the influence from executive director and professional staff on revenue generation or funding strategies of nonprofit organizations.

Operational Cutbacks. Respondents were asked how much their organization has had to cut programs or services, how many to lay off paid employees, and how much to change employment (from full-time to part-time) since the beginning of 2008. This study creates a dichotomous variable to indicate whether an organization has experienced operational cutbacks recently. Organizations that reported program cut, employee lay off, or employment shrinkage are all considered to be those that experienced cutbacks.

Fund Development Efforts

This study uses three categorical variables to measure nonprofit organizations' fund development efforts and investment: FR Staff, FR Consultant, and FR Budget.

FR Staff is measured as the number of internal fund development professionals working in fund development, media and public relations, and grant writing areas. This study creates a dichotomous variable to evaluate the effect of using designated fund development staff.

FR Consultant is measured as the number of external fund development consultants working in those areas. This study creates a dichotomous variable to

examine the impact of hiring professional fund development consultants.

FR Budget is measured as the percentage of organizations' budget that is devoted to fund-raising and marketing activities.

Environmental Factors

Environmental factors consist of two measures: relationship with external stakeholders (external relationship) and regional economy.

External Relationship is measured by two related questions exploring organization's relationship with outside stakeholders in funding and programmatic areas.

Regional Economic Instability is measured by the coefficient of variation of the residuals of monthly employment which was first developed by Conroy (1975) and has been extensively used in regional economic studies such as Kort (1981) and Siegel et al. (1995). This study defines counties as regions and regional economic instability as follows:

$$REIc = \sqrt{\frac{\sum_{t=1}^{T} \left[\frac{e_m^c - \hat{e}_m^c}{\hat{e}_m^c}\right]^2}{M - 2}}$$

Where e_m^c is observed monthly employment for county *c* and month *m*; and \hat{e}_m^c is a linear approximation of the long run growth trend in employment in county *c* and month *m*. A nine year data (108 months) was used to calculate this index for all twenty one counties in New Jersey.

First, a linear approximation of the trend component is estimated; the trend component is then subtracted from the seasonally and randomly adjusted employment series to derive an approximation of the cyclical component; this difference, or residual, is then adjusted, by expressing the difference in percentage terms (dividing by \hat{e}) to account for differences in scale among regions; these percentage deviations from trend are then divided by M - 2 to adjust for degree of freedom lost in estimating e; finally, squared percentage deviations are summed over all years to derive an estimate of overall regional economic instability. The value of this index increases as the difference between e_m^c and \hat{e}_m^c increases, that is, as the deviation of employment from trend increases. Thus, higher values of REI indicate greater relative economic instability.

4.5.4 Other Organizational Characteristics

Demographic characteristics are important factors that impact on organizational performance. Most of the information of these variables is obtained through survey by asking respondents to describe their organization in terms of size, age, geographic location, etc.

Sector. Respondents were asked to indicate the main program activity of their organizations. However, a better and more accurate measure of this variable would be NTEE code. The study creates four dichotomous variables for the four largest subgroups in the sample – multi-purpose human services organizations, housing organizations, youth development organization, and community improvement organizations.

Location. Geographic location of a nonprofit organization is measured as one

of the following four commonly used items: urban, suburban, rural, and other. The study creates two dichotomous variables for urban location and suburban location.

Employee. As one measure of staff size, this variable is measured by the number of both full-time and part-time paid employees in an organization.

Volunteer. Another measure for staff size is the number of volunteers.

NPAge. This variable is measured as the years that an organization has been in operation. Organizational age represents in part the effect of organizational reputation on charitable contributions. Well-established or older nonprofits are more likely to have a better reputation in attracting all kinds of resources because of their superior fundraising capacity and long-term connections within communities.

4.5.5 Respondent Demographics

Respondents' demographic information is also collected, such as tenure (measured as the number of years worked in their current organization), tenure with the nonprofit sector, with government, and with the private business sector. There is no ground to hypothesize that most of the personal characteristic variables such as gender, age, and job title would make any difference to study results. The reason they were included in the questionnaire is to serve as control variables in data analyses and because they have been commonly used in other nonprofit studies.

4.6 Survey Data Collection

As mentioned earlier, the data for the analysis come from two sources. Some financial data were obtained from a large database of IRS 990 forms maintained by GuideStar and accessible at its official website. Most of the organizational data were obtained by a survey sent to the person in charge of day-to-day management of sample organizations, such as executive director, chief executive officer, or administrator. One logistical effort that can help obtain good survey response rates is adopting multiple mailings (Berry et al. 2003), three separate mailings were therefore used with both mail survey group and web survey group. The following table shows the schedule of each mailing.

Mail Survey GroupWeb Survey GroupInitial mailing (955)July 15, 2009Email invitation (160)July 17, 2009Reminder postcard (938)July 24, 2009Follow-up email # 1July 22, 2009Second mailing (746)August 12, 2009Follow-up email #2July 28, 2009

 Table 4.3 Administration of Mail and Web Surveys

4.6.1 Mail Survey

Survey questionnaires were mailed with a one-page cover letter (see Appendix 2) on a letterhead developed to introduce the significance of the study and its relevance with nonprofit organizations, and to instruct respondents to fill out the survey and to return the material in an enclosed self-addressed envelope. Confidentiality was assured in the cover letter; anonymity of the response was guaranteed by committing to publish

aggregate results only, without reference to specific organizations. A business return and self-addressed envelope was enclosed in order to facilitate responses.

The mailing data was merged into the cover letter and envelope labels which were printed. Labels with recipients' names and addresses were put on the $9"\times10"$ formal envelops of the School of Public Affairs and Administration (SPAA) of Rutgers University – the institution the researcher is affiliated with, and labels with researcher' name were put on the #10 Business Reply Mail envelopes. Each survey instrument was coded (the code began with MG meaning "mail group", and then a sequential numerical identifier), and this code was entered into the database.

This study adopted three separate physical mailings – two mails and one reminder post card in between. About two weeks after the first survey mailing went out, a reminder postcard was sent out. On the backside of the postcard was a brief letter (see Appendix 2) that emphasized the importance of the survey, thanked those who already replied, and reminded those who had not done so yet. Labels with recipients' names and addresses were put on the front side of the postcards where logo and address of SPAA were displayed. Four weeks after the first letter was sent, a second letter (see Appendix 2) and final contact was sent with another survey instrument enclosed. Organizations that had already completed and returned the survey were removed from the mailing list.

4.6.2 Web Survey

This study used "SurveyMonkey" - an online survey service - to create and

implement the web survey. An email invitation was sent through SurveyMonkey to 160 recipients uploaded beforehand by the researcher. The main text of the email invitation (see Appendix 3) was similar to that of the cover letter used for snail mail survey group, with minor modifications to fit web survey situation. Respondents were asked to click on the link provided that would direct them to the survey webpage hosted on SurveyMonkey. A colorful logo of SPAA was provided on the survey webpage. After the first email invitation was sent out, it was discovered that two recipients had already opted out of receiving any email from SurveyMonkey, which means the true size of this web survey group is 158. Six days after the invitation email was sent, a follow-up email was sent to all of those who had not responded by then or who have responded but have only partially completed the survey. Another six days later, a second follow-up email and the last contact for the web survey group was sent to all non-respondents by that time. All three contacts were sent out at 8:00 AM on the day they were scheduled to deliver.

4.6.3 Coding

A codebook was developed to help input the data into a Microsoft Excel file. Briefly speaking, the data from the questionnaires were entered in the following way. When nominal and ordinal data was encountered, the responses were scored on straight scales. And interval data were entered without any transformation being performed. This Excel file was then exported to the statistical software in the corresponding format. All missing data was recorded as missing, no further data management was conducted.

4.7 Data Analysis Procedures

STATA 12.1 was chosen for statistical analysis. First, descriptive statistics including central tendency and standard deviation (if appropriate) were calculated for all variables, and a correlation matrix of key variables was provided. Bivariate statistics helped identify some significant variations between different types of nonprofit organizations and statistically significant association among many of the study variables.

4.7.1 Statistical Methods

This study employs two statistical techniques: exploratory factor analysis and multiple regression analysis.

Factor analysis is a method for reducing the dimensionality of multivariate data and understanding patterns of association among variables (Lattin et al., 2003). Factor analysis verifies a feasible factor structure within a given set of survey questions for this study. Principal component factor analysis is utilized to check the measurement equivalence across all items. Reliability of the observed survey items were assessed before conducting factor analysis.

Regression analysis is probably the most widely used form of analysis of dependence to explore the relationship between a set of independent variables (or predictor variables) and a single dependent variable (or outcome variable) (Lattin et al., 2003). This study carries out multiple regression analysis to specify potential causal relationships between contextual factors and nonprofit revenue diversification, as well as between contextual factors, revenue diversification and organizational performance.

4.7.2 Model Specification

Ordinary least squares (OLS) regression models are employed to test the proposed hypotheses and answer the research questions. Although OLS is extensively used in the social sciences research, the results from OLS can be biased if some key assumptions are violated. Despite these limitations, OLS is a helpful first-step in exploring the research topic for this dissertation and can be used as a comparison to other estimation techniques in future research efforts to see how estimates change when theory, diagnostic tests, and data suggest alternative estimation techniques may produce better estimates. The dependent variables of this study are mostly scale variables, and OLS has been shown to be robust in such analyses.

This study develops two models to test research hypotheses proposed. A first model is designed to test the significance of factors that are assumed to impact nonprofit organization's funding pattern measured as the level of revenue diversification (*RD*). The model is:

RD = f (CAPACITY, MANAGEMENT, INVESTMENT, ENVIRONMENT, CONTROL) + e_i

where *CAPACITY* includes organizational structure and capacity such as board size, budget size, organizational growth and internal development; *MANAGEMENT* denotes measures of managerial success, management's perception of revenue diversification, inside stakeholders' influence on financing strategy, and operational cutbacks; *INVESTMENT* reflects nonprofit's investment and efforts in fund development and related activities; *ENVIRONMENT* indicates measures of operating environment of nonprofits, such as organization's relationship with outside stakeholders, difficulty of revenue generation, and regional economic status; *CONTROL* consists of measures of organization's age, size, and service type; e_i is a random error term. Two separate OLS regressions are performed to investigate independent variables' effect on the two measures of revenue diversification: funding variety and revenue balance.

Then, a second regression model is introduced to assess whether nonprofit revenue diversification as measured by funding variety and revenue balance can predict nonprofit financial sustainability. The empirical model is as follows:

Sustainability = f(RD, CAPACITY, MANAGEMENT, INVESTMENT,ENVIRONMENT, CONTROL) + e_i

where *RD* denotes revenue diversification measures; *CAPACITY* includes some organizational characteristics such as board size, budget size, etc.; *MANAGEMENT* denotes operational cutbacks; *INVESTMENT* indicates the level of fund development efforts; *ENVIRONMENT* includes environmental factors; *CONTROL* consists of measures of organization's age, size, and service type; and e_i is a random error term.

Three separate regressions are used to examine independent variables' impact on three measures of financial sustainability: financial stress, likelihood to maintain programs and services, and future funding success.

CHAPTER FIVE DATA ANALYSIS AND FINDINGS

Chapter 5 reports data analysis and hypothesis-testing results and discusses their meaning. This chapter has four sections: (1) Survey Response Rate; (2) Descriptive Statistics; (3) Validation of the Proposed Constructs; and (4) Regression Analysis.

5.1 Survey Response Rate

Research methods textbooks argue strongly for securing a high survey return rate so as to minimize nonresponse bias (Hager et al., 2003). What constitutes a good response rate is not easily stated; some scholars suggest a typical return rate in organizational surveys is around 30 percent. As of September 30, 2009, two and half months after the initial mailing, a total of 505 responses were returned. Of the 505 responses, 501 valid responses⁷ are used for analysis. Considering the size of the initial selected sample (1,115), the overall response rate is 45.3%, and the valid response rate is 44.9%. Seventeen survey invitations were returned because of wrong, out-dated, or undeliverable addresses; and two email invitations were blocked because owners of the two email accounts had opted out of receiving any email from SurveyMonkey where the

⁷ Valid response is defined as a completed survey with a small number of question items not answered by the respondent. It could be an entirely completed or a partially completed survey. Surveys that are apparently broken in any place of the questionnaire are considered to be not valid.

web survey was hosted.

Survey Mode	Surveys sent	Return	Return rate	Valid return	Valid return rate
Web Survey	160	71	44.38%	71	44.38%
Mail Survey	955	434	45.45%	430	45.03%
Overall	1,115	505	45.29%	501	44.93%

 Table 5.1 Survey Response Rates

A number of reasons might explain why the survey achieved such a respectable return. First, Rutgers University with which the researcher is affiliated is the State University of New Jersey, which makes it easier for nonprofit organizations in New Jersey to identify with this study. Second, the survey was conducted at a time when the nonprofit sector, and the entire American economy, was experiencing the most severe economic recession since the Great Depression. Nonprofit executives were very likely to be attracted to the purpose of the survey – examining how nonprofit revenue pattern can hopefully help nonprofits survive the economic downturn. Finally, the questionnaire was designed with a view to making it as easy as possible for respondents to answer the questions and complete the entire survey.

More detailed comparative analysis of the two survey methods are provided in Appendix 9 – A Comparative Study between Web and Mail Surveys.

5.2 Descriptive Statistics

Descriptive information for all survey items is summarized in tables provided

in Appendix 5. The results demonstrate that sufficient variation is present of all the items. This section discusses the characteristics of some selected items, beginning with personal characteristics of survey respondents – the person who completed the survey on behalf of their organization.

5.2.1 Personal Characteristics of Respondents

Although most personal information as to this study's respondents is not relevant to the core research questions, it is useful to include some basic personal characteristics of the respondents.

<u>Job Title</u>

Most survey respondents identified themselves of as Executive Director/CEO/President or Vice President of their organization (409, 84.2%). 12.8% (63) of the respondents reported their job title as either "Professional Staff" or "Other" that might include titles such as "HR manager." Only 15 respondents (3%) are board directors or board members. This suggests that most of the respondents provide information and make judgment from nonprofit management's perspective rather than from that of nonprofit board. It is important to distinguish between managers and board members because they are different stakeholders and have different attitudes and opinions of some nonprofit management issues.

<u>Gender</u>

Consistent with many other survey studies, there are more female respondents

(272, 55.3%) than male respondents (220, 44.7%) in the current survey. It is not sure though whether this is reflective of gender difference in the study population⁸ or it is just because females are more likely to respond to surveys.



Figure 5.1 Frequency of Gender in the Sample

Age

Respondents also cover a wide range in terms of age, and a majority of them are apparently in their middle and elder ages as shown in Figure 5.2. More than 80% (399) respondents are over 45 years old with about 10% (48) over 65, nearly 40% (192) from 55 to 64, and another 32% (159) are in their ages from 45 to 54.



Figure 5.2 Age of Respondents

⁸ The gender information of the entire study population is not available.

Tenure with Different Sectors

On average, respondents have worked at their current organization for 13 years. They have worked an average of 20 years with the nonprofit sector. These nonprofit managers also had some past experience working in either private business sector or the government sector. Figure 5.3 shows the statistics.

Figure 5.3 Tenure with Different Sectors



5.2.2 Demographic Characteristics of Sample Organizations

Although the survey sample is exclusively from New Jersey and operating in the two broad fields of human services and community improvement, variations are presented in demographic characteristics such as geographic location, service field, years in operation, staff size, etc.

<u>Service Field</u>

In terms of service field distribution, the 501 responding organizations seem to be representative of the initial sample of the study (1,115). The information is summarized in Figure 5.4. General type, or multi-purpose, human services organizations comprise over half of the entire sample (501), followed by community improvement organizations and housing organizations each of which takes up 13% of the entire sample. None of the other five service fields takes more than 10% of the entire sample. It should be noted that many general type, multi-purpose human services organizations have operations in some specialized areas such as youth development, employment, and housing.



Figure 5.4 Distribution of Eight Service Fields

Location

A large proportion of these organizations are located in suburban regions (235, 47.4%), followed by those in urban regions (161, 32.5%). 8.3% (41) organizations are located in rural regions, and the rest 11.9% (59) reported their geographic region as "Other" which suggests that they might either have multiple physical location types, or their services are not restricted to a particular type of region.

Years in Operation

Many responding organizations have existed for quite a long time. Sixty percent of the sample were established more than 25 years ago. One quarter of the entire sample (124) has been in operation for more than 50 years; 35% organizations (175) have been in operation for 26 to 50 years. Another quarter (133, 27%) reported an organizational age of 11 to 25 years. For those younger organizations, 13% (65) have been in operation for less than 10 years, and two have an organizational life less than 3 years.

<u>Staff Size</u>

This study adopts two measures – number of paid employees and number of volunteers to examine staff size; this distinction is based on the fact that some organizations in certain service fields might rely more on volunteer labors for program provision and service delivery.



Figure 5.5 Employee Size in the Sample

Figure 5.5 shows the distribution of responding organizations in terms of number of paid employees. Diversity is reflected with a variety of different staff sizes.

About 20% (100) organizations are operated by fewer than five employees. Of these, fifteen organizations reported having no paid employee at all, which suggests that they completely depend on volunteers. At the same time, about 23% (115) organizations have an employee size greater than 100. 68 largest organizations (13.6%) employ more than 200 people.

This study does not reveal a heavy dependence on volunteer labors. In addition to a 12.1% (60) that do not use volunteers at all, nearly 50% (238) of the organizations reported that fewer than 50 volunteers are working with them. As a comparison, 5% (25) organizations use over 1,000 volunteers and another 4% (21) have more than 500 volunteers.



Figure 5.6 Volunteer Size in the Sample

It should be noted though that the survey did not provide a clear definition of volunteers nor an instruction on how to calculate the number of volunteers. It is possible that some organizations recruit a large number of volunteers for their various programs who might only need to dedicate a marginal amount of time, while some other organizations use volunteer labors in a longer term and a more intensive fashion.

5.2.3 Revenue Diversification

Funding Variety

This study uses two different measures to capture different aspects of revenue diversification. First, this study uses the number of different funding sources to measure funding variety; an organization can have from one up to eight funding sources. Then, this study uses revenue balance to refer to the distribution of the three revenue categories in the entire nonprofit financing, and the value of the index calculated for this measure can range from 0 to 1.



Figure 5.7 demonstrates that New Jersey human services and community improvement organizations are relying on multiple funding sources. About 90% (425) organizations have more than one funding source. A majority of organizations (363,

77%) have at least three funding sources. However, no more than 10% (47) depend on financial support from more than six funding sources.

The average number of funding sources is 4.2, but this number varies from service field to service field. Figure 5.8 shows the sectoral differences; on average, youth development and food organizations rely on more than five funding sources while public safety organizations rely on three funding sources.

Figure 5.8 Funding Variety by Service Field



Revenue Balance

Revenue balance examines how nonprofit funding sources are distributed in revenue structure. Table 5.2 shows the descriptive statistics of the three categories of nonprofit revenues in the sample. Government funding obviously dominates nonprofit financing pattern with an average share of 47.8%. Government funding is followed by commercialized income which comprises 30.1% of nonprofit revenue. Sample organizations depend the least on private contributions to generate financial support for their operation.

	Government Funding	Private Contributions	Commercialized Income
Crime & legal-related	44.9	41.1	14
Employment	43.2	6.7	50.2
Food & nutrition	28.4	58.5	13.1
Housing & shelter	53.7	20	28.3
Public safety	13	42.2	44.7
Youth development	25.9	32.5	41.5
HS – Multipurpose	53.1	17.8	28.8
Community Improve	45.8	19.2	35
All Sectors Together	47.8	22	30.1

 Table 5.2 Share of Revenue Categories by Sector (%)

Table 5.3 provides more detailed information by including shares of the eight funding sources. In addition to government funding, service or program fees is the only other funding source that takes more than ten percent of entire nonprofit revenue. The third largest funding source is individual donation which generates slightly less than 10% of total nonprofit revenue. On the contrary, a number of other funding sources only generate very marginal revenues for nonprofits. For example, nonprofits rarely use loans from banks or other lending institutions for financing purposes. The share of revenues generated from this channel comprises only 1.6% of the entire nonprofit financing. The United Way has a second smallest share (1.9%) in this financing pattern.

Table 5.3 also provides statistics broken down by different service fields which presents sectoral variations in terms of share of funding sources. Although government funding is dominant across the board, a number of other sources are also very visible in several sectors. For example, public safety and youth development organizations have adopted commercialized incomes such as fees, sales, and membership dues as the most important funding source for their organization, while food and nutrition organizations rely heavily on individual donations.

