Summer 8-11-2011

Nonprofit and Foundation Behavior in Competitive Markets for Grants

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NONPROFIT AND FOUNDATION BEHAVIOR IN COMPETITIVE

MARKETS FOR GRANTS

A Dissertation
Presented to
The Academic Faculty

by

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In Partial Fulfillment
of the Requirements for the Degree
Joint Ph.D. in Public Policy in the
School of Public Policy at Georgia Institute of Technology and the Andrew Young
School of Policy Studies at Georgia State University

Georgia Institute of Technology and Georgia State University
August 2011

NONPROFIT AND FOUNDATION BEHAVIOR IN COMPETITIVE

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To Soosan, Penn, and Clara Faulk

ACKNOWLEDGEMENTS

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SUMMARY

This dissertation analyzes competition for foundation grants in the nonprofit sector. First, I examine how inter-organization competition and foundation activity in local grants markets affect organization behavior through institutional pressure on (1) firm fundraising expenses, (2) program expense ratios, and (3) revenue diversification. Second, I explore the impacts of nonprofit program expense ratios and fundraising expenses on foundation grantmaking. This analysis focuses on the relative "prices" of donations to competing nonprofit organizations, represented by these expense ratios, and the impact prices have on foundation grant decisions relative to the impact that nonprofit marketing has. Finally, I examine whether greater competition in grants markets increases the importance of program expense ratios and firm marketing behavior for grant selection. Overall, this dissertation contributes to our understanding of organization behavior and foundation influence in grant-seeking markets and competition's role in the distribution of charitable grants.

CHAPTER 1

INTRODUCTION: COMPETITION FOR CHARITABLE RESOURCES IN THE NONPROFIT SECTOR AND WHY IT MATTERS

Nonprofit organizations compete with each other and with for-profit and government organizations in a variety of ways. Nonprofit organizations in similar service areas and geographic markets regularly compete with each other for charitable donations, volunteers, and other scarce philanthropic or public revenues. Nonprofits sell private goods and provide public goods, competing in markets with both for-profits and government agencies. In industries such as health, residential care, daycare, and education, nonprofits compete with for-profit firms and government agencies for human resources, clients, market share, market visibility, and fees for service, contracts, or other funding (Brown, 2010; Kearns, 2006). Inter-organization competition among nonprofits is perhaps most pronounced in the pursuit of charitable resources, including foundation grants. Since more nonprofits apply for foundation funding than can be funded at the amounts requested, there are winners and losers in the grants marketplace.

The nonprofit sector has grown rapidly in recent decades. From 1970 to 2000, the nonprofit sector's contribution to the U.S. GDP rose from 3.1 to 4.2 percent (Boris and Steuerle, 2006). From 1998 to 2008, the number of 501(c)(3) public charities grew 60.5 percent, with their expenses growing 92.6 percent (45.8 percent, adjusting for inflation) (Wing, Roeger, and Pollak, 2010). Over the same period, the growth in the number of grantmaking foundations matched the growth in charities, and total grantmaking grew by

84 percent (Wing, Roeger, and Pollak, 2010). Meanwhile, all private contributions (which include foundation grants) only grew by 32 percent (6 percent, adjusting for inflation) from 2000 to 2009, which did not match the growth in nonprofit outputs or the growth of the general economy over that time (Wing, Roeger, and Pollak, 2010). The combined effects of these trends have led to increased competition for charitable revenues in the sector and placed a larger emphasis for managers on the role of foundation grantmaking as a percentage of overall charitable financial support.

While nonprofits as a whole depend on fees for services more than on charitable giving, charitable contributions typically make up over 40 percent of total revenues in subsectors such as the arts, environment, international, public and societal benefit, and religious (Boris and Steuerle, 2006, 77). Around 90 percent of nonprofit managers report using foundation grants as a funding source or actively soliciting foundation grants (Blackbaud, 2010; Association of Fundraising Professionals, 2009). Meanwhile, nonprofit subsectors that depend on charitable contributions in greater amounts have shown the largest growth in the last decade (Wing, Roeger, and Pollak, 2010), placing an even greater strain on charitable support.

Leaders in the grantmaking community have been concerned about growth in the charitable nonprofit sector and increased competition for funding. Many grantmakers view competition among similar nonprofits as a wasteful duplication of services (Cordes & Rooney, 2004; Golden, 2001). At least anecdotally, foundations have responded to greater competition by targeting more specific fields of interest, focusing their grants on organizations with proven records of accomplishment and encouraging collaborative projects (Chetkovich & Frumkin, 2003; Golden, 2001; Irvin, 2010). If true, this avoids

spreading grants too thinly among similar service providers and decreases the risk of losing charitable return on the donations, but it potentially stymies many small or newly formed nonprofits in their efforts to grow their program operations. Such targeted grantmaking could also contribute to a less ideologically diverse sector by affecting entry and exit in nonprofit markets (Chetkovich & Frumkin, 2003). Already, foundations tend to make grants to established and more financially secure organizations (Ashley and Faulk, 2010), making it more difficult for smaller or transitioning organizations to receive funding that could make them more financially stable and capable of serving their missions. If greater competition for funding increases this pattern, greater segmentation of the sector will occur, with established organizations garnering foundation funding and foundations not funding many deserving charities. Since foundation funding could professionalize, improve, or expand the services nonprofits provide, more selective funding patterns in competitive environments could under-serve some segments of the community.

Foundations become more selective in competitive grants markets for many reasons. Like general donors, foundations are sensitive to the relative "price" of donations, evaluated primarily through nonprofits' financial efficiency measures (Ashley and Faulk, 2010). Foundations are interested in the mission-related and broader social impacts of their gifts and do not want to fund an organization that may go out of existence in the near future. Financial benchmarking of potential grantees allows foundations to assess the risk that organizations will not deliver on their promises. In this way, grants are social "investments" rather than gifts, and foundation representatives commonly evaluate them as they would financial investments. In the US, financial

benchmarking also commonly takes place due to the availability of financial data from yearly IRS 990 Form information returns for 501(c)(3) charitable nonprofits, the category of nonprofits which foundations predominantly fund. Financial benchmarking generally includes efficiency measures, such as program expense ratios (i.e., the proportion of total expenses going to programs) and fundraising expense ratios (fundraising expenses as a proportion of fundraising returns). Watchdog organizations such as the Wise Giving Alliance commonly use these metrics, and general donors typically emphasize charitable efficiency in their own giving choices (e.g., see http://www.bbb.org/us/Charity-Standards/; Pallotta, 2010).

We know from previous research outlined in the literature review that financial measures influence general donations. However, few empirical studies explain foundation grant decisions specifically. Similarly, a small segment of the literature suggests that competitive market pressures improve nonprofit financial efficiency. Yet, no studies test a specific relationship between competition for grants and nonprofit financial efficiency or the relative importance of financial efficiency across different grant markets. Similar to for-profit competition, nonprofit competition could increase efficiency through improved product quality and lower prices for nonprofit services, such as through eliminating wasteful practices. Alternatively, competition could lead to socially inefficient fundraising expenses as nonprofits vie for the same pool of funds, limiting the overall impact that charitable resources have in communities.

From a general perspective on competition in the sector, the implications of competition on nonprofit efficiency are important for taxpayers, policymakers, and government actors. The government gives public charities tax exemptions and their

donors tax deductions, thus subsidizing nonprofit activity. Therefore, the public and

government have an interest in the efficient operations of the nonprofit sector that

extends beyond foundations' and donors' concern with the efficiency of their grantees. If

competition leads foundations to disperse their funds more widely but in lower, less

effective grant amounts or if competition leads to inefficient fundraising, there would be

social costs to having duplicative service providers in nonprofit markets. In such cases,

federated fundraising campaigns in which nonprofits combine their resources to attract a

pool of funding which they then divide could achieve scale economies and be more

socially efficient than nonprofits spending more individually to get the same return

(Rose-Ackerman, 1982). Alternatively, competition among similar organizations could

increase efficiency by forcing competitors to develop innovative service delivery

practices and more efficient administration. Additionally, competition could lead to

greater efficiency by causing greater service differentiation and market segmentation as

individual nonprofits seek particular niches and capture unique funding streams (Barman,

2002; Chektovich and Frumkin, 2003; Rose-Ackerman, 1982).[1]

From a foundation perspective, if competition leads foundations to increasingly

select organizations with strong finances and proven records rather than spreading their

grants more thinly, individual foundations may be able to justify their grant decisions and

ensure the sustainable impact of their gifts. However, they may also inadvertently

contribute to an environment where nascent or innovative organizations fail and new

social demands go unmet. Because of the managerial emphasis on foundation funding

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[1] However, greater market segmentation could lead to monopoly-like behavior as specific firms capture unique niches and funding streams.

and because of the heavy costs of competing for foundation grants, foundations may actually drive up administration costs and diminish nonprofit efficiency. Foundations may simultaneously increase professionalism and organizational capacity as organizations build their fundraising, tracking, and reporting operations. We currently lack empirical evidence examining foundation impacts on these organizational behaviors. In this dissertation, I examine these issues through three sets of research questions.

First, I explore how both the level of foundation presence and inter-organization competition in local grants markets affects nonprofit financial behavior and efficiency. I test how foundation influence and competition among grant-seeking nonprofits impact organization (1) fundraising expenses, (2) administrative expenses, (3) fundraising expense ratios, (4) program expense ratios, and (5) levels of revenue diversification. If higher levels of foundation activity increase nonprofit administrative costs to manage grant application, implementation and reporting processes, foundations could increase organizational capacity but reduce program efficiency in these markets. Likewise, regardless of foundation activity, if competition between similar nonprofits increases fundraising expenses for the same pool of charitable funding, competition would generate inefficiencies and social costs. However, competition could lead to social benefits. Lower fundraising expenses and higher program expense ratios in more competitive markets could indicate greater market segmentation and efficiency gains from more targeted fundraising. Meanwhile, greater revenue portfolio diversification could indicate that competition leads to greater nonprofit financial stability.

Second, I explore the impacts of nonprofit program expense ratios and fundraising expenses on foundation grantmaking. I ask (1) whether the relative "prices"

of donations to competing nonprofit organizations, represented by program expense ratios, impact foundation grantmaking decisions and (2) how prices affect grantmaking compared to the impact of nonprofit marketing, as demonstrated through fundraising expenses. If foundations, like private donors, reward nonprofits with higher program efficiency, foundations will create institutional pressures for nonprofits to be more efficient in their program operations to maintain comparative advantages in the grants marketplace. If foundations award grants to organizations with greater fundraising expenses, however, greater marketing investments, instead of efficiency, would lead to comparative advantages in these markets.

Finally, I examine whether greater competition in grants markets increases the importance of (1) program expense ratios and (2) organization marketing behavior for grant selection. If grant price sensitivity is stronger under greater competition, competition could drive program efficiency. If fundraising expenses drive grant selection in more competitive markets, foundation grantmaking may be more efficiently targeted in these markets, but aggregate fundraising expenses by nonprofits competing for the same grant pools could be socially inefficient.

Overall, this dissertation contributes to our understanding of organization and foundation behavior in grant-seeking markets and competition's role in the distribution of charitable grants. Chapter 2 reviews the literature and pertinent theory. Chapter 3 develops theoretical arguments and research hypotheses for the research questions above. I discuss the data and methodology in chapter 4, the findings in chapter 5, and the conclusions and implications in chapter 6.

CHAPTER 2

LITERATURE REVIEW

2.1 Theory on the Existence of Nonprofits in Market Economies and its Relation to Nonprofit Competition

The literature holds little consensus on what drives the formation and growth of nonprofit organizations or how competition affects the sector. While a coherent body of economic theory explains why and how for-profit firms operate in market economies, nonprofit studies lack a similarly cogent framework for analyzing nonprofit organizational behavior. Instead, several disparate theories propose explanations on the existence of nonprofit organizations. Each comes from a different perspective of the role of nonprofit organizations in society and contributes differently to how we may better understand the nature of competition and collaboration among nonprofit organizations and between nonprofits and other organizations in the economy.

Public goods theory, also called demand heterogeneity theory, argues that the market and government do not meet the demand for collective, public, or quasi-public goods. Nonprofits step in to supply undersupplied goods and services. Markets undersupply goods and services because these goods are non-excludable or non-rival (Steinberg, 2006). Since individuals cannot be excluded from enjoying the benefits of these goods, they have little incentive to pay and a free-rider problem results. Government can tax to overcome free-riding, but if the average or "median" voter does not prefer the provision of a good or service, politicians will be unlikely to supply it

because government resources and attention will be allocated toward providing goods and services with greater voter demand (Steinberg, 2006; Anheier, 2005).

Therefore, nonprofits provide the undersupplied collective goods and services through the private contributions and voluntary efforts of individuals who prefer or demand higher levels of those goods. Even though the free-rider problem still exists and nonprofits do not have the power to tax individuals, they can overcome free-riding behavior through various fundraising strategies, creating private incentives for donating to collective causes (Olson, 1965). Nonprofit organizations therefore step in to "meet a diverse demand for collective goods" in democratic societies, from arts, education, and healthcare to environmental protection and community development, providing goods and services that would otherwise be underprovided by the market or government (Weisbrod, 1988, 25).

Under the demand heterogeneity theory, nonprofits exist not to compete with existing organizations but to fill in where collective goods and services are undersupplied. This theory alone does not predict competition between nonprofits and other organizations for clients or market niche. Instead, nonprofit competition should center upon organizational resources, such as human capital, volunteers, and external funding. However, individual nonprofits exist because enough people demand the services they provide and are willing to support the organization through donations and time. Therefore, nonprofit density in any market increases as new organizations attract and maintain support from donors and volunteers who have similar preferences for goods and services. Since the mix of demands and preferences in communities changes over time, nonprofits will compete primarily with other nonprofit organizations for

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philanthropy. However, if demand for collective services increases and the government decides to directly provide the services, nonprofits may begin to compete with government agencies for funding or niche, and nonprofits may begin to compete with for-profit organizations for government contracts if government decides to indirectly supply the services. In this way, an increase in demand for services that nonprofits provide and the provision of those services by government "crowds out" some nonprofit activity (Anheier, 2005, 123).

Weisbrod's public goods or demand heterogeneity theory does not readily explain the ongoing competition between nonprofit organizations and other organizations in the same industries because the theory explains that nonprofits act more as gap fillers than competitors. The market would clear over time as heterogeneous demands for collective services are met, and particularly when demands for services increase, causing for-profit and government suppliers to enter the market. Hansmann introduced a separate trust-related or contract failure theory, however, that adds to Weisbrod's theory and helps us better understand ongoing competition and particularly why nonprofits would continue to exist in service markets where for-profit organizations operate.

Hansmann argues that the free market undersupplies many goods and services because of high levels of information asymmetry between the producers and consumers. Third party payers have difficultly evaluating the quality of these goods and services, such as daycare, hospital or nursing care, and therefore profit-seeking firms are likely to cut service quality to increase profits (Anheier, 2005). Since the non-distribution constraint prohibits nonprofit organizations from distributing residual income as profits to stakeholders, nonprofit managers lack a profit incentive and are trusted to provide higher

quality goods and services under scenarios of high information asymmetry between buyers and sellers (Brown, 2010; Anheier, 2005). Under this theory, consumers, donors, and government prefer nonprofits to for-profit organizations for services, donations, and contracts.

Therefore, the trust or contract theory adds to the demand heterogeneity theory by explaining why nonprofits compete with for-profit firms in supplying some goods and services (Anheier, 2005). In addition to nonprofits competing among themselves for general resources, nonprofits directly compete with for-profits for service markets and government funding in some fields. Therefore, we expect nonprofits to push for-profit providers out of particular market niches where high information asymmetry leads clients and government to prefer nonprofit providers. However, both nonprofits and for-profits will exist in industries where information asymmetries are not as high for clients who pay for the services they directly receive, such as in healthcare and other segmented markets. Therefore, even with comparative advantages in certain client markets, nonprofits will continue to compete with for-profits in the same industry for human resources and for client markets where information asymmetries are not as great, such as clients paying for elective surgeries in the healthcare industry. This theory also helps us better understand why government would choose to collaborate with nonprofit organizations for indirect service provision through government grants or contract arrangements because nonprofits would be trusted over for-profits to deliver on their promises that cannot be easily monitored.

These theories originate from a demand-side perspective to explain how nonprofits form to meet unmet demands. Supply-side theories, such as stakeholder and

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entrepreneurship theories, focus on the motivation of those who start nonprofits to explain their existence. Like trust theory, stakeholder theory explains that nonprofit organizations overcome information asymmetries where buyers do not trust for-profits to provide goods and services at the quality level demanded (Anheier, 2005; Ben-Ner and Van Hoomissen, 1993). However, stakeholder theory also acknowledges that, in some cases, individuals prefer to provide the good they consume for themselves to ensure the level of quality they want, to be the suppliers and demanders. This will be especially true when particular groups demand a very specific level or quality of the good or service. For instance, groups of parents with education preferences for their children that existing schools do not provide may choose to form a cooperative school (Anheier, 2005) or an independent charter school. Adding the supply-side perspective to the trust theory, stakeholder theory improves our understanding of nonprofit competition by explaining certain situations where nonprofits with similar missions will exist in the same community or service market. Since these organizations will only differ based on particular stakeholder preferences or ideology, competition between these nonprofits will be high for external funding (such as foundation or government grants), human services, clients, and market visibility.

