

# The Contextual Impact of Nonprofit Board Composition and Structure on Organizational Performance: Agency and Resource Dependence Perspectives

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**Abstract** We study the relation between stability of the nonprofit organization's environment and its board structure and the impact of this relation on organizational performance from the perspectives of both Agency Theory and Resource Dependence (Boundary Spanning) Theory. The impact of board characteristics on organizational performance is contextual. Specifically, we predict and show for a sample of U.S. nonprofits that board mechanisms related to monitoring are more likely to be effective for stable organizations, whereas board mechanisms related to boundary spanning are more effective for less stable organizations. We find that the two theories are complementary and address different aspects of nonprofit performance, but the results are statistically stronger and more often consistent with resource dependence than with agency theory. Overall, this study supports Miller-Millesen's (*Nonprofit and Voluntary Sector Quarterly*, 32: 521–547 2003) contention that, because the nonprofit environment is often more complex and heterogeneous than the for-profit world, no one theory describes all tasks of nonprofit boards.

**Résumé** Nous étudions la relation entre la stabilité de l'environnement de l'organisation à but non lucratif et la structure de son administration et l'impact de

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cette relation sur la performance organisationnelle dans les perspectives à la fois de la théorie d'institution et de la théorie de la dépendance aux ressources (partage de l'information). L'impact des caractéristiques de l'administration sur la performance organisationnelle est contextuel. Spécifiquement nous prédisons et montrons pour un échantillon d'organisations à but non lucratif des Etats Unis que les mécanismes d'administration liés à la surveillance sont vraisemblablement plus efficaces pour des organisations stables, alors que les mécanismes d'administration liés au partage d'information sont plus efficaces pour les organisations moins stables. Nous pensons que les deux théories sont complémentaires et parlent de différents aspects de la performance non lucrative, mais les résultats sont statistiquement meilleurs et souvent plus cohérents avec la dépendance à la ressource qu'avec la théorie d'institution. En somme, cette étude supporte l'affirmation de Miller-Millesen (*Nonprofit and Voluntary Sector Quarterly*, 32: 521–547 2003) que, l'environnement des organisations à but non lucratif est souvent plus complexe et hétérogène que le monde du lucratif, aucune théorie ne décrit toutes les tâches de l'administration des organisations à but non lucratif.

**Zusammenfassung** Wir untersuchen die Beziehung zwischen Stabilität des Umfeldes einer gemeinnützigen Organisation und der Struktur ihres Vorstandes und den Einfluss, den diese Beziehung auf organisatorische Leistungen aus Sicht von Agency Theory und Resource Dependence (Boundary Spanning) Theory hat. Der Einfluss der Charakteristika des Vorstandes auf die organisatorische Leistung ist kontextabhängig. Speziell prognostizieren und zeigen wir für eine Beispielgruppe von US-amerikanischen gemeinnützigen Organisationen, dass Verfahren des Vorstandes bezüglich Monitoring eher für stabile Organisationen wirken, während Verfahren des Vorstandes bezüglich Boundary Spanning eher für weniger stabile Organisationen erfolgreich sind. Wir finden, dass die beiden Theorien sich ergänzen und verschiedene Aspekte der Leistung von Nonprofits ansprechen, aber die Ergebnisse sind statistisch stärker und stimmen öfter mit der Resource Dependence Theory als mit der Agency Theory überein. Generell unterstützt diese Studie Miller-Millesens (*Nonprofit and Voluntary Sector Quarterly*, 32: 521–547 2003) Behauptung, dass eine Theorie allein nicht alle Aufgaben von Vorständen gemeinnütziger Organisationen beschreiben kann, weil das Umfeld gemeinnütziger Organisationen oft komplexer und heterogener ist als das von gewinnorientierten Organisationen.

**Resumen** Estudamos la relación entre la estabilidad del entorno de las organizaciones sin ánimo de lucro y la estructura de sus juntas, así como el impacto de esta relación sobre el rendimiento organizativo desde la perspectiva de dos teorías: la de agencias y la de dependencia de recursos (expansión de fronteras). El impacto de las características de las juntas sobre el rendimiento organizativo es contextual. En concreto: predecimos y demostramos con una muestra de ONG estadounidenses que los mecanismos de juntas relacionados con la supervisión tienen más posibilidad de ser eficaces para organizaciones estables, mientras que los mecanismos de juntas relacionados con la expansión de fronteras son más eficaces para las organizaciones menos estables. Descubrimos que las dos teorías son

complementarias y que abordan distintos aspectos de los resultados de las sin ánimo de lucro, si bien los resultados son estadísticamente más sólidos y a menudo más coherentes en la teoría de la dependencia de recursos que en la teoría de agencias. En general, este estudio respalda la afirmación de Miller-Millesen (*Nonprofit and Voluntary Sector Quarterly*, 32: 521–547 2003) según la cual, dado que el entorno sin ánimo de lucro es a menudo más complejo y heterogéneo que el mundo con ánimo de lucro, no existe ninguna teoría que pueda describir el trabajo de las juntas de las sin ánimo de lucro.

**Keywords** Nonprofit boards · Agency theory · Resource dependency theory

## Introduction

The United States is home to a large and varied group of nonprofit organizations. According to the National Center for Charitable Statistics (2007), almost 1.5 million organizations registered in 2006 with the Internal Revenue Service. Of these, about 347,000 are “operating public charities,” registered under IRS Code Section 501 (c) (3), organized for religious, charitable, scientific, educational, or certain other purposes. A key characteristic of these organizations is that they do not operate for the benefit of private owners, but are responsible to various stakeholders. They are supported by the public, not by a single dominant donor.<sup>1</sup> Therefore, profit maximization is not the sole measure of performance.

This study employs a sample of operating public charities to test hypotheses suggested by both Agency Theory and Resource Dependence Theory regarding the relation between board characteristics and two different measures of organizational performance. We add to the relatively limited empirical literature on nonprofit boards by considering board characteristics related to both theories and by relating the effectiveness of board characteristics to the stability of the organization’s funding environment.

Miller-Millesen (2003) argues that, due to the absence of an unambiguous objective (such as profit maximization), the large number of stakeholder types and confounding ideological concerns, nonprofit boards face a more complex and heterogeneous set of goals than do for-profit boards. “Performance” has numerous dimensions, and is judged differently in different contexts. As a consequence, no one theory can adequately explain the proper functions of nonprofit boards. She suggests two broad theories for developing hypotheses concerning the functionality of the nonprofit board: agency theory (Jensen and Meckling 1976; Fama and Jensen 1983a), and resource dependence theory (Pfeffer and Salancik 1978).

<sup>1</sup> The category of operating public charities excludes private foundations, which are primarily sponsored by a dominant founding member. Also, the following types of nonprofit organizations have their own categories, and are not 501 (c) (3) organizations: cooperatives; civic leagues; business leagues and chambers of commerce; labor and agricultural organizations; social and recreational clubs; and war veterans’ organizations (National Center for Charitable Statistics 2007).