Sector	Gov	Donation	UW	Foundation	Corp	Fees	Banks	Other
Crime	44.9	14.9	1.8	18.3	6.1	10.4	.06	3.5
Employment	43.2	1.3	.7	1.5	3.2	37.7	.11	12.4
Food	28.4	34	1.9	16.1	6.5	8.9	.67	3.5
Housing	53.7	9.8	2.1	4.4	3.7	17	3.2	6.1
Public safety	13	39.1	0	.7	2.4	44.7	0	0
Youth	25.9	11.7	3.7	10	7.1	26.5	2.7	12.3
HS	53.1	8.6	2	5.1	2.1	24.4	1.2	3.2
Community	45.8	4.9	.6	7.8	5.9	27.1	2.1	5.8
All Sectors Together	47.8	9.9	1.9	6.6	3.6	23.5	1.6	5

 Table 5.3 Share of Funding Sources by Sector (%)

Organizations in the sample are generally doing a good job in terms of trying to develop more funding sources, considering that the average number of funding sources is 4.2. Revenue Diversification Index calculated to evaluate how balanced the nonprofit revenue structure is reveals some additional information. Table 5.4 shows that when taking into consideration the share of each funding source, the level of funding diversification is not as visible as suggested by the number of funding sources.

According to the "RB Index" column in the table, food organizations are the most diversified while employment organizations are the least diversified, meaning that distribution of different funding sources is more balanced in food organizations. The sectoral difference is much less significant if the revenue balance index is calculated by using share of the three broad revenue categories, as displayed in the "RB3 Index" column. This again proves that it would make more sense to use the three revenue categories to calculate revenue balance rather than the eight funding sources.

Sector	# of Funding Sources	RB Index	RB3 Index	
Sector	# of Funding Sources	(8 funding sources)	(3 revenue categories)	
Crime	4.6	.47	.846	
Employment	3.4	.34	.931	
Food	5.1	.65	.878	
Housing	3.8	.46	.978	
Public safety	3	.37	.93	
Youth	5.2	.63	.989	
HS	4.3	.37	.998	
Community	3.4	.42	.982	
All Sectors Together	4.2	.42	.942	

Table 5.4 Revenue Diversification Index by Sector

This study reveals an interesting observation that financing pattern in some service fields is visibly dominated by a single funding source. If a single source dominant financing pattern is defined as a revenue structure that has more than half (above 50%) of its total revenues generated from a single funding source, 76% are being dominated by a certain funding source. A majority of the 361 organizations defined as single-source dominated are dominated by either government funding (220, 61%) or service fees (98, 27%).



Figure 5.9 Single-Source Dominated Organizations
5.2.4 Nonprofit Financial Sustainability

This study adopts multiple measures to evaluate nonprofit financial sustainability – self-reported financial stress, likelihood to maintain programs and services, and anticipated fund development success in the future..

<u>Financial Sustainability</u>

Respondents were asked to rate on a 10 point scale the level of financial stress their organization is under, where 1 means "no stress at all" and 10 "extreme stress." 12.37% respondents report that their organization is currently under extreme financial stress. Only 2% organizations reported they were not experiencing financial stress at all. The statistics supported a widely held perception that nonprofit organizations are confronted with a very critical and challenging fiscal situation.





Despite a seemingly visible and critical financial stress, over two thirds organizations are confident in their organization's ability to maintain the level of programs and services that it has always delivered. Over 15% of the respondents are very confident by stating that it is "extremely likely" for their organization to maintain current level of services, while only about 5% feel that it is extremely unlikely they will be able to do that.



Figure 5.11 Likelihood to Maintain Programs and Services

An interesting observation is the association between the level of financial stress and the anticipated likelihood of maintaining programs and services. Nearly two thirds organizations reported a financial stress above the mid-level of the scale provided in the questionnaire. The average level of financial stress is 6.4, while the confidence level that organizations will continue to provide the same quality programs and services is 6.7, higher than that of the reported level of financial stress. Although it is good to know that nonprofit organizations demonstrate self-confidence in their future development, it merits further investigation to see if there is any effect from survey design on the two results. The "likelihood to maintain services" question is directly after the "financial stress" question and respondents might be very sensitive to such an order and could be cautious in providing their answers to the "likelihood" question and

some of them would over-report on their organization's ability to maintain programs and services.

5.2.5 Organizational Structure and Capacity

Organizational structure refers to the ways an organization is organized in terms of governance and management; organizational capacity refers to the resources employed by an organization to governance, management, and operation activities. This study uses multiple measures to capture nonprofit organization's structure and capacity.

<u>Budgetary Size</u>

The budget variable is a measure of the fiscal capacity of nonprofit organizations. This study collects information about the real expenditures the sample organizations reported with the IRS on the most recent 990 form available when the data was collected. Comparing the two figures reveals some changes from the time they last filed with the IRS (in most cases for the tax year of 2007 or 2008) to the time the survey was conducted (summer of 2009). Figure 5.12 offers a comparison between self-reported budgetary scale and a proxy measured by total expenditure, and does not present too much difference between real expenditure of 2007 or 2008 and proposed budget of 2009 of responding organizations.

Nearly 30% (147) organizations' 2009 budget falls between one million to five million U.S. dollars. It is interesting to note that although the sample was selected with one criteria that "budget size be no less than \$200,000" as reflected from the statistics

available from the GuideStar Premium dataset, 8% (40) organizations still reported a budget size less than \$200,000. The possible explanation for this discrepancy is that some organizations might have experienced a decrease in their budgetary scope from the time they filed their latest IRS tax report. The gap revealed here might also be an evidence of operational shrinkage of the nonprofit sector due to the economic recession and financial stress.



Figure 5.12 2007/2008 Expenditure versus 2009 Budget

Responding organizations are generally representative of the entire sample in terms of organizational expenditure. Figure 5.13 shows that very small organizations are slightly less likely to respond to the survey and to over-report their budgets than are mid-sized and large organizations. However, the difference does not seem significant enough to merit a concern over response bias. It would be safe to conclude that sample organizations are representative in demographic features and other organizational characteristics such as capacity.



Figure 5.13 Total Expenditure of Responding versus Sample Organizations

Board Size

A majority (about two thirds) of responding organizations have a board with at

least 11 board members.



Figure 5.14 Board Size in the Sample

Board Meetings Each Year

Over half of responding organizations have their boards meet more than six times each year. Another 40% organizations do have at least four board meetings every year. This suggests that most organizations follow the typical practice of having board meetings every month or every other month.

Organizational Growth

One survey question asks respondents to report how much growth of programs and services their organization has experienced over the past five years. The bar chart below shows a very positive and confident evaluation of the programmatic growth of responding organizations. A large proportion of organizations have experienced either "a fair amount of" or "a great deal of growth," and only 7% organizations experienced no programmatic growth at all.





5.2.6 Management

This study considers a number of management-related factors as indicators of nonprofit revenue diversification and nonprofit financial sustainability.

Attitude toward Revenue Diversification

This study attempts to understand nonprofit managers' perception about revenue diversification as an important strategy for nonprofit organizations to pursue. As to the perceived importance of this concept, 71% respondents very strongly believe that having a diversified revenue structure is extremely important for organizations like theirs.



Figure 5.16 Perception versus. Practice of Revenue Diversification

By contrast, organizations in the sample do not seem to do a good job in implementing what they believe to be an "extremely important" strategy. Only 17% respondents claim that their organization has definitely been doing a great job at diversifying its revenue sources. Figure 5.16 displays an obvious discrepancy between perception and practice.

Operational Cutbacks

Survey results show that the nonprofit sector has experienced a rather visible recession in terms of programmatic shrinkage and personnel layoffs. Over half of responding organizations have cut programs or services since the inception of the economic downturn at the beginning of 2008, while slightly less than half of them had to

either lay off employees or reduce employment scale. Figure 5.17 demonstrates that over two thirds of responding organizations have experienced operational cutbacks.



Figure 5.17 Operational Cutbacks

5.2.7 Fund Development Efforts and Investment

Fund Development Professionals

Survey results reveal that using external consultants is a rare practice for nonprofits – 418 out of 501 (83.4%) responding organizations do not hire any external fund development consultants. Fifty seven percent (278) of the organizations reported that at least one employee in their organization work as fundraising professional. These findings are consistent with previous research (Brooks, 2005; Hager et al., 2002) that despite the increased importance and visibility of fund development, most nonprofit organizations "fundraise insufficiently to meet their goal of maximizing program and service delivery (Brooks, 2005)." The following figure shows the summary statistics.

However, it should be noted that the survey instrument does not explain explicitly what an "internal fund development staff" means. Non-fundraising staff, such as executive directors, board members, and volunteers, involved in fund development is not uncommon in many nonprofit organizations, particularly those smaller ones. It is not sure whether some sample organizations would consider themselves as having a designated staff member for fund development, although that person might not necessarily work full time for that purpose.



Figure 5.18 Fund Development Professionals in the Sample

Fund Development Budget

What percentage of total operating budget is devoted to fund-raising and related activities is another measure of fund development efforts and investment. Figure 5.19 shows that 18% organizations (86) do not invest in fund-raising and marketing activities at all, while over half of the organizations only spend less than 5% of their budget in activities for revenue generation. Only 7.6% responding organizations devote more than ten percent of their budget to fund development. These findings are consistent with previous studies on nonprofit fundraising and seem to support the argument that nonprofit organizations fundraise insufficiently (Brook, 2005).



Figure 5.19 Percentage of Budget for Fund Development

5.2.8 Operating Environment

The environment in which organizations operate is potentially related to organizational effectiveness in revenue generation and other performance measures. This study assesses nonprofit operating environment by examining regional economic instability and nonprofit organization's external relationship with outside stakeholders.

<u>Regional Economy</u>

The regional economic instability variable is calculated with county-level statistics and therefore reflects variations between the twenty one counties in the State of New Jersey. Values of this variable range from 6.9 to 17.5, with higher values indicating higher levels of local economic instability. The mean score for this index is 8.6 with a standard deviation of 1.4.

<u>Perceived Difficulty in Fund Development</u>

Figure 5.20 demonstrates that different funding sources present varying requirements and demands nonprofits need to comply with for sustained support.

Generating revenues from commercialized income such as service fees and membership dues presents the least difficulty, followed by government funding. Corporation donations are the most difficult kind of fund to obtain.



Figure 5.20 Difficulty in Obtaining Fund from Different Sources

5.3 Validation of the Proposed Constructs

It is not an uncommon practice in social science research to use latent variables to measure concepts that cannot be directly observed. This study adopts three major latent variables for analysis: "Managerial Success," "Internal Development," and "External Relationships." Usually multiple indicators are used to compose a single measure of a latent variable. This study tests the reliability and unidimensionality of each composite variable.

5.3.1 Test for Reliability

The Cronbach Alpha test has been widely used to test the reliability of survey items and therefore Cronbach Coefficient Alpha (Table 5.5) was computed to test the internal consistency of the three scales. Generally, an Alpha value 0.7 or above is desirable and an Alpha value higher than 0.60 is minimally acceptable. Among the latent variables, "Managerial Success" and "Internal Development" have alpha values higher than 0.80. "External Relationship" has a value of 0.60, the lowest of all three. A possible explanation of this relatively low value is because of the fact that this latent variable is composed of only two items – adding one more item that is designed to measure the same latent concept might improve the alpha value.

Variable	Items	Mean	Std. Dev.	a without	α Raw	α Std.
	wellmanage	5.87	1.22	.82		
	effective	6.28	1.02	.82		
Managerial Success	mission	6.14	1.10	.82	.85	.87
	moresuccess	5.66	1.38	.83		
	evaluate	5.21	1.49	.81		
	datadriven	4.59	1.76	.85		
	structure	3.47	.90	.86		
Internal Development	leadership	3.44	.96	.80	.87	.87
	manage	3.58	.93	.80		
External Deletionship	externalfu~g	2.82	1.06	-	60	60
	externalpr~m	3.51	1.01	-	.00	.00

 Table 5.5 Cronbach Coefficient Alpha of the Sample Data

The results suggest that these measurements are reliable in terms of internal consistency. Factor analysis is however still needed to further assess the unidimensionality of the items, which will be discussed later after factor analysis is conducted.

5.3.2. Test for Unidimensionality

Confirmatory factor analyses are performed to test the construct validity of

items of latent variables. The three latent variables were analyzed separately, and all factor loadings in the three factor analysis results are above 0.6 which is generally used as a cutoff value, and the Eigenvalue index confirms that one factor should be chosen or kept for each latent variable. The results are summarized below.

Managerial Success

Table 5.6 Factor Analysis: Managerial Succe

		Number of ob	5 - 400			
ipal-component	factors	Retained fact	tors = 1			
rotated)		Number of params = 6				
Eigenvalue	Difference	Proportion	Cumulative			
3.62140	2.86603	0.6036	0.6036			
0.75537	0.20182	0.1259	0.7295			
0.55355	0.10569	0.0923	0.8217			
0.44786	0.11358	0.0746	0.8964			
0.33429	0.04675	0.0557	0.9521			
0.28753		0.0479	1.0000			
pendent vs. sa (pattern matri	turated: chi2 x) and unique	(15) = 1319.30 variances	Prob>chi2 = 0.0000			
Factor1 1	Uniqueness					
0.8016 0.7990 0.8242 0.7374 0.8024 0.6881	0.3574 0.3616 0.3207 0.4563 0.3561 0.5266					
	<pre>ipal-component rotated) Eigenvalue 3.62140 0.75537 0.55355 0.44786 0.33429 0.28753 pendent vs. sa (pattern matri Factor1 1 Factor1 1 0.8016 0.7990 0.8242 0.7374 0.8024 0.6881 </pre>	<pre>ipal-component factors rotated) Eigenvalue Difference </pre>	ipal-component factors Retained factors rotated) Number of pa Eigenvalue Difference Proportion 3.62140 2.86603 0.6036 0.75537 0.20182 0.1259 0.55355 0.10569 0.0923 0.44786 0.11358 0.0746 0.33429 0.04675 0.0557 0.28753 0.00479 pendent vs. saturated: chi2(15) = 1319.30 (pattern matrix) and unique variances			

For "Managerial Success" in Table 5.6, the six items all have factor loading higher than 0.6. The item "datadriven" has the lowest loading of 0.69. In Cronbach Coefficient analysis for "Managerial Success", α Raw is 0.85, α Std. is .87. The α without "datadriven" is 0.85, which indicates that no significance difference would be

resulted by dropping this item from the scale. All the six items were hence retained for future analyses.

Internal Development

For "Internal Development" in Table 5.7, all factor loadings are higher than 0.8.

Considering also its high Cronbach α , the researcher retained all the three items in future analyses.

 Table 5.7 Factor Analysis: Internal Development

Factor analysis/correlation	Number of obs = 484					
Method: principal-component factors	Retained factors = 1					
Rotation: (unrotated)	Number of params = 3					
Factor Eigenvalue Difference	Proportion Cumulative					
Factor1 2.39552 2.03844	0.7985 0.7985					
Factor2 0.35708 0.10968	0.1190 0.9175					
Factor3 0.24740 .	0.0825 1.0000					
LR test: independent vs. saturated: chi2(Factor loadings (pattern matrix) and unique v	(3) = 748.78 Prob>chi2 = 0.0000 variances					
Variable Factorl Uniqueness						
structure 0.8693 0.2444 leadership 0.9064 0.1784 manage 0.9046 0.1817						

External Relationship

Only two items are included for the latent variable "External Relationship". Table 5.8 shows the factor loadings on the two items are higher than 0.8. Although the Cronbach coefficient value (0.60) is not very high, it is acceptable, therefore allowing using the two items for the latent variable in future analyses.

Factor analysis/correlation	Number of obs = 474					
Method: principal-component factors	Retained factors = 1					
Rotation: (unrotated)	Number of params = 1					
Factor Eigenvalue Difference	Proportion Cumulative					
Factor1 1.42447 0.84894	0.7122 0.7122					
Factor2 0.57553 .	0.2878 1.0000					
LR test: independent vs. saturated: chi2(1 Factor loadings (pattern matrix) and unique va	.) = 93.87 Prob>chi2 = 0.0000 ariances					
Variable Factor1 Uniqueness						
externalfu~g 0.8439 0.2878 externalpr~m 0.8439 0.2878						

Table 5.8 Factor Analysis: External Relationship

5.3.3 Descriptive Analysis for the Latent Variables

The statistics are summarized in Table 5.9. On average, responding organizations seem to be rather successful in organizational management (mean=5.63 out of 1-7 scale; SD=1.03). But they are not highly confident of their internal development and external relationship with outside stakeholders.

Table 5.9 Descriptive Statistics for Latent Variables

	Ν	Minimum	Maximum	Mean	S.D.
Managerial Success	486	1.83	7	5.63	1.03
Internal Development	484	1	5	3.50	.83
External Relationship	474	1	5	3.16	.87

Note: Factor-based scale is used.⁹

⁹ A factor-based scale does not use an optimally weighted formula to estimate subject scores on the underlying factor. For example, if v1, v2, and v3 have high loadings on factor 1, then each subject's score on factor 1 is calculated as v1+v2+v3. In contrast, an estimated factor score is calculated as b1v1+b2v2+b3v3 (b1, b2, and b3 are scoring coefficients).

5.4 Regression Analysis

Regression analysis is conducted to examine the potential causal relationships between outcome variables and explanatory variables using STATA. There are two main research models for testing the effects of explanatory variables on each dependent variable: one for examining revenue diversification and the other for financial sustainability. Five separate regressions were run to assess a total of five dependent variables: Model 1 for "Funding Variety," Model 2 for "Revenue Balance," Model 3 for "Financial Stress," Model 4 for "Likelihood to Maintain Services," and Model 5 for "Future Funding Success."

5.4.1 Correlation Analysis

Correlation analysis is a bivariate measure of the strength or degree of the linear relationship between any two variables. Correlation analysis can reveal basic relationships among various variables, including the key variables – funding variety, revenue balance, financial stress, funding success, likelihood to maintain programs and services, and future funding success. A correlation matrix describing these correlations appears in Table 5.10. It seems that even if all independent variables are included in one regression model, multicollinearity would not be a concern here because no high correlations (above .70 or .80) are observed.

	fund	rd3	stress	maintain	cutback	growth	influed	ManSuc	IntDev	ExtRel	impdiv	divers	suc09	frstaff	frconsul	frbudget	REI	budget	board	bdmt
fund	1																			
	(472)																			
rd3	.602**	1																		
	(472)	(472)																		
stress	.032	.073	1																	
	(465)	(465)	(493)																	
maintain	113*	056	391**	1																
	(468)	(468)	(492)	(496)																
cutback ^a	.130**	.063	.321**	261**	1															
	(469)	(469)	(491)	(494)	(498)															
growth	.240**	.142**	194**	.049	187**	1														
	(469)	(469)	(490)	(493)	(495)	(498)														
influed	.322**	.159**	055	006	.021	.153**	1													
	(470)	(470)	(491)	(494)	(496)	(496)	(499)													
ManSuc	029	123**	165**	.138**	.208**	.293**	.118**	1												
	(452)	(452)	(472)	(475)	(478)	(479)	(480)	(480)												
IntDev	145**	183**	165**	.220**	129**	.117*	.028	.423**	1											
	(443)	(443)	(464)	(467)	(471)	(469)	(469)	(461)	(471)											
ExtRel	.365**	.268**	094*	.023	046	.292**	.243**	.230**	.000	1										
	(443)	(443)	(464)	(467)	(471)	(469)	(469)	(461)	(471)	(471)										
impdiver	.345**	.268**	.151**	050	.036	.139**	.220**	069	.069	.199**	1									
	(465)	(465)	(486)	(489)	(491)	(493)	(493)	(480)	(468)	(468)	(494)									
diverse	.335**	.300**	155**	.111*	078	.273**	.258**	.255**	.200**	.408**	.422**	1								
	(461)	(461)	(482)	(485)	(487)	(489)	(489)	(480)	(466)	(466)	(490)	(490)								

Table 5.10 Correlation Matrix for the Variables

	fund	rd3	stress	maintain	cutback	growth	influed	ManSuc	IntDev	ExtRel	impdiv	divers	suc09	frstaff	frconsul	frbudget	REI	budget	board	bdmt
suc09	.139**	.145**	324**	.293**	191**	.164**	.102*	.159**	.097*	.207**	024	.173**	1							
	(462)	(462)	(483)	(486)	(488)	(488)	(490)	(473)	(465)	(465)	(487)	(483)	(491)							
frstaff ^a	.417**	.279**	023	005	.046	.156**	.330**	.055	.016	.190**	.219**	.297**	.116*	1						
	(457)	(457)	(479)	(482)	(483)	(483)	(484)	(466)	(456)	(456)	(479)	(475)	(476)	(486)						
frconsult ^a	.041	.048	074	018	.046	.077	.097*	099*	040	.059	.031	.080	.045	.134**	1					
	(472)	(472)	(493)	(496)	(498)	(498)	(499)	(480)	(471)	(471)	(494)	(490)	(491)	(486)	(501)					
frbudget	.246**	.331	.016	119**	.054	.064	.232**	154*	052	.157**	.186**	.163**	.028	.326**	.239**	1				
	(458)	(458)	(477)	(480)	(482)	(482)	(483)	(465)	(456)	(456)	(478)	(474)	(475)	(470)	(485)	(485)				
REI	111*	047**	.007	.008	017	070	040	008	030	056	062	011	032	065	037	065	1			
	(472)	(472)	(493)	(496)	(498)	(498)	(499)	(480)	(471)	(471)	(494)	(490)	(491)	(486)	(501)	(485)	(501)			
budget	.103*	092*	.022	047	.149**	.041	.168**	.125**	.026	.046	022	.030	.034	.163**	.077	047	.033	1		
	(471)	(471)	(492)	(495)	(497)	(497)	(498)	(479)	(470)	(470)	(493)	(489)	(490)	(485)	(500)	(484)	(500)	(500)		
board	.373**	.195**	047	.015	.103*	.095*	.266**	.069	056	.218**	.180**	.211**	.114*	.257**	.037	.147**	083	.220**	1	
	(472)	(472)	(493)	(496)	(498)	(498)	(499)	(480)	(471)	(471)	(494)	(490)	(491)	(486)	(501)	(485)	(501)	(500)	(501)	
bdmeet	.191**	.158**	010	.060	.060	.014	.054	036	.087	.096*	.119**	.116*	.080	.023	.007	.062	020	012	.222	1
	(471)	(471)	(492)	(495)	(497)	(498)	(498)	(479)	(470)	(470)	(493)	(489)	(490)	(485)	(500)	(484)	(500)	(499)	(500)	(500)

Note:

- 1. ** Coefficient significant at the .01 level.
- 2. * Coefficient significant at the .05 level.
- 3. Numbers in parentheses are sample sizes
- 4. ^a Dummy variables

For relations between some variables that are not included in the correlation matrix, some interesting observations could be made as well. For example, percentage of government funding is positively correlated with effort in obtaining government funds, but negatively correlated with efforts in obtaining non-governmental funds (both This suggests that government funding tends to reduce nonprofit significant). organization's efforts in development fund opportunities with other funding sources. There is no significant correlation between percentage of government funding and external relationship, which suggests that external relationship does not necessarily help nonprofits' ability to obtain government funding, or that maintaining funding relationship with government does not require a good relationship with other outside stakeholders. Effort in government funds generation is positively correlated with effort in non-governmental revenue generation and perceived importance of revenue diversification (both significant). Notably, percentage of government funding is negatively correlated with investment in fund raising activities (significant). While investment is positively and significantly correlated with effort in non-governmental funds generation, it has no significant correlation with effort in government funding generation.