Extending the supply-side argument for nonprofit organizations, entrepreneurship theories (Young, 1983; Rose-Ackerman, 1996) argue that individuals who start and lead nonprofits derive utility from non-monetary rewards of nonprofit work, either from achieving the mission of the organization or from other motives, such as religious motivation to serve others. Therefore, individuals or groups of individuals with preferences to create their own organizations and approach social missions in unique

ways drive the supply of nonprofit organizations. This explains why so many nonprofits with similar services and missions exist. These theories predict a larger supply of nonprofit organizations, and greater competition for funding, than public goods or trust theories.

Interdependence theory argues that nonprofits and government complement each other and that government largely supports the work done in the nonprofit sector through grants, contracts, and public-private partnerships (Anheier, 2005). Based on this theory, nonprofits can only provide a limited amount of services due to voluntary failure, or the insufficiency of philanthropic resources to supply public goods under situations of increasing demand. As public demand for their services grows, they increasingly rely on government to fund and support their work, leading to competition between nonprofits for valuable government grants and partnerships.

Overall, each of these major theories provides different insights into the nature of nonprofit competition. As Anheier and Ben-Ner (1997) point out, these theories complement more than contradict each other. Particularly by combining stakeholder and entrepreneur perspectives with public goods and contract failure theory arguments, we expect a greater supply of nonprofit organizations than can be supported (i.e., demanded) by charitable donations. Because new and small nonprofits often rely solely or mostly on donated volunteer time, we expect many more organizations than would be demanded by financial resources to exist, especially in subsectors that have low barriers to entry, do not require large physical or capital assets, or have high exit thresholds due to low operating costs.

Meanwhile, others argue that for-profit theory regarding competition and market structure works for nonprofit organizations as well. Tuckman (1998) applies Porter's five competitive forces to nonprofit competition and demonstrates how entry and exit, power of buyers, power of suppliers, the presence of substitutes, and rivalry among competitors similarly impacts nonprofit organizations, even in markets, such as donation or foundation grant markets, where nonprofits compete exclusively against nonprofits. Lakdawalla and Philipson (2006) characterize all nonprofits as for-profits with lower costs due to tax subsidies and the altruistic motivation of their employees. They argue that for-profit theory holds for nonprofits by treating them as for-profits with lower costs. Extending this argument, Harrison and Laincz (2008) show consistency of for-profit models in nonprofit industries.

Harrison and Laincz (2008) find a key difference for nonprofits, however, showing much higher survival rates for nonprofit organizations than for-profits generally. While new nonprofits form at around the same rate as for-profits, only 17 percent of nonprofits fail after 10 years compared to 80 percent of for-profits (Harrison and Laincz, 2008). As Harrison and Laincz explain, this results in much higher net entry rates for nonprofits than found in for-profits. This finding is consistent with Rose-Ackerman's (1982) argument that low nonprofit entry barriers will allow ideologically driven entrepreneurs to start new organizations even in saturated markets. While new entrants will attract new donors into markets through additional fundraising and marketing, each organization's share of overall donations will fall as the number of organizations in a market rises (Rose-Ackerman, 1982). Therefore, high net entry rates in the nonprofit sector translate into increased competition for donations over time.

As voluntary organizations grow and professionalize, they capture more financial resources in a charitable market. If they fill a particular niche providing a public good that aligns with government initiatives, they may secure public funding to expand and meet non-market demand for that good or service, as interdependence theory expects (Anheier, 2005). Alternatively, they may fill a niche with a quasi-market good, such as in the arts, and capture a mix of fees for service and private donations to expand their operations. If their mission and services match foundation interests, foundation grants will be a potential funding source. However, foundations have finite amounts of grant money to dispense, and applications routinely far exceed their grantmaking capacity. Therefore, foundation grants represent an instrumental source of funding, particularly for nonprofit capacity building and growth due to the expertise and accountability that comes with many grants, but foundations cannot fund all of the worthy organizations and causes that saturate their applicant pools. As more nonprofits formalize, seek funding, and enter the grants marketplace, competition becomes greater for individual grant awards.

2.2 The Role of Foundations in Nonprofit Professionalization and Financial Behavior

Meanwhile, the level of foundation activity has both direct and indirect influences on organizations in any given market. Under institutional theory, nonprofits respond to their environment by conforming to industry or market standards and must behave more similarly to other organizations and match normative expectations in their environment to survive (DiMaggio & Powell, 1988; Feeney, 1997; Flood & Fennel, 1995; Guo and Acar, 2005; Kerlin and Pollak, 2010; Meyer & Rowan, 1977; Milofsky & Hunter 1994; Rao, 1998; Scott, 1995). For nonprofits, institutional pressures come in large part from

external stakeholders such as donors and foundations (Krashinsky, 1997). Like other nonprofits, foundations have unique missions they try to accomplish. While some, such as operating foundations, choose to supply their own services or specifically fund one particular organization to accomplish their goals, most grantmaking foundations choose to outsource services to accomplish their objectives instead of providing the services themselves. In this sense, foundations buy services from nonprofits. By outsourcing, foundations reduce their transactions costs in approaching the complex and dynamic problems represented in their missions, which would require large, complex organizational structures if they were to perform the services themselves (Coase, 1937). Using this strategy, foundations also remain flexible in how they respond to public problems and can adapt their funding priorities as new demands emerge. However, as third-party buyers, foundations purchase services for clients other than themselves and must deal with the oversight problems explained by contract failure theory. Due to the complexity of fully evaluating the quality of services purchased, foundations rely on signals of organizational quality when selecting grantees (Bielefeld, 1992; Feigenbaum, 1987). Organizations use fundraising campaigns as a marketing tool, in part to build organizational legitimacy and signal the quality of their services to potential funders (Chetkovich and Frumkin, 2003; Steinberg, 1997), and greater foundation activity in any given market increases the importance of fundraising for prospective grantees to maintain a competitive edge.

Foundations also operate in institutionalized environments and, in particular, are subject to public scrutiny due to their tax advantages. Because of this, foundations must also legitimize themselves by formalizing their grant selection process and demonstrating

the stewardship of their funds. This has led to additional demands on organizational actors in their environment to develop professional administrative practices to monitor and measure the quality of their services and demonstrate their mission impact through formal reporting (Froelich, 1999). In this way, foundations contribute to an institutional environment that stresses more professional and corporate rather than volunteer and altruistic behavior (Dolnicar, Irvine, and Lacarevski, 2008). With the growth of the sector and the growth of institutionalized philanthropy, the grant writing and reporting process has become professionalized, adding to nonprofit administrative complexity (Dolnicar, Irvine, and Lacarevski, 2008). In 2004, foundation grantees spent an average of 29 hours on each grant proposal and 62 hours on managing each grant, and grantees that received over $1 million spent over 200 hours on each proposal alone (Bolduc, Buchanan, and Huang, 2004).

With the goal of increasing the quality of services provided, foundations will pressure grantees to develop professional practices beyond the administration of their grants (Froelich, 1999), such as undertaking strategic planning and program evaluation. As buyers of nonprofit services, foundations will have more influence over nonprofits the more active they are (i.e., the more grants they administer) in a market (Tuckman, 1998). Through resource dependence, the more active foundations are in a market, the closer the inter-organizational connections between foundations and nonprofits, and the stronger the influence on nonprofit professionalization (Bielefeld, 1992; Froelich, 1999). Because of institutional pressure, prospective grantees will mimic successful organizations in their market environment (Bielefeld, 1992; DiMaggio and Powell, 1988) that have the closest ties to foundations. Therefore, even organizations that do not receive foundation funding

will develop their professional practices through mimetic isomorphism as foundation activity in a market increases.

Therefore, through institutional and resource dependence pressures and institutional isomorphism, greater foundation activity in a nonprofit market will cause greater professionalization of administrative and fundraising operations. This will result in higher administrative and fundraising expenses in markets with greater foundation influence. While these expectations come from the literature cited above, previous studies have not empirically tested the association between foundation activity and nonprofit expenses.

2.3 Inter-Organization Competition and Nonprofit Finance Behavior

A few empirical studies examine the impact of inter-organization competition on nonprofit administrative expenses and fundraising behavior (see Bilodeau & Slivinski, 1997; Castaneda et al, 2008; Feigenbaum, 1987; Seaman, 2004; Thornton, 2006). These studies find that competition for publicity or charitable donations among similar nonprofits causes organizations, at least in aggregate, to increase spending on fundraising or marketing, leading to less efficient fundraising (Castaneda et al, 2008; Feigenbaum, 1987; Irvin, 2010; Seaman, 2004; Thornton, 2006).[2] Meanwhile, competition leads to lower administrative expenses as nonprofits deal with resource constraints and seek

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[2] Thornton (2006) finds that increased competition between organizations causes individual nonprofits to decrease their fundraising expenses at a decreasing rate, even though additional organizations generate higher aggregate fundraising expenses. New organizations were expected to add fundraising expenses at a higher rate than existing firms reduce them, leading to higher aggregate fundraising expenses. Other studies argue for increases in fundraising expenditures from increased competition (Barman, 2002; Castaneda et al, 2008; Feigenbaum, 1987; Rose-Ackerman, 1982; Steinberg, 1987; Tuckman, 1998).

competitive advantages with program efficiency (Castaneda et al, 2008; Feigenbaum, 1987; Thornton, 2006).

In contrast to for-profit analysis in which the economic theory of the firm assumes profit-maximizing behavior, nonprofits operate in mixed industries with no one model of objective behavior (Hughes and Luksetich, 2010). Nonprofit objectives may be service-maximizing or budget-maximizing (Steinberg, 1989). Service-maximizing managers strive to improve overall program efficiency while maintaining high levels of quality or quantity of goods and services. Budget-maximizing managers, on the other hand may still emphasize providing a high level of quantity and quality, but they increase the total budget to maximize their own salaries and benefits, leading to wasteful management (Hughes and Luksetich, 2010; Steinberg, 1989). Like for-profits, nonprofits suffer from agency problems in which managers may budget-maximize even though directors emphasize service-maximizing (Hughes and Luksetich, 2010). Under monopoly conditions, managers will more easily budget-maximize, potentially wastefully increasing their own budget, but competitive environments will constrain managers to service maximize in order to maintain a competitive edge and survive, leading to greater program efficiency (Feigenbaum, 1987; Hughes and Luksetich, 2010)

Other studies point out that even with greater fundraising expenses, increased competition generates efficient aggregate outcomes in the sector, in addition to administrative efficiency. For example, faced with competition from similar organizations, nonprofits may opt to differentiate the services they provide, segmenting the market into more socially efficient sections (Chetkovich and Frumkin, 2003; Gronbjerg, 1993; Han, 1994; Hannan and Freeman, 1977 cited in Barman, 2002).

Alternatively, organizations may develop relationships with institutional funders or collaborations with other organizations to attract greater funding exposure, which would also produce more socially efficient uses of limited charitable resources (Barman, 2002; Combs & Ketchen, 1999).

Strong resource dependence pressures also exist in nonprofit markets. As discussed in chapter 1, many nonprofits in donation-reliant fields depend on foundation grants. This dependence makes organizations willing to change their behavior, programs, and even missions to remain competitive and secure foundation grants, causing them to seek a particular mission or program niche to differentiate themselves from competing firms (Barman, 2002). Due to these resource dependence relationships, foundations and other donors oversee their grantees in a rational and efficiency-driven way (Bielefeld, 1992). Donors and funders will be price-sensitive in competitive environments and prefer program efficiency, as measured by the ratio of program expenses to total expenses (Barman, 2002; Bielefeld, 1992; Chetkovich and Frumkin, 2003; Rose-Ackerman, 1982). Nonprofits in more highly competitive environments will demonstrate greater program efficiency as they compete for comparative advantages and respond to competitive pressures. Similar to for-profit markets, the presence of substitutes in nonprofit markets will influence market share, price and output, with greater competition between substitute organizations driving output up and prices (i.e., inefficiency) down (Tuckman, 1998).

However, competition will also cause organizations to spend more on fundraising to market themselves and to gain or maintain legitimacy (Bielefeld, 1992; Chetkovich and Frumkin, 2003; Steinberg, 1997). Over time, this process will lead to greater differentiation and market segmentation of similar service providers, more overall

efficiency in service markets, and a better fit between funders and organizations through more targeted fundraising and donor selection (Barman, 2002; Chetkovich and Frumkin, 2003; Rose-Ackerman, 1982). However, even nonprofits that narrowly target foundations by their mission fit will experience high levels of funding uncertainty in competitive markets. This uncertainty will cause nonprofits to attempt to differentiate themselves further through marketing appeals to signal quality to potential funders and develop a general trust of the quality of their services in the community (Feigenbaum, 1987). Larger organizations and more successful fundraisers should be able to capitalize on economies of scope, using the same resources to serve multiple functions and thereby temper their fundraising costs (Feigenbaum, 1987). Funders' price sensitivity will help successful organizations capture greater shares of market resources, but it will lead to more difficulty for nonprofits that already have a difficult time as they demonstrate lower fundraising efficiency and receive less donations as a result (Rose-Ackerman, 1992). Overall, even though new entrants will bring in a limited amount of additional donors, competition may lead to less efficient levels of fundraising on average as organizations continue to compete for declining shares of overall grants (Rose-Ackerman, 1982; Thornton, 2006).

Additionally, in order to compensate for greater resource uncertainty from funders and lower shares of overall philanthropy, nonprofits in more competitive environments will generate or increase other revenue streams, such as commercial sales to cross-subsidize charitable activities (James, 1983; Weisbrod, 1998). Due to greater funding uncertainty, nonprofits will ensure more financial stability over time by diversifying their income portfolio (Tuckman and Chang, 1991). Competition for philanthropic sources will

therefore be associated with greater revenue source differentiation in nonprofit markets (Alexander, 1998; Gronbjerg, 1993; Powell & Friedkin, 1987 cited in Barman, 2002; Weisbrod, 1998) as organizations find alternatives to charitable resource dependence.

Overall, competition yields several potential benefits in charitable nonprofit markets. Even though competition will encourage greater fundraising expenses, competitive markets will be more efficient due to less wasteful spending and more targeted nonprofit-foundation relationships. They will also be more stable due to greater revenue diversification within organizations in the market. However, market segmentation within competitive markets will lead to greater bifurcation between successful and stifled organizations and to less ideologically diverse service providers over time (Chetkovich and Frumkin, 2003; Rose-Ackerman, 1982).

2.4 Contract Failure and Foundation Grant Selection

The few studies that empirically investigate competition in the sector model the effect of competition on nonprofit, rather than donor or grantor, behavior. Below, I draw on nonprofit theory and grantmaking studies more generally to develop hypotheses to test organizational determinants of foundation grantmaking and to develop models to test competition's moderating impact on foundation behavior, which is explained in the following sections.

Previous research highlights the lack of information on foundation decision-making. Foundations differ by type and structure, and decision-making criteria and the formality of the decision-making process (Gronbjerg, Martell, and Paarlberg, 2000). In general, foundations base their decisions on applicants' geographic location and mission, financial reports, program performance, reputation and connection to each foundation

(Gronbjerg, Martell, and Paarlberg, 2000). Complicating the evaluation of foundation decision-making, foundation boards do not always operate very effectively. Board members are generally volunteers who do not hold rights to residual profits and pay high information and transaction costs to actively participate in each board decision (Speckbacher, 2008). Incongruity among board members' individual value assessments of decision alternatives (e.g., potential grantees in the case of foundation boards) creates transaction costs through negotiations, and individual board members therefore frequently opt to abstain from active negotiation, free riding on others' assessments (Speckbacher, 2008). Information asymmetries between grant applicants and foundation decision-makers further complicate the effectiveness of foundation due diligence.

As donors, foundations are third-party payers for services they cannot easily evaluate due to information asymmetries explained by contract failure theory (Hansmann, 1980, 1987; Easley and O'Hara, 1986; Krashinsky, 1986, 1997). Foundation agents therefore rely on signals to judge the quality of services provided by grant applicants (Bielefeld, 1992; Feigenbaum, 1987). As mentioned in section 2.2, nonprofit fundraising activity will signal legitimacy and quality to foundations, and organizations with greater marketing, as reflected in fundraising expenses, will receive greater foundation funding. Since foundation decision-makers tend to come from business backgrounds, they will also emphasize more easily measured financial performance metrics rather than elusive social returns (Deep and Frumkin, 2006; Sansing, 2010). Like other donors, they are influenced by the approval of outside evaluators, such as the government granting and enforcing 501(c)(3) recognition or nonprofit charity watchdog groups, which also emphasize financial metrics. In this way, they will tend to make decisions on grants

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similarly to individual donors (Gronbjerg, Martell, and Paarlberg, 2000). Just as these external evaluators do, foundation agents will directly scrutinize nonprofits' financial efficiency signals, as reported by charities on their Form 990 information returns, to determine the relative "price" of donating to each organization. Foundations will also rely on powerful signaling effects of other foundations, increasing the likelihood that the same organizations will receive multiple grants from various foundations.

On top of all of this, foundations, like other nonprofits, have unique missions and compete with one another for visibility. Foundations identify as liberal, conservative, or centrist, (Fleishman, 2007), and they compete for general awareness and policy saliency of the causes they represent. Foundations also differ by objective function and strategy (Anheier and Daly, 2007; Frumkin, 2006; Leat, 1999; Young, 2001). While altruism, a desire to give back, and a drive for creating lasting social change motivate foundation leaders and funders, self-serving objectives such as gaining community recognition for their goodwill, marketing their brand, or overcoming negative public images also influence them (Fleishman, 2007). While corporations' giving is particularly strategic and correlated with their own level of marketing and competition (Zhang et al, 2009), other forms of foundations are not immune to these self-serving objectives. Even community foundations face competitive pressures from other philanthropic vehicles, such as for-profit donor advised funds, and have to spend more to market themselves to donors in more competitive climates (Graddy and Morgan, 2006). In this way, however, by serving themselves and increasing their brand recognition, and sales in the case of corporations, they also serve their charitable missions by increasing their philanthropic funding and the broader public awareness impacts of their work.