One important aspect of nonprofit “performance” is management’s responsible stewardship of organizational funds. Agency theory is particularly relevant to this area, since agency theory focuses on the separation of ownership and control. It emphasizes the responsibility of the board in hiring and monitoring senior management so that management interests do not conflict with those of the organization. For example, boards act to prevent management from “empire-building” and from setting excessive perquisites for employees, and thus keep overhead costs low.

A second important aspect of performance is securing the necessary resources to perform the organization’s mission. Resource dependence theory, which emphasizes that the acquisition and maintenance of human, financial, and other resources is essential for organizational survival, is relevant to this aspect of performance. The primary functions of the board, according to this theory, are to facilitate exchanges that reduce organizational resource dependencies, to increase the flow of a variety of kinds of resources through personal and professional contacts, and to represent the organization to external constituencies.

Building on Oliver’s (1991) assertions, Miller-Millesen (2003) contends that agency theory and resource dependence theory are not mutually exclusive ways of looking at nonprofit board functionality, but rather are complementary when used to predict and explain board behavior. Agency theory focuses primarily on containing management costs, and on preventing the misallocation or diversion of resources away from satisfying the goals of the organization toward the pockets of management. Therefore, a well functioning board from an agency theory perspective is successful when it minimizes unnecessary administrative expenses by monitoring management’s perquisite activities. In contradistinction, resource dependence theory focuses on raising resources. A well functioning board from a resource dependence theory perspective is successful when it ensures the institution’s ability to raise resources. (Empirically, we look at the board’s ability to maximize the growth of direct contributions.) Thus, these theories are complementary in that they focus to a great extent, although not entirely, on different aspects of nonprofit performance and on different relationships between board governance and nonprofit performance.

Broadly construed, we test empirically the hypothesis that nonprofit board characteristics interact with the operating characteristics and environment of the organization in driving nonprofit performance as reflected in revenue growth and in controlling the level of administrative expenses. We find that resource dependence theory provides strong empirical insights into our understanding of the growth in direct contributions to nonprofits. We also find that the agency theory framework provides some empirical insights into explaining nonprofit administrative expenses.

The next section briefly reviews the extant literatures on the relationship between board characteristics and nonprofit performance from the perspective of both agency theory and resource dependence theory and uses that literature to develop the testable hypotheses. The sections that follow describe the data, our empirical findings, our conclusions and the limitations of this study.

## Literature Review and Development of Empirical Hypotheses and Proxy Variables

Numerous management and practitioner-oriented prescriptive papers and books describe how nonprofit boards should operate.<sup>2</sup> Papers in the last 10 years that provide good overviews of the non-profit governance literature include Hyndman and McDonnell (2009), Stone and Ostrower (2007), Miller-Millesen (2003), Green et al. (2001), Ostrower and Stone (2001), Murray and Cutt (2000), and Stone et al. (1999). Academic papers view board performance through a variety of perspectives, including Agency Theory, Resource Dependence, Institutional Theory, and Transaction Cost models. Yet, as noted in these surveys, the body of empirical literature dealing with the relation between board governance and nonprofit performance is limited and, for the most part, descriptive and/or exploratory. Stone and Ostrower (2007) note “Very few studies, however, have asked whether and how board composition affects measures of organizational performance...” and they go on to state “We cannot at this point, therefore, speak with any certainty on the question of whether or how the composition of boards makes a difference to nonprofits or the broader communities they serve.”

Performance, or organizational effectiveness, has been a difficult concept to define and study, in part because it can be defined in various ways. Bradshaw et al. (1992) outline three ways of judging effectiveness. These include the organization’s success in obtaining resources, its efficiency in using these inputs, and the degree to which it attains its service provision goals. Similarly, Green et al. (2001) discuss three models for viewing effectiveness: a “natural systems model”, which deals with the organization’s ability to obtain the resources it needs to survive and grow; a “decision process model,” which looks at the board’s use of high-quality processes as an end in itself; and a “goals model,” which looks at the attainment of particular output goals.

Not surprisingly, prior empirical research has used a variety of proxies and techniques to measure organizational performance. Bradshaw et al. (1992) studied 417 Canadian nonprofit organizations. They employed four proxies for organizational effectiveness, including: the growth in the budget; the size of any budget deficit; and two subjective measures of effectiveness based on respondents’ assessment of the organization’s performance with regard to a variety of functions. Bradshaw et al. (1992) found that board size and composition had little power to explain differences in organizational effectiveness.

Two papers (Green and Griesinger 1996; Cornforth 2001) followed Bradshaw et al. (1992) in using survey responses to construct subjective measures of organizational or board effectiveness, but, unlike Bradshaw et al., did not use any objective financial measures of organizational effectiveness. Cornforth (2001) used 1999 data for over 700 organizations from a national survey in England and Wales to relate board inputs, board structures and board processes to board effectiveness in

<sup>2</sup> For an introduction to the for-profit literature on the relation between board composition and structure and organizational performance, see the meta-analyses by Dalton et al. (1998) and Dalton et al. (1999), as well as the literature survey by Daily et al. (2003).

performing 17 different functions, including stewardship and fundraising. Conforth did not find significant relations between board effectiveness and either the size of the board or the frequency of its meetings. Green and Griesinger (1996) related the quality of certain board processes and organizational performance (measured using survey responses) for 16 nonprofit organizations dealing with developmentally disabled young adults. Their organizational performance criteria primarily focus on achieving service goals, but also consider the organization's ability to raise resources. They found significant relations between certain board processes and organizational performance in, among other areas, "resources development" and "financial planning." They did not find a significant relation between board processes and "budget setting." Their study was also not designed to test associations between board composition and structure variables and organizational performance.

The extant governance literature strongly suggests that the links between board structure and composition and organizational performance are likely to be mediated by a variety of factors (Cornforth and Edwards 1999). A variety of board processes may affect board functioning (Green and Griesinger 1996). Stone and Ostrower (2007) cite prior literature indicating that the power balance between boards and CEO's depends upon a variety of "individual, organizational, and environmental factors," such as "CEO seniority, organizational size, and external stability." Hyndman and McDonnell (2009) point to the importance of other governance factors that are outside the board. The causality of the links between board functions and performance is unlikely to be uni-directional. The way boards are chosen and structured may be in reaction to pressures on the board. Iecovich (2005) studied 161 nonprofit organizations in Israel, and found links between the organizations' task environment and features of board structure. To cite one example, she found a significant correlation between organizational deficits and the amount of time the board devoted to fundraising.

Our paper adds to this literature by relating objective financial measures of organizational performance to certain aspects of board structure and composition, taking into consideration the important mediating effect of organizational revenue stability. The use of objective financial organizational measures of performance is rare in the literature. We consider both the Agency and the Resource Dependence perspectives of the role of nonprofit boards, discussed in the next section. Our measures of financial performance include one (growth in donations) related to the "natural systems" or to the "resource dependency literature", and one (the administrative expense percentage) that relates to the efficiency of converting inputs into outputs, and is directly related to the Agency perspective.

### Agency and Resource Dependence Perspectives

Agency theory deals with the separation of ownership and control of the firm's assets. Nonprofit organizations differ from for-profit firms in that they have no residual owners of the entity's assets. However, as Fama and Jensen (1983a, b) argue, for a nonprofit organization to survive and be successful, there must be assurances that the donations received will be used effectively and not expropriated.