The correlation analysis provides important implications for examining the relationships between dependent variables for the two research models in this study. *Funding variety* and *revenue balance* are positively related at .01 significant level (r=.602). Both *funding variety* and *revenue balance* are positively related with *financial*

stress but the relationships are not statistically significant; they are however both significantly and positively related with *future funding success* (r=.139, and r=.145). *Funding variety* and *revenue balance* are negatively related with *likelihood to maintain services*, with the correlation between *funding variety* and *likelihood to maintain services* significant at .05 (r=-.113). *Financial stress* and *future funding success* are negatively correlated at .01 (r=-.324) while *likelihood to maintain services* and *future funding success* are positively correlated at .01 (r=.293).

It is interesting to analyze the relationships between some independent variables as well. *Operational cutbacks* is positively correlated to *managerial success*, *budgetary size*, and *board size*, and negatively correlated to *organizational growth* and *internal development*. *Organizational growth* is positively and significantly correlated with most of the other independent variables including *managerial success*, *internal development*, *external relationship*, *importance of revenue diversification*, *fund-raising staff*, and *board size*. *Managerial success* is significantly and positively related to *internal development*, *external relationship*, *importance of revenue diversification*, *fund-raising staff*, and *board size*. *Managerial success* is significantly and positively related to *internal development*, *external relationship*, *importance of revenue diversification*, and *board size*, but negatively correlated with both *fund-raising staff* and *fund-raising consultants*.

Internal development is not significantly correlated with most of the other variables. On the contrary, *external relationship* is positively with quite many other variables, such as *importance of revenue diversification*, *fund-raising staff*, *fund-raising budget*, *board size*, and *annual board meetings*. Perceived *importance of revenue*

diversification is positively related to fund-raising staff and fund-raising budget but not fund-raising consultants. Fund-raising staff is positively related to fund-raising consultants and fund-raising budget, as well as budgetary size and board size.

The correlation matrix shows that there is only a moderate correlation between almost all of the independent variables, which indicates that these variables are very likely to measure different concepts or constructs. In addition to this preliminary observation, other indices are assessed later in this chapter.

The first research hypothesis of this study is to examine basic relationships between any single dominant funding source and nonprofit revenue structure. The correlation analysis provides important implications for future study for examining the relationships. Correlation coefficients in Table 5.11 demonstrate that reliance on any single revenue source that is dominant in nonprofit financing pattern is associated with a weaker representation of different types of funding sources in the financing pattern as well as a less balanced distribution of these sources.

	Dominant ^a	Funding Variety	Revenue Balance
Dominant ^a	1		
	(475)		
Funding Variety	395**	1	
	(472)	(472)	
Revenue Balance	575**	.602**	1
	(472)	(472)	(472)

 Table 5.11 Correlations between Dominant Funding and Revenue Diversification

** Significant at the .01 level

Sample size in parentheses.

^a Dummy variable

5.4.2 Regression Diagnostics

Without verifying regression assumptions underlying regression analysis, statistical results may be inaccurate and misleading. Preliminary regression analyses were conducted to detect potential outliers, multicollinearity, heteroskedasticity, and non-normality problems. Final regression models are confirmed after performing regression diagnostics.

Unusual Data

A single observation (or a very small group of observations) that is substantially different from all other observations can make a huge difference in the results of regression analysis. Unusual data can influence the regression model in three ways: outliers, leverage, and influence. An outlier is an observation with large residual. An outlier may indicate a sample peculiarity or may be caused by a data entry error. Outliers can be identified by examining the studentized residuals. Observations with studentized residuals exceeding +3 or -3 might be outliers.

First, after generating studentized residuals, one potential outlier (ID#=548, r=3.05) is identified for Model 1 – the regression model for funding variety. Dropping the outlier identified does not significantly change the regression results nor the diagnostic test results, therefore the observation is retained in the regression model. No potential outlier is identified for Model 2 – the regression model for revenue balance. It is concluded that no severe outliers in the revenue diversification models.

Regarding the financial sustainability models, no potential outlier is identified

for Model 3 for financial stress and Model 4 for likelihood to maintain services. Three outliers (ID#=418, r=3.82; ID#=1024, r=3.60; ID#=734, r=3.36) are identified for Model 5, the regression model for future funding success. Dropping the outliers significantly improves the regression results, it was therefore determined that the three observations were removed from the dataset for Model 5.

<u>Normality</u>

This study conducts two tests to detect normality of residuals: the Shapiro-Wilk W test and the iqr test.

Table 5.12 Normality						
Model	Shapir	o-Wilk W	IQR			
Model	Z	Prob.>z	# severe outliers	% severe outliers		
Model 1: Funding Variety	0.005	0.49805	0	0.00%		
Model 2: Revenue Balance	2.800	0.00256	0	0.00%		
Model 3: Financial Stress	3.281	0.00052	0	0.00%		
Model 4: Maintain Services	5.823	0.00000	0	0.00%		
Model 5: Future Funding Success	3.757	0.00009	0	0.00%		

Shapiro-Wilk W test result fails to reject the null hypothesis of the normality assumption for Model 1 at a five percent significance level. However, the probability value for Model 2 is very small, which suggests that residuals are not normally distributed for the regression model for revenue balance. As with the financial sustainability models, Shapiro-Wilk W test results show that the p values are all very small in the three models, so the null hypothesis of the normality assumption for the three regression models is rejected. The iqr test is then conducted to cross check the Shapiro-Wilk W statistics. The iqr test results show that the models do not have any severe outliers. It is therefore concluded that the distribution of residuals is fairly symmetric.

Multicollinearity

Multicollinearity means a high degree of correlation among a set of predictor or independent variables. An increased degree of multicollinearity will inflate the standard errors for the coefficients and result in unstable estimates of the coefficients. Two methods are commonly used for diagnosing multicollinearity: correlation matrix of the independent variables and Variance Inflation Factors (VIFs). Correlation matrix is examined in previous section and no significant correlation was detected between any pair of independent variables.

lable 5.13 Summary	of Multicollinearity
Model	Mean VIF
Model 1: Funding Variety	1.93
Model 2: Revenue Balance	1.93
Model 3: Financial Stress	3.18
Model 4: Maintain Services	3.11
Model 5: Future Funding Success	3.11

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The average VIF score is 1.93 for both models for revenue diversification, and most variables have VIF less than 2. The two variables that have the largest VIF scores are Expenditure (in thousands) and Expenditure². Based on VIF and tolerance for the regression, no significant multicollinearity is found among the independent variables in both regression models for revenue diversification.

As for the three models for financial sustainability, based on VIF and tolerance for the regression, no significant multicollinearity is found among the independent variables in all three models. While most variables have VIF scores less than 2, several variables that are computed with Expenditure in the three models have high VIF scores (greater than 15), thus moderately raises the average VIF score.

Homoscedasticity

Model 1: Funding Variety							
Bruesch-Pagan/Cook-Weisberg Test	White's Test						
Ho: Constant variance	H0: homoscedasticity						
Variables: fitted values of Funding Variety	Ha: unrestricted heteroskedasticity						
chi2(1) = 0.37	chi2 (307) = 293.04						
Prob > chi2 = 0.5416	Prob > chi2 = 0.7071						
Model 2: Revenue Balance							
Bruesch-Pagan/Cook-Weisherg Test	White's Test						

Table 5.14 Homoscedasticity	Tests
M. J. J. T. T. R W W	

Model 2: Revenue Balance						
Bruesch-Pagan/Cook-Weisberg Test		White's Test				
Ho: Constant variance		H0: homoscedasticity				
Variables: fitt	ted val	lues of Revenue Balance	Ha: unrestricted heteroske	dasticity		
chi2 (1)	=	0.73	chi2 (307) = 323.18			
Prob > chi2	=	0.3939	Prob > chi2 = 0.25	18		

Model 3: Financial Stress

	Would 5. Financial Stress					
Bruesch-Pagan/Cook-Weisberg Test		ook-Weisberg Test	White's Test			
Ho: Constant	varia	ance	H0: homoscedasticity			
Variables: fitted values of Financial Stress		dues of Financial Stress	Ha: unrestricted heteroskedasticity			
chi2 (1)	=	1.34	chi2 (256) = 260.56			
Prob > chi2	=	0.2474	Prob > chi2 = 0.4091			

Model 4: Likelihood to Maintain Programs/Services					
Bruesch-Paga	n/Co	ok-Weisberg Test	White's Test		
Ho: Constant	varia	nce	H0: homoscedasticity		
Variables: fitt	ed va	lues of Maintain	Ha: unrestricted heteroskedasticity		
chi2 (1)	=	0.32	chi2 (256) = 249.07		
Prob > chi2	=	0.5693	Prob > chi2 = 0.6100		

Model 5: Future Funding Success

Bruesch-Pagan/Cook-Weisberg Test			White's Test		
Ho: Constant v	varian	ce	H0: homoscedasticity		
Variables: fitted values of Funding Success		ues of Funding Success	Ha: unrestricted heteroskedasticity		
chi2 (1)	=	3.94	chi2 (256) = 258.05		
Prob > chi2	=	0.0472	Prob > chi2 = 0.0485		

The homogeneity of variance of the residuals is another main assumption for regression analysis. This study conducts the White's test and the Breusch-Pagan/Cook-Weisberg test to detect heteroskedasticity and all the five regression models meet the regression assumption of homoscedasticity. Table 5.14 presents the results of both Breusch-Pagan/Cook-Weisberg test and White's test. Probability values yielded by White's test and Breusch-Pagan test suggest that the null hypothesis of homoscedasticity cannot be rejected at .05 significant level for models one through four, indicating that there is homogeneity of variance of the residuals for these models. In Model 5, the null hypothesis is rejected at the .05 significance level by both Breusch-Pagan test and White's test. However, the two p values are not very small, which suggests that the possible heteroskedasticity is not so severe as to merit further investigation. It is therefore determined that Model 5 does not need to be corrected.

Finally, based on the diagnostic test results to detect the underlying regression assumptions, three severe outliers are eliminated from Model 5 for final analysis.

5.4.3 Regression Analysis: Revenue Diversification as Dependent

The regression model¹⁰ for predicting the effect of exploratory variables on revenue diversification is:

 $\begin{aligned} \text{RevenueDiversification} &= \beta_0 + \beta_1 \text{Budget} + \beta_2 \text{Budgetsqu} + \beta_3 \text{Board} + \beta_4 \text{Boardmeet} + \\ \beta_5 \text{Growth} + \beta_6 \text{IntDevelopment} + \beta_7 \text{ManagerialSuccess} + \beta_8 \text{Attitude} + \beta_9 \text{EDInfluence} + \\ \beta_{10} \text{OperationalCutback} + \beta_{11} \text{FRStaff} + \beta_{12} \text{FRConsultant} + \beta_{13} \text{FRBudget} + \beta_{14} \text{ExtRelation} + \end{aligned}$

¹⁰ There are two separate models – Model 1 for examining funding variety and Model 2 revenue balance.

 $\beta_{15}REI + \beta_{16}HS + \beta_{17}Youth + \beta_{18}Housing + \beta_{19}Community + \beta_{20}Urban + \beta_{21}Suburban + \beta_{22}OrganizationAge + \beta_{23}EmployeeSize + \beta_{24}VolunteerSize$

The regression analysis for Model 1 demonstrates significant support for the hypothesized links between revenue diversification and most of the predictor variables. There are two measures for the dependent variable. One is *funding variety*, measured as the total number of funding sources an organization has; and the other is *revenue balance* that is calculated by a revised HHI index. Table 5.15 summarizes the regression results of both models – one with "funding variety" as dependent variable while the other with "revenue balance" as dependent variable. Adjusted R^2 for the funding variety regression model is .401, accounting for 40% of the variance and the *F* (24, 371) statistics is 12.03 (*p*<.000). Adjusted R^2 for the revenue balance regression model is .255, accounting for about 25% of the variance and the *F* (24, 371) statistics is 6.64 (*p*<.000).

Hypothesis 2a predicts a curvilinear relationship (\cup shaped) between organization's budgetary size and funding variety. The coefficient for budgetary size squared is significant in Model 1 of Table 5.14 (*b*=.064, p<.05) and the direction of the coefficient is consistent with the hypothesized relationship. This finding confirms Hypothesis 2a and shows that both larger and smaller organizations – in terms of budgetary size – are more likely to depend on more funding sources. This finding suggests that smaller organizations tend to take advantage of every funding opportunity regardless how big the fund is and therefore are very likely to rely on more funding sources, while larger organizations, with more organizational capacity and resources, are also highly likely to enjoy more funding sources. However, increased budgetary size is

generally associated with a decreased funding variety.

Table	5.15	Revenue	Diversification	as	a	Function	of	Org	anizational	and
Enviro	onmen	tal Charac	teristics							
				T 7	• 4		-			

	Funding Variety		Revenue Balance		
-	Model 1		Model 2		
Background	b	SE	b	SE	
Employees	.129*	(.071)	018	(.013)	
Volunteers	.220***	(.066)	008	(.012)	
Organization Age	.230***	(.087)	.038**	(.016)	
HS	181	(.226)	020	(.042)	
Youth	.162	(.316)	.062	(.059)	
Housing	337	(.283)	.070	(.053)	
Community	504*	(.296)	023	(.055)	
Urban	.230	(.212)	.066*	(.040)	
Suburban	.189	(.203)	.034	(.038)	
Capacity					
Budget Size	006**	(.003)	001	(.001)	
Budget_Squared	.064**	(.028)	.007	(.005)	
Board Size	.057	(.077)	.003	(.014)	
Board Meetings	.299***	(.109)	.048*	(.020)	
Growth	.320***	(.090)	.036*	(.017)	
Internal Development	284***	(.085)	041***	(.016)	
Management					
Managerial Success	072	(.092)	015	(.017)	
Attitude to RD	.145**	(.059)	.031***	(.015)	
ED Influence	.206**	(.093)	011	(.017)	
Operational Cutbacks	.414**	(.165)	.049	(.031)	
Investment					
FR Staff	.625***	(.169)	.086***	(.031)	
FR Consultant	066	(.218)	.007	(.041)	
FR Budget	.018	(.093)	.055***	(.017)	
Environment					
External Relations	.327***	(.083)	.047***	(.015)	
REI	064	(.054)	.008	(.010)	
R^2	.438		.301		
$Adj R^2$.401***		.255***		
Ν	396		396		

*p<.1; **p<.05; ***p<.01

Hypothesis 2b predicts that organizations with large budget are more likely to have a higher level of revenue balance. Regression results do not support this hypothesis. This finding suggests that organizations do not necessarily try to manage their financing pattern in a way that helps obtain a more balanced revenue structure, even when they might have sufficient resources and capacity to do so.

Hypotheses 3 predicts that board size is positively related to both funding variety and revenue balance, which is not confirmed by regression results. However, regression coefficients support Hypothesis 4 that number of board meetings each year significantly increases funding variety (b=.299, p<.01) and level of revenue balance (b=.048, p<.1). These findings seem to suggest that board involvement in nonprofit management and decision-making matters more than just the number of people sitting on board in predicting nonprofit revenue diversification.

Hypothesis 5 predicts that organizations that have recently experienced organizational growth in terms of programs and services are more likely to have more funding sources and a higher level of revenue balance. The coefficients for organizational growth are significant in Model 1 (b=.320, p<.01) and in Model 2 (b=.036, p<.1) and the directions of the coefficients are consistent with the hypothesized relationships. This finding supports Hypothesis 5 and shows growth and development of services and programs, as an important indicator of organizational capacity, significantly improves the level of funding variety and revenue balance.

Hypothesis 6 predicts that internal organizational development is positively related to both funding variety and revenue balance. The coefficients for internal development are significant in Model 1 (b=-.284, p<.01) and in Model 2 (b=-.041, p<.01), however, the directions of the coefficients are inconsistent with the hypothesized relationships. The results indicate that better internal development as self-reported by

organizations significantly reduces the number of funding sources as well as the level of revenue balance.

Hypothesis 7 predicts that organizations enjoying greater managerial success are more likely to have more funding sources and a more balanced revenue structure. Surprisingly, regression results do not support this hypothesis. These findings certainly needs further investigation as understanding the dynamics of nonprofit management and its impact on revenue structure are critical to inform nonprofit fund development.

Hypothesis 8 predicts that organizations that attach more importance to revenue diversification are more likely to have more funding sources and a higher level of revenue balance. The coefficients for perceived importance of revenue diversification are significant in Model 1 (b=.145, p<.05) and Model 2 (b=.031, p<.01) and the direction of the coefficients are consistent with the hypothesized relationship. This finding supports Hypothesis 8 and shows that management's perception of the importance of diversifying revenue structure has a significant influence on real diversification status as indicated by funding variety and revenue balance.

Hypothesis 9 predicts that influence of executive director and professional staff on revenue generation strategy is positively associated with funding variety and revenue balance, which is only partially confirmed by the regression results. The coefficient in Model 1 (b=.206, p<.05) is significant and the direction of the coefficient is consistent with the hypothesized relationship. This finding suggests that internal management's influence on revenue generation strategy has a significant impact on funding variety. However, this influence has no effect on revenue balance, as the coefficient in Model 2 is not significant and the direction of the coefficient is inconsistent with what is hypothesized.

Hypothesis 10 predicts that organizations that have experienced recent operational cutbacks are more likely to have a greater funding variety and a higher level of revenue balance. This hypothesis is only partially confirmed by regression results. The coefficient for operational cutbacks is significant in Model 1 (b=.414, p<.05), but not significant in Model 2. The significant relationship between operational cutbacks and funding variety suggests that if organizations experience recent cutbacks, they are highly likely to have an incentive to develop new funding relationships and seek more funding sources. However, they are not necessarily motivated to balance their revenue structure, which they might consider to be of little importance, at least for the time being when their most critical concern is to have ends meet.

Regression results provide evidence to support Hypothesis 11 which predicts that organizations with designated employees working on fund-raising and related activities are more likely to have more funding sources and a higher level of revenue balance. The coefficient for fund development staff which is a dummy variable are significant in Model 1 (b=.625, p<.01) and Model 2 (b=.086, p<.01), and the direction of the coefficients are consistent with the hypothesized relationships. This finding shows that designating fund development staff helps nonprofit organizations increase the total number of funding sources and improve the balance among the three broad revenue categories.

