Doing Too Much? Financial Vulnerability Of Canadian Registered Charities

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ABSTRACT

Registered Charities (RCs) play an important role in Canadian society through the provision of social goods and services. We study whether "mission drift" leads to an increase in RCs' financial vulnerability. We find that mission drift is associated with deterioration in the RC's performance and an increase in financial vulnerability. We build upon the theoretical predictions of other studies of the potential impact of mission drift, by empirically testing it using a sample of approximately 80,000 Canadian RCs over a 10 year period. We suggest two mission drift may be conceived in two dimensions: an increased number of service activities (NumProgs), and service concentration (ProgCon), the emphasis of resources devoted to individual services. We find that RCs become more financially vulnerable as they undertake more activities. However, the impact of service concentration on financial vulnerability is unclear. Results are robust to other factors that could affect financial vulnerability of RCs.

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INTRODUCTION

Registered Charities (RCs) play an important role in the provision of social goods in Canada. They enjoy a tax-preferential status, in that not only are they not subject to taxation, they are also permitted to issue receipts for tax-deductible donations. Furthermore, in being distinct from for-profit organizations – RCs are not permitted to distribute their surpluses, have no identified owners, and they provide goods and services to recipients who are different from donors and funding bodies - RCs present a different setting to examine the impact of information asymmetry and agency costs, particularly those related to bankruptcy costs arising from financial distress. In this study, we extend the existing literature on financial vulnerability of nonprofit organizations by examining whether "mission drift" contributes to the financial vulnerability of such nonprofit organizations. We define mission drift along two dimensions. First, mission drift could arise from an increase in the overall number of programs offered by an RC (*NumProg*). Secondly, mission drift could be conceived of as the lack of concentration on key programs (*ProgCon*). Although related, these two dimensions are different. For example, a RC could provide ten services, but if it devotes 90 per cent of its resources to providing just one or two of the ten programs, it might be viewed as not having drifted from its mission as much as that RC which devotes equal amount of resources on providing just five programs.

We draw upon data from T3010 Annual Information Returns submitted by approximately 80,000 RCs over a ten year period, from the year 2000 to 2009. The T3010 form is a mandatory filing required of RCs to enable them to retain their tax-preferred status. A sample T3010 form is included as Appendix 1. We operationalize financial vulnerability as a more than a 20 percent decrease in the organization's fund balance over three years. This definition is adopted from

Trussel (2002), which in turn, is an extension of Gilbert et al's work on the financial distress of for-profit firms (Gilbert et al. 1990). We first test for the association of financial vulnerability of Canadian RCs with factors found to be significant in Trussel's (2002) study, namely, debt, revenue concentration, surplus margin and size. Our logistic regression model results are qualitatively similar to those reported by Trussel, with both debt and revenue concentration being positively and significantly associated with financial vulnerability, and surplus margin and size being negatively and significantly associated with financial vulnerability. Next, we include our proxies for Mission Drift, namely number of programs, and program concentration, as additional predictors of financial vulnerability. We find that while number of programs is a positively significant predictor of financial vulnerability, program concentration is not, except when revenue size is controlled for. Our results appear to suggest that financially vulnerable Canadian RCs might be doing too much, that is, be involved in providing too many programs. Our results are robust, and remain materially unaltered when we include dummies for sectors, years and revenue size.

With this study, we make the following contributions to the literature. First, we contribute to the literature on financial vulnerability of nonprofit organizations by providing empirical validation of Trussel's (2002) model in a non-US setting, using a large sample comprising of over 600,000 observations. We then extend the literature by providing evidence that nonprofits might also be financially vulnerable if they are engaged in providing a large number of service programs. We also hope to initiate a discussion within the Accounting community about how the fundamental differences among nonprofit organizations and the forprofit firms require a reimagination of performance metrics for the former. There has been a renewed interest in the accounting issues related to nonprofit organizations, such as donors' interpretation of low-quality

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information on program ratios (Yetman and Yetman 2012), the incidence or tax expense allocations to taxable activities by nonprofit organizations (Yetman 2001), and misreporting of expenses by such organizations (Krishnan et al. 2006).