Agency theory suggests that a major board function is to monitor costs and the allocation of resources. Consistent with this argument, the board must provide mechanisms that separate its monitoring function from management's implementation of the organization's goals. As we hypothesize below, there are ways that nonprofit boards can be structured to achieve this purpose. Some of the ways (such as the inclusion of nonboard members on board committees, and the inclusion of major donors on the board) are unique to nonprofits; others (such as the use of compensation and audit committees) are similar to for-profit boards.

The agency perspective suggests that board monitoring will have an impact upon organizational costs. Our proxy for the board's attention to monitoring is, therefore, the average "administrative expense ratio", defined as the ratio of administrative expenses to total revenues. To mitigate the small denominator problem, average administrative expenses for each firm is computed as total administrative expenses over the sample period divided by total revenues over the sample period (adjusted for missing data). The assumption is that greater monitoring efforts will be associated with lower average administrative expense ratios.

A second theoretical perspective of the role of boards comes from resource dependence theory. Pfeffer and Salancik (1978) define "resource dependence" as the organization's need to construct internal mechanisms toward managing or strategically adapting to its external environments. One way a nonprofit organization can manage its external environments is to place directors on its board in proportion to the directors' abilities to influence the outside world to the organization's advantage, for example through fundraising, through helping the organization to collaborate with government or other organizations, or by improving the organization's outside image. In the nonprofit literature, this is often referred to as "boundary spanning" (see, e.g., Provan 1980; Provan et al. 1980; Harlan and Saidel 1994; Jun and Armstrong; 1997). See Iecovich (2005) for a discussion of how, in a sample of Israeli organizations, these activities included both fundraising and increasing the ability to collaborate with other organizations.

Existing studies support the view that a very important boundary spanning activity for nonprofit boards is securing external financing (fundraising). Zald (1967) finds that boards of Chicago YMCAs are more likely to spend time raising funds than involving themselves with programs or attending meetings because fundraising is considered more crucial for the organizations' existence. Pfeffer (1973) finds that hospital boards dependent on local communities for support tend to co-opt local well-known community leaders in order to raise funds. In contrast, he finds that hospitals dependent upon religious groups or the federal government for support have boards that are involved to a greater extent in administrative activities. Pfeffer and Salancik (1978) show that fundraising is an important activity for boards of private and nonprofit hospitals that are more reliant on private donations. By comparison, hospitals characterized as dependent upon federal funds are more concerned with the internal administration of the organization. More recently, using board member survey data, O'Regan and Oster (2005) find some evidence that executive directors of nonprofits may use their power to push nonprofit boards toward fundraising in place of monitoring.

Thus, the key proxy variable we test from a resource dependence perspective involves raising funds, while the key metrics under the agency perspective relate to uses of funds. Specifically, we measure the degree of board boundary spanning by the growth rate in direct contributions, computed as the annual geometric growth rate from 1992 to 1996 inclusive, a period of 5 years. In the event that the 1992 or 1996 (but not both) data are missing, the geometric growth rate is measured over the 4-year period.

The greater is the degree of boundary spanning, the greater is the growth in the organization's direct contributions. This measure is analogous to Bradshaw et al.'s (1992) use of growth in budget size as a measure of organizational performance.

### Hypotheses and Variables Regarding Mediating Effects of Organizational Instability

Organizational instability is predicted to be associated with less monitoring, but more effort at boundary spanning. The board's focus is likely to differ when the organization is undergoing rapid changes. Miller-Millesen (2003) maintains that nonprofit boards are more likely to engage in monitoring activities when the organization is stable. Her argument is based on the meta-analysis of Daily and Schwenk (1996), who find that when for-profit organizations are undergoing significant changes (e.g., globalization or restructuring) or are in decline, power shifts from the board to the CEO and monitoring activities decline. This yields our first testable hypotheses (expressed in the alternative).

**H1A** There is a positive association between organizational instability and the average administrative expense ratio.

**H1B** The association between board characteristics and the average administrative expense ratio will vary with organizational instability. In particular, board characteristics that are expected to have a negative (positive) relation with the average administrative expense ratio will have a weaker (stronger) association the more unstable the organization.

The instability of the organization is measured by the standard deviation of total revenues for the organization over the 5 years 1992–1996. If total revenues for one of these years are missing, the standard deviation is computed for 4 years.

Miller-Millesen (2003), again citing Daily and Schwenk (1996) for motivation, predicts that boundary spanning is more likely to occur for firms that are unstable and where the external environment is complex. Her rationale is that for less stable nonprofit organizations, the CEO will handle administrative duties, but the board will focus more on fundraising. This consideration yields the following two hypotheses:

**H1C** There is a positive association between organizational instability and the growth in direct contributions.

**H1D** The association between board characteristics and the growth of direct contributions will vary with organizational instability. In particular, board

characteristics that are expected to have a negative (positive) relation with the growth in donations will have a weaker (stronger) association the more unstable the organization.

### Hypotheses Regarding Donor Representation on the Board and the Fund-Raising Committee

Donor representation on the board is expected to be positively associated with performance from both the agency and the resource dependence perspectives. Hansmann (1980) and Fama and Jensen (1983a), taking the agency perspective, propose that major donors serve as effective monitors of nonprofits. Callen et al. (2003) provide evidence in favor of the link between having major donors on a nonprofit board and effective board monitoring. They show an inverse relation between the presence and role of major donors on the board and (1) the ratio of total expenses to program expenses and (2) the ratio of administrative expenses to program expenses.<sup>3</sup> Therefore, we propose the following hypothesis:

**H2A** There is a negative association between the proportion of major donors on the board and the average administrative expense ratio.

From the resource dependence perspective, we argue that major donors are often co-opted to serve on nonprofit boards and especially on board fundraising committees because of their contacts among the moneyed elite and their often unique ability to co-opt other potential major donors to the organization. (It should be noted that committee members need not be board members.) Callen et al. (2003) find for a large sample of nonprofit organizations that major donors tend to be more highly represented on the fundraising (development) committee than on the board. This leads to our next hypothesis:

**H2B** There is a positive association between the proportion of major donors on the board and on the board's fundraising committee and the growth in direct contributions.

### Hypotheses Related to Board Size

Larger board size is expected to be associated with more boundary spanning efforts (since there are more board members to make links with outside organizations) but with less effective monitoring, due to the unwieldy size of the board. See Hyndman and McDonnell (2009). Yermack (1996) shows an inverse relation between board size and firm performance for for-profit firms. He concludes that smaller boards are more adept at monitoring the firm, following an agency perspective. Prior empirical literature is far from unanimous in supporting this proposal. Bradshaw et al. (1992)

<sup>3</sup> Following the accepted accounting rules for nonprofit organizations, total expenses are comprised of program expenses, fundraising expenses, and administrative expenses. Program expenses are incurred for activities directly related to carrying out the organization's mission; fundraising expenses are incurred to help obtain donations; and administrative expenses relate to the central administrative functions of the organization.

found board size to have little power to explain differences in growth in budgets, and Cornforth (2001) did not find board size to be significantly related to board effectiveness. The meta-analysis of studies in the for-profit area by Dalton et al. (1999) found a significant *positive* relation between board size and financial performance. Based on the work by Yermack (1996), and the logic of agency theory, we propose that larger boards are *less* effective in monitoring nonprofit organizations leading to the following hypothesis.