The same is expected from the relationship between the use of external fund development consultants and revenue diversification. However, the findings shown in Table 5.15 do not provide evidence to argue such a significant relationship as predicted by Hypothesis 12. This study constructs a dummy variable to measure the use of external fund development professionals. Of the 501 responding organizations, only 83 (16.6%) reported they hire outside fund development consultants to help with related activities. The unbalanced distribution of organizations that use external fund development consultants and those that do not might explain the insignificant result of the relationship.

Hypothesis 13 predicts that fund development expenditure as measured by percentage of operating budget has significant and positive impact on revenue diversification measures. Regression results only partially confirm this hypothesis. The coefficient for fund development budget is not significant in Model 1 and is significant in Model 2 (b=.055, p<.01). The insignificant result in Model 1 may reflect measurement limitations. This study constructs a categorical variable to measure the effect of fund development budget on revenue diversification. However, the categories (scales in this case) might not be able to fully capture the variations in fund development expenditure. A better way would be to use a continuous variable (percentage in this case) as an alternative measurement. However, using continuous level measurement makes it more difficult for respondents to answer the question and this was exactly the

reason a categorical variables was used rather than a continuous one when the survey was designed.

Hypothesis 14 predicts that a better relationship with outside stakeholders such as funding agencies, major donors, and service recipients significantly increases funding variety and improves revenue balance. Regression results provide evidence to support this hypothesis. The coefficients for external relationships are significant in Model 1 (b=.327, p<.01) and Model 2 (b=.047, p<.01), and the directions of the coefficients are consistent with the hypothesized relationships. The findings show that developing a good relationship with outside stakeholders can significantly improve revenue diversification in terms of both funding variety and revenue balance.

Regression results do not provide evidence to argue that regional economic situation is a significant predictor of revenue diversification as proposed in Hypothesis 15. Neither of the coefficients for regional economic instability is significant in Model 1 and Model 2. This variable is constructed at county level, which means organizations located in a same county share a same value for this variable. A possible interpretation of this finding is that the regional difference in economy within the state of New Jersey is not significant enough to present varying effect on nonprofit revenue generation.

The regression models also analyze the effects of some control variables on revenue diversification. According to Hypotheses 16a and 16b, both employee size and volunteer size significantly improves funding variety. Regression coefficients for employee size (b=.129, p<.1) and volunteer size (b=.220, p<.01) are both significant in

Model 1, and the direction of the coefficients are consistent with the hypothesized relationships. These findings demonstrate that staff size has significant impact on nonprofit revenue diversification.

Organizational age can be used as a good proxy for organizational capacity and reputation. Hypothesis 17 predicts that mature and more established organizations are more likely to have more funding sources and a higher level of revenue balance, which is supported by the regression results. Regression coefficients for organizational age are significant in Model 1 (b=.230, p<.01) and Model 2 (b=.038, p<.05), and the direction of the coefficients are consistent with the hypothesized relationships.

In addition, there have been very minor sectoral and geographic differences in terms of their effects on nonprofit revenue diversification. The only service field that presents a different influence is Community Improvement; organizations in this field tend to have fewer funding sources (b=-.504, p<.1). In terms of geographical locations, organizations located in urban areas are more likely to have a more balanced revenue structure (b=.066, p<.1).

In summary, regression results presented from Table 5.15 provide evidence to argue that organizational and environmental factors have significant effects on nonprofit revenue diversification. First, organizational capacity significantly affects variations of funding variety and revenue balance. Second, managerial factors have significant and positive effects on funding variety, but less so on revenue balance. Third, fund development efforts' effects on revenue diversification are rather mixed. Finally, one of the two environmental factors proves to be a significant predictor of revenue diversification. Table 5.16 provides a summary of the hypothesis testing results for Model 1 and Model 2.

Table 5.16 Summary of Hypotheses Testing Results (Models 1 and 2)Research Hypotheses

	C: Confirmed NC: Not Confirmed	Results
H2a	There is a curvilinear relationship (\cup shaped) between budget size and funding variety.	С
H2b	Budget size is positively related to revenue balance.	NC
H3a	Board size is positively related to funding variety.	NC
H3b	Board size is positively related to revenue balance.	NC
H4a	# of board meetings is positively related to funding variety.	С
H4b	# of board meetings is positively related to revenue balance.	С
H5a	Organizational growth is positively related to funding variety.	С
H5b	Organizational growth is positively related to revenue balance.	С
H6a	Internal development is positively related to funding variety.	NC*
H6b	Internal development is positively related to revenue balance.	NC*
H7a	Managerial success is positively related to funding variety.	NC
H7b	Managerial success is positively related to revenue balance.	NC
H8a	Management's attitude toward RD is positively related to funding variety.	С
H8b	Management's attitude toward RD is positively related to revenue balance.	С
H9a	Influence from ED and staff on funding strategy is positively related to funding variety.	С
H9b	Influence from ED and staff on funding strategy is positively related to revenue balance.	NC
H10a	Recent operational cutbacks are positively related to funding variety.	С
H10b	Recent operational cutbacks are positively related to revenue balance.	NC
H11a	Use of fund development staff is positively related to funding variety.	С
H11b	Use of fund development staff is positively related to revenue balance.	С
H12a	Use of fund development consultants is positively related to funding variety.	NC
H12b	Use of fund development consultants is positively related to revenue balance.	NC
H13a	Fund development expenditure is positively related to funding variety.	NC
H13b	Fund development expenditure is positively related to revenue balance.	С
H14a	External relationship is positively related to funding variety.	С
H14b	External relationship is positively related to revenue balance.	С
H15a	Regional economy is positively related to funding variety.	NC
H15b	Regional economy is positively related to revenue balance.	NC
H16a	Employee size is positively related to funding variety and revenue balance.	С
H16b	Volunteer size is positively related to funding variety and revenue balance.	С
H17	Organizational age is positively related to funding variety and revenue balance.	С
Note:	* indicates that the finding is significant but not consistent with the hypothesized di	rection.

5.4.4 Regression Analysis: Financial Sustainability as Dependent

The regression model for predicting the effect of exploratory variables on financial sustainability is:

$$\label{eq:approx} \begin{split} FinancialSustainability &= \beta_0 + \beta_1 FundingVariety + \beta_2 RevenueBalance + \beta_3 Budget + \\ \beta_4 Board + \beta_5 Boardmeeting + \beta_6 OperationalCutbacks + \beta_7 FRStaff + \beta_8 FRConsultant + \\ \beta_9 FRBudget + \beta_{10} ExtRelation + \beta_{11} REI + \beta_{12} FundingVariety*Budget + \\ \beta_{13} RevenueBalance*Budget + \beta_{14} HS + \beta_{15} Youth + \beta_{16} Housing + \beta_{17} Community + \beta_{18} Urban \\ + \beta_{19} Suburban + \beta_{20} OrganizationAge + \beta_{21} EmployeeSize + \\ \beta_{22} VolunteerSize \end{split}$$

Table 5.17 summarizes the regression results of the three models that use financial stress, likelihood to maintain services, and future funding success to operationalize and measure nonprofit financial sustainability. Adjusted R^2 for the Financial Stress regression model is .110, accounting for 11% of the variance and the *F* (22, 377) statistics is 3.24 (*p*<.000). Adjusted R^2 for the Maintain Services regression model is .079, accounting for about 8% of the variance and the *F* (22, 379) statistics is 2.56 (*p*<.000). Adjusted R^2 for the Future Funding Success regression model is .113, accounting for about 11% of the variance and the *F* (22, 373) statistics is 2.36 (*p*<.000).

The regression analysis does not provide much evidence to support the hypothesized links between financial sustainability and most of the predictor variables.

Hypotheses 18a and 18b predict that revenue diversification decreases the level of financial stress of nonprofit organizations. However, they are not supported by the regression results. The direction of the coefficient for funding variety is consistent with the hypothesized relationship in Model 3; but the coefficient is not significant. This
insignificant finding suggests that organizations enjoying multiple funding sources do not particularly experience lower level of financial stress. The coefficient for Revenue Balance is significant in Model 3 (b=1.039, p<.05), but the direction of the coefficient is inconsistent with the hypothesized relationship. This finding suggests that a more balanced revenue structure significantly increases the level of nonprofit financial stress. One possible explanation of this finding is that when trying to balance their revenue structure, organizations creates just one more task to manage and thus more stress on their operations. Another important interpretation of this result is that reliance on non-government sources hurt nonprofit organizations more during the economic crisis because these funding sources are more volatile. Relying on government funding, instead, turns out to be a relatively safe option for nonprofits surviving the economic crisis as government funding is more reliable than non-government funding sources.

Hypotheses 19a and 19b predict that revenue diversification enhances the likelihood to maintain the current level of programs and services, which are not supported by the regression results. The coefficient for Funding Variety is significant in Model 4 (b=-.185, p<.1), but the direction of the coefficient is inconsistent with the hypothesized relationship. This finding suggests that organizations that have more funding sources are less likely to maintain the level of programs and services. The direction of the coefficient for Revenue Balance in Model 4 is consistent with the hypothesized relationship; however the coefficient is not significant. This insignificant finding suggests that a more balanced revenue pattern does not particularly enhance the

likelihood to maintain programs and services.

	Financi	al Stress	Maintain Pr	ogram/Service	Future Funding Success		
	Мо	del 3	Me	odel 4	Mo	odel 5	
Rev Diversification	b	SE	b	SE	b	SE	
Funding Variety	063	(.092)	185*	(.101)	.097**	(.045)	
Revenue Balance	1.039**	(.503)	.574	(.557)	.284	(.249)	
FundVariety*Budget	.021	(.081)	.073	(.087)	.018	(.039)	
RevBalance*Budget	765	(.509)	.488	(.563)	.013	(.250)	
Contextual Charact	<u>eristics</u>						
Budget	.007	(.007)	014 *	(.008)	001	(.003)	
Board Size	065	(.121)	.080	(.134)	001	(.060)	
Board Meetings	.039	(.171)	.267	(.189)	.028	(.085)	
Operational Cutbacks	1.465***	(.258)	-1.439***	(.285)	461***	(.128)	
FR Staff	.048	(.272)	.403	(.300)	.192	(.134)	
FR Consultant	402	(.341)	122	(.378)	.192	(.168)	
FR Budget	.088	(.148)	387**	(.164)	028	(.073)	
External Relationship	263**	(.126)	.011	(.139)	.225***	(.063)	
REI	037	(.084)	005	(.094)	.015	(.042)	
<u>Background</u>							
Employees	231**	(.103)	.244**	(.114)	023	(.051)	
Volunteers	128	(.106)	.066	(.118)	.002	(.052)	
Organization Age	.109	(.137)	033	(.152)	008	(.068)	
HS	.390	(.354)	242	(.392)	.120	(.175)	
Youth	.144	(.510)	602	(.558)	.113	(.251)	
Housing	312	(.448)	612	(.498)	.308	(.225)	
Community	.087	(.463)	.611	(.514)	.240	(.230)	
Urban	323	(.339)	.416	(.373)	.184	(.167)	
Suburban	644**	(.324)	.129	(.357)	.210	(.160)	
R^2	.159		.129		.162		
$Adj R^2$.110***		.079***		.113***		
Ν	400		402		395		

Table5.17FinancialSustainabilityasaFunctionofOrganizationalandEnvironmental Characteristics

*p<.1; **p<.05; ***p<.01

Hypotheses 20a and 20b predict that revenue diversification enhances nonprofit organizations' future funding success, which is partially supported by regression results. The coefficient for Funding Variety is significant (b=.097, p<.05) in Model 5, and the direction of the coefficient is consistent with the hypothesized relationship. This finding suggests that organizations having more funding sources are more likely to be successful in fund development in the future. However, the coefficient for Revenue Diversification is not significant in Model 5, which suggests that keeping a balanced revenue pattern does not necessarily help organizations in terms of raising funds.

According to hypotheses 21, budgetary size has a negative effect on financial stress, and positive effects on maintaining programs/services and on future funding success. The coefficients for Budget Size are not significant in Model 3 and Model 5, and significant (b=-.014, p<.1) in Model 4 with a direction that is inconsistent with the hypothesized relationship. These findings suggest that a large budget does not necessarily guarantee a better financial sustainability. On the contrary, the regression results show that larger organizations are less likely to maintain the current level of programs and services. Correlation analysis shows that budgetary size and operational cutbacks are positively related at significance level of .01. This suggests that larger organizations are less likely to experience cutbacks, and this might explain why larger organizations are less likely to maintain services.

Hypotheses 22 and 23 predict that both board size and number of annual board meetings can predict nonprofit financial sustainability, which are not confirmed by the regression results. Across the board, nonprofit board does not seem to have any significant impact on the three measures of financial sustainability.

Hypotheses 24a, b, and c predict that recent experience of operational cutbacks significantly reduces the likelihood that organizations are financially sustainable. The coefficients for Operational Cutbacks are significant in all the three models, and the directions of all the coefficients are consistent with the hypothesized relationships. These findings suggest that operational cutbacks significantly increase organization's financial stress, reduce the likelihood to maintain programs and services, and affect future fund development.

Hypothesis 25 predicts that fund development efforts and investment significantly enhances nonprofit financial sustainability. Of the nine sub-hypotheses regarding the relationships between the three fund development efforts measures (Fund Development Staff, Fund Development Consultants, and Fund Development Budget) and the three financial sustainability measures, only one relationship turns out to be statistically significant – the coefficient for Fund Development Budget in Model 4 is significant (*b*=-.387, p<.05), however, the direction of the coefficient is inconsistent with the hypothesized relationship. This inconsistent relationship, which merits further investigation, seems to suggest that organizations that spend more on fund development are less likely to maintain their services and programs.

Hypotheses 26a, b, and c predict that developing a better relationship with external stakeholders helps nonprofit organizations maintain financially healthy. The coefficients for External Relationship are significant in Model 3 (b=-.263, p<.05) and Model 5 (b=.225, p<.01), and the directions of the coefficients are consistent with the hypothesized relationships. The findings suggest that organizations that enjoy a healthy relationship with outside stakeholders or partners are less likely to experience financial stress while more likely to be successful in revenue generation in the future.

Hypotheses 27a, b, and c predict a significant effect from regional economic

situation on nonprofit financial sustainability. The regression results do not provide sufficient evidence to argue for such a relationship. The insignificant result might be due to the marginal regional differences in an economically homogeneous state like New Jersey. Also, the current economic crisis could have minimized the regional differences to a degree that does not present sufficient variations for meaningful analysis.

Hypotheses 28a and b predict that the performance-boosting effect from revenue diversification is more significant as nonprofit organizations' budgetary size increases. The coefficients for the interaction variables are not significant and the results do not provide sufficient evidence to argue that budgetary size increases revenue diversification's positive effect on nonprofit financial sustainability.

Finally, this study examines some other variables' effects on nonprofit financial sustainability, such as number of employees, number of volunteers, years of operation, and geographic location. The regression results do not provide sufficient evidence to argue for most of the hypothesized relationships. The coefficients for employee size are significant in Model 3 (b=-.231, p<.05) and Model 4 (b=.244, p<.05), and the directions of the two coefficients are consistent with the hypothesized relationships. These findings suggest that large organizations that employ more staff members are less likely to experience financial stress while more likely to be sustainable in terms of program and service provision. In addition, the coefficient for Suburban is significant in Model 3 (b=-.644, p<.05), which suggests that organizations located in suburban regions are less likely to experience financial stress than organizations located in non-suburban regions.

In summary, regression results presented from Table 5.17 do not provide sufficient evidence to argue that revenue diversification is a strong indicator of nonprofit financial sustainability. Table 5.18 provides a summary of hypothesis testing results for Models 3, 4 and 5.

 Table 5.18 Summary of Hypotheses Testing Results (Models 3, 4 and 5)

	Research Hypotheses	Doculto
	C: Confirmed NC: Not Confirmed	Results
H18a	Funding variety is negatively related to financial stress	NC
H18b	Revenue balance is negatively related to financial stress	NC*
H19a	Funding variety is positively related to likelihood to maintain services.	NC*
H19b	Revenue balance is positively related to likelihood to maintain services.	NC
H20a	Funding variety is positively related to future funding success.	С
H20b	Revenue balance is positively related to future funding success.	NC
H21a	Budget size is negatively related to financial stress.	NC*
H21b	Budget size is positively related to likelihood to maintain services.	NC
H21c	Budget size is positively related to future funding success.	NC
H22a	Board size is negatively related to financial stress.	NC
H22b	Board size is positively related to likelihood to maintain services.	NC
H22c	Board size is positively related to future funding success.	NC
H23a	# of board meetings is negatively related to financial stress.	NC
H23b	# of board meetings is positively related to likelihood to maintain services.	NC
H23c	# of board meetings is positively related to future funding success.	NC
H24a	Experience of operational cutbacks is positively related to financial stress.	С
H24b	Experience of operational cutbacks is negatively related to likelihood to maintain services.	С
H24c	Experience of operational cutbacks is negatively related to future funding success.	С
H25	Fund-raising efforts and investment is positively related to financial sustainability.	NC
H26a	External relationship is negatively related to financial stress.	С
H26b	External relationship is positively related to likelihood to maintain services.	NC
H26c	External relationship is positively related to future funding success.	С
H27	REI is negatively related to financial sustainability.	NC
H28a	Budget size is positively related to funding variety's effect on financial sustainability.	NC
H28b	Budget size is positively related to revenue balance's effect on financial sustainability.	NC
Note	: * indicates that the finding is significant but not consistent with the hypothesized dir	rection.

Although funding variety enhances the likelihood of future funding success, it

does not reduce the level of financial stress; what is more, it reduces the likelihood for

organizations to maintain their current programs and services. Revenue balance is not related to the other two measures while it significantly increases financial stress. In addition, only a few other contextual variables are found to strongly predict financial sustainability, such as fund development budget, external relationship with outside stakeholders, and staff size. Interestingly, results show that whether organizations have experienced recent operational cutbacks is a strong indicator of nonprofit financial sustainability.

CHAPTER SIX IMPLICATINS AND FUTURE RESEARCH

This chapter discusses theoretical contributions, managerial implications, and methodological improvements and suggests future research directions. The chapter highlights this study's contributions to the literature of nonprofit revenue diversification, nonprofit financial management, and nonprofit performance. The chapter further illustrates important managerial implications for nonprofit managers, individual donors and institutional funders, and policy makers. The chapter concludes with a discussion on the study's limitations and directions for future research.

6.1 Theoretical Contributions

This study contributes to the literature of nonprofit revenue diversification, nonprofit financial management, and nonprofit performance. First, the study provides a definition of nonprofit revenue diversification the use of which has been inconsistent in existing literature and empirically tests this definition. The findings suggest that revenue diversification should be approached from both "variety" and "balance" perspectives as they capture two dimensions of nonprofit revenue structure.

Second, this study develops an integrated model that addresses the multiple predictors of nonprofit financial performance through a multidimensional perspective by linking the analysis of nonprofit revenue diversification. The model predicts how variations of revenue diversification and nonprofit financial sustainability are correlated with different assumptions about organizational features, managerial factors, and environmental characteristics. This theoretical contribution is important to explain financial performance heterogeneity among nonprofit organizations by taking into account their distinct organizational capacity, managerial factors, fund development efforts, and environmental factors. In addition, this study adds new knowledge to understand revenue diversification by investigating what determine the level of funding variety and revenue balance as well as their effects on nonprofit financial sustainability.

The findings of this study suggest that nonprofit organizations' structure and capacity can help them to improve their revenue diversification, particularly funding variety. The regression results demonstrate that capacity measures including budget size, board involvement, programmatic growth, organizational size, and organizational age, are very strong indicators of a high level of nonprofit revenue diversification. This study also reveals that managerial experiences of nonprofit organizations are significant indicators of revenue diversification, especially funding variety. The regression results show that management perception of revenue diversification and internal management's influence on fund development strategies are strongly related to nonprofit revenue diversification. In addition, fund development effort and investment of nonprofit organizations is found to be of great significance in determining funding variety and revenue balance of these organizations. However, the findings of this study do not present a strong relationship between operating environment and revenue diversification. Finally, the effect of diversification on performance has not been sufficiently studied, and this study takes an important step to evaluate the relationship between revenue diversification and nonprofit performance. In terms of whether nonprofit organizations should strategically manage their fund development to create a diversified and balanced revenue structure, the findings of this study conclude that revenue diversification does not necessarily help organizations to maintain financially sustainable. Instead, nonprofits having more funding sources are less likely to maintain their current level of programs and services and a more balanced revenue structure increases the financial stress of nonprofits. These findings partially challenge the "diversification improves performance" proposition that has been held by some nonprofit researchers and this theoretical contribution is crucial to inform future research efforts in this area to further investigate diversification-performance relationship.

6.2 Managerial Implications

Development professional, researchers, and nonprofit practitioners have been increasingly paying attention to nonprofit revenue structure and financial performance. Moreover, there are some debates on the usefulness of diversifying revenue sources of nonprofit organizations. The findings of this study provide a number of important management implications that help shed light on understanding revenue diversification, financial sustainability, and the relationship between them.