BACKGROUND AND LITEARURE REVIEW

In Canada, as in the United States of America (USA) and the United Kingdom (UK), registered charities play an important role in their respective societies by providing social goods and services, ranging from arts and cultural events to health care and senior services. In 2009, more than 85,000 registered charities (RCs) operated in Canada (Auditor General of Canada 2010). The charitable and nonprofit sector comprise almost 8 per cent of Canada's Gross Domestic Product, and employs more than two million individuals, with another 12 million volunteering for them (Imagine Canada). In 2009, Canadian RCs reported over CAD 192 Billion in revenues from all sources. The cost to the Canadian government in terms of tax receipted deductions was almost CAD 2.4 Billion (Auditor General of Canada 2010).

RCs are a subset of nonprofit organizations, enjoying an additional tax advantage in the "power to issue tax-deductible receipts for donations" (Kitching 2006). This provision allows donors to fully deduct donations made to RCs as an expense against any other revenue, which can have the effect to reduce the donor's tax burden. In order to retain their preferential tax status, RCs are required to file the T3010 Annual Information Return. Failure to do so could revoke their ability to issue tax receipts against donations. However, such sanctions are rarely invoked in reality. For example, whereas more than 33,000 RCs failed to submit their T3010 forms in time, only some 3,000 charities actually had their tax status revoked over the 2007 to 2009 period (Auditor General of Canada 2010).

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RCs present a setting quite different from for-profit organizations. The latter have two major stakeholders – investors and creditors – whose information needs are met through financial reporting. The primary purpose of for-profit organizations is to earn a profit, for distribution to shareholders as dividends, or to be reinvested in the business for capital appreciation. Creditors tend to be concerned about an assurance of a consistent return on (interest), and return of (principal) of their capital. With such businesses often being run by professional management, the sources of information asymmetry, and the means by which it is sought to be mitigated, are well understood in the accounting literature. However, nonprofit organizations do not exist for earning profits, nor are their surpluses distributed. Indeed, section 149(1) of the Canadian Income Tax Act defines a charitable organization as one "all the resources of which are devoted to charitable activities carried on by the organization itself" with "no part of the income of which is payable to, or is otherwise available for, the personal benefit of any proprietor, member, shareholder, trustee or settler thereof". By their very nature, the services provided by RCs do not result in a two way exchange. While the recipients of services are beneficiaries, the operational funds are provided by donors, funding agencies and the government. Furthermore, the absence of a clearly defined set of performance metrics makes it difficult for the parties that provide RCs with resources to evaluate their performance.

The differences outlined above are accentuated by the fact that unlike their for-profit counterparts, nonprofit organizations are often not put through a high level of financial scrutiny. For example, many nonprofits do not undergo audits. In many other instances, the board of nonprofit organizations is comprised of well-meaning, but possibly not so experienced, individuals, who are unable to provide requisite oversight on the organization's management. This could, and often does, result in adverse behaviour such as expense misreporting (Krishnan

et al. 2006) and manipulating disclosure to increase fund-raising (Jegers 2010). The potential ill-effects of the information asymmetry that underlies the donor-nonprofit relationship are heightened when the nonprofit organization is financially vulnerable. There exists a considerable body of literature examining financial vulnerability of nonprofit organizations (Greenlee and Trussel 2000; Trussel 2002, 2003; Trussel and Greenlee 2004; Tuckman and Chang 1991; Chang and Tuckman 1991; Hager 1999, 2001; Hodge and Piccolo 2005), which extends from, and builds upon the work on financial distress of for-profit firms (Gilbert et al. 1990). Simply put, "financial vulnerability is an organization's susceptibility to financial problems" (Trussel 2002), and may be thought of as a nonprofit organization's "going concern" problem. Whereas for a for-profit firm, the violation of the going concern problem could ultimately be resolved through bankruptcy and distribution of proceeds from the liquidation of assets amongst creditors and shareholders, in the case of a nonprofit organization, financial vulnerability could result in the failure of the organization to continue to meet its objectives and provide much-needed services (Trussel 2002).