**H3A** There is a positive association between board size and the average administrative expense ratio.

From a resource dependence perspective, we expect donations to be positively associated with a larger board. Olson (2000) studies the relation between several board characteristics for 43 independent colleges and the colleges' gifts and total revenues. He finds a significant positive relationship between board size and total gifts (but not revenues). His findings are consistent with the view that larger boards, with more outside contacts, function more effectively in helping the organization to obtain resources. While our sample is comprised of different types of organizations than those studied by Olson (2000), we follow Olson (2000) and propose that boundary spanning will be positively related to board size.

**H3B** There is a positive association between board size and the growth in direct contributions.

### Hypotheses Regarding Board Committee Structure

A board's areas of interest may often be reflected in the types of committees it forms, and their composition and activity. Klein (1998) divides for-profit board committees into two areas of functionality—monitoring and investing. She argues and finds that placing independent directors on monitoring committees and inside directors on investment committees is consistent with a better-functioning board. We categorize nonprofit board committees into two areas of functionality—monitoring and boundary spanning, and propose that seeing a higher ratio of monitoring to boundary spanning committees is synonymous with the board engaging more actively in monitoring activities, which would result in lower administrative expense ratios. More monitoring emphasis also implies less boundary spanning activity, resulting in lower donation growth.

**H4A** There is a negative association between the proportion of monitoring board committees to the total number of committees and the administrative expense ratio.

**H4B** There is a negative association between the proportion of monitoring board committees to the total number of committees and the growth in direct contributions.

### Hypotheses Regarding Staff Representation on the Board

One frequent metric used in the for-profit literature to measure board independence is the percent of the board comprised of non-management (or independent)

directors. Fama and Jensen (1983a) argue that boards with members more independent of management are more likely to monitor, since they are able to separate themselves better from management's influence. A similar proxy for independence is available in the nonprofit arena, namely, the proportion of staff members (usually including the CEO) on the board.

Nevertheless, there are important differences between the impact of staff on nonprofit boards and insider members on for-profit boards, raising doubts about the appropriateness of this factor in a nonprofit study. The presence of employees as board members is much less common in the nonprofit environment than in the for-profit environment and only in very rare cases would employees be a majority of the board. Indeed the BBB Wise Giving Alliance's governance standards call for compensated members not to exceed one employee or 10% of the board, whichever is greater. In our sample, boards typically have no more than one employee member. About 40% of the boards have no employee members at all. If the way executive directors affect policy is through the information they supply the board, not by voting, then formal staff representation on the board may not be a meaningful measure of their influence, and one would expect the empirical tests of this relation to lack significance. Cornforth and Edwards (1999) point to a variety of factors, beyond simple board membership, that affect the relation between boards and senior managers.

If, however, the formal membership of staff on nonprofit boards has an analogous effect with the impact of insiders on for-profit boards, we would expect that staff representation on the board to be associated with weaker monitoring, but with more effective boundary spanning. Based again upon the analysis of Daily and Schwenk (1996), Miller-Millesen (2003) argues that nonprofit boards are less likely to engage in monitoring when the executive staff is professionalized, because the board becomes dependent upon the executive staff (typically the CEO) for information. Staff are knowledgeable and responsible for the day-to-day running of the organization, and are likely in a superior position to affect the agenda and decisions of the board.

While the agency perspective suggests that the presence of staff on the board has unfavorable effects on monitoring, the resource dependence perspective would suggest a positive impact on boundary spanning. (See Hyndman and McDonnell (2009) for additional discussion of this tension between monitoring and boundary spanning.) Based upon the insights of Miller-Millesen (2003) and Fama and Jensen (1983a, b), we expect that nonprofit boards with members more dependent on management are less likely to involve themselves in administrative issues, which are deemed to be the CEO's prerogative, and to involve themselves instead in boundary spanning.

We therefore propose the following hypotheses:

**H5A** There is a positive relation between the presence of staff members on the board and higher average administrative ratios. This relation will be stronger in times of instability.

**H5B** There is a positive relation between the presence of staff members on the board and the growth in direct contributions. This relation will be stronger in times of instability.

## Controls

We include two control variables in our empirical tests beyond those for which we have framed formal hypotheses. First, we include the log of 1992 beginning of period total assets as a control for organizational size in all of our tests. Tinkelman (1996) suggests that larger, better-established nonprofit organizations tend to be more efficient, suggesting a negative relationship between size and our administrative expense variable. There could also be relations between size and fundraising efficiency. Second, for the tests of the resource dependence hypotheses, we include a measure of the cost of obtaining a dollar of charitable output per dollar contributed to the organization, also called the price of donations. Extensive research finds that “price” is related to donations including Weisbrod and Dominguez (1986), Posnett and Sandler (1989), Callen (1994), Tinkelman (1996, 1998, 1999), and Callen et al. (2003) among others. The price of donations is defined as the proportion of a dollar donated that goes to (non-program) administrative and fundraising expenses. Consistent with the nonprofit literature (see, e.g., Posnett and Sandler 1989; Callen 1994; Tinkelman 1996, 1998; Callen et al. 2003), the price of donations is measured as the (log of) 1992 total expenses divided by one minus the sum of the ratio of administrative and fundraising expenses to total expenses. (The empirical results are robust to using years other than 1992 to compute this variable.) The greater the price of donations to a given organization, the less donations the organization obtains.

## Sample Selection

We focus on organizations falling under IRS Section 501 (c) (3), i.e., publicly supported organizations with charitable, educational, scientific, or religious missions. To select the sample, we begin by identifying organizations in the 1994, 1995 and 1996 New York State Department of Law databases of regulatory filings on nonprofit organizations. Other studies using New York State regulatory data include Grimes (1977), Ben Ner and Hoomissen (1993), Tinkelman (1996, 1998, 1999), and Callen et al. (2003).

New York State requires all organizations soliciting more than \$25,000 annually in the state to file annual financial reports, unless the organization qualifies for exemption on religious or other grounds. As a consequence, the New York State database contains national as well as local organizations. The database maintains lagged key financial statistics based on these annual reports for each organization for up to a period of 3 years. The financial reports of these organizations follow Generally Accepted Accounting Principles with certain minor exceptions and are publicly available. If the organization solicits over \$100,000 annually in donations, New York State requires these financial reports to be audited. The latter requirement, as well as the more comprehensive nature of the New York State report, means that the New York State data dominate the alternative federal Form 990 data that contain only unaudited financial information. In addition, data problems with the alternative Form 990 data are well-known. See Herman and Renz (1997) and Froelich and Knoepfle (1996), although later research by Froelich et al.

(2000) found some contrary evidence. This study is designed to avoid possible problems by using audited data and eschewing Form 990 data.