First, the findings from this study provide rather weak evidence that revenue

diversification impact financial sustainability of nonprofits. Furthermore, in addition to the insignificant relationships, this study shows that a diversified revenue structure can actually weaken financial sustainability. For example, more funding sources decreases the likelihood to maintain services and a more balanced structure heightens the level of financial stress. It however needs to be cautioned that the analysis is conducted at a very special time when America's nonprofit sector is going through probably the worst financial recession it has ever experienced and so the data might not be as typical and representative as those if collected at another time.

Second, it is worth noting that funding variety and revenue balance present different kinds of impact on financial performance. The findings suggest that while having more funding sources help organizations secure revenues more successfully in the future, maintaining a balanced revenue structure does not benefit organizations, even worse, organizations will be under more pressure by doing so. Therefore this study concludes that organizations need to design fund development plans very carefully and make decisions regarding whether they should develop new funding relations or they should try to balance their revenue structure according to resource sufficiency and performance priorities.

6.3 Methodological Improvements

Several methodological improvements drawn from this study can be useful for future research on nonprofit financial management and performance measurement. First, earlier studies indicate that sample selection affects the comparison of nonprofit revenue diversification and performance and results in inconsistent and contradictory findings. This study constructs a more comparable sample by developing distinct sample selection criteria that focus on a group of homogenous organizations based on NTEE classification (human services and community improvement organizations) in a same location (New Jersey).

Second, accurate measurement and information regarding variables are critical to research on nonprofit revenue diversification. Instead of relying completely on 990 Form data, this study collects survey data to calculate the two diversification measures which overcomes the limitation of the 990 Form data.

Finally, as discussed in literature review, measuring organizational performance is difficult due to multiple missions of nonprofit organizations; measuring financial performance nonprofits is also difficulty due to a great array of efficiency and outcome measures. The study specifically examines nonprofit financial sustainability by investigating the three measures of financial stress, likelihood to maintain services, and future funding success. Such a design creates future possibility of exploring more performance measures that not only compare efficiency but also sustainable development of nonprofit organizations.

6.4 Limitations and Future Research directions

Despite its theoretical contributions and methodological improvements, this

study has a number of limitations – some of which are mentioned in previous chapters – that might influence the robustness of regression results and the generalizability of the findings. Future research can overcome these limitations by extending the integrated model and testing alternative hypotheses derived from other theoretical perspectives, creating improved measurements and collecting more reliable performance data, using advanced statistical models, and conducting qualitative research as follow-up studies.

First, as shown in the regression results tables, the full models only explain total variance in funding variety and revenue balance for about 40% and 26%. The explanatory power of the three models for financial sustainability is even less at around 10% on average. These percentages suggest that other contextual factors that might have influence on nonprofit revenue diversification and financial sustainability are not included in the research models in this study. Therefore, the study would recommend that future research develop and test alternative hypotheses derived from other theoretical perspectives to examine research questions such as: How does leadership, organizational learning process, and market competitiveness affect nonprofit revenue diversification and financial sustainability? Exploring these new research questions provide useful knowledge that can complement the findings of this study and provide additional managerial implications.

Second, data limitations influence the accuracy of regression results and sample characteristics affect the generalizability of the findings. This study heavily uses survey data that are mostly self-reported estimates of variables, which raises the concern of measurement validity. A majority of variables are categorical or scale variables that are unable to fully present the variations. These measurement limitations reduce the research models' capacity to reveal potentially significant relationships between variables. To overcome measurement limitations, this study suggests that researchers consider collecting more continuous variables to better differentiate nonprofit revenue patterns, organizational features, and environmental characteristics. In addition, this study suggests that creating more construct variables to measure contextual variables would be useful to facilitate advanced data analysis.

This study's sample is limited to two general types of organizations located in one region. These organizations' institutional features and management dynamics might differ significantly from other types of organizations, and the homogeneity in geographic locations presented in the sample may limit the variations of some key variables in the study such as regional economic instability. This study therefore suggests that future research further test the research models by investigating organizations operating in other service fields and other locations. It would be helpful to replicate the study elsewhere in the U.S. to compare the results with the current ones based on the New Jersey sample.

Third, future research can use advanced statistical models to examine the sophisticated relationships between contextual factors, revenue diversification, and financial performance. Overcoming some data and measurement limitations would provide more opportunities to implement advanced analytical methods. For instance, by creating more construct variables, researchers can construct structural equation modeling

to investigate the complex causal relationships and subtle relations such as mediating effects; furthermore, panel data makes it possible for researchers to conduct more rigorous statistical analysis.

Fourth, it remains to be explored what an "optimal revenue structure" is for nonprofit organizations. Given that this study does not provide sufficient evidence to argue for a positive relationship between revenue diversification and financial sustainability and fails to reveal other important predictors of financial sustainability, future research still needs to collect information to formulate the so-called "best practices" for organizations regarding fund development and management.

Finally, the preliminary findings suggest that researchers may implement case studies to collect qualitative data that can hopefully help interpret the findings from the quantitative analysis and explore more relevant topics to be included in future research models. It is also useful to conduct follow-up studies to track the long term trend toward a diversified revenue generation pattern in the nonprofit sector. Financial literature suggests that revenue diversification, as a strategy to divert investment risk for corporations, is not able to cope with the risks associated with a systemic crisis. Future study will be helpful to further investigate whether the potential performance-boosting effect from revenue diversification has been offset by the particular economic environment when the current research was conducted.

6.5 Conclusion

Examining nonprofit revenue diversification is important not only in understanding nonprofit financial management dynamics but also in informing nonprofit financial sustainability. This study draws on nonprofit financial management theories to propose three research questions, and develops and empirically tests an integrated model that investigates how contextual factors – organizational structure and capacity, managerial experience, fund development effort and investment, and operating environment – affect nonprofit revenue diversification and financial sustainability.

Questionnaires were administered to executive directors of 1,115 New Jersey human services and community improvement organizations. Using data from 501 responding organizations, this study found certain organizational and environmental characteristics have a significant influence on nonprofit revenue diversification. As expected, some capacity, management, investment and environment measures have a positive impact on funding variety, but fewer measures have a positive effect on revenue balance. Multiple regression analyses reveal that most of the hypotheses regarding predictors of financial sustainability are not confirmed which suggests that the research model does not include other factors that significantly impact nonprofit financial sustainability.

Major findings of the study include: (a) organizational structure and capacity, such as employee size, years of operation, board involvement, and internal development, are positively related to nonprofit revenue diversification, particularly funding variety; (b) managerial factors, including management's attitude toward revenue diversification, management's influence on fund development strategies, and recent operational cutbacks, have significant impact on funding variety, but less so on revenue balance; (c) using designated fund development staff and developing good relationship with outside stakeholders enhance revenue diversification; and (d) revenue diversification does not help organizations maintain financially sustainable. Although these findings are only suggestive, this study is a significant step forward in the development of a theory of nonprofit financial performance including the analysis of revenue diversification which will lead to a better understanding of a number of topics that have been understudied and thus not well understood.

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Appendix 1: Questionnaire



Page 1

organization	None	Only 1	2-3	4-5	More than
Internal fundraisin staff	g O	Ó	0	0	0
External fundraisin consultants	ng O	0	\bigcirc	0	0
6. About how	w many peo	ople are on yo	ur board of	directors?	
O None	0 1-5	6-10	0 11-15	0 16-20	\bigcirc More tha
7. About how	w many boa	ard meetings	do you have	each year?	
O None	Only 1	O 2-3	4-6	7-12	$\bigcup_{12} \text{More tha}$
8. How long	has your o	rganization be	een in opera	tion?	
Less than 3	() 3 to 10	years 0 11	to 25 years) 26 to 50 years	More than 50
years Part II: We nding envi	e'd like to	learn a little	e about yo	ur organiz	years ation's
years Part II: We nding envi 9. About how	e'd like to w much is y	learn a little our annual bu	e about yo Idget?	ur organiz	years ation's
years Part II: We nding envi 9. About hov Less than \$20 () \$200,001 to 5	e'd like to w much is y ^{00,000}	learn a little our annual bu	e about yo Idget?	ur organiz	years ation's
years Part II: Wo nding envi 9. About how Less than \$20 \$200,001 to 5 \$500,001 to 5	e'd like to w much is y 00,000 500,000 1 million	learn a little our annual bu	e about yo Idget?	ur organiz	years ation's
Part II: We nding envi 9. About hov Less than \$20 \$200,001 to 5 \$500,001 to 1 \$1 million to 5	e'd like to w much is y 20,000 500,000 1 million 5 million	learn a little our annual bu	e about yo	ur organiz	years ation's
Part II: We nding envi 9. About hov Less than \$20 \$200,001 to 3 \$500,001 to 3 \$1 million to \$5 million to	e'd like to w much is y 00,000 500,000 1 million 5 million 10 million	learn a little	e about yo	ur organiz	years ation's
years Part II: We nding envi. 9. About how Less than \$20 \$200,001 to 1 \$500,001 to 1 \$1 million to 1 \$200,001 to 1 \$200,000 to 1 \$2	e'd like to w much is y 00,000 500,000 1 million 5 million 10 million 10 million	learn a little	e about yo	ur organiz	years ation's
years Part II: We nding envi. 9. About how Less than \$20 \$200,001 to 3 \$500,001 to 3 \$500,000 to 3 \$500	e'd like to w much is y 00,000 500,000 1 million 5 million 10 million lion	learn a little	e about yo	ur organiz	years ation's
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years Part II: We nding envi 9. About hov Uss than \$20 \$200,001 to 5 \$500,001 to 5 \$5 million to 5 \$5 million to 5 Over \$10 mill	e'd like to w much is y 00,000 500,000 1 million 5 million 10 million lion	learn a little	e about yo	ur organiz	years ation's
years Part II: Wo nding envi 9. About how Less than \$20 \$200,001 to 5 \$500,001 to 5 \$500,000 to 5 \$500,	e'd like to w much is y 00,000 500,000 1 million 5 million 10 million lion	learn a little our annual bu	e about yo	ur organiz	years ation's

Government funding				100]			
(from all levels - federal, state, county and municipal)			Ξ.					
Individual donations]			
The United Way]			
Foundations]			
Corporations or businesses]			
Program service revenues (fees/sales/dues)]			
Banks, lending institutions]			
Other income]			
11. From how	many go	vernme	nt agen	cies did	you rec	eive fu	nding in	2008?
None	🔵 1-2 ag	encies	○ 3-5 ag	gencies	○ 6-10 a	agencies	Over 1 agencies	0
12. From how	many fou	Indatio	ns did yo	ou recei	ive fundi	ng in 2	008?	
12. From how	many fou	Indatio	ns did ya ○ ³⁻⁵	ou recei	ve fundi 0 6-10	ng in 2	008?	10
12. From how None 13. From how 2008?	many fou 1-2 many col	undation rporatio	ns did ya O 3-5 ons or bu	ou recei Isinesso	es did yo	ng in 2 u recei	008?	ng in
12. From how None 13. From how 2008?	many fou 1-2 many con 1-2	undation rporatio	ns did ya 3-5 ons or bu 3-5	ou recei Isinesse	ive fundi 6-10 es did yo 6-10	ng in 2 u recei	OO8? Over 1 Ve fundin	n g in
12. From how None 13. From how 2008? None 14. How difficu	many fou 1-2 many cou 1-2 1-2 lit would	indation rporation you sa	ns did ya 3-5 ons or bu 3-5 y it is fo	ou recei Isinesse r your o	ive fundi 6-10 es did yo 6-10 organizat	ng in 2 u recei tion to	OO8? Over 1 ve fundin Over 1	ng in 10 10 evenue
12. From how None 13. From how 2008? None 14. How difficu	many fou 1-2 many col 1-2 1-2 ult would ving soun	rporation you sarces?	ns did yo 3-5 ons or bu 3-5 y it is fo	ou recei Isinesso r your c	ove fundi 6-10 es did yo 6-10 organizat	ng in 2 u recei	OO8? Over 1 ve fundin Over 1 obtain re	ng in
12. From how None 13. From how 2008? None 14. How difficu from the follow	many fou 1-2 many cou 1-2 1-2 1-2 1-2 1-2 Not difficult at all	rporation you sa	ns did ya 3-5 ons or bu 3-5 y it is fo	ou recei Isinesso r your c	ive fundi 6-10 es did yo 6-10 organizat	ng in 2 u recei tion to	OO8? Over 1 ve fundin Over 1 obtain re Extremely difficult	ng in 10 Evenue N/A
12. From how None 13. From how 2008? None 14. How difficu from the follow	many fou 1-2 many col 1-2 1-2 11t would ving soun Not difficult at all	rporation you sa rces?	ns did ya 3-5 ons or bu 3-5 y it is fo	ou recei Isinesso r your c	ive fundi 6-10 es did yo 6-10 organizat	ng in 2 u recei tion to	OO8? Over 1 ve fundin Over 1 obtain re Extremely difficult	ng in 10 evenue
12. From how None 13. From how 2008? None 14. How difficu from the follow	many fou 1-2 many col 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	you sarces?	ns did yo 3-5 ons or bu 3-5 y it is for O	ou recei Isinesso r your c	organizat	ng in 2 u receition to	OO8? Over 1 Ve fundin Over 1 Over 1 Over 1 Over 1 Extremely difficult	
12. From how None 13. From how 2008? None 14. How difficu from the follow Government funding Individual donations The United Way	many fou 1-2 many col 1-2 llt would ving sour Not difficult at all O O	you sar	ns did ya 3-5 ons or bu 3-5 y it is fo	r your c	ive fundi 6-10 es did yo 6-10 organizat	ng in 2 u receition to	OO8? Over 1 ve fundin Over 1 Over 1 obtain re Extremely difficult O	
12. From how None 13. From how 2008? None 14. How difficu from the follow Government funding Individual donations The United Way Foundations	many fou 1-2 many con 1-2 ult would ving soun Not difficult at all 0 0 0	you sarces?	ns did ya 3-5 ons or bu 3-5 y it is fo	r your c	ive fundi 6-10 es did yo 6-10 organizat	u receition to	OO8? Over 1 ve fundin Over 1 obtain re Extremely difficult O	
12. From how None None None None None None None None	many fou 1-2 many col 1-2 1-2 1-2 1-2 1-2 1-2 1-2 0 1-2 0 0 0 0 0 0 0 0 0 0 0 0 0	you sa rces?	ns did ya 3-5 ons or bu 3-5 y it is for 0 0 0 0 0 0 0 0 0 0 0 0 0	r your d	organizat	u receition to	OOB? Over 1 ve fundin Over 1 Over	
12. From how None None None None None None None None	many fou 1-2 many col 1-2 llt would ving sour Not difficult at all 0 0 0 0 0 0 0 0 0 0 0 0 0	you sar	ns did yo 3-5 ons or bu 3-5 y it is fo	r your c	organizat	u receition to	OOB? Over 1 ve fundin Over 1 obtain re Extremely difficult O O O O O	
12. From how None None None None None None None None	many fou	you sar rces?	ns did yo 3-5 ons or bu 3-5 y it is fo	r your d	organizat	u receition to	OOB? Over 1 ve fundin Over 1 obtain re Extremely difficult O O O O O O O O O O O O O	

None	C Less th	an 5%	() 5% to	10%	() 11%	to 20%	O More
16. How much	effort do	es yo	ur organi	zation	devote	to genei	rating re
from these sou	rces?						
Government funding	None at a	ill.	Little effort	Some	effort	A fair amou	unt Ag
Individual departies	X		0		2	0	
The United Way	X		0		3	00	
Foundation	8		0		3	0	
	0		0	5	2	0	
business	0		0	()	0	
Fee/sales/dues	0		0	()	0	
Banks, lending	0		0	($\mathbf{)}$	0	
Other income	0		0	()	\bigcirc	
							Successiul
	at all						successiui
Government funding		0	0	0	0	0	
Government funding Individual donations		00	00	00	00	00	
Government funding Individual donations The United Way		000	000	000	000	000	
Government funding Individual donations The United Way Foundations		0000	0000	0000	0000	0000	
Government funding Individual donations The United Way Foundations Corporations or businesses		00000	00000	00000	00000	00000	
Government funding Individual donations The United Way Foundations Corporations or businesses Fees/sales/dues		0000000	00000 0	00000 C	0000000	00000 0	
Government funding Individual donations The United Way Foundations Corporations or businesses Fees/sales/dues Banks, lending institutions		000000000	000000000	00000000	000000000	00000000	
Government funding Individual donations The United Way Foundations Corporations or businesses Fees/sales/dues Banks, lending institutions Other income		0000000000	0000000000	0 00 00 00 0	0000000000	000000000	
Government funding Individual donations The United Way Foundations Corporations or businesses Fees/sales/dues Banks, lending institutions Other income		000000000	00000000	0 00 00 00 0	00000000	000000000	

	None		Little	Sor	ne	A fair amour	it Agr	eat dea
Executive	\bigcirc		0	C)	0		0
Chair of the board of	0		0	C)	0		0
Board of directors	0		0	C)	0		0
Professional staff	0		0	C)	0		0
Volunteers	\bigcirc		\bigcirc	C		0		0
Important donors and funders	0		\bigcirc	C)	0		0
Other	0		0	C)	0		0
revenues from t	Not successful at all	ources T	'HIS YE	AR?			Extremely successful	N/A
Government funding	0	0	0	\bigcirc	0	0	0	0
Individual donations	0	0	0	0	0	0	0	Q
The United Way	Õ	Õ	Õ	Õ	Q	Q	Q	Q
Foundations	Q	0	0	Q	0	Q	Q	0
businesses	0	0	0	0	0	0	0	0
Fees/sales/dues	0	0	Ő	Q	Ő	0	0	0
institutions	0	0	0	0	0	0	0	0
Other income	\bigcirc	\bigcirc	0	0	0	0	\bigcirc	0
Part IV: Now, rformance. 20. How much g experienced over	think prowth er the p	about y (of prog ast five	your o rams a years?	rganiza nd servi	itiona ces) h	l manag as your o	ement rganiza	and tion
None at all	\bigcirc	Only a little		🔵 A fair	amount	0	A great deal	
	Completely disagree		_	_			Completely agree	
---	------------------------	-----------	--------------	-----------	------------	-----------	---------------------	
My organization is well managed.	0	0	0	0	0	0	0	
My organization is effective in delivering quality programs and services.	0	0	0	0	0	0	0	
My organization is successful in achieving ts organizational missions.	0	0	0	0	0	0	0	
My organization is more successful than most of the similar nonprofits.	0	0	\bigcirc	0	0	0	0	
My organization has been doing a good job at evaluating program butcomes	0	0	0	0	0	0	0	
My organization is data- driven and uses performance information n many ways.	0	0	0	0	0	0	0	
laving revenues from several sources is extremely important for nonprofit organizations ike ours.	0	0	0	0	0	0	0	
My organization has been doing a good job at diversifying its revenue sources.	0	0	0	0	0	0	0	
22. Overall, how following areas?	would yo	ou rate t	he job yo	our organ	ization is	s doing i	n the	
	Poor	Only	fair	Good	Very go	bod	Excellent	
Developing external relationships in funding area	0	C)	0	0		0	
Developing external relationships in programmatic area	0	C	$\mathbf{)}$	0	0		0	
Improving organizational structure	0	C)	0	0	•	0	
Developing leadership	0	()	0	0		0	
Improving internal management	Ó	Ċ)	0	Õ		0	

Page 6

	0		0		\bigcirc	
None at all	Only	y a little	() A fair	amount	Quite a lo	t
24 Since Janu off, if any?	ary 1, 200	08, how ma	ny paid e	mployees	have you ha	d to lay
None at all		y a few			Quite a lo	t
25. Since Janua part-time) have	ry 1, 2008 you had,	3, how muc if at all?	h employ	ment chan	ge (from ful	l-time t
None at all		a little	🔵 A fair	amount	Quite a lo	t
26. Since Janua experienced fro	ry 1, 2008 m the foll	8, how muc owing sou	h in fundi rces?	ng cuts ha	s your organ	nization
Government funding	None at all	Less than 25%	25% - 50%	51% - 75%	More than 75%	N/A
Individual donations	ŏ	ŏ	ŏ	ŏ	Ö	õ
The United Way	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
Foundations	ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
Corporations or businesses	Õ	Õ	Õ	Õ	ŏ	ŏ
Fees/sales/dues	\bigcirc	0	0	0	0	0
Banks, lending institutions	0	0	0	0	0	\bigcirc
Other income	\bigcirc	0	0	0	0	0
27. Using the 1- stress your orga	10 scale b nization i	elow, how s under the	would yo ese days?	u rate the	level of fina	ncial
Level of stress	at all	0 (0 0	0 0	0 0	stress
28. Looking ahe organization wil it has always de	ad a year I be able t livered?	from now, o maintain	how likely the level	/ would yo of program	u say is it th ns and servi	at your ces that
E> U How likely	tremely Inlikely	0 (0 0	0 0	0 0	Extreme likely
	wo'd li	ka ta laar	n a little	aboutur		U
Dart VI Einallu	TATE OF AN ALL AND A SHORE AND A	CONTRACTOR AND		TO ISING VAS	1 Providence and the second	
Part V: Finally	, we a m	to icui	in a meere	about ye		

	lany years no	ave you work	ced in the nor	profit sector	?
31 How n	any years ha	we you work	red in the nriv	uata husinass	soctor?
	iany years ne				Sector .
32. How n	nany years ha	ave you work	ed in govern	ment?	
22 What i					
	s your gende	r?			
U Male					
34. What i	s your age?				
○ ≤25	25-34	35-44	45-54	55-64	
35. What i	s your title?				
	Director/President/C	EO	Board Cha	ir or Other Board Me	mber
	lent			al Staff	
Other (plea	ase specify)				
Thank you very r released, please be linked to you	much for your partici provide your email a r responses. We will	pation! If you would address in the box I only use it to send	l like to receive a cop below. Please be ass you a digital copy of	by of the survey resu ured that this contac the survey results.	lts when they are t information will i Thanks again!
36. (Optio	nal)I'd like ye	ou to send a	copy of the si	urvey results	to this emai
address:					

Appendix 2: Three Contacts of Mail Survey

[Initial Mailing]

July 15, 2009 Dear Mr. ABC,

We are writing to invite your participation in a survey about how the current economic situation affects New Jersey's nonprofits like yours, particularly in the area of resource acquisition and development. The survey is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, the State University of New Jersey, and directed by Professor Marc Holzer, and Weiwei Lin. The mission of SPAA is to conduct important, timely research on issues of importance to the public and nonprofit sectors in New Jersey and the nation.