Prior studies have documented several potential causes of financial vulnerability. The seminal study on the nonprofit sector was by Tuckman and Chang (1991), who suggested that financial vulnerability was indicated for organizations with inadequate net assets, revenue concentration, low (or negative) operating margin, and a lack of slack owing to already low levels of administrative costs. With the exception of inadequate net assets (or equity), the other three factors were found to be significant predictors of financial vulnerability, which was operationalized as a decrease in program expenditures over a three year period (Greenlee and Trussel 2000). In a follow-up study, Trussel (2002) revised the definition of financial vulnerability to mean an aggregate decline in fund balance over three years of 20 percent or

more. We believe that this latter definition provides a more definite financial description of financial vulnerability, and hence, we use it in this study.

Of particular interest to us in this study is whether "mission drift" leads to an increase in RCs' financial vulnerability. In the following subsection, we elaborate on this concept, and develop reasoned arguments to expect a positive association between financial vulnerability and mission drift.

Mission value key tenet for RCs

Media and general public discourse surrounding nonprofit organizations (NPOs) and RCs is often influenced by the perceived and actual public investment made by society in said organizations. The favourable tax status of NPOs and RCs results in reduced tax revenues as individuals and corporations are allowed to deduct nonprofit expenditures (donations) for net income calculation. For instance, the total revenue of Canadian RCs in the year 2009 was approximately $192B[1]. A large portion[2] of these revenues are direct governmental transfers which speak to the significant societal investment made individually, corporately, and publicly by Canadians. In 2009, RCs reported receiving $132B in direct government funding and $13B in tax receipted donations. Conservatively it takes Canadian individuals and corporations over $370B in income to pay these amounts in taxes to levels of government in order for governments to fund RCs and is over $4B in tax avoidance for donors[3] to make the tax deductible donations.

There has been, therefore, an increase in contribution by Canadians (direct or indirect) to the nonprofit sector. This increase in contributions has come with increased public scrutiny, which

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[1] Based on the preliminary review of the 2009 T3010 Annual Returns filed with CRA the total revenue of registered charities in Canada was $192,067,000,000.
[2] In 2009 the revenue by source reported 68.8% of RC revenues are from government funding sources.
[3] Based on a marginal tax rate of 35% the tax deductible cost of the tax-receipted donations is $4B and the taxes paid by Canadians to raise $132B is over $370B.

often focuses on elements that distinguish for for-profit organizations (FPOs) from NPOs. The fundamental difference, as alluded to earlier, is the organizational mission.

The concept of "mission" as central to distinguish NPOs from FPOs is suggested by many authors (Abraham 2006, 2007; Barman 2007; Behn 2003; Bozzo and Hall 1999; Brooks and Lewis 2001; Brooks 2005; Dart 2004; Fama and Jensen 1983a; Froelich 1998; Jones 2007; Sawhill and Williamson 2001; Sowa et al. 2004; Moxham and Boaden 2007; Wainwright 2003). Mission refers to "the organization's aim, purpose, or reason for being" (Harrison 1987, p.7), and a well-articulated mission helps drive members' commitment (Vard et al. 1989). While most organizations (NPOs and FPOs), regard their "mission" as a central objective, for NPOs, "mission" has even greater emphasis as a key tenet for their very existence due to the absence of financial return objectives. "Given the centrality of mission, culture and history to the NPO" (Abraham 2007), mission is the central thrust of an NPO, the very reason for its existence (Drucker 1989), and "NPOs are the melting pot combining mission, members and money" (Abraham 2006).