Because of the importance of their own image and impact in a community through their grants, foundations tend to highlight the stewardship of their resources, even though they face limited accountability and oversight themselves (Fleishman, 2007). Foundations demonstrate their social benefits through the success of their grantees, even though program success is difficult to measure (Center for Effective Philanthropy, 2002). Therefore, foundations can improve their success and image, by focusing their grants on more established organizations with proven records (Fleishman, 2007; Gronbjerg et al, 2000).

Foundation decision-making is not always rational. While a rational actor model is useful to analyze foundation behavior, decisions are not always top-down, internal actors may not agree on decisions, and full information on any grant decision is rare (Diaz, 1999). Instead, a bounded rationality model is more fitting in which foundation decision-makers face transactions costs and limited information during grantee selection (Diaz, 1999). Funding decisions depend on objective criteria, such as geographic location, mission fit, and performance indicators (Gronbjerg et al, 2000). However, with greater numbers of grant applicants, foundations face a more difficult decision process and tend to rely heavier on reputation and objective measures, requiring more information in the grant application (Gronbjerg et al, 2000).

2.5 Financial Efficiency Measures and the Relative "Price" of Donations

Public demand for financial accountability and transparency by nonprofit organizations has been an issue for over three decades (Smallwood and Levis 1977; Frumkin and Kim 2001; Tinkelman and Mankaney 2007). However, more recent scandals in the 1990s and early 2000s, along with for-profit corporate scandals and policy

responses like the Sarbanes-Oxley Act have caused increased scrutiny of the field (Frumkin and Kim 2001; Tinkelman and Mankaney 2007). This scrutiny has led to the development of public and private financial monitoring mechanisms of nonprofits' financial reporting, primarily relying on data from the annual IRS Form 990 filings and expense ratios using these reported figures. Generally, financial stewardship oversight using such data has focused on ratios of fundraising expenses to fundraising revenues and of administrative expenses to total expenses.

Over 30 states have *charitable solicitation acts* that regulate charities' fundraising (Hopkins 2002, 2005). Although the laws vary state-to-state, they generally provide the legal framework for fundraisers and attempt to limit abuse of charitable intent. Many implicitly or explicitly cap charities' fundraising cost ratio at a legal ratio, typically 25 to 35 percent (Smallwood and Levis, 1977; Hopkins, 2002).

Critics, however, argue that accounting practices within organizations bias fundraising and program efficiency measures (Smallwood and Levis, 1977; Hopkins, 2002). As Hopkins (2002) explains, nonprofit managers do not all calculate the numbers the same way, especially since many are not formally trained in accounting. Due to reporting discrepancies, one organization may report a 20 percent fundraising ratio and another may report only a 15 percent ratio when both have equal efficiency or the organization reporting the higher ratio may really be more efficiently managed (Hopkins 2002, p. 189).

Additionally, many organizations inaccurately report their administrative and fundraising expenses, perhaps intentionally. The Urban Institute and the Center on Philanthropy at Indiana University Overhead Costs Project (2004) examined the

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reliability of IRS Form 990 data on nonprofits' overhead expenses, including fundraising costs and administrative expenses. Incredibly, close to 40 percent of nonprofits reporting $50,000 or more in contributions reported zero fundraising costs (Urban Institute and the Center on Philanthropy at Indiana University 2004). Misreporting fundraising as zero derives from pressure on managers to demonstrate greater efficiency and leads to validity issues with efficiency measures (Krishnan, Yetman, and Yetman, 2006). However, organizations that report reasonable fundraising expenses and those that use outside accountants are more likely to accurately report their expenses, based on comparisons with external audits (Krishnan, Yetman, and Yetman 2006; Tinkelman and Mankaney, 2007).

Even when accurately reported, however, financial efficiency measures can mislead potential donors because they represent past average performance rather than current marginal performance (Steinberg, 1986; 1989; Brooks, 2006; Pallotta, 2010). More complete information on the incremental impact of a donor's particular gift would be more valuable for individual donor decision-making, even though average efficiency remains important for taxpayers as a whole and policymakers (Steinberg, 1989). Moreover, as Hager and Greenlee (2004) point out, an important shortcoming of financial performance measures is that they do not directly measure mission performance or program effectiveness. The exact relationship between financial and mission performance measures is unknown. Financial measures may be poor indicators of program effectiveness, or they may be highly correlated with mission performance (or somewhere in between).

Despite these arguments against using fundraising and program cost ratios to compare nonprofit organizations, policymakers and watchdog organizations use these financial efficiency measures among the other indicators of nonprofit performance. For example, the Better Business Bureau's Wise Giving Alliance uses a strict threshold of 35% to judge whether organizations fall within its standard for fundraising efficiency (www.give.org/standards/newcbbbstds.asp). Charity Navigator also uses the fundraising ratio in its standards, endorsing organizations that have greater fundraising efficiency (for example, they list organizations receiving their top score of four stars at www.charitynavigator.org/index.cfm?bay=search.results&overallrtg=4). As commonly noted, these measures are very easy to calculate and understand. Furthermore, the financial metrics can be measured and evaluated uniformly across organizations with different missions – something impossible to do using mission performance criteria.

Especially with the rise of online giving and the use the internet to support donor decisions, donors are becoming more aware, and critical, of financial efficiency measures in nonprofits. It is clear from popular websites such as BBB Wise Giving Alliance (give.org), American Institute of Philanthropy (charitywatch.org), and Charity Navigator (charitynavigator.org), that efficiency, accountability, and stewardship of donative funds are important factors for donors when making funding decisions. Indeed, donors reward nonprofit organizations that report higher financial efficiency in terms of spending greater proportions of their total expenses on program services than fundraising and administrative costs (Buchheit & Parsons, 2006; Callen & Falk, 1993; Greenlee & Brown, 1999; Jacobs & Marudas, 2009; Okten & Weisbrod, 2000; Posnett & Sandler, 1989; Tinkelman & Mankaney, 2007; Weisbrod & Dominguez, 1986).

Donors favor financially efficient organizations for multiple reasons. Buchheit and Parsons (2006) and Parsons (2003) use an experimental design randomly assigning potential donors to groups in which financial efficiency information was and was not revealed. Both studies find that reporting financial efficiency signals trustworthiness and is significantly related to participants' willingness to donate to an organization.

Several studies using IRS form 990 data find significant, positive relationships between greater program expense ratios (program or administrative efficiency) and charitable donations (Jacobs & Marudas, 2009; Okten & Weisbrod, 2000; Posnett & Sandler, 1989; Kingma, 1989; Khanna, Posnett & Sandler, 1995; Khanna & Sandler, 2000). Meanwhile, Frumkin and Kim (2001) and Greenlee and Brown (1999) use similar methods, variables, and data and find insignificant or mixed impacts of organizations' program and administrative efficiency on contributions.

However, Tinkelman & Mankaney (2007) replicate the Frumkin and Kim (2001) and Greenlee and Brown (1999) models with NCCS Core Data files on all IRS Form 990 filers in the place of Statistics of Income (SOI) data that they argue are not representative of donation-seeking nonprofit organizations. They find that making these adjustments, controlling for factors from other studies, and reducing the sample to organizations for which donations make up significant portions of their revenues produce significant, positive effects of higher program expense ratios on contributions.

Other studies have focused on clarifying the relationship between financial variables and concepts of organizational efficiency and donations performance. Trussel and Parsons (2003) and Ritchie and Kolodinsky (2003) use factor analyses to determine which financial reporting ratios from the Form 990 data load on concepts of program and

fundraising efficiency and other factors related to predicting donations to charitable

nonprofit organizations. Ritchie and Kolodinsky (2003) find that separate factors of

fundraising efficiency (e.g., direct contributions divided fundraising expenses), public

support (e.g., total contributions divided by total revenue), and fiscal performance (e.g.,

total contributions divided by total expenses) demonstrate financial performance in

nonprofit organizations. Trussel and Parsons (2003) meanwhile include more diverse

efficiency variables in their analysis, such as program expense ratios (program to total

expenses) and administrative cost ratios (administrative to total expenses). Contrary to

Ritchie and Kolokinsky (2003), Trussel and Parsons (2003) find that variables for

fundraising efficiency load with a variable of fundraising expenses on a factor they

describe as fundraising quantity while program and administrative efficiency load on a

factor of program efficiency. Trussel & Parsons also demonstrate that measures of

administrative efficiency load with program efficiency rather than on a factor of

organizational stability represented by financial health variables, as Tuckman and Chang

(1991) assume. Overall, Trussel and Parsons (2003) find that controlling for factors of

financial health, fundraising expenses, and organizational size and age, allocating greater

proportions of total expenses to administration and fundraising rather than to programs

has a significant, negative impact on expected donations. A factor measuring fundraising

expenses has a significant positive effect on donations, controlling for the other factors.

2.6 The Overall View of Nonprofit Grant Markets

Two main actors operate in the foundation grant marketplace: nonprofit

managers and foundation decision-makers. Nonprofit managers strive to win

grants that foundation actors give. The markets are fragmented by geographic

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location and service industries, in which relatively few foundations serve each grant market. Because of the low numbers of foundations relative to nonprofits and since nonprofit managers tend to emphasize foundation grants as an important part of their fundraising (Blackbaud, 2010; Boldoc et al, 2004), grant markets are essentially monosponistic where few foundations, as buyers of nonprofit services, hold large amounts of influence on nonprofit managers (Tuckman, 1998). Even small levels of foundation activity in a market can therefore have large impacts on nonprofit management, causing managers to professionalize and increase their administrative and fundraising capacity to capture and manage grants.

Under greater levels of competition for grants, nonprofit managers can (1) increase their spending on fundraising to market themselves more heavily, (2) try to appeal to funders with comparative program efficiency through finding greater operational efficiency, or (3) look for alternative revenue sources (Barman, 2002; Alexander, 1998; Bielefeld, 1992; Chetkovich and Frumkin, 2003; Steinberg, 1997; Weisbrod, 1998). Similar to for-profits, substitutes in the market will drive organizations toward greater program efficiency, in part through resource constraints and in part to seek competitive advantages over their peers (Castaneda et al, 2008; Feigenbaum, 1987; Thornton, 2006; Tuckman, 1998). However, facing greater competition, organizations will spend more on fundraising to increase their marketing and perceived legitimacy to potential funders (Bielefeld, 1992; Chetkovich and Frumkin, 2003; Steinberg, 1997). Managers will also generate more diverse funding portfolios to cross-subsidize their charitable activity and compensate for less grant certainty (James, 1983; Weisbrod, 1998).

As third-party buyers of services and due to the information asymmetries inherent in nonprofit service provision, foundations have trouble directly measuring the quality of potential grantees (Hansmann, 1980, 1987; Easley and O'Hara, 1986; Krashinsky, 1986, 1997). Foundations will therefore rely on objective signals of quality, including program efficiency, size, and fundraising appeals, to guide their grant decisions (Bielefeld, 1992; Deep and Frumkin, 2006; Feigenbaum, 1987; Gronbjerg et al, 2000; Sansing, 2010). In more competitive markets where foundations decide among greater numbers of applicants, foundations' cost to fully evaluate each applicant increases, and foundations both require more information in the grant application and rely to a greater extent on easily observed signals of organizational quality (Gronbjerg et al, 2000). In competitive environments, it will be more difficult for the average organization to win a grant, and organizations with greater program efficiency and fundraising expenses will hold stronger competitive advantages over their peers.

In the next chapter, I develop specific hypotheses to test each of these expectations.

CHAPTER 3

INTEGRATED THEORY, HYPOTHESES, AND MODELS

3.1 The Influence of Foundation Activity on Nonprofit Financial Behavior

Nonprofit markets vary in terms of the number of foundations funding organizations and the total grant amounts dispersed. As third party buyers, foundations require grantees to monitor and formally report their activities to evaluate the services they purchase. Foundation grant proposals and grant management therefore create administrative burdens, leading nonprofits to professionalize their fundraising and administrative practices in order to successfully secure and maintain foundation funding. More formalized and advanced fundraising practices will market nonprofit organizations to their external stakeholders, including foundations, and signal legitimacy in these markets. Because other nonprofits will mimic successful nonprofits to demonstrate legitimacy, survive, and compete in the market, foundation activity will lead to the professionalization of all nonprofits in the markets in which they are active. Nonprofits will therefore spend more on administrative and fundraising in markets with higher foundation activity.

> H1a: Greater foundation activity in nonprofit subsector and geographic markets will lead to greater average nonprofit fundraising expenses in those markets.

$$\text{Foundation Activity} \xrightarrow{\;+\;} \text{Fundraising Expenses}$$

> H1b: Greater foundation activity in nonprofit subsector and geographic markets will lead to greater average nonprofit administrative expenses in those markets.

$$\text{Foundation Activity} \xrightarrow{\;+\;} \text{Administrative Expenses}$$

3.2 The Impacts of Competition on Nonprofit Financial Behavior

Based on the theory explaining the existence of nonprofit organizations in market economies explained in chapter 2, particularly stakeholder and entrepreneur theories, a greater supply of nonprofit organizations in particular service markets will exist than can likely be supported at efficient levels by donor and foundation funding alone. Since more nonprofits will compete in foundation grants markets than can likely be funded, foundations will be more selective of nonprofits in more competitive markets. This will lead to lower probabilities of getting foundation grants for nonprofit managers. Nonprofits will increase their fundraising expenses as they compete for funding and use fundraising to market their services, increase their reputation and legitimacy, and earn a competitive edge in the grants marketplace.

H2a: Greater competition among grant-seeking nonprofits will lead to greater average nonprofit fundraising expenses.

$$\text{Competition} \xrightarrow{\ +\ } \text{Fundraising Expenses}$$

However, due to greater uncertainty for individual grants and more demanding selection criteria on the part of foundations, increased competition will lead to lower average returns on fundraising and less fundraising efficiency overall. Feigenbaum (1987) finds evidence of this with charity hospitals, and Thornton (2006) finds this effect in general competition for general donations. In his study, Thornton (2006) compares these results to similar findings in marketing studies. Seaman (2004) also discusses this general finding in the arts in his review of nonprofit arts marketing studies.

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H2b: Greater competition among grant-seeking nonprofits will lead to lower average fundraising efficiency.

$$\text{Competition} \xrightarrow{\quad-\quad} \text{Fundraising Efficiency}$$

Increased competition for foundation grants will also lead to other firm behavior in order to maintain consistent levels of overall funding in the face of increased competition for donations or to compensate for decreased foundation funding due to increased competition for this limited pool of resources. Under institutional theory, nonprofits respond to their environment by conforming to industry or market standards and must behave more similarly to other organizations and match normative expectations in their environment to survive (DiMaggio & Powell, 1988; Feeney, 1997; Flood & Fennel, 1995; Guo and Acar, 2005; Kerlin and Pollak, 2010; Meyer & Rowan, 1977; Milofsky & Hunter 1994; Rao, 1998; Scott, 1995). Because donors and funders hold strong preferences for nonprofit program efficiency, nonprofits in grant-seeking markets will experience greater institutional pressures to allocate more spending on programs in order to continue to receive grants in more competitive markets. In other words, in order to remain competitive and to maintain levels of foundation funding, when competition for finite resources exists, is introduced, or grows, organizations will actively pursue desirability in terms of objective ratios of efficiency, such as the proportion of revenue expended on services rather than administration (Barman, 2002, 1194). Nonprofit managers may achieve this through manipulating their accounting practices (Krishnan, Yetman and Yetman, 2006), but they may also achieve greater operational efficiency through better management practices and finding cost savings through more efficient administration when faced with greater competition.

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Feigenbaum (1987) finds that competition leads to greater operational efficiency in charity hospitals, and Thornton (2006) also suggests that competition will lead donors to become more selective of efficient nonprofits and, therefore, add strong external institutional pressures on nonprofits to be more efficient. Bilodeau and Slivinski (1997) similarly argue that greater inter-firm competition increases the level of nonprofits' efficiency as donors select more efficient firms under situations of higher inter-organization competition for their donations.[3] Overall, these institutional pressures will lead organizations to allocate greater shares of expenses to programs rather than administration.

H2c: Greater competition among grant-seeking nonprofits will lead to higher average firm reported program efficiency.

$$\text{Competition} \xrightarrow{\ +\ } \text{Program Efficiency}$$

However, in order to compensate for lower likelihoods of funding given increased competition for foundation funds, in addition to trying to be more competitive, nonprofits will seek alternative sources of revenue. Competition for philanthropic sources will therefore lead to revenue source differentiation (Weisbrod, 1998; Alexander, 1998; Gronbjerg, 1993; Powell & Friedkin, 1987 cited in Barman, 2002) as an alternative to charitable resource dependence.

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[3] Although their study is in the context of higher levels of donor-advised funding through federated giving programs such as the United Way, and they further explain that high proportions of undesignated funds in such scenarios may actually undermine or hide the efficiency effect of competition by allowing federated programs to balance funding across organizations by subsidizing inefficient firms with undesignated donations.

H2d: Greater competition among grant-seeking nonprofits will lead to lower average firm revenue concentration.

$$\text{Competition} \longrightarrow \text{Revenue Concentration}$$

3.3 Foundation Grant Decision Hypotheses

In all, the findings across the studies cited in section 2.5 above provide robust support for several hypotheses in the context of this paper about the expected effect nonprofits' reported program efficiency and raw fundraising expenditures have on donations. However, despite the substantial replication of these findings in the context of private charitable donations, there are several shortcomings in previous research with regard to discerning institutionalized foundation grant-making behavior. Primarily, previous studies use a measure of contributions developed from Form 990 data that combines donations from individuals, government and foundations.