You are one of a small group of nonprofit representatives who have been selected, so your participation is very important to the study. We would greatly appreciate your taking only about 15 minutes to complete the enclosed questionnaire, and then return it in the self-addressed envelope.

Please be assured that your answers are completely confidential, and all results will be reported only in aggregate form. The reported results will not identify you or your organization individually. We would gladly provide you with a copy of the survey results when they are released.

We would be happy to answer any questions you might have about this study; please feel free to contact Ms. Lin at (201) ***-**** or weiwei@pegasus.rutgers.edu.

As a token of appreciation, we are enclosing a flyer about our "Public Performance Measurement & Reporting Network" (PPMRN) website. We hope you enjoy the free resources PPMRN provides on a broad range of issues influencing the performance of public and nonprofit organizations and agencies.

Thank you for your help and we look forward to receiving your response.

Sincerely,	
Marc Holzer	Weiwei Lin
Dean, Board of Governors Professor	Research Associate
SPAA	SPAA
Rutgers, the State University of New Jersey	Rutgers, the State University of New Jersey

This study has been reviewed and approved by the Rutgers University Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 \times 2104 or humansubjects@orsp.rutgers.edu.

[Postcard]

July 22, 2009

Last week we sent you a questionnaire to ask your opinion about how the current economic situation affects New Jersey nonprofits like yours.

If you have already completed and returned the questionnaire, please accept our sincere thanks. If not, please do so today. We are very grateful for your help with this important study.

If you did not receive a questionnaire, or if it was misplaced, please contact Weiwei Lin at 201-***_**** or <u>weiwei@pegasus.rutgers.edu</u> and we will get another one in the mail to you today.

Sincerely,

Marc Holzer Dean and Board of Governors Professor School of Public Affairs and Administration Rutgers University-Newark Weiwei Lin Research Associate School of Public Affairs and Administration Rutgers University-Newark

[Second Mailing]

August 5, 2009

Dear Mr. ABC,

About three weeks ago we wrote to you asking if you would participate in a survey study about how the current economic situation affects New Jersey nonprofits, particularly in the area of resource acquisition and development. To the best of our knowledge, it has not yet been returned.

We are writing again because of the importance that your responses have for this study. It is only by hearing from each nonprofit representative in our small sample like you that we can be sure that the results truly represent New Jersey nonprofit world. Therefore, we hope that you'll be able to take only about 15 minutes from your busy schedule to fill it out and send it back in the self-addressed, postage-paid reply envelop we provided for your convenience.

Again, please be assured that all responses will be held in the strictest confidence, and all results will be reported only in aggregate form. The reported results will not identify you or your organization individually. If you have any questions about the study, please feel free to contact Ms. Lin at <u>weiwei@pegasus.rutgers.edu</u>.

We hope that you enjoy the questionnaire.

Sincerely,

Marc Holzer Dean, Board of Governors Professor School of Public Affairs and Administration Rutgers, the State University of New Jersey Weiwei Lin Research Associate School of Public Affairs and Administration Rutgers, the State University of New Jersey

This study has been reviewed and approved by the Rutgers University Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 \times 2104 or humansubjects@orsp.rutgers.edu.

Appendix 3: Three Contacts of Web Survey

[Initial Email Invitation]

To: [Email]

From: weiwei@pegasus.rutgers.edu

Subject: Rutgers University "Survey of Nonprofit Resource Acquisition and Development"

Body: [FirstName] [LastName] [CustomValue]

Dear [FirstName],

We are writing to invite your participation in a survey about how the current economic situation affects New Jersey's nonprofits like yours, particularly in the area of resource acquisition and development. The survey is sponsored by the School of Public Affairs and Administration (SPAA) at Rutgers, the State University of New Jersey, and directed by Professor Marc Holzer, and Weiwei Lin. The mission of SPAA is to conduct important, timely research on issues of importance to the public and nonprofit sectors in New Jersey and the nation.

You are one of a small group of nonprofit representatives who have been selected, so your participation is very important to the study. We would really appreciate your taking only about 15 minutes to complete the survey; please click on the link below to begin the survey:

Survey link: http://www.surveymonkey.com/s.aspx

Please be assured that your answers will be completely confidential, and all results will be reported only in aggregate form. The reported results will not identify you or your organization individually. We would gladly provide you with a copy of the survey results when they are released.

We would be happy to answer any questions you might have about this study; please feel free to contact Ms. Lin at (201) 349-5285 or weiwei@pegasus.rutgers.edu

Thank you for your help by completing the survey.

Sincerely,

Marc Holzer Dean and Board of Governors Professor School of Public Affairs and Administration Rutgers, the State University of New Jersey

Weiwei Lin Research Associate School of Public Affairs and Administration Rutgers, the State University of New Jersey

(P.S.: This study has been reviewed and approved by the Rutgers University Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at (732) 932-0150 \times 2104 or humansubjects@orsp.rutgers.edu)

[Follow-up Email #1]

To: [Email]

From: weiwei@pegasus.rutgers.edu

Subject: Rutgers University "Survey of Nonprofit Resource Acquisition and Development"

Body: [FirstName] [LastName] [CustomValue]

Dear [FirstName],

Last week we sent you an email asking you to respond to a survey about how the current economic situation affects New Jersey nonprofits like yours.

If you have already completed the survey, we really appreciate your participation. If you have not yet responded, we encourage you to take only about fifteen minutes and complete the survey.

Please click on the link below to begin the survey.

Survey link: http://www.surveymonkey.com/s.aspx

You are one of a small group of nonprofit representatives who have been selected, so your response is very important. We are very grateful for your help with this study.

Sincerely,

Marc Holzer Dean, Board of Governors Professor School of Public Affairs and Administration Rutgers, the State University of New Jersey

Weiwei Lin Research Associate School of Public Affairs and Administration Rutgers, the State University of New Jersey

[Follow-up Email #2]

To: [Email]

From: weiwei@pegasus.rutgers.edu

Subject: Please complete Rutgers University nonprofit survey.

Body: [FirstName] [LastName] [CustomValue] Dear [FirstName],

We are writing you about our study of New Jersey nonprofits during the current economic downturn. We are hoping you may be able to give about fifteen minutes to help us collect important information for the "Rutgers University Survey of Nonprofit Resource Acquisition and Development."

The study is drawing to a close, so we wanted to email everyone who has not responded to make sure you had a chance to participate. We are writing again because of the importance that your response has for helping get accurate results.

Please click on the link below to begin the survey.

Survey link: http://www.surveymonkey.com/s.aspx

Thank you in advance for completing the survey. Your response is important! Nonprofit executives are the best source of information to help build a stronger nonprofit sector in the state of New Jersey.

Sincerely,

Marc Holzer Dean, Board of Governors Professor School of Public Affairs and Administration Rutgers, the State University of New Jersey Weiwei Lin Research Associate School of Public Affairs and Administration Rutgers, the State University of New Jersey

Appendix 4: Notice of Exemption from IRB Review

RUTGERS UNIVERSITY Office of Research and Sponsored Programs ASB III, 3 Rutgers Plaza, Cook Campus New Brunswick, NJ 08901

May 14, 2009

P.I. Name: Lin Protocol #: E09-492

Weiwei Lin School of Public Affairs and Administration 701 Hill Hall, 360 MLK Blvd Newark Campus

Dear Weiwei Lin:

Notice of Exemption from IRB Review

Protocol Title: "Impact of Government Funding on Nonprofit Revenue Strategies and Organizational Performance"

The project identified above has been approved for exemption under one of the six categories noted in 45 CFR 46, and as noted below:

Exemption Date: 5/5/2009 Exempt Category: 2

This exemption is based on the following assumptions:

- This Approval The research will be conducted according to the most recent version of the protocol that was submitted.
- Reporting ORSP must be immediately informed of any injuries to subjects that occur and/or problems that arise, in the course of your research;
- Modifications Any proposed changes MUST be submitted to the IRB as an amendment for review and approval prior to implementation;
- Consent Form (s) Each person who signs a consent document will be given a copy of that document, if you are using such documents in your research. The Principal Investigator must retain all signed documents for at least three years after the conclusion of the research;

Additional Notes: None

Failure to comply with these conditions will result in withdrawal of this approval.

The Federalwide Assurance (FWA) number for Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Sincerely yours melille m Sheryl Goldbergs der

Director of Office of Research and Sponsored Programs graser@orsp.rutgers.edu

cc: Marc Holzer

Descriptive mormation is	of Managerr	ai ractors richis			
Questionnaire Item	Ν	Mean	Std. Dev.	Min	Max
wellmanage	495	5.874747	1.224112	1	7
effective	499	6.278557	1.022125	2	7
mission	497	6.138833	1.101155	1	7
moresuccess	494	5.659919	1.378527	1	7
evaluate	493	5.206897	1.491777	1	7
datadriven	494	4.591093	1.761316	1	7
imp_diverse	494	6.277328	1.462864	1	7
diversifying	490	4.416327	1.871686	1	7
inf_ed	499	4.539078	.8665909	1	5
inf_staff	490	3.285714	1.371638	1	7
inf_chair	492	3.512195	1.238328	1	5
inf_board	496	3.397177	1.153612	1	5
growth	498	2.941767	.9008282	1	4
structure	487	3.468172	.8995388	1	5
leadership	487	3.443532	.9560261	1	5
manage	484	3.576446	.9260118	1	5
procut	494	1.734818	.8332116	1	4
employcut	497	1.503018	.7408657	1	4
employchange	494	1.469636	.6816109	1	4
cut_gov	429	1.806527	.9334662	1	5
cut_donation	396	2.179293	.9550269	1	5
cut_uw	262	2.248092	1.272874	1	5
cut_founda~n	343	2.209913	1.104068	1	5
cut_corp	345	2.257971	1.005856	1	5
cut_fee	305	1.744262	.9033062	1	5
cut_bank	212	2.023585	1.116193	1	5

Appendix 5: Descriptive Information of Questionnaire Items

Descriptive Information for Managerial Factors Items

Descriptive Information for Fund Development Investment Items

Question Item	Ν	Mean	Std. Dev.	Min	Max
frstaff	486	1.87037	.9533807	1	5
frconsultant	501	1.211577	.5469421	1	5
percentage	485	2.22268	.8929829	1	5
effort_gov	496	3.564516	1.360285	1	5
effort_don~n	487	3.344969	1.32563	1	5
effort_uw	483	2.256729	1.321829	1	5
effort_fou~n	485	3.171134	1.305421	1	5
effort_corp	486	3.148148	1.301334	1	5

effot_fee	473	2.885835	1.582368	1	5
effort_bank	465	2.333333	1.2843	1	5

Descriptive Information for Environmental Factors Items

Question Item	Ν	Mean	Std. Dev.	Min	Max
externalfu~g	479	2.820459	1.057509	1	5
externalpr~m	483	3.507246	1.011064	1	5
inf_volunt~r	491	2.181263	1.173576	1	5
inf_donor	486	2.576132	1.245762	1	5
dif_gov	454	3.900881	1.921494	1	7
dif_donation	438	4.59589	1.62607	1	7
dif_uw	317	4.883281	1.878157	1	7
dif_founda~n	419	4.935561	1.550783	1	7
dif_corp	434	5.182028	1.500285	1	7
dif_fee	332	3.506024	1.900062	1	7
dif_bank	310	4.777419	1.811186	1	7
REI	501	8.575381	1.384715	6.909562	17.516

Descriptive Information for Performance Items

Question Item	Ν	Mean	Std. Dev.	Min	Max
suc09_gov	459	4.568627	1.944979	1	7
suc09_dona~n	450	3.706667	1.616507	1	7
suc09_uw	356	2.733146	1.756797	1	7
suc09_foun~n	439	3.332574	1.559654	1	7
suc09_corp	440	3.170455	1.497314	1	7
suc09_fee	364	4.126374	2.022046	1	7
suc09_bank	152	2.875	1.885155	1	7
stress	493	6.385396	2.476218	1	10
maintain	496	6.6875	2.615634	1	10

Descriptive Information for Diversification Items

	NT	м	C(L D	241	3.6
Question Item	N	Mean	Std. Dev.	Min	Max
gov	475	.4784745	.3752253	0	1
donation	473	.0994757	.1860288	0	1
uw	473	.0186854	.0558965	0	.71
foundation	473	.0657865	.1197326	0	.9
corp	473	.0359218	.0676152	0	.4
fee	473	.2346784	.3270797	0	1
bank	473	.0158911	.0622483	0	.75
fund	472	4.165254	1.87684	1	8
rd	472	.4242183	.2910375	0	.954285

Question Item	Ν	Mean	Std. Dev.	Min	Max	
gov08	497	2.476861	.9692697	1	5	
foundation08	494	2.38664	1.273184	1	5	
corp08	490	2.818367	1.540745	1	5	
suc_gov	440	4.943182	1.964131	1	7	
suc_donation	440	3.811364	1.677496	1	7	
suc_uw	341	3.108504	1.994835	1	7	
suc_founda~n	423	3.527187	1.811912	1	7	
suc_corp	418	3.382775	1.677011	1	7	
suc_fee	357	4.302521	1.988257	1	7	
suc bank	311	3.109325	1.823045	1	7	

Descriptive Information for All Other Items

Appendix 6 Full Data Analysis Results

(1) Funding Variety as Dependent Variable

Source	SS	df	MS		Number of ob	s = 396
Model Residual	574.123328 737.533237	24 23. 371 1.9	9218054 8796021		Prob > F R-squared	= 0.0000 = 0.4377
Total	1311.65657	395 3.3	2064953		Root MSE	= 1.41
fund	Coef.	Std. Err.	t	P> t	[95% Conf	. Interval]
exp shiwan	0067922	.0028228	-2.41	0.017	0123429	0012414
_ expsqu	.0644548	.0283061	2.28	0.023	.0087944	.1201153
board	.0565538	.0774626	0.73	0.466	095767	.2088745
boardmeet	.2989451	.1088151	2.75	0.006	.0849734	.5129167
growth	.319891	.0900022	3.55	0.000	.1429125	.4968694
IntDev	2836771	.0848403	-3.34	0.001	4505053	116849
ManageSucc~s	0722142	.0916807	-0.79	0.431	2524932	.1080648
imp_diverse	.144897	.0592423	2.45	0.015	.0284041	.2613898
influed	.2061727	.0931205	2.21	0.027	.0230625	.389283
staffdummy	.624718	.1686333	3.70	0.000	.293121	.9563149
consultdummy	0664281	.2184122	-0.30	0.761	4959091	.363053
percentage	.017518	.0930975	0.19	0.851	165547	.200583
ExtRelation	.3268551	.0825855	3.96	0.000	.1644607	.4892495
rei	0636436	.0536294	-1.19	0.236	1690993	.0418122
HS	18068	.2256346	-0.80	0.424	6243631	.2630031
Youth	.1615788	.3164288	0.51	0.610	4606401	.7837977
Housing	3366719	.2830336	-1.19	0.235	8932231	.2198793
Community	5039564	.2958604	-1.70	0.089	-1.08573	.0778172
Urban	.2300012	.2122116	1.08	0.279	1872871	.6472895
Suburban	.1888205	.2027025	0.93	0.352	2097694	.5874104
npage	.2301162	.087449	2.63	0.009	.0581584	.402074
employee	.1290398	.071053	1.82	0.070	0106773	.2687568
volunteer	.2196367	.0656473	3.35	0.001	.0905492	.3487241
justcut	.4144271	.165272	2.51	0.013	.0894396	.7394145
_cons	-1.801679	.9232998	-1.95	0.052	-3.617237	.0138778
. Funding Var	ietv: predict	R1, rstude	nt (105 m	issina v	values generate	ed)
list id r1 i	n 1/10	,	. lis	t id r1	in 387/396	·
+	+			+	+	
id	r1			id	r1	

	1a	rı		1 10	ĽΤ	I.
1.	450	-2.493619	387.	290	2.012207	
2.	508	-2.465974	388.	149	2.039019	
3.	1083	-2.364105	389.	1093	2.115507	
4.	671	-2.229665	390.	478	2.155252	
5.	64	-2.218692	391.	387	2.221614	
6.	938	-2.210676	392.	22	2.406335	
7.	186	-2.136673	393.	635	2.532725	
8.	649	-1.853391	394.	370	2.542666	
9.	808	-1.824774	395.	402	2.767379	
10.	495	-1.817656	396.	548	3.223442	
	+	+		+		+

swilk r

Variable	Sha Obs	apiro-Wilk N W	W test for V	normal data z	Prob>z
r	+ 396	0.99633	1.002	0.005	0.49805

. iqr r mean= 1.7e-09 median=0015	pseudo	std.dev.= 1.366 std.dev.= 1.386	(n= 396) (IQR= 1.87)			
10 011			low	high		
		inner fences # mild outliers % mild outliers outer fences # severe outliers % severe outliers	-3.761 0 0.00% -6.567 0 0.00%	3.719 2 0.51% 6.525 0 0.00%		
. vif Variable	VIF	1/VIF				
<pre>exp_shiwan expsqu employee HS Suburban Urban Community Housing board ManageSucc~s Youth npage IntDev volunteer staffdummy influed ExtRelation growth percentage imp_diverse boardmeet rei consultdummy justcut </pre>	6.85 4.59 2.86 2.53 2.04 1.95 1.89 1.82 1.65 1.64 1.57 1.55 1.42 1.41 1.36 1.35 1.34 1.34 1.32 1.20 1.19 1.17 1.15	0.146075 0.217698 0.349538 0.395067 0.489725 0.513843 0.528937 0.549370 0.606825 0.609984 0.638798 0.643421 0.703375 0.711047 0.733136 0.739404 0.739404 0.746372 0.747233 0.755125 0.833314 0.837345 0.840172 0.854033 0.870189				
Mean VIF	1.93					

. estat imtest

Cameron & Trivedi's decomposition of IM-test

Source		chi2	df	p
Heteroskedasticity Skewness Kurtosis	 	293.04 35.36 0.58	307 24 1	0.7071 0.0632 0.4464
Total		328.98	332	0.5365

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of fund
chi2(1) = 0.37
Prob > chi2 = 0.5416

Source	e	SS	df		MS		Number of obs	=	396
Mode Residua	+ l l +	11.0345299 25.6732687	24 371	.459	9772081 9200185		Prob > F R-squared	=	0.0000 0.3006 0.2554
Tota	, 1 	36.7077986	395	.092	2931136		Root MSE	=	.26306
rd3	3	Coef.	Std.	Err.	t	P> t	[95% Conf.	In	terval]
exp_shiwan expsqu board boardmeet growth IntDev ManageSucc~s imp_diverse influed staffdumm percentage ExtRelation res Ha Youth Housing Community Urban Suburban npage employee voluntees justcut	+ n u d t s v s y s y h S y h s r s 		.000 .005 .014 .02 .01 .015 .017 .015 .017 .031 .040 .017 .015 .010 .042 .059 .052 .030 .037 .016 .013 .016 .013 .017	 5267 2812 4525 0302 6792 8289 1052 1053 3738 4625 7499 3695 4083 0058 0974 0372 8065 1997 9593 8189 3157 2566 2248 8354 2632	-1.64 1.26 0.24 2.39 2.14 -2.61 -0.85 2.77 0.65 2.72 0.16 3.19 3.06 0.79 -0.48 1.05 1.32 -0.42 1.66 0.90 2.32 -1.39 0.63 1.59 -2.81	0.103 0.210 0.810 0.017 0.033 0.009 0.393 0.006 0.518 0.007 0.873 0.002 0.002 0.428 0.631 0.293 0.188 0.678 0.098 0.369 0.021 0.165 0.529 0.112 0.005	0018974 003751 0249504 .0085722 .0029869 0724935 0482565 .0088968 0229111 .0237222 0736159 .0212989 .0168707 011739 1030266 0539547 0342241 1314524 012217 0403571 .005758 0444919 0163584 0115331 8231747		 0001739 0170185 0318876 0884151 0690258 0102421 .019014 0523658 0454159 1474566 0866436 .089609 07746175 0625324 1782244 1734512 0856346 1434928 1083754 0699235 0076431 0318102 1097349 1457053
. Revenue Ba	alanc r2 i	e: predict n 1/10	R2, r:	studer	nt(105 mis . list	sing va id r2	lues generated in 387/396)	
+ i0 	d 	+ r2 			+ 	id	+ r2 		