Initially, there are over 7,000 organizations reporting nonzero revenues for fiscal 1992 to fiscal 1994, the latest complete year of data available on the 1996 database. We impose two selection criteria. First, we require the nonprofit to receive in 1992 over \$2.5 million in direct contributions (private donations less funds raised by other organizations, such as United Way). Second, we further require that direct contributions exceed 10% of total 1992 receipts. We thus focus on organizations with significant donations. These rules reduce the sample to 473 organizations.

Although the focus on larger organizations affects the potential for generalizing the results of this study, large nonprofits are economically quite significant. Crittenden (2000) indicates that in 1998 “fewer than 4% of nonprofits (excluding foundations) that report to the IRS have expenses higher than \$10 million, but are responsible for more than three-quarters of the sector’s assets.” Also, given our focus on these ratios, we chose a sample for which the data are more likely to be reliable. Tinkelman (1999) in particular found that donor sensitivity to expense ratios was greater in the type of sample analyzed here.

We obtained governance data through a mail survey of the 473 organizations. We sent the survey to each organization and asked a staff member to fill it out. Typically, the staff member was at the executive director or corporate secretary level, since no one else had the data. In no case did a board member fill out the survey. Anonymity of the response was guaranteed by committing to publish aggregate results only, without reference to details related to specific organizations. In total, we received 123 replies, a 26.0% response rate. This response rate is similar to that of the “popular” nonprofit survey sponsored by the National Center for Nonprofit Boards (Slesinger and Moyers 1995). Respondents were telephoned when the replies were incomplete or ambiguous.

One focus of our study is to determine the relation between the “type” of director and firm attributes. We divide director-type into the following categories: employee, major donor, well-known person who enhances the organization’s image (e.g., a celebrity), person with a useful professional skill (e.g., an investment advisor), and other. The other category typically includes retired staff, ex-officio members from parent or affiliated organizations, and individuals who are interested in the mission and have the intelligence and social skills to make them desirable board members. We left the categorization to the discretion of the organization staff member who filled out the survey. Although this induces noise in the measure, any definition of, for example, a major donor must be organizationally dependent. A major donor to one organization may be “small fry” to another organization, and any external criterion of what constitutes a major donor is likely to be quite arbitrary. Where a person fit equally into two categories, fractions are used.

Financial data for 1994 comes from the New York State 1994 database. Financial data for 1995 and 1996 are from the reports entitled “*Where the Money Goes—The AG’s Report for 1997*” and “*Where the Money Goes—The AG’s Report for 1998*”, respectively. These reports appear on the web site of the New York State Office of the Attorney General ([www.oag.state.nys.us](http://www.oag.state.nys.us)).

The sample of 123 publicly supported organizations that responded to the survey instrument includes both famous national organizations and less well-known or locally focused organizations. We find that the responders are similar in size and in reliance on direct contributions to the nonresponders, but are somewhat less local in focus. Mean 1994 total revenues of the replying and non-relying organizations are \$23.6 million and \$25.1 million, respectively. In both cases, the mean 1994 direct contribution is \$13.0 million. The mean percentages of 1994 expenses devoted to program costs for replying and non-relying organizations are 78.1 and 75.8%, respectively. Of the replying organizations, 43.1% have addresses in New York State, while 51.3% of the non-replies have New York addresses. The replying organizations are concentrated in the areas of health (19.5%), fundraising or support organizations such as the United Way (18.7%), social welfare (17.1%), cultural–educational organizations (14.6%) and public policy (13.8%). Our sample includes only one school and one hospital. The non-replies are concentrated in similar categories, with somewhat greater representation in the public policy (17.5%) and cultural–educational categories (19.8%), and somewhat less in the health area (15.8%). Overall, the responder and non-responder samples appear similar in size, location, and expense ratios, reducing the probability of self-selection bias.

## Findings Part 1—Descriptive Statistics

### Board Composition and Structure

Table 1 contains descriptive data on characteristics of the boards, whereas Table 2 contains descriptive data on the existence and composition of board committees. These tables incorporate data from all 123 organizations that replied to our survey.

Nonprofit boards differ substantially from for-profit boards. As Table 1 shows, the mean (median) board has 28.1 (25) members. These numbers are between two and three times greater than for-profit boards (Klein 1998; Yermack 1996). Nonprofit boards have relatively few insider members. The mean number of paid staff on the board is only 0.6, just 2% of the total board make-up. In general, nonprofits report either one or no staff members on the board, consistent with the requirements of nonprofit rating agencies. Thus, about 60% of our sample organizations included one staff person on the board. In comparison, the proportion of inside directors, the equivalent of our staff category, on for-profit boards averages from 22 to 36% (excluding affiliated directors) depending on the specific breakdown (Klein 1998; Yermack 1996).

The survey also suggests that many board members have developed some relevant experience in managing nonprofit organizations—the median organization reports that between 51 and 75% of board members have served over 5 years, and the same percentage also serve on other nonprofit boards. Boards most often met between three and five times per year (55%), with most of the remaining boards meeting either two or “six to eight” times per year.

**Table 1** Characteristics of nonprofit boards<sup>a</sup>

Board size (number of members)	Mean	28.1
	Median	25.0
	Maximum	105.0
Number of board meetings per year (median) <sup>b</sup>		3–5
% of women on board (median)		10–30%
% of board members with over 5 years service (median)		51–75%
Median % of Board members also serving on		
Other nonprofit boards		51–75%
For-profit boards <sup>c</sup>		Under 25%
Composition of board <sup>d</sup>	Mean no. of people	Percentage (%)
Staff	0.6	2
Major donors	7.2	26
Persons with professional skills	10.4	37
Well-known individuals	5.0	18
Other	4.9	17
Total	28.1	100

<sup>a</sup> The summary data in this table are based on a sample size of 123 organizations

<sup>b</sup> The survey asked for ranges rather than point estimates for some of the data

<sup>c</sup> There were numerous non-replies to this question

<sup>d</sup> Staff are employees of the nonprofit firm. A major donor is someone who contributes substantially to the nonprofit he/she serves on. A person with professional skills is someone with professional skills useful to the nonprofit, e.g., accounting, legal, or investment expertise. A well-known individual is a celebrity

As Table 1 illustrates, the largest single category of board member is persons with a useful professional skill. These constitute 37% of the boards, on average. Major donors represent 26%, and well-known individuals constitute 18%.

As shown in Table 2, nonprofit organizations vary widely as to the existence and composition of board committees. The most common is the executive committee, present in 85.4% of the organizations. Finance and nominating committees are the next most common (present in over 70% of the organizations), while audit and compensation committees are present in only 35.0 and 35.8% of the organizations, respectively. The percentages of nonprofit boards with audit and compensation committees differ substantially from public for-profit corporations, in which all boards have audit committees (currently mandated by Sarbanes–Oxley) and almost all have compensation committees.

We categorize seven of the eight board committees by primary function, monitoring or resource dependence. We classify the audit, finance, investment, nominating, and compensation committees as primarily serving as monitoring committees. Fundraising and program committees are classified as primarily serving a resource dependence function. The executive committee, which acts in place of the board when the board cannot or will not meet, is neither.