Therefore, inferences regarding foundation grant-making behavior may be biased by the effects of general contributions if foundation grants are not analyzed separately from aggregated contributions. Therefore, instead of assuming the relationships found in previous studies on general donor behavior hold for predicting grant-making behavior, I test these relationships for foundation grantmaking decisions in this analysis.

Based on the theory outlined, foundation grantmakers emphasize financial efficiency measures, all else equal, when selecting grantees because of the lower relative "price" of grant donations to organizations that spend relatively more on programs than administration.

H3a, b, c: Greater program efficiency, measured as allocating greater proportions of total expenses to programs rather than to administration or fundraising, will make organizations more likely to receive foundation grants.

Program Efficiency $\xrightarrow{\quad + \quad}$ Grants (a) Likelihood, (b) Number, and (c) Amount

Also, given competition for marketing and fundraising efforts between nonprofits, nonprofits that spend more money on fundraising, all else equal, are more likely to gain exposure to foundations in the marketplace and signal higher quality and fit to those foundations through increased fundraising appeals. Therefore, nonprofits that spend more on fundraising will be more likely to receive foundation grants.

H3d, e, f: Greater fundraising expenditures will make organizations more likely to receive foundation grants.

Fundraising Expenses $\xrightarrow{\quad + \quad}$ Grants (d) Likelihood, (e) Number, and (f) Amount

Additionally, organization size serves as another signal of quality to foundations. All else equal, large organizations represent stable philanthropic investments since these organizations have likely grown through their own success. Larger organizations also likely have more established and efficient grant-writing units and benefit from economies of scale in their fundraising operations (Feigenbaum, 1987). Under competition between grant-seeking nonprofits, organization size is a comparative advantage. Size will therefore have a positive impact on receiving foundation grants in competitive grants markets.

H3g, h, i: Greater organizational size will make organizations more likely to receive a foundation grant.

Organizational Size $\xrightarrow{\quad + \quad}$ Grants (g) Likelihood, (h) Number, and (i) Amount

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3.4 Hypotheses on the Moderating Impact of Competition on Grant Selection

Previous studies have not modeled the effect of competition among nonprofits on donor decision-making. Even though the literature on nonprofit competition in the section on organization behavior above discusses the nonprofit firm response to increased competition for fundraising or marketing, little can be inferred about the impact competition has on donor behavior. The closest finding approaching this research question is Thornton's (2006) finding that, on average, returns on fundraising expenditures decrease with greater competition suggests that donors spread their gifts more thinly in more competitive nonprofit markets.

However, in the case of the market for foundation grants, outcomes are primarily binary in terms of organizations being awarded a grant (1) or not (0). To test whether a population of foundations indeed spreads grants evenly to competing nonprofits in foundation grant-seeking markets, I test whether nonprofits in industry subsectors with greater inter-organization competition are significantly less likely to receive a grant. Under this hypothesis, a null relationship will tentatively support foundations dispersing their grants thinly among competing nonprofits, while a negative relationship will conversely provide support to inferring that grantmakers are more selective in their grantmaking in scenarios of greater competition between similar organizations.

> H4a: Greater inter-organization competition for foundation funding will lead to lower likelihood for organizations to receive a foundation grant, on average.

Competition $\xrightarrow{\text{-}}$ Likelihood of Receiving a Grant

As Barman (2002) notes, the literature generally expects inter-organization competition to cause external evaluators to focus on efficiency (also see Powell, 1991,

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184; Orru, Biggart & Hamilton, 1991). However, there remains a void in the empirical literature on "the impact of competition on the perceptions of environmental actors" in the nonprofit context (Barman, 2002, 1196, 1216). Empirical studies in the context of for-profit organizations or mixed industries with competition between for-profits and nonprofits indicate efficiency and quality benefits from competition between units or firms for limited resources controlled by scrutinizing decision-makers (Barman, 2002; Hill, Hitt & Hoskisson, 1992; Schlesinger, 1998; Thorpe & Brecher, 1988; Weisbrod, 1998). However, empirical studies have not tested nonprofit competition's effect on foundation decisions.

Due to incomplete information about program outcomes (Center for Effective Philanthropy, 2002), foundations will emphasize financial efficiency measures in their grant searches. Greater numbers of grant applications in more competitive markets will lead to greater information asymmetries and greater information costs. Even though foundations will require more information on grant applications, they will tend to become more selective along objective measures as grant applications increase (Gronbjerg et al, 2000). Competition will therefore have a moderating impact on the importance that foundations place on program efficiency when deciding between competing grantees, as tested with interactions between market competition and organizational variables. More specifically, as competition increases, the relative importance of program efficiency in grant decisions will increase.

> H4b, c, d: Greater competition will increase the impact of program efficiency on the likelihood of receiving foundation grants.

Competition
$\downarrow$+

Program Efficiency $\xrightarrow{\quad + \quad}$ Grants (b) Likelihood, (c) Number, and (d) Amount
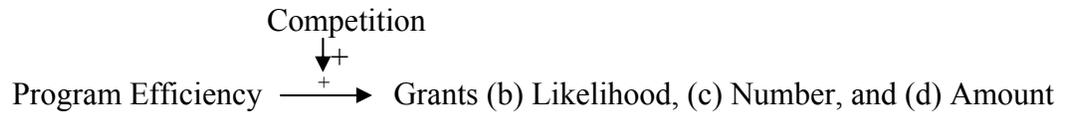
Alternatively, from the grantee perspective, the impact of increased marketing and fundraising expenditures to attract foundation grantmakers' attention and approval on grant receipt will be also be moderated by inter-organization competition. Feigenbaum (1987) argues that when faced with competition, fundraising is an effective tool to differentiate a nonprofit from its peers. Since the quality and quantity of charitable outputs of donation-reliant organizations are difficult and costly for donors to assess, nonprofits rely on marketing expenditures to gain donors' trust and contributions (Bielefeld, 1992; Chektovich and Frumkin, 2003; Steinberg, 1997). In competitive markets, fundraising both lowers donors' costs to donating to charities and gives some nonprofits comparative advantages, signaling their own quality to potential donors (Feigenbaum, 1987). Because these signaling effects will hold greater importance in more crowded grants markets, fundraising expenditures will have a greater positive impact on receiving foundation grants in more competitive environments.

H4e, f, g: Greater competition will increase the impact of fundraising expenditures on the likelihood of receiving foundation grants.

Competition
$\downarrow$+

Fundraising Expenses $\xrightarrow{\quad + \quad}$ Grants (e) Likelihood, (f) Number, and (g) Amount

CHAPTER 4

DATA AND METHODOLOGY

This research uses unique data on 74 foundations in Georgia that were responsible for 58% of all foundation giving in the state in 2005. All 1,264 grantmaking foundations that filed an IRS Form 990 in 2005 composed the population list. The top ten foundations in the state were purposively included to capture a greater proportion of overall grants in the state. The remaining foundations were sampled from independent, family, and corporate foundation groups from different regions in Georgia. A sample was stratified by regions of the state and by foundation type. Foundations were then randomly selected within those strata to represent both the geographic distribution pattern and each foundation type from the population of 990 filing foundations in the state. I exclude community and operating foundations from my sample because community foundations include large proportions of donor advised funds directed by individuals other than foundation boards and operating foundations typically support only one organization. The final foundation sample is representative of foundations of those types across Georgia and includes 68 foundations across ten regions of the state. Six are corporate foundations, 39 independent foundations, and the remaining 23 are family foundations, having greater than 65% of the board in the same family. The sample foundations had a median total giving of $856,000 and distributed over $200 million in grants to over 900 nonprofits in Georgia in 2005.

I combined the sample foundations' IRS 990-PF data with Form 990 data (NCCS, 2007) on all 932 nonprofit organizations in Georgia that received grants from them in

2005, and 4,843 comparative nonprofits in Georgia that did not receive grants. In all, the grantees received 1,740 grants with a median grant amount of $10,000. While some received funding from as many as 16 foundations in the sample, the average grantee received awards from 2 foundations, with a median total funding of $20,000. The comparative nonprofits include all organizations in the state that filed Form 990s in 2005 and that were coded by the National Center for Charitable Statistics as being in the same (three-digit) NTEE-CC specific subsectors as the grantee organizations in the dataset. By selecting these organizations, I limit the analysis to organizations within specific nonprofit industries that seek foundation grants on the local and state level.

Preliminary analyses find foundation giving to be highly localized: foundations awarded two-thirds of all grants to nonprofits in the same or a neighboring county (Ashley et al, 2007). I therefore define the local grants market regionally based on clusters of counties within the state, following the boundaries of Georgia's 12 regions set by the state (Georgia.gov). Under this operationalization, grant-seeking nonprofits compete against other organizations in their same region for grants from foundations that are active within their region. Since foundations in the sample fund across subsector areas but determine individual grants based on specific program areas and because, just as in for-profit markets, the presence of substitute organizations is a driver of nonprofit competitive pressures (Tuckman, 1998), I further operationalize competition as being between nonprofits in the same specific (3-digit) National Taxonomy of Exempt Entities Core Codes (NTEE-CC) subsector industry category. Therefore, I define competitive markets as existing when organizations in the same region are in the same specific industry subsector. For instance, under this market definition, performing arts theaters

compete against other theaters in the same county cluster for grants since they are near substitutes, but they do not directly compete with museums or other nonprofit arts organizations, or with theaters in other regions of the state.

Because of a concern about a modifiable areal unit problem resulting from aggregating data based on abstract geographic boundaries (Fotheringham and Wong, 1991; http://en.wikipedia.org/wiki/Modifiable_areal_unit_problem), I perform a sensitivity analysis using other market geographic boundaries at the county and state levels. Also due to a concern that competition for grants may be broader than between nonprofits of the same specific subsector industries, I perform additional sensitivity analysis using other market definitions measuring competition between organizations in the same NTEE subsector (27 alphabetical codes, including separate industries for hospitals and higher education) and major industry (12 major subsector groups).

Following Thornton (2006), I measure competition by both the number of organizations and the Herfindahl-Hirschman Index (HHI) in each market. The HHI is constructed using total private and public contributions (including general donations and foundation and government grants) and represents the sum of the square of all organizations' share of total contributions in the market. The HHI is a standard market index showing the relative concentration of resources within specific organizations. The index ranges from 0 to 10,000 with 0 being fully competitive and 10,000 meaning all market resources are concentrated in one organization (i.e., a monopoly situation). Foundation activity in each market is measured by the number of foundations that gave grants to each subsector-region group, representing how much influence they have on organizations in the market.

Following Tinkelman and Mankaney (2007), I restrict the sample to organizations that report both fundraising and administrative expenses, combined fundraising and administrative expenses greater than $1000, and contributions revenue. Because many organizations report zero fundraising expenses, this reduces the sample but limits the analysis to organizations with more reliable data (Krishnan, Yetman, and Yetman, 2006; Tinkelman and Mankaney, 2007).[4] To make sure a few influential observations with outlier data will not bias estimates, I exclude an additional 11 observations reporting fundraising cost ratios (i.e., fundraising expenses to private contributions earned) over 4.[5] Competition variables are generated before the sample restrictions to preserve market density and other characteristics dependent on the full sample of nonprofits that file the IRS form 990.

While 84 percent of organizations report administrative expenses, close to 70% of organizations report zero fundraising. Non-grantees have higher zero reporting (76% vs. 37% of grantees). The restrictions stated above reduce the sample to 1,364 organizations, with 567, or 42%, receiving grants from the foundations in the sample in 2005. [6] Even though this reduces the sample considerably, the proportions of organizations in the major 12 subsectors align very closely with the distribution of organizations in the

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[4] Although this reduces the sample to organizations with more reliable data, fundraising and administrative expenses are still expected to be underreported across organizations, leading to a consistent bias. As Thornton (2006, 214-215) explains, while this may "cause bias in the intercepts, slope coefficients will remain unbiased." See Thornton (2006) for more detailed discussion.

[5] This follows Ashley and Faulk (2010). The excluded observations were over the 99th percentile (2.3) for the fundraising cost ratio.

[6] This is a higher proportion of grantees than the full, unrestricted data where 16% are grantees. However, reducing the data makes our results more generalizable to grant-seeking nonprofits by excluding organizations that do not seek contributions or grants (see Tinkelman & Mankaney, 2007 for more discussion).

population of 501(c)(3) charitable organizations that file an IRS Form 990 in the Georgia.

As shown in table 1, higher education, health, and human service organizations are

slightly over-represented, and hospitals, education, public benefit, and religious

organizations are slightly under-represented.

Table 1: Summary of Sample Industry Subsector Statistics

Major Subsector	Sample		Population	
	Freq.	Percent	Freq.	Percent
Arts	130	9.53	668	9.22
Higher Education	26	1.91	42	0.58
Education	232	17.01	1,355	18.71
Hospitals	6	0.44	127	1.75
Environment	55	4.03	286	3.95
Health	172	12.61	762	10.52
Human Services	450	32.99	2,223	30.69
International	24	1.76	122	1.68
Public Benefit	151	11.07	872	12.04
Religious	118	8.65	760	10.49
Total	1,364	100	7,217	100

Based on the market definition of specific NTEE-CC subsectors grouped by 12

regions in the state, shown in figure 1, the restricted data include 668 grant markets. As

shown in table 2 below, the Atlanta metro area (region 3) holds one-third of the markets,

which is consistent with the overall distribution of nonprofits in the state (Ashley et al,

2007). Summary statistics on these variables for the entire data and for individual major

industry subsectors is provided in tables 3 and 4 below.
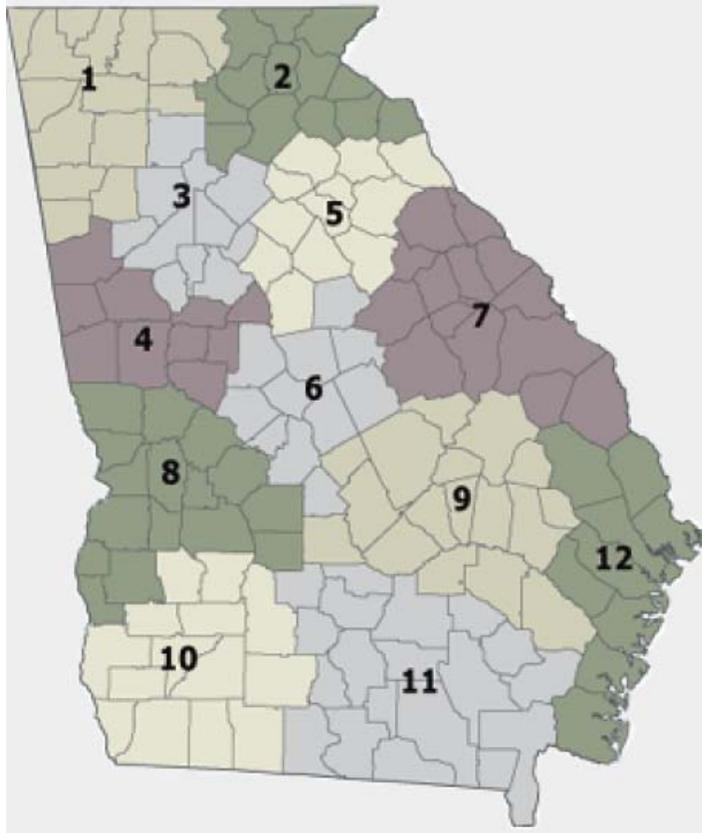
Figure 1: 12 Georgia Regions
Source: http://www.georgia.gov/00/channel_title/0,2094,4802_4977,00.html

Table 2: 12 Georgia Regions

GA 12

Region	Freq.	Percent
1	50	7.49
2	51	7.63
3	221	33.08
4	27	4.04
5	55	8.23
6	39	5.84
7	46	6.89
8	45	6.74
9	12	1.8
10	29	4.34
11	31	4.64
12	62	9.28
Total	668	100

Table 3: Inter-Organization Competition and Foundation Activity

Variable	Obs	Mean	Std. Dev.	Min	Max
HHI	668	6740	2924	532	10000
N Organizations	668	6	13	1	240
N Foundations	668	2	3	0	24

Table 4: Inter-Organization Competition and Foundation Activity by Subsector

Major Subsector	Mean HHI	Mean N Organizations	Mean N Foundations
Arts	6932	4.6	1.9
Higher Education	7946	2.5	6.3
Education	5150	12.1	3.5
Hospitals	7580	5.8	0.6
Environment	7057	4.5	2.2
Health	7397	4.3	1.7
Human Services	6715	5.0	1.4
International	7519	6.5	1.5
Public Benefit	7224	5.2	1.9
Religious	4912	22.2	1.1

The density graphs below in Figures 2 and 3 demonstrate the variation in the amount of local competition across markets. As portrayed in the descriptive statistics above and the graphs below, the average market is concentrated, or non-competitive, based on the common HHI threshold of 2000 for competitive markets. However, competition varies by subsector and region. Within the metro Atlanta region, as shown in table 5, education, hospital, and religious subsectors appear the most competitive, based on HHI.