For RCs their operations or activities must legally be "good works"[4] and should reflect their purpose as shaped by their mission. For example a local museum in Calgary operates under the mission as stated in their annual report and disclosed on their website as follows;

> *"Our program, exhibitions and services foster learning and an appreciation of art*
> *and culture in our daily lives." 2011 Annual Report*[5]

This specific RC undertakes numerous activities in support of their mission, including school educational gallery visits and permanent or special displays. These activities are envisioned to

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[4] As defined by the ITA.
[5] Glenbow Museum 201/2011 Annual report page 2

be aligned with the organizational mission and are representative of their primary service provision. Opposite to the alignment of activities and mission, it has been suggested that mission drift, "a diversion of time, energy and money away from the nonprofit's mission" (Jones 2007, p.302) can occur. Jones (2007) suggested that when alignment of activities and mission exists then organizational performance should be positively related to this alignment. As such if the activities undertaken by RCs support or are aligned with the organizational mission then organizational performance measures should improve as compared to instances when the activities are not aligned to organizational mission and therefore mission drift occurs and mission value diminishes.

At a micro or organizational level, "mission value" dominates the alignment of stakeholder, board, management and employee relationships which in turn should create a backdrop for a framework of governance practices. Indeed, there is good reason to believe that the NPOs' mission is intrinsically linked to availability of financing for their operations (Weisbrod 1998). All parties involved are mission focused, to the extent and bias to which stakeholders interpret through their own lens organizational mission. What then happens if mission values are unclear, changing or un-communicated between stakeholders and RCs? In a critique of the increased incidence of NPOs forging partnerships for-profit entities in an attempt to shore up revenues, Weisbrod (2004) cautions that in doing so, NPOs risk their reputation. Weisbrod highlights the concerns of NPOs undertaking for-profit commercial activities that act to misalign NPO activities from their stated objectives and organizational values. It would appear that a course of action to undertake divergent activities in the pursuit of funds is flawed. When NPOs decide to undertake activities that help them earn revenue, their social concerns (for example, hiring workers from a socially disadvantaged demographic, their desire to pay a "living wage" to

employees, or to serve customers in remote and underserved areas) could inhibit them from being profitable (Foster and Bradach 2005).

Mission drift is thus the opposite of mission value. Mission drift is not limited to for-profit activities within an NPO, but can originate from "multiple sources" (Jones 2007) including nonprofit activities outside the primary service of the organization. To highlight these possibilities Jones (2007) brought to our attention examples where "government or foundation support can also divert a nonprofit from its mission" (p.303) and/or "that a nonprofit having a great deal of money can lead to mission drift" (p.304). Jones described the example where the Hershey Foundation of Philadelphia became distracted through legal challenges to establish a learning and development centre outside its mandated school for orphan boys. The foundation's attempt to build the Girard College became entangled with extravagant building projects and for-profit hotel investments. In addition, the foundation's involvement with medical colleges across the US "in the effort to generate more revenue and, at the same time, cut costs, [and as a result the foundation has] drifted far from their academic moorings. All examples of multiple sources of potential mission drift" (p.305) (for a detailed discussion see Jones 2007).

Important to this study is the observations by both Weisbrod (2004) and Jones (2007) that NPO experience "mission drift" by undertaking multiple activities including but not limited to for-profit activities. The concept of "mission drift" has parallels in the accounting literature. Activity-based costing or management (ABC/M) and diversification research both discuss factors that contribute to reductions in organizational performance. Activity Based Costing / Management studies (Ittner et al. 2002; Datar and Gupta 1994) suggest that the greater the number of product lines (or cost centres) in for-profit manufacturing operations, the greater the aggregate or specification costing errors. These errors intuitively lead to inefficiencies and

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greater administration and/or overhead costs (Cooper and Kaplan 1991). The reasoning under ABC/M systems is that the greater the organizational identification of cost centres and/or cost drivers the greater the ability to manage and ultimately optimize organizational resources. The intuitive result is that organizations can strategically determine profitable product lines and eliminate or change the non-contributing activities. For example one of the authors has observed that a local steel building manufacturer greatly improved their "bottom line" by reducing the number of building models to concentrate on two use-specific styles (from over ten variations). This production activity reduction was a direct result of increased cost tracing and greatly reduced their overhead and inventory costs which in turn increased profits.