Major donors are best represented on the fundraising, nominating and executive committees, where, on average, they make up 31.0, 22.4 and 21.2% of the members,

**Table 2** Representation of director-types on board committees<sup>a</sup>

Committee <sup>b</sup>	% of respondents with this committee	Mean (median) no. of members on committee	Mean (median) no. of staff members	Mean (median) % of members who are major donors	Mean (median) % of members with professional skills
Monitoring board committees					
Audit	35.0	4.9 (4.0)	0.3 (0.0)	14.0 (0)	64.9 (67.0)
Finance	70.7	8.1 (7.0)	0.5 (0.0)	18.2 (10.0)	52.1 (50.0)
Investment	40.6	5.9 (5.0)	0.4 (0.0)	15.5 (0.0)	62.9 (67.0)
Nominating	71.5	6.2 (5.5)	0.2 (0.0)	22.4 (0.0)	31.4 (25.0)
Compensation	35.8	5.6 (5.0)	0.5 (0.0)	15.8 (0.0)	43.6 (43.0)
Boundary spanning committees					
Program	56.9	10.8 (9.0)	0.6 (0.0)	14.8 (0.0)	46.2 (40.0)
Fundraising	61.8	24.6 (9.0)	0.5 (0.0)	31.0 (29.0)	34.8 (33.0)
Neither monitoring nor boundary spanning committee					
Executive	85.4	8.8 (8.0)	0.5 (0.0)	21.2(8.0)	37.3 (33.0)
Overall board		8.1 (25.0)	0.6 (0.0)	25.6 (9.5)	37.0 (33.0)

<sup>a</sup> The summary data in this table are based on a sample size of 123 organizations. Of the respondents, 27.6% noted they had committees other than those listed, including committees dealing with planning and with building matters

<sup>b</sup> Committee definitions: Audit—hires/fires/supervises auditors, Finance—oversees the financial management of the organization, including the organization's budgeting and financial reporting processes. This committee often has the functions of an audit committee if there is no separate audit committee, and sometimes of a compensation committee if there is no separate compensation committee, Investment—oversees the organization's investments, which are typically in marketable securities, Nominating—nominates people for the board and for new officers, Compensation—oversees executive pay and benefits issues, Program—oversees one or more of the organization's operating programs, Fundraising—coordinates efforts to raise donated funds, whether by direct mail, telephone campaigns, direct personal solicitation of donors, or by special fundraising events, such as dinners, Executive—acts in place of the board when the board cannot, or chooses not, to meet

respectively, and are least represented on audit and program committees, where they make up only 14.0 and 14.8% of the committees, respectively. People with professional skills are most highly represented on the audit, investment and finance committees (64.9, 62.9, and 52.1%, respectively), and are least represented on the fundraising and nominating committees (34.8 and 31.4%, respectively). Respondents mentioned skills such as accounting and investment expertise as being the major factors in selecting members of the audit, finance, and investment committees. Staff members appear most frequently on the program committee (0.6%) and are least represented on the nominating and audit committee (0.2 and 0.3%, respectively). Unlike for-profits, there is no regulatory restriction on employees serving on any committee.

#### Descriptive Statistics for Dependent and Independent Regression Variables

Table 3 shows summary statistics of the variables employed in our regression analysis, for the 104 organizations that have sufficient data to be included in the

**Table 3** Summary data—regression variables

Variable	Mean	Median	S.D.	Minimum	Maximum
Average administrative expense ratio	0.09	0.08	0.06	0.00	0.31
Growth of direct contributions	0.03	0.04	0.19	-0.72	0.56
Price	\$1.30	\$1.27	\$0.27	\$1.00	\$2.82
% Staff on board	4.0	0.0	9.0	0.0	67.0
% Major donors on board	20.0	10.0	22.6	0.0	75.0
% Major donors on FR committee	22.7	0.0	29.6	0.0	100.0
$\sigma$ (Total revenues)	7.1	2.0	23.4	0.2	205.0
Board size	28.9	24.5	20.3	3.00	105.0
% Monitoring committees	34	33	21	0	100
Assets	72.0	11.6	365	0.1	3,584

Variables in this table have not been demeaned. Summary data are based on the (104) observations used to estimate the Agency Theory Model regressions in Table 4

Variable definitions: Average Administrative Expense Ratio = Sum of administrative expenses from 1992 to 1996 divided by the sum of revenues from 1992 to 1996, Growth rate of direct contributions = Geometric growth rate in direct contributions from 1992 to 1996, Price = {Total Expenses/[1-(Administrative expense ratio + Fundraising expense ratio)]} for 1992, % Staff on board = Percent of staff members on nonprofit board, % Major donors on board = Percent of major donors on board, % Major donors on FR committee = Percent of major donors on board fundraising committee,  $\sigma$ (Total Revenues) = Standard deviation of total revenues from 1992 to 1996 in (\$000,000), % Monitoring committees = The number of total monitoring committees divided by total number of board committees, expressed as a percentage, Board size = Number of board members, Assets = 1992 beginning assets in (\$000,000)

agency model regressions. Because the number of observations differs from that in Tables 1 and 2, certain variables have slightly different means or medians in Table 3.

Table 3 shows that the sample is comprised of large nonprofit organizations (by construction) and that, not surprisingly, board size is much larger than would be the case in the for-profit environment. The sample is heterogeneous. The presence of organizations with large values results in the mean values of certain variables being much larger than the medians. For example, while the median 1992 beginning total assets was \$11.6 million, the maximum was \$3,584 million, and the standard deviation was \$365 million. The number of board members ranges from 3 to 105.

## Findings—Part 2—Regression Analysis

### Empirical Tests—Agency Theory

We assume that the monitoring activity of the nonprofit board and nonprofit board committees reflects itself in lower values of our agency cost proxy (average administrative expense ratio). Our agency analysis predicts that the average administrative expense ratio is positively related to board size, the proportion of staff members on the board and organizational instability, and negatively related to

the proportion of major donors on the board, and the proportion of monitoring board committees. In addition, we control for the organization's size and the percentage of major donors on the fund-raising committee. As discussed above, we expect organizational instability to affect the effectiveness of other board monitoring characteristics, so we test the relations with, and without, organizational instability interaction terms.

To mitigate multicollinearity concerns, especially in regressions with interaction terms, all regressors are demeaned (Aiken and West 1991). Belsley et al. (1980) suggest that condition indices larger than 30 are indicative of potential multicollinearity. None of the variables in the regressions to follow had condition indices larger than 30.

*Columns* (1) and (2) of Table 4 show Ordinary Least Squares (OLS) parameter estimates from two different regressions of our administrative expense ratio variable on the variables assumed to reflect board monitoring. The first regression excludes interactions of our instability variable with other independent variables. The second regression includes these interaction terms. The results indicate the importance of considering the interaction of board governance variables with organizational instability.

The results for the first regression, with one exception, are generally consistent with the theory. The *F*-statistic is significant at the 1% level, and the adjusted  $R^2$  statistic of 0.24 indicates the regression explains a significant portion of the variation in the data.