Table 5: HHI by Subsector within the Metro Atlanta Region

Major Subsector	Mean HHI	Mean N Organizations
Arts	5114	9
Higher Education	6644	6
Education	2627	32
Hospitals	2463	18
Environment	7442	6
Health	6203	7
Human Services	5356	10
International	6098	12
Public Benefit	6058	10
Religious	2968	73
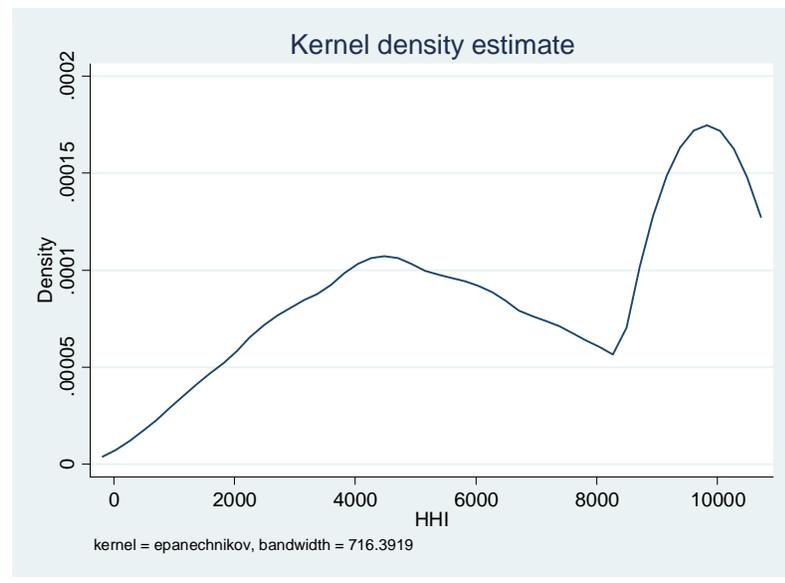
Figure 2: Inter-Organization Competition (HHI)

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Kernel density estimate

kernel = epanechnikov, bandwidth = 0.9064
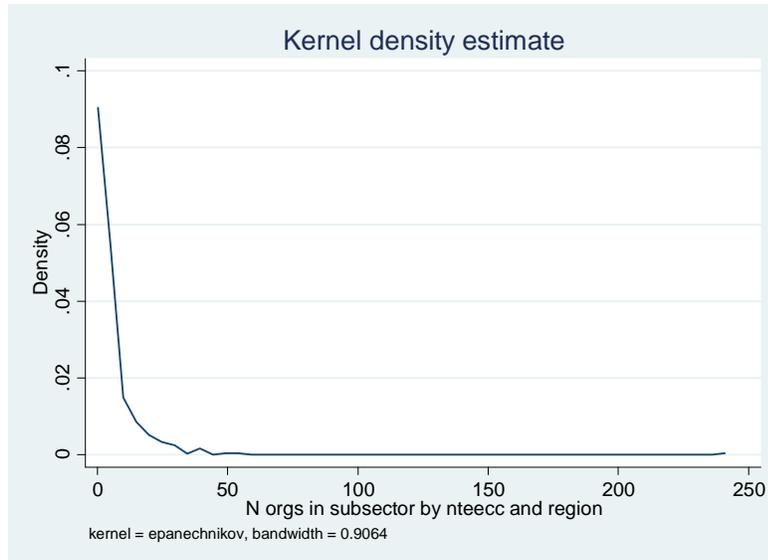
Figure 3: Inter-Organization Competition (N)

Given the nested structure of these data, with nonprofit organizations nested within subsectors and regions, I use hierarchical linear modeling (HLM) to estimate the models. This method is designed for grouped observations that are not fully independent and allows for more reliable parameter estimates than using non-hierarchical models, such as OLS, with this type of data since using identical values of local market-level variables for multiple organization-level observations violates the independence of observations assumption (Raudenbush & Bryk, 2002). In this analysis, organization variables from a digitized 2005 NCCS 990 data file on organizations in each local nonprofit market are included on level-one, and market variables for competition between organizations are included on the second level of the data.[7]

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[7] I also estimate the models using alternative techniques, including OLS, panel analysis, and generalized linear models (GLM). The parameter estimates across estimation techniques are consistent, though the statistical significance of the coefficients is often stronger under the alternative estimations.

I operationalize program efficiency as the log of program expenses as a proportion of total expenses, which is conceptually the same as other studies' price variables that combine fundraising and administrative costs into one variable (Tinkelman & Mankaney, 2007).[8] I use the log of the administrative and fundraising expenses reported in organizations' Form 990. For the purposes of this analysis, I assume that increased administrative expenses contribute to professionalizing the work force and that additional fundraising expenses strengthen organizational marketing. Fundraising efficiency is the log of the ratio of total private contributions (i.e., contributions not including government grants) to fundraising expenses. Revenue concentration is the log of the Herfindahl-Hirschman Index (HHI) of Revenue Concentration, calculated as the sum of the squares of the shares of each revenue stream as proportions of total revenues (including direct and indirect private contributions, government grants, program revenue, dues, net income from special events, gross profit from sales of inventory, and other revenue).[9]

Level-1 organizational controls include the logs of total assets to control for size and age, calculated as the number of years since receiving exempt status. Because location in Atlanta may explain some of the effects of competition, I control for location in Fulton or DeKalb counties. I also include the log of government funding to control for income interactions with government grants (following Tinkelman & Mankaney, 2007) as well as the administrative costs of managing government grants independently from

_____

[8] 7 observations were set to missing because they reported program efficiency greater than 1.
[9] This definition follows Hager (2001) by setting individual revenue streams to zero if they are reported negative. Even though market HHI is measured 0 to 10000, revenue concentration HHI is commonly measured 0 to1.

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private contributions and foundation funding in all models except those estimating

revenue concentration. I control for the log of contributions reliance, measured as the

percentage of private contributions to total revenues[10], in models other than the revenue

concentration and fundraising efficiency models since reliance on charitable

contributions plays a significant role in self-selection of seeking charitable funds or

applying for foundation grants (Tinkelman & Mankaney, 2007).[11] I also control for

lagged contributions, measured by the log of total contributions from the previous three

years. Finally, I control for the level of foundation activity in each subsector market,

measured as the logged number of foundations that gave grants to the same NTEE-CC

subsector group and made grants in the same geographic region, to account for variable

exposure to grantmaking foundations in the sample in the grant estimation models.

I include organization level summary statistics on the raw variables in table 6

below.

Table 6: Organization Level Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
Grantee	0.416	0.493	0	1
Total Grants	0.900	1.626	0	16
Total Amount	115,785	583,921	0	7,534,742
Program Efficiency	0.741	0.195	0	0.995
Fundraising Efficiency	79	648	0.013	17689
Fundraising Expenses	314,878	4,139,486	9	142,000,000
Revenue Concentration	0.671	0.226	0.193	1

[10] Private contributions do not include government grants. I also subtract the total amount of grants each organization received from foundations in the sample from private contributions.
[11] I do not include contributions reliance in the fundraising efficiency models because contributions are on the left side of the equation. I exclude contributions reliance and government grants from the revenue concentration models for the same reason.

Table 6 continued

Management Expenses	715,146	4,265,552	16	85,600,000
Age	19	16	0	80
Assets (EOY)	20,100,000	237,000,000	0	8,250,000,000
Fulton/DeKalb County	0.403	0.491	0	1
Lagged Contributions	7,138,883	76,300,000	0	2,150,000,000
Government Grants	928,810	12,900,000	0	353,000,000
Contributions Reliance	0.552	0.345	0	1

Note: Observations = 1364 on all variables.

Following Tinkelman and Mankaney (2007), I log all variables to reduce the

impact of skewed data, which is prevalent in 990 data.[12] Using log transformations also

allows me to report the coefficients as elasticities. I also perform the analysis with

variables in their raw form to check the robustness of the estimates based on

specification.

To test the hypotheses, summarized in table 7 below, nine sets of equations are

presented.

Table 7: Study Hypotheses

Nonprofit Financial Behavior Hypotheses	
H1a	Greater foundation activity in nonprofit subsector and geographic markets will lead to greater average nonprofit fundraising expenses in those markets.
H1b	Greater foundation activity in nonprofit subsector and geographic markets will lead to greater average nonprofit administrative expenses in those markets.
H2a	Greater competition between grant-seeking nonprofits will lead to greater average fundraising expenses.
H2b	Greater competition between grant-seeking nonprofits will lead to lower average nonprofit fundraising efficiency.
H2c	Greater competition between grant-seeking nonprofits will lead to higher average reported program efficiency.

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[12] I added one (or one thousandth for ratios) to variables with zero values to transform them to logs.

Table 7 continued

H2d	Greater competition between grant-seeking nonprofits will lead to lower average revenue concentration.
Foundation Grant Decision Hypotheses	
H3a	Greater program efficiency will make organizations more likely to receive a foundation grant.
H3b	Greater program efficiency will lead to greater numbers of foundation grants received.
H3c	Greater program efficiency will lead to greater combined grant amounts from all foundation grant sources.
H3d	Greater fundraising expenditures will make organizations more likely to receive a foundation grant
H3e	Greater fundraising expenditures will lead to greater numbers of foundation grants received.
H3f	Greater fundraising expenditures will lead to greater combined grant amounts from all foundation grant sources.
H3g	Greater organizational size will make organizations more likely to receive a foundation grant.
H3h	Greater organizational size will lead to greater numbers of foundation grants received.
H3i	Greater organizational size will lead to greater combined grant amounts from all foundation grant sources.
Moderating Impact of Competition on Grant Selection Hypotheses	
H4a	Greater competition for foundation funding will lead to a lower likelihood for organizations to receive a foundation grant, on average.
H4b	Greater competition will increase the impact of program efficiency on the likelihood of receiving a foundation grant.
H4c	Greater competition will increase the impact of program efficiency on the number of foundation grants received.
H4d	Greater competition will increase the impact of program efficiency on the total grant amounts from all foundation grant sources.
H4e	Greater competition will increase the impact of fundraising expenditures on the likelihood of receiving a foundation grant.
H4f	Greater competition will increase the impact of fundraising expenditures on the number of foundation grants received.
H4g	Greater competition will increase the impact of fundraising expenditures on the total grant amounts from all foundation grant sources.

Hypotheses 1a through 2d are tested with two-level random-intercept, fixed-slope

models testing the impacts of competition on levels of fundraising expenses,

administrative expenses, fundraising efficiency, program efficiency, and revenue

concentration, controlling for organizational size, age, subsector, and the number of

foundations in the market. I show the equation set for each of these dependent variables

below:

Equation Set 1

L1: $Y_f = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

$b_1 = \gamma_{10} + u_1$

$b_2 = \gamma_{20} + u_2$

$b_3 = \gamma_{30} + u_3$

Where:

Y_f is **fundraising expenses**

X_1 is the size of the organization (assets)

X_2 is the age of the organization (age)

X_3 is location in Fulton or DeKalb county

X_4 is the lagged contributions (contributions from the previous 3 years)

X_5 is the amount of government grants received (government grants)

X_6 is the ratio of contributions reliance (private contributions / total revenue)

W_1 is the competition between organizations in the same subsector market

W_2 is the number of foundations active in each subsector market

W_3 is the major NTEE subsector (Arts is the reference group)

r is the individual grantee level error term

u_0 is the subsector-county level intercept error term

u_{1-3} are the subsector-county level slope error terms

Equation Set 2

L1: $Y_a = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

$b_1 = \gamma_{10} + u_1$

$b_2 = \gamma_{20} + u_2$

$b_3 = \gamma_{30} + u_3$

Where:

Y_a is **administrative expenses**

X_1 is the size of the organization

X_2 is the age of the organization

X_3 is location in Fulton or DeKalb county

X_4 is the lagged contributions (contributions from the previous 3 years)

X_5 is the amount of government grants received (government grants)

X_6 is the ratio of contributions reliance (private contributions / total revenue)

W_1 is the competition between organizations in the same subsector market
W_2 is the number of foundations active in each subsector market
W_3 is the major NTEE subsector (Arts is the reference group)
r is the individual grantee level error term
u_0 is the subsector-county level intercept error term
u_{1-3} are the subsector-county level slope error terms

Equation Set 3

L1: $Y_{fe} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + r$
L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$
     $b_1 = \gamma_{10} + u_1$
     $b_2 = \gamma_{20} + u_2$
     $b_3 = \gamma_{30} + u_3$

Where:

Y_{fe} is the **fundraising efficiency ratio** (private contributions / fundraising expenses)
X_1 is the size of the organization (assets)
X_2 is the age of the organization (age)
X_3 is location in Fulton or DeKalb county
X_4 is the lagged contributions (contributions from the previous 3 years)
X_5 is the amount of government grants received (government grants)
W_1 is the competition between organizations in the same subsector market
W_2 is the number of foundations active in each subsector market
W_3 is the major NTEE subsector (Arts is the reference group)
r is the individual grantee level error term
u_0 is the subsector-county level intercept error term
u_{1-3} are the subsector-county level slope error terms

Equation Set 4

L1: $Y_{pe} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$
L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$
     $b_1 = \gamma_{10} + u_1$
     $b_2 = \gamma_{20} + u_2$
     $b_3 = \gamma_{30} + u_3$

Where:

Y_{pe} is the **program efficiency ratio** (program expenses / total expenses)
X_1 is the size of the organization (assets)
X_2 is the age of the organization (age)
X_3 is location in Fulton or DeKalb county
X_4 is the lagged contributions (contributions from the previous 3 years)

X_5 is the amount of government grants received (government grants)
X_6 is the ratio of contributions reliance (private contributions / total revenue)
W_1 is the competition between organizations in the same subsector market
W_2 is the number of foundations active in each subsector market
W_3 is the major NTEE subsector (Arts is the reference group)
r is the individual grantee level error term
u_0 is the subsector-county level intercept error term
u_{1-3} are the subsector-county level slope error terms

Equation Set 5

L1: $Y_{rc} = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + r$
L2: $b_0 = \gamma_{00} + \gamma_{01} W_1 + \gamma_{01} W_2 + \gamma_{01} W_3 + u_0$
     $b_1 = \gamma_{10} + u_1$
     $b_2 = \gamma_{20} + u_2$
     $b_3 = \gamma_{30} + u_3$

Where:
   Y_{rc} is the **revenue concentration index**
   X_1 is the size of the organization (assets)
   X_2 is the age of the organization (age)
   X_3 is location in Fulton or DeKalb county
   W_1 is the competition between organizations in the same subsector market
   W_2 is the number of foundations active in each subsector market
   W_3 is the major NTEE subsector (Arts is the reference group)
   r is the individual grantee level error term
   u_0 is the subsector-county level intercept error term
   u_{1-3} are the subsector-county level slope error terms

To test hypothesis 4a, I center the organizational controls on their sample means so that the intercept represents the average organization along each of the control variables. A Level-2 variable for competition (HHI or N) is introduced to explain variation in the y-intercept in each model, controlling for the 5 major NTEE subsector categories (arts, education, health, human services, and other, with arts as the reference group). H3a expects competition to have a negative effect on the intercept in the fundraising expense model.

The level-1 and level-2 random-intercept, fixed-slope equations to test H3a are:

<u>Equation Set 6</u>

L1: $\ln(p/1-p)\ Y_g = b_0 + b_{pe}X_{pe} + b_fX_f + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $\quad b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

$\quad\quad b_1 = \gamma_{10} + u_1$

$\quad\quad b_2 = \gamma_{20} + u_2$

$\quad\quad b_3 = \gamma_{30} + u_3$

Where:

$\quad Y_g$ is a dummy variable for **receiving a grant from a foundation in the sample**

$\quad X_{pe}$ is the program efficiency (program expenses / total expenses)

$\quad X_f$ is the fundraising expenses (fundraising expenses)

$\quad X_1$ is the size of the organization (assets)

$\quad X_2$ is the age of the organization (age)

$\quad X_3$ is location in Fulton or DeKalb county

$\quad X_4$ is the lagged contributions (contributions from the previous 3 years)

$\quad X_5$ is the amount of government grants received (government grants)

$\quad X_6$ is the ratio of contributions reliance (private contributions / total revenue)

$\quad W_1$ is the competition between organizations in the same subsector market

$\quad W_2$ is the number of foundations active in each subsector market

$\quad W_3$ is the major NTEE subsector (Arts is the reference group)

$\quad r$ is the individual grantee level error term

$\quad u_0$ is the subsector-county level intercept error term

$\quad u_{1-3}$ are the subsector-county level slope error terms

Because descriptive statistics show that a disproportionate number of the observations did not receive grants in 2005 with variances greater than the means (i.e., overdispersion of the dependent variable), I estimate the model using an overdispersed multilevel logit analysis to predict receiving a foundation grant.

To test the foundation grant distribution hypotheses 3a, 3d, and 3g testing the impacts of program efficiency, fundraising expenses, and size on the likelihood of getting a foundation grant, and to test hypotheses 4b and 4e on the moderating effects of competition on the likelihood of receiving a grant, I use the following two-level overdispersed logit random-intercept, random-slope model:

<u>Equation Set 7</u>

L1: $\ln(p/1\text{-}p)\ Y_g = b_0 + b_{pe}X_{pe} + b_fX_f + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

       $b_1 = \gamma_{10} + \gamma_{11}W_1 + \gamma_{11}W_2 + \gamma_{11}W_3 + u_1$

       $b_2 = \gamma_{20} + \gamma_{21}W_1 + \gamma_{21}W_2 + \gamma_{21}W_3 + u_2$

       $b_3 = \gamma_{30} + u_3$

       $b_4 = \gamma_{40} + u_4$

       $b_5 = \gamma_{50} + u_5$

       $b_6 = \gamma_{60} + u_6$

       $b_7 = \gamma_{70} + u_7$

       $b_8 = \gamma_{80} + u_8$

Where:

Y_g is the a dummy variable for **receiving a grant from a foundation in the sample**

X_{pe} is the program efficiency (program expenses / total expenses)

X_f is the fundraising expenses (fundraising expenses)

X_1 is the size of the organization (assets)

X_2 is the age of the organization (age)

X_3 is location in Fulton or DeKalb county

X_4 is the lagged contributions (contributions from the previous 3 years)

X_5 is the amount of government grants received (government grants)

X_6 is the ratio of contributions reliance (private contributions / total revenue)

W_1 is the competition between organizations in the same subsector market

W_2 is the number of foundations active in each subsector market

W_3 is the major NTEE subsector (Arts is the reference group)

r is the individual grantee level error term

u_0 is the subsector-county level intercept error term

$u_{1\text{-}8}$ are the subsector-county level slope error terms

Because descriptive statistics also indicate that many organizations receive more than one grant from multiple foundations, I test hypotheses 3b, 3e, 3h, 4c, and 4f using multilevel Poisson models to test the impacts of key variables on the number of foundation grants received. Finally, I test hypotheses 3c, 3f, 3i, 4d, and 4g using nested tobit models to test the impact of key variables on the total amount of all grant awards received. To account for the overdispersion of zero values on the dependent variables in

these models, the Poisson models are specified as overdispersed and the tobit model accounts for left-censoring at 0. H3b through H3i expect program efficiency, fundraising expenses, and size to have positive effects on receiving grants (both in terms of the number of grants received and total grant amounts). Following this, the same Level-2 variables as in the first model set (competition and subsector market controls) are introduced in cross-level interactions (i.e., interaction terms) with program efficiency and fundraising expenses to test H4c through H4g, which expect competition to have positive moderating effects on program efficiency, fundraising expense, and size impacts on predicted grant success.