(2)	Devenue Delence de Devendent Veriable
(2)	Revenue Balance as Dependent Variable
(-/	neteriae balance as bepenaent tanable

	id	r2		id	r2
1. 2. 3. 4. 5.	83 1083 234 78 1129	-2.58701 -2.460635 -2.386093 -2.359695 -2.312805	387. 388. 389. 390. 391.	23 53 396 923 402	1.855576 1.887501 1.895829 1.914521 1.970161
6. 7. 8. 9. 10.	 471 72 508 606 667	-2.256738 -2.21782 -2.105632 -2.089553 -2.026882	392. 393. 394. 395. 396.	 840 290 240 630 298	2.053524 2.064437 2.138843 2.173023 2.365901

. swilk r

Variable	Shapi Obs	ro-Wilk W W	test for normal V	l data z	Prob>z
r	396 Shapi	0.98811 .ro-Wilk W	3.245 test for norma	2.800 1 data	0.00256

187

mean= -1.2	e-10	std.dev.= .2549	(n=	396)
median= .00	73 pseudo	std.dev.= .2996	(IQR=	.4041)
10 trim= .00	23		low	high
		inner fences # mild outliers	8097 0	.8068 0
		% mild outliers	0.00%	0.00%
		outer fences # severe outliers % severe outliers	-1.416 0 0.00%	1.413 0 0.00%
. vif Variable	VIF	1/VIF		
exp shiwan	6.85	0.146075		
expsqu	4.59	0.217698		
employee	2.86	0.349538		
HS	2.53	0.395067		
Suburban	2.04	0.489725		
Urban	1.95	0.513843		
Community	1.89	0.528937		
Housing	1.82	0.549370		
board	1.65	0.606825		
ManageSucc~s	1.64	0.609984		
Youth	1.57	0.638798		
npage	1.55	0.643421		

1	0	0
1	о	o

. estat imtest

Mean VIF |

IntDev |

Cameron & Trivedi's decomposition of IM-test

1.93

 IntBage
 1.100
 0.101121

 IntDev
 1.42
 0.703375

 volunteer
 1.41
 0.711047

 staffdummy
 1.36
 0.733136

 influed
 1.35
 0.739404

 ExtRelation
 1.34
 0.746372

 growth
 1.32
 0.755125

 imp_diverse
 1.20
 0.833314

 boardmeet
 1.19
 0.840172

 consultdummy
 1.17
 0.854033

 justcut
 1.15
 0.870189

Source		chi2	df	p
Heteroskedasticity Skewness Kurtosis	- 	323.18 61.92 20.08	307 24 1	0.2518 0.0000 0.0000
Total		405.19	332	0.0037

1.42 0.703375

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance Variables: fitted values of rd3

> chi2(1) = 0.73

Prob > chi2 = 0.3939

Source		SS	df		MS		Number of obs	=	400
Model	 	362 059391	22	16	457245		F(22, 377) Prob > F	_	0 0000
Residual	i.	1913.78061	377	5.0	7634114		R-squared	=	0.1591
	+-						Adi R-squared	=	0.1100
Total	Ì	2275.84	399	5.7	0385965		Root MSE	=	2.2531
stress		Coef.	Std.	Err.	t	P> t	[95% Conf.	In	terval]
fund		0633613	.0919	9414	-0.69	0.491	2441435		.117421
rd3		1.039082	.502	2914	2.07	0.039	.0502138		2.02795
exp_shiwan		.0068096	.0072	2488	0.94	0.348	0074434		0210627
_ board		0650306	.1211	L268	-0.54	0.592	3031994		1731382
boardmeet	1	.0390844	.1714	1434	0.23	0.820	2980207		3761895
justcut		1.46503	.2584	1397	5.67	0.000	.9568664	1	.973194
staffdummy		.047874	.2718	3938	0.18	0.860	4867442	•	5824923
consultdummy		4017586	.3413	3216	-1.18	0.240	-1.072891		.269374
percentage	1	.0881853	.1482	2666	0.59	0.552	2033479		3797185
ExtRelation		2628383	.1258	3316	-2.09	0.037	510258		0154186
rei		0367905	.0846	5135	-0.43	0.664	203164		.129583
fund_exp		.0210272	.0806	5121	0.26	0.794	1374784		1795329
rd3_exp		7651468	.5093	3036	-1.50	0.134	-1.766579		.236285
employee		2308347	.1034	1007	-2.23	0.026	4341491		0275203
volunteer		1277527	.1060	049	-1.21	0.229	3361877		0806823
npage		.1091472	.1369	9112	0.80	0.426	160058		3783524
HS		.3895128	.3542	2924	1.10	0.272	307124		1.08615
Youth		.1441993	.5095	5177	0.28	0.777	8576534	1	.146052
Housing		3119398	.4475	5456	-0.70	0.486	-1.191938		5680586
Community	I	.0865212	.4632	2875	0.19	0.852	8244301		9974725
Urban	I	3230992	.3390)511	-0.95	0.341	9897673		.343569
Suburban	1	6438363	.3240)523	-1.99	0.048	-1.281013		00666
_cons		6.373696	1.227	7663	5.19	0.000	3.959772		8.78762

(3) Financial Stress as Dependent Variable

. Funding Variety: predict R1, rstudent(101 missing values generated) list id r1 in 1/10 list id r1 in 391/400

	+	+	+
	id	r1	id r1
1.	17	-2.886873	391. 1086 1.66611
2.	840	-2.566617	392. 1004 1.676469
З.	58	-2.512438	393. 100 1.676591
4.	852	-2.488196	394. 818 1.714646
5.	278	-2.446256	395. 550 1.722615
6.	389	-2.394686	396. 746 1.764313
7.	82	-2.273545	397. 1155 1.993388
8.	776	-2.244247	398. 375 2.116155
9.	414	-2.203973	399. 621 2.239176
10.	576	-2.109327	400. 236 2.39125
	+	+	+

		Shapi	ro-Wilk W	test for	normal	data	
Variable	[Obs	W	V		Z	Prob>z
r		400	0.98558	3.97	0 3	3.281	0.00052

iqr r mean= median= 10 trim=	2.1e-09 .2927 .0777	pseudo	std.dev.= 2.19 std.dev.= 2.327	(n= 400) (IQR= 3.139)		
				low	high	
			inner fences # mild outliers % mild outliers	-6.279 0 0.00%	6.278 0 0.00%	
			outer fences # severe outliers % severe outliers	-10.99 0 0.00%	10.99 0 0.00%	

. vif

Variable		VIF	1/VIF
exp_shiwan fund_exp rd3_exp HS employee fund Suburban Urban Community rd3 Housing board Youth npage volunteer staffdummy percentage ExtRelation boardmeet rei consultdummy justcut		7.77 5.74 5.04 2.47 2.41 2.22 2.07 1.97 1.85 1.84 1.62 1.55 1.52 1.45 1.40 1.32 1.27 1.18 1.17 1.15 1.12	0.056259 0.063541 0.198472 0.405063 0.414507 0.450250 0.484190 0.507343 0.540594 0.542403 0.551227 0.617011 0.645821 0.657418 0.688248 0.712394 0.755935 0.788928 0.848359 0.851317 0.866317 0.892293
Mean VIF	-+ 	3.18	

. estat imtest

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity Skewness Kurtosis	260.56 40.16 9.25	256 22 1	0.4091 0.0104 0.0024
Total	309.97	279	0.0979

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of stress
chi2(1) = 1.34
Prob > chi2 = 0.2474

Source	ļ	SS	df		MS		Number of obs	=	402
Model Residual	-+- 	351.948738 2364.16072	22 379	15. 6.2	9976699 3789107		F(22, 3/9) Prob > F R-squared	= =	0.0002 0.1296
Total		2716.10945	401	6.7	7334028		Adj R-squared Root MSE	=	2.4976
maintain		Coef.	Std.	Err.	t	P> t	[95% Conf.	In	terval]
fund	Ì	1853409	.1014	4964	-1.83	0.069	3849074		0142256
rd3	Ι	.5739225	.5570	0908	1.03	0.304	5214535	1	.669298
exp_shiwan	Ι	0142619	.007	7979	-1.83	0.068	0295944	•	0010706
board	Ι	.0803101	.1339	9704	0.60	0.549	1831084	•	3437285
boardmeet	Ι	.2671466	.1893	3467	1.41	0.159	1051549	•	6394481
justcut	Ι	-1.438637	.2853	3478	-5.04	0.000	-1.9997		8775739
staffdummy		.4033277	.3002	2761	1.34	0.180	187088	•	9937435
consultdummy		1216108	.3782	1819	-0.32	0.748	8652083	•	6219867
percentage		3874419	.1639	9449	-2.36	0.019	7097974		0650864
ExtRelation		.0112528	.1393	1888	0.08	0.936	2624263	•	2849319
rei		0054587	.0930	6027	-0.06	0.954	1895043		1785869
fund_exp		.0730547	.0874	4279	0.84	0.404	0988498		2449592
rd3_exp		.4883641	.5632	2524	0.87	0.386	619127	1	.595855
employee		.244159	.1141	1722	2.14	0.033	.0196686		4686493
volunteer		.0657693	.11	7619	0.56	0.576	1654982		2970368
npage		0329584	.1520	0272	-0.22	0.828	3318809		2659641
HS		2423555	.3922	1629	-0.62	0.537	-1.013443		.528732
Youth		6015627	.5576	6748	-1.08	0.281	-1.698087		4949614
Housing		6115197	.497	7577	-1.23	0.220	-1.590232		.367193
Community		.611003	.513	7374	1.19	0.235	3991296	1	.621136
Urban		.4157924	.3734	4347	1.11	0.266	3184709	1	.150056
Suburban	L	.1291242	.35	7056	0.36	0.718	5729347		8311831
_cons		6.742352	1.35	6745	4.97	0.000	4.074661	9	.410044

(4) Likelihood to Maintain Services as Dependent Variable

. Funding Variety: predict R2, rstudent(99 missing values generated) list id r2 in 1/10 list id r2 in 393/402

	+	+
	id	r2
1.		-2.778226
2.	530	-2.766037
3.	375	-2.656354
4.	669	-2.648568
э.	1/3	-2.58/6/6
6.	470	-2.538434
7.	731	-2.453695
8.	631	-2.442769
9.	236	-2.345289
10.	27	-2.185475
	+	+

SWI	. 1	ĸ	r
		_	_

	Sha	apiro-Wilk V	∛ test for	normal data	
Variable	Obs	W	V	Z	Prob>z
r	402	0.95823	11.551	5.823	0.00000

. iqr r mean= median= 10 trim=	3.1e-09 .5293 .1854	pseudo	<pre>std.dev.= std.dev.=</pre>	2.428 2.577	(n= 402) (IQR= 3.476)		
					low	high	
			inne # mild ou % mild ou	r fences tliers tliers	-6.857 0 0.00%	7.046 0 0.00%	
			oute # severe % severe	r fences outliers outliers	-12.07 0 0.00%	12.26 0 0.00%	

. vif

Variable	I VI	F 1/VIF
Variable exp_shiwan fund_exp rd3_exp HS employee fund Suburban Urban Community rd3 Housing board Youth npage volunteer staffdummy percentage ExtRelation	VI 16.9 15.1 2.4 2.4 2.2 1.2.4 1.2.4 1.2.4 1.2.1 1.3 1.3 1.2	F 1/VIF 5 0.058999 0 0.066211 3 0.198778 7 0.404399 1 0.414564 1 0.451748 5 0.510602 5 0.539845 5 0.540324 0 0.556105 2 0.618100 5 0.654248 4 0.695461 0 0.712527 3 0.752171 6 0.795003
boardmeet	1.1	7 0.852556
rei	1.1	7 0.853676
consultdummy	1.1	5 0.866396
justcut	1.1	1 0.897440
Mean VIF	3.1	1

. estat imtest

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity Skewness Kurtosis	249.07 77.15 3.23	256 22 1	0.6100 0.0000 0.0725
Total	329.45	279	0.0203

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance

Variables: fitted values of maintain

chi2(1) = 0.32 Prob > chi2 = **0.5693**

(5) Future Funding Success as Dependent Variable

Source	SS	df	MS		Number of obs	= 398
Model	70.154750	1 22 3	.18885228		P(22, 573) Prob > F	= 0.0006
Residual	507.65154	5 375 1	.35373745		R-squared	= 0.1214
	+				Adj R-squared	= 0.0699
Total	577.80629	5 397 1	.45543147		Root MSE	= 1.1635
Suc09	Coef.	Std. Er	r. t	P> t	[95% Conf.	Interval]
fund	.067217	.047561	7 1.41	0.158	0263041	.1607381
rd3	.3734448	.260304	8 1.43	0.152	1383951	.8852848
exp_shiwan	0017437	.003639	6 -0.48	0.632	0089004	.005413
board	.0029856	.062756	3 0.05	0.962	1204127	.1263839
boardmeet	.0533322	.089795	8 0.59	0.553	1232342	.2298985
justcut	4525983	.133946	-3.38	0.001	7159784	1892181
staffdummy	.1571402	.140648	8 1.12	2 0.265	1194189	.4336993
consultdummy	.179691	.17625	3 1.02	2 0.309	1668771	.5262591
percentage	0359435	.076571	5 -0.47	0.639	1865069	.1146199
ExtRelation	.1591296	.06559	2 2.43	0.016	.0301554	.2881038
rei	.0023338	.043883	1 0.05	5 0.958	0839541	.0886216
fund_exp	.0304071	.040760	7 0.75	5 0.456	0497412	.1105553
rd3_exp	0137689	.262606	-0.05	0.958	5301348	.502597
employee	.0043378	.053331	1 0.08	0.935	1005278	.1092034
volunteer	.0008414	.054523	7 0.02	2 0.988	1063692	.108052
npage	0243791	.071470	9 -0.34	1 0.733	1649131	.1161549
HS	.014541	.182630	4 0.08	3 0.937	344567	.3736491
Youth	0547706	.260026	-0.21	L 0.833	5660638	.4565226
Housing	.2601254	.234290	9 1.11	0.268	2005631	.7208139
Community	.122491	.240381	1 0.51	0.611	3501728	.5951547
Urban	.2195533	.175577	2 1.25	0.212	125686	.5647925
Suburban	.2410122	.167716	9 1.44	0.152	0887712	.5707955
_cons	3.044909	.6414	1 4.75	5 0.000	1.783698	4.30612

(Original Regression Model Results)

. Funding Variety: predict R3, rstudent (103 missing values generated) list id r3 in 1/10 List id r3 in 389/398

	+	+	++
	id	r3	id r3
1.	375	-2.155401	389. 122 2.468071
2.	631	-2.090291	390. 57 2.531564
З.	419	-2.078884	391. 399 2.58269
4.	1156	-2.019528	392. 251 2.588998
5.	731	-1.895212	393. 437 2.624007
6.	64	-1.888433	394. 840 2.842599
7.	277	-1.831233	395. 341 2.851582
8.	189	-1.815374	396. 734 3.356047
9.	596	-1.787526	397. 1024 3.59969
10.	68	-1.713186	398. 418 3.815143
	+	+	++

(Finalized Regression Model Results)

Source	SS	df	MS		Number of obs	= 395
Model	+ 88 1076184	22 4 00	1489175		F(22, 3/2) Prob > F	= 0.0000
Residual	455 3065	372 1 2	239422		R-squared	= 0.0000
	+				Adi R-squared	= 0.1021
Total	543.414118	394 1.37	7922365		Root MSE	= 1.1063
Suc09	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
fund	.096545	.0454882	2.12	0.034	.0070987	.1859914
rd3	.2836861	.2486476	1.14	0.255	205245	.7726172
exp_shiwan	0007397	.0034658	-0.21	0.831	0075546	.0060752
board	0013028	.0597476	-0.02	0.983	1187882	.1161827
boardmeet	.0278201	.0857024	0.32	0.746	1407017	.196342
justcut	4614983	.1278211	-3.61	0.000	7128408	2101559
staffdummy	.1916462	.1338625	1.43	0.153	0715758	.4548682
consultdummy	.1922119	.1676165	1.15	0.252	1373827	.5218065
percentage	0275056	.072845	-0.38	0.706	1707452	.1157341
ExtRelation	.2249646	.063307	3.55	0.000	.1004803	.349449
rei	.014851	.0417789	0.36	0.722	0673015	.0970035
fund_exp	.0179393	.0388086	0.46	0.644	0583724	.0942511
rd3_exp	.0127519	.2498045	0.05	0.959	478454	.5039578
employee	0233931	.0509046	-0.46	0.646	1234899	.0767037
volunteer	.002621	.0518531	0.05	0.960	0993409	.1045829
npage	007691	.0684273	-0.11	0.911	1422439	.1268619
HS	.1203427	.1752607	0.69	0.493	2242832	.4649686
Youth	1129057	.2509598	-0.45	0.653	6063834	.380572
Housing	.3082189	.2250743	1.37	0.172	1343585	.7507962
Community	.2403717	.2297905	1.05	0.296	2114796	.6922229
Urban	.1842836	.1672238	1.10	0.271	1445388	.513106
Suburban	.2115489	.1597317	1.32	0.186	1025413	.5256391
_cons	2.87869	.610717	4.71	0.000	1.677799	4.07958

. swilk r

Variable	Shap:	iro-Wilk Obs	W test W	for	normal V	data	Z	Prob>z
r	-+	395	0.98216		4.855		3.757	0.00009

. iqr r

mean= 1.9e-09 median=0708 10 trim=0557	sto pseudo sto	d.dev.= d.dev.=	1.075 .9591	(n= 39) (IQR= 1	(n= 395) IQR= 1.294)	
				low	high	
	# %	inne: mild out mild out	fences liers liers	-2.648 0 0.00%	2.527 8 2.03%	
	# %	outer severe o severe o	fences outliers outliers	-4.589 0 0.00%	4.468 0 0.00%	

. vif		
Variable	VIF	1/VIF
exp shiwan	17.05	0.058660
fund exp	15.18	0.065860
rd3 exp	5.05	0.197827
HS	2.47	0.404883
employee	2.43	0.410718
fund	2.12	0.472791
Suburban	2.05	0.486684
Urban	1.96	0.510081
Community	1.85	0.540035
rd3	1.81	0.553133
Housing	1.78	0.562904
board	1.61	0.622543
Youth	1.56	0.642580
npage	1.53	0.653469
volunteer	1.42	0.706681
staffdummy	1.38	0.722044
percentage	1.31	0.765848
ExtRelation	1.25	0.801436
boardmeet	1.19	0.840383
rei	1.17	0.851828
consultdummy	1.15	0.868027
justcut	1.11	0.900942
Mean VIF	3.11	

. estat imtest

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	р
Heteroskedasticity Skewness Kurtosis	258.05 58.89 2.41	256 22 1	0.4524 0.0000 0.1203
Total	319.35	279	0.0485

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance Variables: fitted values of Suc09

> chi2(1) = 3.94 Prob > chi2 = **0.0472**

Appendix 7 Survey Methods Study Results

(RQ2: do respondents to the web survey have the same demographic profiles as those to the mail survey?)

tabulate age	group2, chi2		
Age	1	2	Total
2	4	4	8
3	10	22	32
4	24	26	50
5	28	40	68
6	5	6	11
Total	71	98	+ 169
Pe	arson chi2(4)	= 2.53	98 Pr = 0.638

. ttest tenure, by(group2)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	+ 70 98	10.72857 11.13776	1.051209 .9617878	8.795044 9.521214	8.631467 9.228873	12.82568 13.04664
combined	168	10.96726	.7098629	9.200875	9.5658	12.36872
diff		4091837	1.443846		-3.259852	2.441485
diff Ho: diff	= mean(1) - = 0	mean(2)		degrees	t = of freedom :	= -0.2834 = 166
Ha: d Pr(T < t	iff < 0) = 0.3886	Pr(Ha: diff != T > t) = (0).7772	Ha: d: Pr(T > t	iff > 0) = 0.6114

tabulate gender groupttest, chi2

, , , , , , , , , , , , , , , , , , ,	grouptte	est	
Gender	1	2	Total
1	35	49	84
2	35	48	83
Total	70	97	167
P	earson chi2(1)	= 0.0043	Pr = 0.948

(RQ5: do responses generated in the web survey have the same mean values as those generated in the mail survey?)