Absent controls for the interaction between organizational instability and the other variables, the base-line regression in *column* (1) finds that the presence of major donors on the board is negatively and significantly related to the administrative expense ratio ( $p = 0.04$ , two-tailed) and larger board size is positively and significantly ( $p = 0.05$ , two-tailed) associated with the administrative expense ratio. These two findings are in accordance with agency theory predictions. However, contrary to agency theory, the variability of total revenues, our proxy for organizational instability, is negatively and significantly ( $p = 0.00$ , two-tailed) related to the administrative expense ratio. We also find that larger organizations tend to have significantly higher average administrative expenses ( $p = 0.00$ , two-tailed). While we made no predictions for this variable, the finding is not surprising because larger organizations tend to carry more debt (interest is an administrative expense) and tend to be more reliant on paid staff than on volunteers. The proportion of committees devoted to monitoring is negatively related to the administrative expenses ratio as predicted but only significant at the one-tailed level ( $p = 0.17$ , two-tailed). The other variables—staff representation on the board and the proportion of donors on the fund-raising committee—do not have statistically significant coefficients.

*Column* (2) of Table 4 presents results for the regression of the average administrative expense ratio on the base-line independent variables inclusive of interaction terms with organizational instability. Again, the *F*-statistic is highly significant ( $p = 0.00$ , two-tailed), and the adjusted  $R^2$  statistic has increased from 0.24 to 0.38. In this regression, both the coefficient for the presence of staff on the board ( $p = 0.07$ , two-tailed), and the related interaction variable ( $p = 0.05$ , two-tailed), are positive and significant as predicted. The only board governance variable

**Table 4** Regressions of average administrative expense ratio and growth of direct contributions on board characteristics and other variables<sup>a</sup>

Dependent variable <sup>b</sup>	Agency Theory Model		Resource dependence models	
	Administrative expense ratio	Growth of direct contributions	(3)	(4)
Independent variables	(1)	(2)	(3)	(4)
Intercept	<b>-2.63 (0.00)***</b>	<b>-2.69 (0.00)***</b>	<b>0.03 (0.05)**</b>	<b>0.06 (0.01)***</b>
%Staff on board	0.71 (0.42)	<b>1.84 (0.07)*</b>	0.25 (0.24)	<b>0.96 (0.00)***</b>
%Major Donors on board	<b>-0.85 (0.04)**</b>	-0.32 (0.44)	0.04 (0.66)	0.01 (0.96)
%Major Donors on FR committee	-0.12 (0.69)	-0.09 (0.80)	-0.00 (0.99)	<b>0.18 (0.03)**</b>
Ln(Board Size)	<b>0.27 (0.05)**</b>	0.26 (0.25)	0.03 (0.45)	<b>0.10 (0.07)*</b>
%Monitoring Comm.	-0.47 (0.17)	-0.38 (0.24)	0.12 (0.17)	-0.01 (0.95)
$\Sigma$ (Total Revenues)	<b>-0.02 (0.00)***</b>	<b>-0.03 (0.05)**</b>	0.00 (0.27)	<b>0.01 (0.04)**</b>
Ln(Assets)	<b>0.21 (0.00)***</b>	<b>0.20 (0.00)***</b>	0.01 (0.31)	0.01 (0.26)
Ln (Price)	—	—	<b>-0.42 (0.00)***</b>	<b>-0.33 (0.00)***</b>
$\Sigma$ (Total Revenues)* %Staff on board	—	<b>0.37 (0.05)**</b>	—	<b>0.13 (0.05)**</b>
$\Sigma$ (Total Revenues)* %M. Donors on board	—	0.02 (0.69)	—	0.01 (0.70)
$\Sigma$ (Total Revenues)* %M. Donors on FR Com.	—	0.05 (0.40)	—	<b>0.03 (0.04)**</b>
$\Sigma$ (Total Revenues)*% Ln(Board Size)	—	0.01 (0.87)	—	0.01 (0.25)
$\Sigma$ (Total Revenues)*%Monitoring Com.	—	<b>-0.04 (0.04)**</b>	—	-0.01 (0.54)
$\Sigma$ (Total Revenues)*Ln(Assets)	—	<b>0.01 (0.02)**</b>	—	-0.00 (0.72)
$\Sigma$ (Total Revenues)*Ln(Price)	—	—	—	<b>-0.05 (0.00)***</b>
Number of observations (organizations)	104	104	97	97
F-statistic	<b>5.74 (0.00)***</b>	<b>5.84 (0.00)***</b>	<b>4.52 (0.00)***</b>	<b>6.43 (0.00)***</b>
Adjusted R <sup>2</sup>	0.24	0.38	0.23	0.46

<sup>a</sup> Table 4 shows coefficients and two-tailed *p*-values in parentheses. Coefficients and *p*-values that are significant at the 0.10 level or less are shown in bold face

\*\*\* Significant at the 1% significance level

\*\* Significant at the 5% significance level

\* Significant at the 10% significance level

<sup>b</sup> Variable Definitions–Agency Model

See Table 3 for variable definitions. These regressions used the log form of the average administrative expenses, board size, assets, and price variables. Independent variables are measured as deviations from the mean to mitigate multicollinearity concerns regarding the interaction terms

that is significant at conventional levels is the interaction term involving the proportion of board committees devoted to monitoring ( $p = 0.04$ , two-tailed) which is negatively associated with the administrative expense ratio, as predicted. In

robustness testing, the presence of a special compensation committee was key to this effect. The coefficients for the presence of major donors on the board, board size and the proportion of board committees devoted to monitoring have the correct predicted sign but, unlike the baseline regression in *column* (1), are not statistically significant at conventional levels. The size variable remains positive and significant ( $p = 0.02$ , two-tailed) as before. Again, contrary to our prediction, the coefficient for the variability of total revenues is negative and significant ( $p = 0.05$ , two-tailed).

Our findings with regard to staff presence on the board are consistent with the concept that, in rapidly changing environments, boards focus less on monitoring, allowing managers to get away with a bit more administrative spending. Nevertheless, the significance of this variable is somewhat surprising, as the typical board has at most one voting staff member. As a robustness test, we ran this regression without the variable for % of staff on board, and its interaction term. Results for other variables are qualitatively unchanged.

Extensive sensitivity analysis (not tabulated) has no discernable effect on the overall results for our agency cost metric. Many other board, committee, and organization characteristics were included in the regressions but these proved to be insignificant. These characteristics include (but are not limited to) number of board meetings, the average longevity of board members' tenure, whether board members served on other nonprofit and for-profit boards, the proportion of major donors on monitoring boards, the existence of an audit committee, the age of the organization, the proportion of well-known persons on the board, the proportion of persons with professional skills on the board, the proportion of direct contributions to total revenues and, following Weisbrod and Dominguez (1986) and Posnett and Sandler (1989), organizational type. In addition, the variables in the regression were interacted with such key variables as the age of the organization, in case board activity is sensitive to the organization's life-cycle, and organizational instability as measured by the standard deviation of total nonprofit revenues. The estimated coefficients of these interaction terms also turned out to be statistically insignificant in explaining average administrative expenses.