For all models, I center all variables other than dummy variables at the sample means.[13] Due to the centering methods described, the model intercepts may be interpreted as arts organizations outside of Fulton and DeKalb counties with the average program efficiency, fundraising expenses, assets, lagged contributions, government funding, private contributions reliance, competition and foundation activity compared to all organizations across sample. I also estimate the models using full maximum likelihood in order to compare models with likelihood ratio tests (Crawley, 2007; Raudenbush and Bryk, 2002).

In models 8 and 9 the number and amounts of foundation grants is estimated with level 1 and level 2 equations as:

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[13] Enders and Tofighi (2007), Hofmann and Gavin (1998), and Kreft, de Leeuw and Aiken (1995) argue that grand mean centering yields more reliable estimates than uncentered variables. While they find group-mean centering tends to produce more consistent and reliable estimates in multilevel models with cross-level interactions as is done in this section of the analysis, my data have many level 2 groups with only one observation, limiting the use of group-mean centering.

Equation Set 8

L1: Total Grants $= b_0 + b_{pe}X_{pe} + b_fX_f + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

$b_1 = \gamma_{10} + \gamma_{11}W_1 + \gamma_{11}W_2 + \gamma_{11}W_3 + u_1$

$b_2 = \gamma_{20} + \gamma_{21}W_1 + \gamma_{21}W_2 + \gamma_{21}W_3 + u_2$

$b_3 = \gamma_{30} + u_3$

$b_4 = \gamma_{40} + u_4$

$b_5 = \gamma_{50} + u_5$

$b_6 = \gamma_{60} + u_6$

$b_7 = \gamma_{70} + u_7$

$b_8 = \gamma_{80} + u_8$

Where:

Total Grants is the **number of grants received**

X_{pe} is the program efficiency (program expenses / total expenses)

X_f is the fundraising expenses (fundraising expenses)

X_1 is the size of the organization (assets)

X_2 is the age of the organization (age)

X_3 is location in Fulton or DeKalb county

X_4 is the lagged contributions (contributions from the previous 3 years)

X_5 is the amount of government grants received (government grants)

X_6 is the ratio of contributions reliance (private contributions / total revenue)

W_1 is the competition between organizations in the same subsector market

W_2 is the number of foundations active in each subsector market

W_3 is the major NTEE subsector (Arts is the reference group)

r is the individual grantee level error term

u_0 is the subsector-county level intercept error term

u_{1-8} are the subsector-county level slope error terms

and

Equation Set 9

L1: $Y_{tga} = b_0 + b_{pe}X_{pe} + b_fX_f + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + r$

L2: $b_0 = \gamma_{00} + \gamma_{01}W_1 + \gamma_{01}W_2 + \gamma_{01}W_3 + u_0$

$b_1 = \gamma_{10} + \gamma_{11}W_1 + \gamma_{11}W_2 + \gamma_{11}W_3 + u_1$

$b_2 = \gamma_{20} + \gamma_{21}W_1 + \gamma_{21}W_2 + \gamma_{21}W_3 + u_2$

$b_3 = \gamma_{30} + u_3$

$b_4 = \gamma_{40} + u_4$

$b_5 = \gamma_{50} + u_5$

$b_6 = \gamma_{60} + u_6$

$b_7 = \gamma_{70} + u_7$

$$b_8 = \gamma_{80} + u_8$$

Where:

    Y_{tga} is **total grant amounts**
    X_{pe} is the program efficiency (program expenses / total expenses)
    X_f is the fundraising expenses (fundraising expenses)
    X_1 is the size of the organization (assets)
    X_2 is the age of the organization (age)
    X_3 is location in Fulton or DeKalb county
    X_4 is the lagged contributions (contributions from the previous 3 years)
    X_5 is the amount of government grants received (government grants)
    X_6 is the ratio of contributions reliance (private contributions / total revenue)
    W_1 is the competition between organizations in the same subsector market
    W_2 is the number of foundations active in each subsector market
    W_3 is the major NTEE subsector (Arts is the reference group)
    r is the individual grantee level error term
    u_0 is the subsector-county level intercept error term
    u_{1-8} are the subsector-county level slope error terms

In summary, this analysis tests the impacts of foundation activity and competition in local grants markets on organization behavior and receiving philanthropic grants. In the following chapters, I present my findings and discuss the implications for policy and practice.

CHAPTER 5

ANALYSIS

In this chapter, I test my hypotheses with the data and methods described in the previous chapter. I begin with a comparison of summary statistics for grantees and non-grantees (Table 8). Next, I analyze the financial behavior models (models 1-5, Table 9) testing hypotheses H1a-H2d. I then test the grant distribution hypothesis (H4a) and grant decision hypotheses (H3a-i) in models 6-8 (Table 10). Finally, I test the moderating effects of competition on the importance of program efficiency and fundraising expenses on grant success (H4b-g) in models 9-11 in Table 11. Competition measured by both the number of near substitute organizations and HHI have consistent effects across the models shown. To facilitate the interpretation of the analysis and because the number of competitor organizations holds more intuitive sense, I focus the analysis below on models operationalizing competition as the number of organizations in the same specific industry and same geographic region in the state.

The market definition I use includes over 200 specific nonprofit industries based on the National Taxonomy of Exempt Entities Core Codes (NTEE-CC). Throughout, I discuss the robustness of the findings across different market definitions and model specifications. To check the sensitivity of the findings to market definition, I test other industry groupings along the major 12 and major 27 industry classifications, as explained in chapter 4. I also test the robustness of the models based on geographic market, including separate market definitions at the county and state levels. Finally, I test models with variables in their raw instead of logged form. In general, the findings from the

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sensitivity analysis exhibit the same significance and signs as those reported in the tables below, supporting the robustness of these findings.

5.1 Descriptive Statistics

Summary statistics of grantees and non-grantees (Table 8) show that grantees are larger and older than non-grantees. The table includes the differences between grantees and non-grantees and the significance of those differences for each variable.[14] While fundraising expenses and efficiency are not significantly different, grantees spend significantly more on management while having significantly greater program efficiency. Grantees also have significantly more diversified revenue portfolios and earn greater amounts of government grants. Greater proportions of grantees are located in Fulton or DeKalb counties and are in markets with significantly greater foundation activity. Meanwhile, grantees' markets are significantly more concentrated in terms of the number of substitute organizations and HHI. Consistent with my expectations, these summary statistics show that more established organizations with access to foundations and with relatively low competition tend to have greater success in the grants marketplace. The following multivariate models test my specific hypotheses controlling for potential confounding factors.

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[14] I test the significance of the differences between grantees and non-grantees with t tests and Wilcoxon tests for the group of subsector dummies.

Table 8: Grantee vs. Non-Grantee Descriptive Statistics

VARIABLES	Grantees	Non-Grantees	Difference
Program Efficiency	0.767	0.723	0.044***
	(0.145)	(0.221)	
Fundraising Expenses[†]	0.382	0.267	0.114
	(1.903)	(5.173)	
Management Expenses[†]	1.235	0.346	0.890***
	(5.630)	(2.879)	
Fundraising Efficiency	90.01	71.38	18.63
	(910.00)	(360.40)	
Revenue Concentration	0.633	0.699	-0.066***
	(0.217)	(0.227)	
Assets (EOY)[†]	41.420	4.896	36.524**
	(362.000)	(46.770)	
Age	25.36	15.33	10.03***
	(17.70)	(13.12)	
Fulton / DeKalb County	0.515	0.324	0.191***
	(0.500)	(0.468)	
Contributions (previous 3 years) [†]	10.520	4.732	5.788
	(73.400)	(78.300)	
Government Grants[†]	1.953	199.913	1.753**
	(19.920)	(1.497)	
Contributions Reliance	0.677	0.845	-0.168**
	(0.766)	(1.349)	
Market HHI	5,506	4,733	773***
	(3,088)	(3,093)	
N Market Organizations	15.60	28.44	-12.84***
	(32.28)	(54.67)	
N Market Foundations	4.901	3.365	1.536***
	(4.729)	(4.832)	
Arts	0.104	0.0891	0.0149
	(0.306)	(0.285)	
Higher Education	0.0353	0.008	0.028***
	(0.185)	(0.087)	
Education	0.175	0.167	0.008
	(0.380)	(0.373)	
Hospitals	0.002	0.006	-0.005

Table 8 continued

		(0.042)	(0.079)	
Environment		0.048	0.035	0.013
		(0.213)	(0.184)	
Health		0.141	0.115	0.026
		(0.348)	(0.320)	
Human Services		0.319	0.338	-0.019
		(0.467)	(0.473)	
International		0.014	0.020	-0.006
		(0.118)	(0.140)	
Public Benefit		0.125	0.100	0.025
		(0.331)	(0.301)	
Religious		0.037	0.122	-0.085***
		(0.189)	(0.327)	
Observations		567	797	

Significance: * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

† In millions.

5.2 The Impact of Foundations on Nonprofit Fundraising and Overhead

My first two hypotheses, H1a and H1b, are that greater foundation activity in a nonprofit market increases nonprofits' fundraising and administrative expenses as organizations compete for and manage grants. Because foundations play a large role in the institutional environment for grant-seeking organizations, the number of foundations making grants to organizations in any given market influences organizational behavior. Since foundations demand quality and accountability from their grantees, foundation activity influences organizations to professionalize their management. Because organizations with more professionalized fundraising practices will earn greater grants, foundation activity also promotes greater fundraising expenses as organizations vie for those funds and mimic successful organizations in the market.

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These expectations are supported by positive and significant coefficients on the foundation activity variable on fundraising and administrative expenses in models 1 and 2. As the number of foundations in a market doubles, nonprofit fundraising expenses are expected to increase by 7 percent and administrative expenses are expected to rise by 4 percent holding the other variables constant. These findings indicate that foundations create pressures on organizations to professionalize their operations and spend more on administrative and fundraising functions.

These findings are economically significant for nonprofit managers. Increasing the number of foundations from the mean of 2 to 10 increases an organization's expected administrative expenses by around 22 percent and fundraising expenses by 36 percent. For the average arts organization outside of Fulton and DeKalb counties with the average size, age, lagged contributions, government grants, and contributions reliance (represented by the model intercept), and controlling for the level of competition, such an increase in the number of foundations increases the estimated annual administrative expenses from $52,000 to $65,000 and estimated fundraising expenses from $15,000 to over $21,000. Having greater numbers of foundations to apply to and compete for increases the managerial complexity organizations face, increasing their administrative burden.

These effects are robust to geographic and subsector specification in terms of sign and significance. Significance falls only under the region-major 12 subsector market definition for model 1 and remains consistent across market definitions for model 2. Across market definitions, significant effects ($p<0.1$) average 0.25 and 0.12 for models 1 and 2, respectively, which are greater effects than those reported here. Foundation

activity's impact is as great as 0.412 for model 1 and 0.237 for model 2, indicating that a

doubling of foundation activity increases fundraising expenses by 41 percent and

administrative expenses by 24 percent under those market definitions.

Table 9: Organization Financial Behavior Models

L1 Organization Variables *L2 Market Variables*	Model 1 Fundraising Expenses	Model 2 Administrative Expenses	Model 3 Fundraising Efficiency	Model 4 Program Efficiency	Model 5 Revenue Concentration
Intercept	9.602*** (0.155)	10.862*** (0.140)	2.190*** (0.129)	-0.699*** (0.104)	-0.731*** (0.034)
Competition	-0.179*** (0.049)	-0.079$^+$ (0.043)	0.064 (0.044)	-0.026 (0.023)	0.015 (0.011)
Foundation Activity	0.071*** (0.017)	0.043** (0.015)	-0.010 (0.016)	0.009 (0.011)	0.003 (0.003)
Assets	0.439*** (0.031)	0.456*** (0.029)	0.024 (0.020)	0.013 (0.011)	-0.017*** (0.004)
Age	0.217*** (0.061)	0.168** (0.054)	-0.150* (0.061)	0.061* (0.029)	-0.082*** (0.013)
Fulton/DeKalb County	0.706*** (0.105)	0.389*** (0.088)	-0.285** (0.097)	0.022 (0.047)	0.030 (0.022)
Contributions (previous 3 years)	-0.001 (0.009)	-0.001 (0.008)	0.016$^+$ (0.008)	0.016** (0.005)	
Government Grants	0.013 (0.009)	0.036*** (0.006)	-0.023** (0.008)	-0.002 (0.003)	
Contributions Reliance	0.110* (0.042)	-0.275*** (0.033)		-0.145*** (0.025)	
N Organizations	1,364	1,364	1,364	1,364	1,364
N Markets	668	668	668	668	668

Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses
All variables other than dummies are in log form.
All models control for major 12 subsector. For full tables, please see Appendix A.

From a policymaker and foundation perspective, foundations appear to hold significant influence over the professionalization of organizations. While there do not appear to be financial efficiency gains from these pressures, there could be other consequences related to the quality of services produced. Foundations may pressure organizations to professionalize their operations and increase their mission impact through more quality programming, strategic management, and program evaluation (Bielefeld, 1992; Dolnicar et al, 2008; Froelich, 1999). However, as Dolnicar et al (2008) argue, this professionalization could come at the cost of losing voluntary input into nonprofit administration, which may lessen the representation of community perspectives. As Bolduc et al (2004) show, the professionalization of fundraising could also come at the cost of spending large amounts of administrative time on foundation grant management, which may not be accurately reported as financial expenses on the 990 information return.

5.3 The Effect of Competition on Organization Behavior

Model 1 tests H2a, which expects competition between near substitute organizations to lead to greater nonprofit fundraising expenses. A significant, negative coefficient on competition indicates the opposite effect than hypothesized, that competition leads organizations to reduce their fundraising outlays. This finding is consistent in sign, significance and magnitude across market definitions with an average effect of -0.22. Although this negative effect is different than most of the literature expects, Thornton (2006) finds a similar effect and argues that as in for-profit marketing, nonprofits receive less benefits from fundraising in more crowded markets, so they opt to reduce their fundraising expenses.

However, I do not find that competition leads to less fundraising efficiency in model 3 as expected in H2b.[15] Combined with a negative impact of competition on administrative expenses[16] in model 2, competition between near substitute organizations appears to lead to more efficient organizations. However, the effects of competition on fundraising efficiency and program efficiency in models 3 and 4 are insignificant with some significant effects from the sensitivity analysis suggesting that competition leads to lower fundraising and program expense efficiency overall, opposite from what hypotheses H2b and H2c expect.

Hypothesis H2d expects competition to lead to lower average revenue concentration. Such a finding would indicate that competition leads to organizational stability as organizations diversify their income portfolios. However, with an insignificant effect across model specifications and market definitions in model 5, I fail to reject a null relationship that competition and revenue diversification are unrelated. Instead, it appears that other factors are more important for revenue portfolios, particularly nonprofit subsector, the effects of which I show in the full table in Appendix A. Controlling for the other variables, all subsectors other than environment have significantly different revenue portfolios than arts organizations. This finding supports Young (2007) and Wilsker and Young's (2010) "nonprofit benefits theory," which expects program mission (here indicated by subsector) to be the main factor in an organization's financial resources. Since different organizations' programs yield different

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[15]I cannot confidently reject a null relationship. The effect is very sensitive to market definition but is fairly consistently insignificant, with mixed signs for the few significant effects across market definitions.
[16] This finding is fairly robust based on a sensitivity analysis with an average effect of -0.13.

benefits to different clients (e.g., public versus private or group benefits), nonprofits have varying access to different sources of revenues. For instance, an organization with mostly private benefits, such as an improvisation comedy theater, would generate fees for service but would have a harder time appealing to government or foundations for grants. Meanwhile, an organization that mainly produces public benefits, such as a research institute, would have difficulty surviving on private fees but would be more appealing for public and private grants.

Overall, competition affects organizations' fundraising and administrative expenses more than it influences efficiency or financial revenue diversification. Size and age appear to matter much more than competition, with older and larger organizations spending more on fundraising and administrative expenses. Controlling for size, age and the other factors in the model, greater numbers of near substitute organizations competing in the same grants market causes organizations to trim their administrative and fundraising overhead and maintain consistent program efficiency. Supporting Feigenbaum's (1987) argument, competition for funds appears to drive organizations to at least sustain levels of program efficiency and remain competitive for grants, in part by reducing their overhead expenses.