. ttest ManageSuccess, by(groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	 68 98	.1508132 0280587	.1007772 .1124714	.8310297 1.11341	0503388 2512833	.3519652 .1951659
combined	166	.0452141	.0782719	1.008463	1093294	.1997577
diff	+ 	.1788719	.1590369		1351519	.4928957
diff = Ho: diff = Ha: di Pr(T < t)	= mean(1) - = 0 iff < 0) = 0.8688	- mean(2) Pr(Ha: diff != T > t) = (degrees 0 0.2624	t = of freedom = Ha: d: Pr(T > t)	= 1.1247 = 164 iff > 0) = 0.1312

. ttest IntDev, by(groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	+ 71 99	0549436 0418308	.1166939 .1058285	.9832801 1.052981	2876822 2518441	.177795 .1681824
combined	170	0473074	.0783455	1.0215	2019692	.1073545
diff	+ 	0131128	.1593295		3276586	.3014331
diff = Ho: diff = Ha: d Pr(T < t	= mean(1) - = 0 iff < 0) = 0.4673	• mean(2) Pr(Ha: diff !=	degrees 0 0.9345	t = of freedom = Ha: d: Pr(T > t	= -0.0823 = 168 iff > 0) = 0.5327

. ttest ExtRelation, by (groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	 71 99	.3629254 .2769551	.1105883 .0924786	.9318333 .9201501	.1423641 .0934344	.5834868 .4604758
combined	+ 170	.3128603	.070812	.9232749	.1730704	.4526503
diff		.0859704	.1438588		1980335	.3699742
diff = Ho: diff = Ha: d: Pr(T < t)	= mean(1) - = 0 iff < 0) = 0.7245	mean(2) Pr(Ha: diff != T > t) = (degrees 0 0.5509	t = of freedom = Ha: d: Pr(T > t)	= 0.5976 = 168 iff > 0) = 0.2755

. ttest fund, by(groupttest)

Two-sample t test with equal variances

Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
 66 94	4.833333 4.744681	.2088746 .1656474	1.696905 1.606011	4.416182 4.415738	5.250485 5.073624
160	4.78125	.1296075	1.63942	4.525276	5.037224
+ 	.0886525	.2640154		4328023	.6101073
= mean(1) - = 0 iff < 0) = 0.6313	mean(2) Pr(Ha: diff != T > t) =	degrees 0 0.7375	t = of freedom = Ha: d Pr(T > t	= 0.3358 = 158 iff > 0) = 0.3687
	Obs +	Obs Mean 66 4.833333 94 4.744681 1 160 4.78125 .0886525 = mean(1) - mean(2) 0 iff < 0	Obs Mean Std. Err. 66 4.833333 .2088746 94 4.744681 .1656474 1 160 4.78125 .1296075 1 .0886525 .2640154 = mean(1) - mean(2) 0 Ha: diff != 0 .06313	Obs Mean Std. Err. Std. Dev. 66 4.833333 .2088746 1.696905 94 4.744681 .1656474 1.606011 1 160 4.78125 .1296075 1.63942 1 .0886525 .2640154 .0896525 .2640154 = mean(1) - mean(2)	Obs Mean Std. Err. Std. Dev. [95% Conf. 66 4.833333 .2088746 1.696905 4.416182 94 4.744681 .1656474 1.606011 4.415738 1 160 4.78125 .1296075 1.63942 4.525276 1 .0886525 .2640154 4328023 = mean(1) - mean(2) t degrees of freedom 16f 0 Ha: diff != 0 Ha: diff 0 End Ha: diff Ha: diff 0 End End End 0 E

. ttest rd3, by(groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	+ 66 94	.4665634 .4881852	.035653 .0325358	.2896463 .3154465	.3953594 .4235755	.5377673 .5527949
combined	160	.4792662	.0240589	.3043232	.43175	.5267823
diff		0216218	.0489961		1183937	.07515
diff Ho: diff Ha: d Pr(T < t	= mean(1) - = 0 iff < 0) = 0.3298	- mean(2) Pr(Ha: diff != T > t) =	degrees 0 0.6596	t : of freedom : Ha: d: Pr(T > t	= -0.4413 = 158 iff > 0) = 0.6702

. ttest suc09, by(groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	+ 71 99	4.056942 3.720154	.133278 .0960941	1.12302 .9561241	3.791127 3.529458	4.322756 3.910849
combined	170	3.860812	.0797143	1.039347	3.703448	4.018176
diff	+ 	.3367877	.1600206		.0208775	.652698
diff = Ho: diff = Ha: di	= mean(1) - = 0 iff < 0	mean(2)	Ha: diff !=	degrees	t : of freedom : Ha: d	= 2.1047 = 168 iff > 0
Pr(T < t) = 0.9816	Pr(T > t) =	0.0368	Pr(T > t) = 0.0184

. ttest stress, by(groupttest)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 2	 69 98	6.405797 6.44898	.2936663 .2388355	2.439376 2.364351	5.819795 5.974957	6.991799 6.923002
combined	 167	6.431138	.1848218	2.388423	6.066233	6.796042
diff	+ 	0431825	.3764669		7864958	.7001308
diff = Ho: diff = Ha: di Pr(T < t)	= mean(1) - = 0 iff < 0) = 0.4544	mean(2) Pr(Ha: diff != T > t) =	degrees 0 0.9088	t = of freedom = Ha: d: Pr(T > t	= -0.1147 = 165 iff > 0) = 0.5456

ttest justcut, by(groupttest)

Two-sample t test with equal variances

Group Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
1 71 2 99	.7183099 .6868687	.0537641 .0468476	.4530247 .4661274	.6110807 .5939012	.8255391 .7798362
combined 170	.7	.0352506	.4596114	.6304118	.7695882
diff	.0314412	.0716487		1100067	.172889
diff = mean(1) - Ho: diff = 0 Ha: diff < 0 Pr(T < t) = 0.6693	- mean(2) Pr(1	Ha: diff !=	degrees 0 0.6614	t : of freedom : Ha: d. Pr(T > t.	= 0.4388 = 168 iff > 0) = 0.3307

Appendix 8 A Comparative Study between Web and Mail Surveys

This section is dedicated to a discussion of the results of survey methods implemented in the current study. Although popularity of web surveys is rising, traditional paper surveys administered via regular mail are still the most commonly used survey method in nonprofit research. Web surveys have a number of advantages over mail surveys: they are cheaper, require less labor work, and can be administered significantly faster (Dolnicar et al., 2009). However, mail surveys dominate because of the relatively easy access to mailing lists or sampling frames. Very few empirical studies have examined different survey methods in nonprofit research despite the fact that survey is a very common empirical research method in nonprofit study. In order to compare the different survey methods and their effects on response rate and data quality, this study uses two survey channels – web survey and mail survey – that have included four groups.

The survey questionnaire was conducted with a group of 1,115 New Jersey human services and community improvement organizations. Efforts were made to obtain information about the potential recipients of the survey questionnaire – executive directors or chief executive directors. Finally, 876 (76%) surveys went out with a personal name; the rest were generically addressed to "Executive Director/Chief Executive Directors." Email addresses were identified for 320 executive directors out of the 876. The researchers randomly split these 320 into two halves. One half was used as an experimental group for Web survey, and the other half was merged with other groups for mail survey. Table 1 provides the summary information of the four groups.

	Group	Have Contact Person's Name?	Have Contact Person's Email Address?	Survey Mode	#
1	Web	Yes	Yes	Web	160
2	Mail 1	Yes	Yes	Mail	160
3	Mail 2	Yes	No	Mail	528
4	Mail 3	No	No	Mail	267
	Total				1,115

Table 1 Summary of Four Groups

Web survey group (Web group) participants were contacted exclusively by email messages. For this group, the contact person's name and personal email address are available. The contact person's name and personal email address are also available for the first mail group (Mail 1 group). This group is comparable to the Web group.

The second mail group (Mail 2 group) has the contact person's name, but does not have their email address. The third mail group (Mail 3 group) has neither the contact person's name nor their email address; and the surveys were addressed to "Executive Director/CEO."

For the purpose of this survey method study, the analyses were primarily focused on comparing the results from Web survey respondents and the Mail 1 survey respondents. This study primarily explores five research questions. Does the Web survey generate the same response rate as the regular mail survey? Do respondents to the Web survey have the same demographic profiles as those to the mail survey? Does the Web survey have the same data quality as the regular mail survey? Do scales in the Web survey have the same levels of internal consistency as those in the regular mail survey? And, do responses generated in the web survey have the same mean values as those generated in the mail survey?

1. Response Rate

One way to evaluate survey performance is by comparing response rates (Fricker and Schonlau, 2002). The overall response rate for this dissertation survey study is 44.9%. Mail 1 group achieved the highest response rate of the four groups, followed by Mail 2 group. It is interesting to note that Mail 2 group (addressed to a real contact person whose email address cannot be obtained) achieved a response rate that is slightly higher than the total average, while Mail 3 group (addressed to "Executive Director/CEO" instead of a real contact person's name) only had a 26.2% response rate, lowest of the four groups.

Table 2 Survey Response Rates							
	n	%					
Web	71	44.4					
Mail 1	100	62.5					
Mail 2	260	49.2					
Mail 3	70	26.2					
Total	501	44.9					

An interesting observation from some previous studies is that if web surveys generally do not achieve response rates equal to those of mail surveys (Fricker and Schonlau, 2002). After comparing the two comparable groups – Web group and Mail 1 group, this study shows that, consistent with previous studies in other social sciences studies (Cole, 2005; Fricker and Schonlau, 2002), mail survey achieved a higher response rate (62.5%) than web survey (44.4%). Table 9.3 shows that the difference between the response rates of these two groups is statistically significant (chi-square with one degree of freedom = 10.56, p = 0.001). This might suggest that higher cost and longer waiting time associated with conventional regular mail survey is still worthwhile to achieve a

more satisfactory response rate in nonprofit survey research, given that detailed personal contact information is available.

	Web		Mail 1 Web		Web +	Mail 1		
	n	%	n	%	n	%	р	λ
							.001*	10.56
Responded	71	44	100	62.5	171	53		
Not-Responded	89	56	60	37.5	149	47		
Total	160	100	160	100	320	100		

Table 3 Comparison of Response Rates

*Significant at α=.01

2. Demographic Profiles of Organizations and Respondents

In addition to the comparison between the two comparable groups, it is very important to evaluate if these two groups, combined as a sub-sample, are representative of the entire study sample. Table 4 and 5 show that the two comparable groups are highly similar in terms of their budgetary size; furthermore, when combined as a single group, they do not differ from the entire study sample although they tend to have a larger budgetary size than the average.

Web Mail 1 Total М SD М SD М SD М SD t р t р .999 -.001 Budget .603 .520 (in \$1,000) 6505 3915 6161 3916 6767 3915 3656 6426 (N=500) (N=70)(N=100)(N=170)

Table 4 Comparison of Responding Organizations (Budgetary Size)

There is no statistically significant difference between Web group and Mail 1 group in terms of their service field distribution (chi-square with seven degrees of freedom = 2.13, p = 0.952).

	W	Veb	Ma	il 1			Web +	Mail 1	Tot	al		
Variable	n	%	n	%	р	λ	n	%	n	%	р	λ
Service Field					.952	2.13					.315	8.21
Crime	4	5.6	6	6			10	5.8	24	4.8		
Employment	1	1.4	2	2			3	1.8	19	3.8		
Food	3	4.2	5	5			8	4.7	20	4		
Housing	7	9.9	11	11			18	10.5	68	13.6		
Public Safety	0	0	1	1			1	.6	8	1.6		
Youth	9	12.7	15	15			24	14	42	8.4		
HS	40	56.3	47	47			87	50.9	256	51.5		
Community	7	9.9	13	13			20	11.7	64	12.8		
Total	71	100	100	100			171	100	501	100		

 Table 5 Comparison of Responding Organizations (Service Field)

Table 6 and Table 7 exhibit the profiles of Web group and Mail 1 group respondents.

_	V	Veb	Mai	1	Web + Mail 1			
Variable	n	%	n	%	n	%	р	λ
Gender							.948	.0043
Male	35	50	48	49	83	50		
Female	35	50	49	51	84	50		
Total	70	100	97	100	167	100		
Age							.638	2.54
25-34	4	5.6	4	4.1	8	4.8		
35-44	10	14.1	22	22.5	32	18.9		
45-54	24	33.8	26	26.5	50	29.6		
55-64	28	39.4	40	40.8	68	40.2		
≥65	5	7	6	6.1	11	6.5		
Total	71	100	98	100	169	100		

 Table 9.6 Comparison of Respondents' Profiles (Gender and Age)

Results from chi-square and *t*-tests indicate that there is no statistically significant difference between the two comparable Web group and Mail 1 group respondents in terms of gender (chi-square with one degree of freedom = .0043, p = .948), age (chi-square with four degree of freedom = 2.5398, p = .638), and number of years working with the current organization (t = .2834, p = .7772).

	Web		Mail 1		Web + Mail 1		_	
	М	SD	М	SD	М	SD	р	t
Years	10.7	8.8	11.1	49	11	9.2	.777	.283
	(N=70)		(N=98)		(N=168)			

 Table 9.7 Comparison of Respondents' Profiles (Tenure with Current Organization)

3. Data Quality

Survey data quality can refer to different aspects of survey response – item nonresponse, the honesty of responses, and the completeness of responses (Fricker and Schonlau, 2002). This study uses response completeness as an indicator of data quality which is measured as (1) the number of respondents with missing items and (2) the percentage of missing items (Dolnicar et al., 2009; Fricker and Schonlau, 2002;). Table 8 lists the number of respondents that completed all survey questions – only 21% of Web survey responses and 19% of Mail 1 survey responses have no missing value for all the question items. There is no statistical difference between Web survey and Mail 1 survey in terms of percentage of fully completed responses.

	Web		Mail 1		Web + Mail1				
	n	%	n	%	n	%	р	λ	
Completed	15	21	20	20	35	20	.857	.032	
With missing items	56	79	80	80	136	80			
Total	71	100	100	100	171	100			

 Table 8 Comparison of % of Fully Completed Responses

Table 9 exhibits the results from *t*-test, indicating that the there is no difference between Web survey and Mail 1 survey in terms of the number of missing items, although web survey had slightly more missing fields than the mail survey.

	Web		Mail 1		Web + Mail 1				
	Μ	SD	Μ	SD	Μ	SD	р	t	
% of missing items	6.01	.76	5.61	.54	5.78	.44	.613	0.51	
	(N=71)		(N=99)		(N=170)				

 Table 9 Comparison of # of Missing Items

These results suggest that using the two survey modes – Web survey and regular mail survey – generate responses that have equal data quality.

4. Internal Consistency of Scales

A number of scales were developed in this nonprofit revenue diversification study to measure nonprofit organization's managerial characteristics that potentially influence the level of revenue diversification and organizational performance. These characteristics are the managerial success (5 items, Scale 1), organization's internal development (3 items, Scale 2), and external relationships (2 items, Scale 3). Factor analysis was conducted to examine the dimensionality of each scale.

Data Set	Scale 1	Scale 2	Scale 3	
Web	.7990	.8703	.4135	
Mail 1	.8769	.9011	.6488	
Web + Mail 1	.8519	.8736	.5952	

Table 10 Reliability Coefficients of Scales in Web and Mail Surveys

Cronbach's alpha was calculated for each scale to demonstrate its internal consistency. When combining the two groups' data together, the overall internal consistency coefficients for Scales 1 to 3 were .8591, .8736, and .5952, respectively. Table 10 also lists the Cronbach's alpha of each scale for the Web group and Mail 1 group. Mail 1 group had higher reliability coefficients on all the three scales.
5. Comparing the Mean Values of Responses (scales and single items)

Table 11 presents the mean values of the three scales discussed in previous section and the five single items that are primary dependent variables for the study. Comparing the two comparable groups does not show too much difference in responses to the survey questions.

	Ν	Mean	SD	t	р
Scale 1				1 125	262
Web	68	1508	8312	1.125	.202
Mail 1	98	0281	1.1134		
	20	10201	11110		
Scale 2				082	.935
Web	71	0549	.9833		
Mail 1	99	0418	1.0530		
Scale 3				.598	.551
Web	71	.3629	.9318		
Mail 1	99	.2770	.9201		
Funding Variety				336	738
Web	66	4 8333	1 6969	.550	.750
Mail 1	94	4 7447	1.6060		
TVILLE I		1.7 117	1.0000		
Revenue Balance				4413	.660
Web	66	.4666	.2896		
Mail	94	.4882	.3154		
Funding Success				2.105	.037*
Web	71	4.0569	1.1230		
Mail 1	99	3.7202	.9561		
Financial Stress				115	.909
Web	69	6.4058	2.4394		
Mail 1	98	6.4490	2.3644		
Cutbacks				.439	.661
Web	71	.7183	.4530		
Mail 1	99	.6869	.4661		
*0: : : : : : 0.7					

 Table 11 Mean Comparisons between Web and Mail 1 Surveys

*Significant at $\alpha = .05$

Respondents from the two groups showed no difference on mean scores of all three scales: Managerial Success (t = 1.125, p = .262), Internal Development (t = -.082, p = .935), External Relationships (t = .598, p = .551). As Table 6.9 indicates, mean scores of Managerial Success and External Relationships from the Web survey were lower than those from the Mail 1 survey, while the score of Internal Development from the Web survey was higher than that from the Mail 1 survey.

Similarly, the two groups did not differ significantly on most of the five major dependent variables except on "Funding Success". Web survey respondents report a significantly higher level of funding success than Mail 1 survey respondents.

6. Conclusion

Using two comparable samples, this study found that a regular mail hard copy questionnaire achieved a significantly higher response rate to a Web survey. The findings of this research also suggests that, a Web survey application can achieve a comparable data quality and content to a questionnaire delivered by regular mail despite a lower response rate. Considering the cost and time advantage of Web survey administration, Web-based survey can be an alternative for researchers who might not have sufficient funding resource or need to get the research project completed as quickly as possible.

In addition to the comparisons presented in previous sections, there are other issues that researchers must take into account when trying to optimize their survey design. For example, the cost differential and time differential between the mailed hard copy questionnaire treatment and the Web survey treatment were found to be substantial and very complicated. Administering a mail survey is associated with a high cost on postage, while obtaining more detailed contact information for Web survey such as personal email addresses can be even more expensive. Since the email information was hand collected for the current study, there was no monetary cost associated with that, but a lot of time and effort was devoted to that purpose. The length of time it takes to field and complete a survey usually covers obtaining relevant contact information, contacting (including follow-ups), and response time. Fricker et al. (2002) suggest that decreasing the time in one or more of different parts of the survey processes will decrease the overall time of survey study.

During the first stage of fielding a survey, identifying contact information for Web survey is either time-consuming (if the information is manually collected) or costly (if it is purchased). However, preparing mail survey also takes a large amount of time or a large volume of labor (printing, labeling, and stuffing envelopes, etc.).

During the second stage of survey administration, Web survey obviously requires much less time for initial as well as follow-up contacts, as electronically transmitted survey invitations are sent and received instantaneously and survey response time is therefore tremendously shortened. A three round Web survey can be easily administered within 3 weeks or a shorter period of time; while a three round regular mail survey usually takes more than 3 weeks to administer.

Response time is yet another factor to be considered for survey timeliness. Researchers usually will not start analyzing data until they judge that a large portion of anticipated responses are in. With Web survey, this happens several days after the last round of email invitation is sent out. But with mail survey, researchers usually wait several weeks for all the responses to be in.

Several suggestions are summarized based on what is found in the current study for future nonprofit survey studies. First, it is highly recommended that researchers try to obtain detailed contact information so that surveys can be addressed to a real contact person. This will help the survey get more attention from the potential respondents who are more committed to responding. Second, it is suggested that survey researchers use mail survey if there is no time pressure or budgetary constraint that prevent them from investing in this particular survey mode. Respondents might prefer this mode as well because reading a paper version gives them more time to think through certain survey questions than when they are reading from computer screen. Third, Web survey is still an excellent survey mode. If the sample size is large enough, it is very safe to use Web survey because there will be very little coverage error.

Web surveys are increasingly popular nowadays because they are much cheaper to conduct and are faster. Previous research found that web surveys yield higher response rates when combined with other survey modes (Fricker and Schonlau, 2002). Further research comparing these two methods and even other approach, such as mix modes methods, is needed to help identify the optimal survey mode for nonprofit research.

Curriculum Vitae

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