We also tried using the growth in administrative expenses, rather than the average administrative expense ratio, as our proxy for board monitoring efforts. Results were generally statistically weaker.

Overall, the results in *columns* (1) and (2) are weakly consistent with the implications of agency theory. Board characteristics such as the percentage of staff on the board, percentage of major donors on the board, board size and the proportion of board committees devoted to monitoring are associated with the administrative expense ratio in the predicted directions. The results also weakly suggest that researchers need to control for the interaction of board characteristics and organizational instability.

### Empirical Tests—Resource Dependence Theory

Our tests in this area parallel those for the agency theory hypotheses. We use similar variables, and test the relations with and without interactions with organizational instability.

We assume that the boundary spanning activities of the nonprofit board and nonprofit board committees are reflected in increased growth of direct contributions. We predict that the growth of direct contributions is positively related to the proportion of major donors on the board and on the board's fundraising (development) committee, board size, the proportion of staff members on the board, and organizational instability. In addition, we control for the organization's size and the price of donations.

*Columns* (3) and (4) of Table 4 show OLS regressions of the growth rate in direct contributions on the variables assumed to reflect board boundary spanning activities. The regression in *column* (3) is a base-line regression without interaction terms. The regression in *column* (4) includes interaction terms where the interaction variable is our organizational instability measure. The simple (base-line) regression is highly significant ( $F = 4.52, p = 0.00$ , two-tailed) with an adjusted  $R^2$  of 0.23. However, the only strongly significant variable in this regression is a control variable, the (log of the) price of donations, which has the predicted negative sign ( $p = 0.00$ , two-tailed). The proportion of board committees devoted to monitoring is positive as predicted and marginally significant at the one-tailed level ( $p = 0.17$ , two-tailed).

The regression with the instability interaction terms is far more interesting. The overall regression is highly significant ( $F = 6.43, p < 0.00$ , two-tailed) and the adjusted  $R^2$  doubles dramatically over the base-line regression from 0.23 to 0.46. More importantly, the signs of the estimated coefficients correspond to the underlying (resource dependence) theory. In particular, the growth rate in direct contributions is significantly and negatively related to the price of donations ( $p = 0.00$ , two-tailed) and positively related to the instability of the organization ( $p = 0.04$ , two-tailed). Also, as predicted, the growth rate in direct contributions is significantly positively related to the proportion of staff members on the board ( $p = 0.00$ , two-tailed), the proportion of major donors on the board's fundraising (development) committee ( $p = 0.03$ , two-tailed), and board size ( $p = 0.07$ , two-tailed). The growth in donations is not significantly related to the presence of donors on the board, after the presence of donors on the fundraising committee is controlled for. The proportion of monitoring committees does not have a significant effect.

The signs of all of the interaction terms are the same as the signs of the corresponding non-interacted variables and some of these interaction variables are highly significant. Specifically, the more unstable the organization, the greater the negative impact of the price of donations on the growth in direct contributions ( $p = 0.00$ , two-tailed). Also, the more unstable the organization, the greater the positive impact of board staff members ( $p = 0.05$ , two-tailed) and major donors on the fundraising committee ( $p = 0.04$ , two-tailed) on the growth in direct contributions. Again, removing the % staff on board, and its interaction term, has no discernable qualitative affect on the results for the other variables.

Extensive sensitivity analysis (not tabulated) yields similar results. Many other board, committee, and organization characteristics were included in the regression but proved to be insignificant. These characteristics include (but are not limited to) the number of board meetings, whether board members served on other nonprofit and for-profit boards, the proportion of major donors on monitoring boards, the average longevity of board members' tenure, the proportion of well-known persons

on the board, the proportion of persons with professional skills on the board, the proportion of direct contributions to total revenues, the existence of an audit committee, the age of the organization and organizational type. In addition, the variables in the regression were interacted with the age of the organization, in case board activity is sensitive to the organization's life-cycle. The age interaction terms also proved to be statistically insignificant.

## Conclusions and Limitations

### Conclusions

We examine the role that nonprofit boards play in managing and procuring financial resources through two theoretical lenses—agency cost theory and resource dependence theory. Agency theory predicts that boards are comprised so as to mitigate the misallocation or diversion of the nonprofit's resources away from its goals and toward management's consumption of perquisites. Resource dependence theory predicts that boards function to enhance the nonprofit's ability to raise resources, particularly, direct contributions.

In framing our hypotheses, we note that various decisions that organizations make concerning the structure and composition of their boards involve trade-offs. Characteristics that help the board's monitoring role may be associated with weaker ability to raise resources. The presence of staff on the board, or the size of the board, are examples.

One of our primary findings is that the impact of various board characteristics on organizational performance is contextual. Following Miller-Millesen (2003), we predict that nonprofit boards' monitoring activities appear less effective when the organization is stable, and the boards' boundary spanning activities seem more likely to be effective when the organization is unstable. We measure instability as the standard deviation of total revenues over a 5 year period. Our findings indicate that the statistical significance of several board characteristics on monitoring, and on growth in donations, is dependent upon controlling for organizational instability. For practitioners, this finding suggests a need to reconsider the structure and composition of the board as the organization's environment changes. For scholars, it suggests a need to incorporate adequate controls into future research designs.

In particular, we find empirical evidence that the desirability of having staff members on the board is contextual. After controlling for the interaction with organizational stability, the presence of staff members on the boards has two statistically significant effects: a positive effect on the organization's ability to obtain resources, and a negative effect on the organization's ability to hold down administrative costs. These findings are somewhat surprising, since one could argue that staff should be able to influence boards even when not formal voting members. Neither effect is apparent in regressions that do not control for interaction with organizational stability. Further research in this area is needed.

We also find strong evidence in favor of the resource dependence theory—namely that the boards' boundary spanning characteristics do aid effective

fundraising. Again, this evidence is only strong after controlling for the interaction of organizational instability with other variables. Consistent with Miller-Millesen (2003), we find that the coefficients on certain board characteristics associated with resource dependencies (board size and donor presence on fundraising committees) are significantly greater for less stable nonprofits than for more stable nonprofits. Thus, nonprofits create boards that engage in effective fundraising, and where revenues are less stable, their boards' fundraising activity is more important.

## Limitations

Our data did not allow us to test the impact of possible additional contextual factors that may influence a board's focus and effectiveness. For example, CEO characteristics, such as tenure, may affect the board's monitoring and boundary spanning activities. We also lacked data on the degree to which CEO's who were not formal members of the board actively participated in board and committee discussions.

Any empirical study's results are dependent upon its methods and the size and representativeness of its sample. Our regression analysis samples consist of around 100 organizations that registered with New York State. Replication with a larger and broader sample would be useful. We developed empirical proxies for the board's focus on controlling agency costs, the success of its boundary spanning activities, and organizational instability. The degree to which these proxies do not fully correspond with the underlying theoretical constructs limits the interpretation of our results.

Finally, our work tested hypotheses from the agency theory and resource dependence perspectives: other perspectives, such as transaction cost economics, institutional theory and decision theory, may suggest additional testable hypotheses.

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