From a policy and foundation perspective, these findings do not provide robust support for competition leading to less efficient organizations. While it does not lead to greater reported program efficiency, it may very well cause greater efficiencies as organizations spend less to manage and promote their organizations. Importantly, instead of leading to excessive fundraising as some argue, competition causes organizations to significantly reduce their fundraising expenses. In aggregate, organizations' fundraising

may still be inefficient under varying levels of competition, as Thornton (2006) argues, but they are no less efficient under greater competition. We cannot discern management practices from these data to know how competition affects managerial efficiency concerning program outcomes. However, from the financial data it appears that under greater competition, nonprofits do more or the same amount with less overhead.

5.4 Organizational Determinants of Foundation Grants

Model 6 in table 10 demonstrates support for hypotheses 3a and 3d. H3a predicts that program efficiency will positively impact the likelihood of grant success controlling for other factors in the model. A significant ($p<0.05$) positive coefficient on program efficiency indicates that grantmaking foundations make grants to more efficient nonprofits on average. Increasing program efficiency by around 10 percent (e.g., from spending 77 percent of overall expenses on programs to spending 85 percent) increases an organization's odds of receiving a foundation grant by around 6.5 percent. At the sample averages for the other variables, increasing program efficiency by 10 percent increases the probability of getting a grant by around 6 percentage points. Meanwhile, organizations with higher fundraising expenses are also more successful, controlling for the other factors in the model. With a significant coefficient of 0.196 ($p<0.01$) on fundraising expenses, doubling an organization's fundraising expenses in is expected to yield around a 3 percentage point increase in an organization's probability of getting a grant, holding the other variables at their means. As expected by H3g, holding the other variables constant, larger organizations are also expected to be more likely to receive grants. All else equal, an organization that is double the size is expected to have 27

percent higher odds, or a 4.4 percentage point increase in the probability of receiving a

grant.

Table 10: Explaining Foundation Grant Distribution

L1 Organization Variables *L2 Market Variables*	Model 6 Grantee	Model 7 N Grants	Model 8 Total Grant Amounts
Intercept	-1.498*** (0.293)	-2.105*** (0.139)	-803,857*** (120,897)
Competition	-1.313*** (0.086)	-0.505*** (0.037)	-267,135*** (35,195)
Foundation Activity	0.882*** (0.050)	0.673*** (0.042)	295,295*** (37,165)
Program Efficiency	0.645* (0.254)	0.362** (0.122)	225,327*** (72,086)
Fundraising Expenses	0.196** (0.065)	0.077* (0.030)	55,869*** (20,551)
Assets	0.272*** (0.054)	0.153*** (0.030)	127,718*** (18,838)
Age	0.093 (0.119)	0.084 (0.057)	-18,172 (42,602)
Fulton/DeKalb County	0.651** (0.181)	0.318*** (0.071)	106,509 (70,203)
Contributions (previous 3 years)	0.016 (0.016)	0.008 (0.008)	5,841 (5,647)
Government Grants	0.040** (0.015)	0.017** (0.006)	11,916** (5,447)
Contributions Reliance	0.215** (0.074)	0.070* (0.032)	62,982** (25,601)
N Organizations N Markets	1,364 668	1,364 668	1,364 668

Dep. Var. = Received a grant (Model 7), Total number of grants received (Model 8), Total dollar amounts of grants received (Model 9)
Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses
All variables other than dummies are in log form.
All models control for major 12 subsector. For full tables, please see Appendix A.

Model 7 tests hypotheses 3b, 3e, and 3h explaining the number of grants received and model 8 tests hypotheses 3c, 3f, and 3i explaining the total grant amounts received. Significant positive coefficients on program efficiency, fundraising expenses, and total assets provide further support that organizations reporting greater program efficiency, spending more on fundraising, and that are larger, have comparative advantages over their peers and are expected to receive more grants as well as higher overall grant amounts, holding the other variables constant.

The significance of both program efficiency and fundraising expenses creates tension for nonprofit managers between increasing fundraising activities to earn more grants *and* spending more on programs than overhead expenses. However, since program efficiency is not as easily influenced by managers and is bounded by a limit of spending 100 percent of all expenses on programs, managers have greater control over their grant success (and perhaps overall fundraising efficiency) by spending more on fundraising.

5.5 The Impact of Market Factors on Grant Success

The grant distribution hypothesis, H4a, is tested in model 6, a logit model predicting foundation grant success. H4a expects greater inter-organization competition to lead to lower likelihoods of receiving foundation grants for organizations with the sample average program expense ratios, fundraising expenses, size, age, government grant revenue, lagged contributions, contributions reliance, and number of active

foundations in their market. The intercept represents an arts organization with the sample average of all independent variables. At sample average values of all variables in the model, organizations have about an 18 percent chance of getting a grant. As shown in model 6 in Table 10 and as expected, competition has a significant negative effect on the likelihood of getting a grant. As the number of organizations in the market doubles from the average of 6, the chances of getting a grant drop from 18 percent to around 6 percent, holding the other variables at their averages. The odds ratio (0.27, not shown) indicates that as competition between grant-seeking nonprofits doubles, the odds that an average organization will receive a grant will only be one-quarter as great. The effect of competition is robust across market definitions, with an average coefficient of -1.157, which is slightly smaller than the effect reported in model 6.

Not surprisingly, the number of foundations present in an organization's county is positively related with grant success. Doubling the number of foundations in a market from the average of 2 is expected to increase organizations' odds of grant success increase by around 88 percent. With 4 active foundations in a market, an organization's chance of getting a grant almost doubles to around 35 percent, holding the other variables at their averages. This finding is robust across market definitions, with an average coefficient on foundation activity across specification of 1.603, which is higher than the effect reported in model 6.

Other than higher education and religious, subsector is generally insignificant. With full controls, higher education organizations are less likely to get a grant and religious organizations have slightly higher probabilities, but organizations in other subsectors have around the same likelihood of getting a grant.

Overall, program efficiency and fundraising expenses increase an organization's chances of grant success, controlling for other organization variables and market characteristics. Inter-organization competition significantly reduces grant success for the average organization, while the number of foundations in an organization's market significantly improves its chances of winning grants. The organizational and market variables included in the models reduce the between-market variation of the intercept to a value insignificantly different from zero, implying that they fully explain the variance in grant success. Based on likelihood ratio tests, adding competition to models with all other controls significantly improves the model fit (χ^2 = 418.8 at 1 df, p<0.001).

5.6 The Moderating Impact of Competition on Grant Success

Next, I test the moderating impact of competition on grant selection hypotheses (H4b-H4g) with models 9, 10, and 11 in Table 11. I test hypotheses 4b and 4e with a logistic regression model with being a grantee as the dependent variable (model 9), hypotheses 4c and 4f with a Poisson model estimating the number of grants received (model 10) and hypotheses 4d and 4g with a tobit model estimating the total grant amounts (model 11). These hypotheses expect that competition between nonprofits in the same local grants market will act as a moderating variable, increasing the positive effects of program efficiency and fundraising expenditures on grant success and on the total number and amounts of grants expected.

Table 11: Competition and the Importance of Program Efficiency and Fundraising

L1 Organization Variables *L2 Market Variables*	Model 9 Grantee	Model 10 N Grants	Model 11 Total Grant Amounts
Intercept	-1.557*** (0.287)	-2.129*** (0.147)	-889,355*** (118,634)
Competition	-1.393*** (0.116)	-0.668*** (0.040)	-319,425*** (33,774)
Foundation Activity	0.882*** (0.056)	0.697*** (0.042)	326,770*** (36,645)
Program Efficiency	2.801** (0.963)	0.637[+] (0.353)	398,801[+] (224,465)
*Competition	1.094** (0.334)	0.292* (0.122)	170,613[+] (87,247)
*Foundation Activity	-0.126 (0.129)	0.040 (0.062)	-59,834 (88,102)
Fundraising Expenses	0.208 (0.210)	0.021 (0.071)	14,742 (48,621)
*Competition	0.047 (0.051)	0.079*** (0.013)	26,666* (12,139)
*Foundation Activity	-0.007 (0.022)	-0.002 (0.016)	34,073** (11,911)
Assets	0.261*** (0.055)	0.123*** (0.024)	105,068*** (18,399)
Age	0.110 (0.129)	0.067 (0.054)	-19,312 (41,777)
Fulton/DeKalb County	0.697** (0.209)	0.311*** (0.076)	92,542 (68,709)
Contributions (previous 3 years)	0.030 (0.019)	0.016* (0.007)	8,872 (5,441)
Government Grants	0.042* (0.017)	0.016** (0.005)	9,829[+] (5,215)

Table 11 continued

Contributions Reliance	0.367***	0.114**	74,465**
	(0.083)	(0.033)	(24,856)
N Organizations	1,364	1,364	1,364
N Markets	668	668	668

Dep. Var. = Received a grant (Model 9), Total number of grants received (Model 10), Total dollar amounts of grants received (Model 11)
All models include subsector controls as interaction terms with Program Efficiency and Fundraising Expenses, which are not shown to simplify the table. I show the full models in Appendix A.
Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

5.6.1 The Relative Importance of Program Efficiency under Varying Levels of Competition

I find support for hypotheses H4b, H4c, and H4d expecting program efficiency to be more important for grant success in more competitive markets. A significant and positive coefficient on interactions of competition with program efficiency in models 9, 10, and 11 indicate that as competition increases, the impact of program efficiency increases. At the average competition of 6 organizations and the average values of the other variables, increasing program efficiency by 10 percent increases the probability of getting a grant by 25 percent. At double the competition of around 12 organizations in a market, a 10 percent increase in program efficiency increases expected probability of getting a grant by 44 percent. At higher levels of competition, the percent change in the probability with a 10 percent increase in program efficiency continues to increase. However, due to the large negative coefficient on the competition variable alone, the negative impact of competition itself on the probability of grant success outweighs the additional benefits gained from an increased impact of program efficiency. Organizations in more competitive markets have significantly and substantially lower odds of getting

grants, regardless of program efficiency. While organizations receive relatively larger gains in terms of percent change of grants expected, under greater competition program efficiency yields less of a competitive advantage in terms of total additional grants expected. These effects are robust across market definitions, though significance falls under the major 12 subsector definition and when defining the geographic boundaries to the state rather than region. Across market definitions, the average significant effect of the competition-program efficiency interaction is 0.799 for the logit model, 0.319 for the Poisson model, and 184,313 for the tobit model, which are around the estimates reported in models 9, 10, and 11. Overall, market variables explain 32 percent of the slope variance in program efficiency's impact on grant success, with competition and foundation activity explaining 30 percent of the variance. Based on a likelihood ratio test, models including competition provide a significantly better fit ($p<0.05$) than models without competition.

5.6.2 The Relative Importance of Fundraising Expenses under Varying Levels of Competition

As can be seen in models 9, 10, and 11, the cross-level interactions between competition and fundraising expenses have the expected positive coefficients and are significant for models estimating the number of grants and total grant amounts (models 10 and 11). This indicates that competition leads to stronger positive impacts of fundraising expenses on both the predicted number of grants and total grant amounts awarded to nonprofits, controlling for the other variables in the models. These findings support H3f and H3g that increases in competition between grant seeking nonprofits will lead to more positive impacts of fundraising expenses on grant awards. That is, all else

equal, as competition between nonprofits increases, those that market themselves more heavily receive more, and larger, grants. However, earning additional grants comes at a heavy cost in competitive markets. Even though the same level of fundraising increases yield greater percent changes in grants in more competitive markets, the base probabilities at the average fundraising levels steadily decline as competition increases. Based on model 10, at double the average competition, an organization with the average values of the other variables in a market with the average number of foundations can only expect 0.06 grants (about half that expected under average competition). While doubling fundraising expenses can increase the number of grants by 8 percent, the organization is still not much more likely to get an additional grant. Because competition has such a large negative expected impact on the likelihood of receiving grants, the benefits of fundraising gained in more competitive markets is outweighed by the decreased likelihood of getting grants for the average organization.

To interpret these effects a little more clearly, I present a more intuitive model in Table 12 where competition, foundation activity, and fundraising expenses are centered at zero instead of at their sample means. In this model, the intercept represents a monopoly organization (i.e., an organization without market competitors) with zero fundraising expenses in a market with one active foundation and the average values at the other variables. Without competition, the organization can expect around 1 grant. Introduce one or two additional organizations in the market, however, and the expected number of grants drops to around 0.2. Under this level of competition, an organization with 10 percent greater program efficiency can only expect to earn another hundredth of a grant. By increasing fundraising expenses to $10,000, however, the organization can

expect around half of a grant, or a 114 percent increase, showing a much larger relative

effect of fundraising than program efficiency.

Table 12: Competition and the Importance of Program Efficiency and Fundraising
Supplemental Model

L1 Organization Variables *L2 Market Variables*	Model 12 N Grants
Intercept	0.324 (0.554)
Competition	-1.499*** (0.134)
Foundation Activity	0.835*** (0.189)
Program Efficiency	0.451 (0.456)
*Competition	0.423** (0.126)
*Foundation Activity	-0.063 (0.133)
Fundraising Expenses	-0.031 (0.052)
*Competition	0.083*** (0.012)
*Foundation Activity	-0.012 (0.018)
Assets	0.121*** (0.024)
Age	0.085 (0.051)
Fulton/DeKalb County	0.315*** (0.072)

Table 12 continued

Contributions (previous 3 years)	0.013*
	(0.007)
Government Grants	0.015**
	(0.005)
Contributions Reliance	0.096**
	(0.033)
N Organizations	1,364
N Markets	668

Dep. Var. = Total number of grants received
The model includes subsector controls as level 2 controls and as interaction terms which are shown in the full models in Appendix A.
Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

Just as in the previous models, the number of foundations in the state that give

grants to the same subsector and give grants in the same region makes a large difference.

With 10 active foundations, a monopoly organization with zero fundraising can expect

around 7 grants. Introducing one to two competitors drops the expected grants to around

1.5. By increasing fundraising to $10,000 at this level of competition, again the

organization can double its grants to 3. At greater competition, however, these effects are

greater. With 10 foundations and 10 nonprofits, without fundraising, an organization can

only expect around 0.2 grants, compared to the monopoly organization that received 7.

However, by spending $10,000 on fundraising and holding the other variables at their

averages, the organization can expect 1 grant, over a 400 percent change. Therefore,

under greater competition, organizations see greater percent changes in total grants from

the same amount of fundraising increases than organizations in less competitive markets,

but they cannot expect the same numbers of grants.

5.7 Sensitivity Analysis

It is important to note that the market boundaries used in this analysis are only proxies for the true competitive markets for these nonprofits, which are not known. As discussed in chapter 4, because arbitrary boundaries specified by regional borders may not accurately represent the nonprofits' competitive markets, I perform a sensitivity analysis specifying the market boundaries at the county and state levels as alternatives to the regional market definition. I also test the models defining competition among organizations within each of the 12 and 27 major industry classifications as an alternative to competition within the very specific nonprofit industry NTEE-CC codes. Across market definitions, the estimates in the models are generally consistent with those reported above in terms of sign and significance. As a notable exception, the parameter estimates in models 3 and 4, with fundraising efficiency and program efficiency as the dependent variables, demonstrate considerable sensitivity to market definition in terms of the significance and direction of effects. This finding cautions researchers and policymakers to consider the significant bias introduced by arbitrary market boundaries when evaluating other research relating competition in the sector to nonprofit efficiency. Since the estimates for the efficiency models vary so widely across market definitions, developing a more precise operationalization of nonprofit markets is essential to establishing sound inferences and policy recommendations.

Across models shown, HHI has similar effects as competition defined as the number of organizations in each market. Based on the sensitivity analysis, competition measured as the number of substitute organizations is more consistently significant than

HHI across market definitions, even though when HHI is significant it has the same sign and similar magnitude as competition measured as the number of organizations. Specifying competition in its raw, unlogged form also generally shows consistency with the findings I present. However, likelihood ratio tests indicate that models with logged variables provide a better fit. Models with the full sample, without restrictions, also produce consistent findings to those reported here, though the significance for the cross level interaction between competition and program efficiency falls in models 9 and 10. Overall, interactions between competition and fundraising expenses demonstrate much stronger consistency across models than interactions between competition and program efficiency, lending greater support to the importance of marketing rather than efficiency in competitive grants markets.

CHAPTER 6

CONCLUSIONS

Overall, these findings demonstrate that foundation activity and inter-organization activity significantly alter nonprofit organizations' institutional environment. Foundation activity in a nonprofit's market, in particular, significantly influences the organization's fundraising and administrative costs. The more active foundations exist in a market, the higher the amount the average organization spends on fundraising to attract those funds (and presumably signal legitimacy) and the more it spends on administration. These findings suggest that foundations in nonprofit markets exert institutional pressure on organizations to professionalize their operations in order to both earn and manage their grants. It is important to note that this does not necessarily imply that organizations are less efficient in markets with greater foundation activity. Indeed, the insignificant effects of foundation activity on fundraising and program efficiency in models 3 and 4 imply that foundations have little influence on overall organizational financial efficiency. However, foundations do create institutional pressures on nonprofits to be more efficient by disproportionately selecting more efficient and established organizations for their grants. Findings from models 6 through 8 indicate that organizations with greater program efficiency are significantly more likely to earn more and greater amounts of grants.

Foundation activity itself also affects organizations' probabilities of getting grants. Organizations operating in markets without the presence of active foundations are significantly less likely to receive foundation grants. While this finding seems rather intuitive, it has important implications for nonprofit management, particularly in rural

areas where foundations are not typically active. Managers of such organizations likely better serve their organizations by focusing on other revenue sources besides foundation grants.

Competition also plays an important role in grant selection. Organizations in markets with greater numbers of similar organizations are significantly less likely to earn foundation grants. With greater numbers of potential grantees, foundations in more competitive nonprofit markets become more selective, with findings from models 9 through 11 indicating that program efficiency matters more for grant selection in more highly competitive markets. At the same time, there is tension between the importance of program efficiency and spending on fundraising for nonprofit managers. While program efficiency increases an organization's competitive edge over similar organizations vying for foundation grants, spending on fundraising also increases an organization's likelihood of earning foundation grants. Like program efficiency, the impact of fundraising on grant selection also becomes stronger as competition increases, giving organizations that spend greater amounts on fundraising a competitive edge in those markets. Because spending more on fundraising relative to programs decreases an organization's program efficiency, managers may face a dilemma of whether to increase program or fundraising expenditures to attract greater funding. However, the findings from the sensitivity analysis show that the effect of fundraising expenses is more robust across market specifications than the impact program efficiency has on foundation grant success. Managers may find fundraising expenses more easily controllable than overall program efficiency, and while managers can only increase program efficiency to 1, there is no upper limit to the amount they can fundraise. Additionally, as shown most clearly in the

analysis of model 12 above, increasing fundraising expenses holds greater economic significance in terms of the relative impact on grant success. Reasonable increases in fundraising can have much larger impacts on grant success than reasonable increases in program efficiency in competitive markets. Increasing fundraising from zero to $10,000 can increase grants by over four times, a much larger effect than a 10 percent increase in program efficiency, which can only be expected to yield another hundredth of a grant.

In terms of explaining grant-making foundation behavior in competitive grant-seeking markets, I find significant support that grantmakers select grant recipients along organizational characteristics. Organizations that have greater program efficiency, are larger, and spend more on fundraising tend to capture more grants in competitive markets. These findings also support the expectation that nonprofit fundraising reduces the transactions costs for grantmakers and helps overcome information asymmetries in crowded grants markets. As competition between grant seeking nonprofits in local grants markets increases, foundations tend to increasingly fund organizations that actively market themselves. Greater inter-organization competition for grants also lowers the likelihood that foundations will fund organizations with average efficiency, fundraising expenditures, size, age, and alternative revenue streams compared to their peers. These findings suggest that foundations do not spread their resources thinly among competing grant seekers but instead become more selective and discerning as competition between grant-seeking organizations increases. These findings also support previous research in implying that spending more on fundraising is a key determinant to receiving foundation grants.

However, especially when faced with competition, this also implies that foundation grants come at a significant and substantial cost to organizations. This is particularly evidenced in the Poisson models predicting multiple grants showing that, on average and controlling for the other variables in the models, a one hundred percent increase in fundraising expenditures can only be expected to increase an organization's chances of earning an extra grant by around 8 percent. If an organization is already spending a significant amount on fundraising, an extra grant comes at a substantial cost. For example in model 7, with only an expected 0.077 increase in grants for every doubling of fundraising expenditures, all else equal, an organization would need to increase its fundraising outlays by around 1300% for each additional grant predicted under average levels of competition (around 6 nonprofits) and average foundation activity (around 2 foundations).

The question remains as to whether this pattern of grantmaking behavior in competitive grants markets leads to more effective outcomes. While foundations do not spread their resources thinly across competing organizations, greater competition leads to higher proportions of grant-seeking nonprofits that fail to receive funding. If this leads to a self-selection by unsuccessful nonprofits away from seeking grants and toward alternative sources of revenues, this could imply efficient charitable outcomes from philanthropic competition. Alternatively, this could lead to a stagnation of many promising organizations that rely on increased foundation funding to maximize their mission impacts. From a policy perspective, if competitive nonprofit markets arise from a social demand for their services, foundations cannot be expected to substitute or replace government as a universal funder of public goods. On the contrary, these results imply

that as nonprofits proliferate, government may need to increase its funding to offset the uncertainty of foundation grants, supporting arguments of voluntary failure and philanthropic insufficiency (Anheier, 2005).

In terms of manager response to these findings, Chetkovich and Frumkin (2003) argue that in order to market their organizations to funders, managers select between two competing management strategies. The first strategy is to boost their efficiency and show they can provide more program output for the same amount of money as their peers. The alternative strategy is to differentiate themselves from their peers in terms of programs and increase their fundraising to more targeted funders that share an interest in their mission niche. Chetkovich and Frumkin find that managers prefer the second strategy to the first and argue that this leads to increased nonprofit expertise, professionalization, and capacity to respond to particular social needs.

My findings showing nonprofits spend more on fundraising and administration in markets with greater foundation activity similarly support the argument that organizations tend toward professionalization and heavier marketing rather than efficiency in markets with greater foundation influence. Since organizations see greater economic gains from increasing fundraising expenses than improving their program efficiency in competitive markets, my findings suggest that managers should emphasize marketing even if it leads to slight losses in program efficiency. However, because competition itself plays such a large role in the likelihood of receiving grants, managers would be well advised to undertake some form of market analysis before dedicating substantial resources or time to foundation grant applications. Even a basic understanding of the number of similar organizations and foundations making grants to their particular subsector in the same

geographic area could inform managers of their realistic chances of truly entering and competing in the market.

From a policy perspective, foundations' apparent preference for professionalization could lead to improved quality of nonprofit programs and mission-related outcomes as nonprofits gain greater capacity and expertise. However, as Dolnicar et al (2008) and Chetkovich and Frumkin (2003) discuss, such professionalization could also lead to more corporate rather than voluntary organizational behaviors, more emphasis on marketing rather than mission, and selection of clients based on how easy they are to serve rather than need (i.e., "creaming"). This is a similar concern as Guo (2007) and Smith and Lipsky (1993) raise regarding the influence of government grants on professionalization, leading to a decline community representation among nonprofits (also see Suarez, 2011).

Similarly, since foundations appear to become more selective as competition increases, nonprofit competition could lead to more targeted selection by foundations and more targeted fundraising by grantees seeking to differentiate themselves and their particular missions from their peers. If targeted grantmaking stratifies the market due to intense program differentiation, these segmented markets could become noncompetitive leading to poorer quality services (Chetkovich and Frumkin, 2003). Moreover, such targeted funding could lead to less diversity of organizations overall as only the professionalized and established organizations grow and survive (Chetkovich and Frumkin, 2003; Rose-Ackerman, 1982). For this reason, limiting the market through united funding drives, such as the United Way, or creating barriers to entry in grants markets by encouraging unsolicited grants processes could lead to market efficiencies by

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limiting the market to established organizations that can secure funding (Rose-Ackerman, 1982). However, such strategies could also lead to less diversity of organizations and those representing minority views being further marginalized (Rose-Ackerman, 1982; Chektovich and Frumkin, 2003).

Since foundations exert such a strong institutional pressure on nonprofits to professionalize their operations but simultaneously create market pressures for organizations to maintain efficiency, an alternative strategy to limiting grant market entry could be to increase the influence foundations have across nonprofit markets by channeling more funding through them and creating greater incentives to establish new foundations across local regions. Public policies could include relaxing mandatory spend-out policies or reducing excise taxes currently imposed on private foundations in the US, increasing the charitable tax deduction rate to encourage more giving to foundations, or directly funding foundations with public dollars. Since foundations are selective of organizations based on efficiency but drive nonprofits toward professionalization of their operations, greater numbers of diverse foundations or expanding the presence of existing foundations more broadly across geographic markets would direct philanthropic dollars to stable organizations, influence all organizations within nonprofit markets to professionalize, and build overall nonprofit capacity to respond to local and regional needs. Furthermore, by promoting ideologically diverse foundations, such a strategy would not necessarily limit the ideological diversity organizations, leading to a stronger sector while maintaining its diversity.

APPENDIX A

FULL MODELS

Table 13: Organization Financial Behavior Full Models

L1 Organization Variables *L2 Market Variables*	Model 1 Fundraising Expenses	Model 2 Administrative Expenses	Model 3 Fundraising Efficiency	Model 4 Program Efficiency	Model 5 Revenue Concentration
Intercept	9.602***	10.862***	2.190***	-0.699***	-0.731***
	(0.155)	(0.140)	(0.129)	(0.104)	(0.034)
Competition	-0.179***	-0.079[+]	0.064	-0.026	0.015
	(0.049)	(0.043)	(0.044)	(0.023)	(0.011)
Foundation Activity	0.071***	0.043**	-0.010	0.009	0.003
	(0.017)	(0.015)	(0.016)	(0.011)	(0.003)
Higher Education	0.938***	1.077***	0.042	0.248[+]	0.247**
	(0.284)	(0.242)	(0.256)	(0.136)	(0.070)
Education	-0.177	-0.121	0.324*	0.329**	0.297***
	(0.189)	(0.208)	(0.158)	(0.122)	(0.042)
Hospitals	-1.062	1.633**	-0.875	-0.034	0.681***
	(0.885)	(0.494)	(1.034)	(0.142)	(0.075)
Environment	-0.332	-0.431*	0.547*	0.406**	0.114
	(0.248)	(0.189)	(0.245)	(0.127)	(0.069)
Health (not Hospitals)	-0.096	0.051	0.554**	0.206	0.295***
	(0.217)	(0.161)	(0.193)	(0.125)	(0.044)
Human Services	-0.063	0.036	0.421**	0.319**	0.176***
	(0.169)	(0.150)	(0.144)	(0.103)	(0.037)
International	0.902	0.781[+]	1.442***	0.593***	0.564***
	(0.563)	(0.434)	(0.223)	(0.134)	(0.063)
Public Benefit	0.173	0.031	0.497**	0.180	0.363***
	(0.203)	(0.185)	(0.178)	(0.144)	(0.049)
Religious	0.258	0.588*	0.798***	0.496***	0.407***
	(0.244)	(0.226)	(0.209)	(0.125)	(0.052)

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Table 13 continued

Assets	0.439***	0.456***	0.024	0.013	-0.017***
	(0.031)	(0.029)	(0.020)	(0.011)	(0.004)
Age	0.217***	0.168**	-0.150*	0.061*	-0.082***
	(0.061)	(0.054)	(0.061)	(0.029)	(0.013)
Fulton/DeKalb County	0.706***	0.389***	-0.285**	0.022	0.030
	(0.105)	(0.088)	(0.097)	(0.047)	(0.022)
Contributions (previous 3 years)	-0.001	-0.001	0.016$^+$	0.016**	
	(0.009)	(0.008)	(0.008)	(0.005)	
Government Grants	0.013	0.036***	-0.023**	-0.002	
	(0.009)	(0.006)	(0.008)	(0.003)	
Contributions Reliance	0.110*	-0.275***		-0.145***	
	(0.042)	(0.033)		(0.025)	
N Organizations	1,364	1,364	1,364	1,364	1,364
N Markets	668	668	668	668	668

Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses
All variables other than dummies are in log form.

Table 14: Explaining Foundation Grant Distribution Full Models

L1 Organization Variables *L2 Market Variables*	Model 6 Grantee	Model 7 N Grants	Model 8 Total Grant Amounts
Intercept	-1.498*** (0.293)	-2.105*** (0.139)	-803,857*** (120,897)
Competition	-1.313*** (0.086)	-0.505*** (0.037)	-267,135*** (35,195)
Foundation Activity	0.882*** (0.050)	0.673*** (0.042)	295,295*** (37,165)
Higher Education	-2.793*** (0.506)	-0.767*** (0.169)	-190,683 (220,465)
Education	-0.053 (0.355)	0.083 (0.129)	-34,187 (128,579)
Hospitals	-1.604 (1.255)	-1.129+ (0.660)	-792,892 (614,014)
Environment	0.340 (0.406)	-0.012 (0.158)	-28,271 (175,839)
Health (not Hospitals)	-0.253 (0.385)	-0.107 (0.127)	-96,540 (126,686)
Human Services	-0.149 (0.301)	-0.109 (0.096)	-158,843 (109,768)
International	-0.794 (0.642)	-0.715** (0.271)	-56,561 (256,063)
Public Benefit	-0.068 (0.342)	-0.023 (0.129)	-9,198 (129,005)
Religious	0.792+ (0.453)	-0.099 (0.191)	-62,028 (177,874)
Program Efficiency	0.645* (0.254)	0.362** (0.122)	225,327*** (72,086)

Table 14 continued

Fundraising Expenses	0.196**	0.077*	55,869***
	(0.065)	(0.030)	(20,551)
Assets	0.272***	0.153***	127,718***
	(0.054)	(0.030)	(18,838)
Age	0.093	0.084	-18,172
	(0.119)	(0.057)	(42,602)
Fulton/DeKalb County	0.651**	0.318***	106,509
	(0.181)	(0.071)	(70,203)
Contributions (previous 3 years)	0.016	0.008	5,841
	(0.016)	(0.008)	(5,647)
Government Grants	0.040**	0.017**	11,916**
	(0.015)	(0.006)	(5,447)
Contributions Reliance	0.215**	0.070*	62,982**
	(0.074)	(0.032)	(25,601)
N Organizations	1,364	1,364	1,364
N Markets	668	668	668

Dep. Var. = Received a grant (Model 7), Total number of grants received (Model 8), Total dollar amounts of grants received (Model 9)

Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

All variables other than dummies are in log form.

Table 15: Competition and the Importance of Program Efficiency and Fundraising Full Models

L1 Organization Variables *L2 Market Variables*	Model 9 Grantee	Model 10 N Grants	Model 11 Total Grant Amounts
Intercept	-1.557*** (0.287)	-2.129*** (0.147)	-889,355*** (118,634)
Competition	-1.393*** (0.116)	-0.668*** (0.040)	-319,425*** (33,774)
Foundation Activity	0.882*** (0.056)	0.697*** (0.042)	326,770*** (36,645)
Education	-0.100 (0.373)	0.034 (0.161)	-71,351 (126,602)
Health	-0.320 (0.460)	-0.150 (0.172)	-40,401 (125,211)
Human Services	-0.197 (0.301)	-0.048 (0.106)	-105,422 (108,526)
Other	0.282 (0.361)	0.044 (0.132)	13,350 (113,573)
Program Efficiency	2.801** (0.963)	0.637[+] (0.353)	398,801[+] (224,465)
*Competition	1.094** (0.334)	0.292* (0.122)	170,613[+] (87,247)
*Foundation Activity	-0.126 (0.129)	0.040 (0.062)	-59,834 (88,102)
*Education	-3.793** (1.230)	-0.874 (0.535)	41,607 (53,834)
*Health	0.022 (1.731)	0.016 (0.672)	-64,575 (53,159)
*Human Services	-2.235[+] (1.198)	-0.502 (0.411)	-33,810 (50,150)

Table 15 continued

Other	-2.784*	-0.490	479.8
	(1.210)	(0.436)	(50,834)
Fundraising Expenses	0.208	0.021	14,742
	(0.210)	(0.071)	(48,621)
Competition	0.047	0.079***	26,666*
	(0.051)	(0.013)	(12,139)
Foundation Activity	-0.007	-0.002	34,073**
	(0.022)	(0.016)	(11,911)
Education	0.038	0.040	
	(0.248)	(0.068)	
Health	0.074	0.051	
	(0.252)	(0.058)	
Human Services	0.121	0.029	
	(0.229)	(0.054)	
Other	-0.097	-0.051	
	(0.235)	(0.055)	
Assets	0.261***	0.123***	105,068***
	(0.055)	(0.024)	(18,399)
Age	0.110	0.067	-19,312
	(0.129)	(0.054)	(41,777)
Fulton/DeKalb County	0.697**	0.311***	92,542
	(0.209)	(0.076)	(68,709)
Contributions (previous 3 years)	0.030	0.016*	8,872
	(0.019)	(0.007)	(5,441)
Government Grants	0.042*	0.016**	9,829[+]
	(0.017)	(0.005)	(5,215)
Contributions Reliance	0.367***	0.114**	74,465**
	(0.083)	(0.033)	(24,856)
N Organizations	1,364	1,364	1,364
N Markets	668	668	668

Table 15 continued

Dep. Var. = Received a grant (Model 9), Total number of grants received (Model 10), Total dollar amounts of grants received (11)
Subsector-Fundraising Expenses interaction variables are omitted from Model 11 due to collinearity
Significance: [+] p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

Table 16: Competition and the Importance of Program Efficiency and Fundraising
Supplemental Full Model

L1 Organization Variables *L2 Market Variables*	Model 12 N Grants
Intercept	0.324 (0.554)
Competition	-1.499*** (0.134)
Foundation Activity	0.835*** (0.189)
Education	-0.024 (0.682)
Health	0.187 (0.672)
Human Services	0.226 (0.584)
Other	0.972 (0.564)
Program Efficiency	0.451 (0.456)
Competition	0.423** (0.126)
Foundation Activity	-0.063 (0.133)
Education	-0.965 (0.619)
Health	-0.272 (0.726)
Human Services	-0.769 (0.506)

Table 16 continued

Other	-0.823
	(0.527)
Fundraising Expenses	-0.031
	(0.052)
Competition	0.083***
	(0.012)
Foundation Activity	-0.012
	(0.018)
Education	0.005
	(0.061)
Health	-0.022
	(0.061)
Human Services	-0.020
	(0.053)
Other	-0.083
	(0.051)
Assets	0.121***
	(0.024)
Age	0.085
	(0.051)
Fulton/DeKalb County	0.315***
	(0.072)
Contributions (previous 3 years)	0.013*
	(0.007)
Government Grants	0.015**
	(0.005)
Contributions Reliance	0.096**
	(0.033)
N Organizations	1,364

Table 16 continued

N Markets   668

Dep. Var. = Total number of grants received
Significance: $^+$ p<0.1, * p<0.05, ** p<0.01, *** p<0.001, Standard Errors in parentheses

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