A for-profit sector meta-analysis examining determinants of financial performance (Capon et al. 1990) found a "positive relationship between industry concentration and firm performance" (p.1148) and a negative relationship for diversification at the firm level. These studies lead to the suggestion that FPO suffer reductions in performance, the less they "stick to the knitting". The theorized resulting organizational inefficiency (Jones 2007; Weisbrod 2004) provides an underlying foundation for the mission drift variable suggested later. A foundation for this current study is that multiple mission activities or objectives in non-profit organizations lead to organizational inefficiencies. This suggestion is suggested both within the NP and FP accounting research streams as observed in activity-based costing and diversification studies.

For RCs the offering of program services, the internal processes required to support these services and the financial management of inputs and outputs are organizational tensions pressing towards mission drift. Mission drift occurs when organizations experience an inefficienct use of resources. RCs in Canada can and do undertake a number of different and quite diverse program activities. In a previous study (Spyker and Seel 2008) small and rural RCs in Canada reported

numerous program services provided averaging over 5 program offerings. These can and do include non-profit and for-profit activities (Segal and Weisbrod 1998). In the US, non-mission realted revenues are the fastest growing source of revenue for NPO (Yetman and Yetman 2003).

It has been suggested that NPOs are multiproduct organizations (Weisbrod 1988) with increasing reliance upon non-mission related revenues (Yetman and Yetman 2003). In a study of ancillary or non-mission related revenues (Du Bois et al. 2004) observed that agency issues within NPOs lead to greater emphasis upon non-mission related revenue sources. As such, if RCs are undertaking more services, these services may be increasingly non-mission related, and the greater the governance issues the more non-mission related services. Thus suggesting that the greater the number of services undertaken by RCs the more likely the deteriation of performance. Likewise RCs devote their resources to differing activities at differing rates. The concentration of their resources upon a greater number of activities may lead to performance reductions. Increased program service diversity is the same as less specific program activity concentration.

RESEARCH DESIGN AND DATA

Based on the preceding review of the lterature, we believe that mission drift could be associated with the financial vulnerability of NPOs. We operationalize mission drift across two dimensions. First, we argue that mission drfit might be inferred from the number of program services (NumProg) offered by the NPO. An NPO that seeks to do too many things faces a potential reduction in its overall effectiveness due to the suboptimal application of its core competence (Prahalad and Hamel 1990; Javidan 1998). On the other hand, it is possible that an NPO providing related services might not suffer from ill effects of program diversification (Markides and Williamson 1994). The second dimension for mission drift is the level of

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concentration on specific programs (ProgCon). Even if an NPO provides multiple programs, it might not be experiencing mission drift, if the vast majority of its resources were applied to one or two major programs. On the other hand, an NPO does run the risk of drifting from its mission if it spreads its resources and efforts too thinly across multiple programs.

Prior research has found debt, revenue concentration, operating margin, and size as significant predictors of financial vulnerability of NPOs (Trussel 2002). An NPO with substabntial reliance on debt is more likely to be financially vulnerable. Similarly, an NPO that relies on one or few sources of revenue is financially vulnerable, in that it is susceptible to any shocks arising from reduction or rescindment of such funding. On the other hand, NPOs with higher operating margin (defined as total revenues minus total expenses, scaled by total revenues) may be expected to be less financially vulnerable. Finally, it may be argued that NPOs having substantial amounts of assets are possibly less financially vulnerable. This is because such NPOs are likely to be older and with more well established reputation, thus having more stable operations, characterized by greater economies of scale than their smaller counterparts.

Accordingly, we test the followed logistic regression models:

$$\text{FinVul} = \alpha_0 + \alpha_1\text{Debt}^{(+)} + \alpha_2\text{RevCon}^{(+)} + \alpha_3\text{Margin}^{(-)} + \alpha_4\text{Size}^{(-)} \qquad [1]$$

$$\text{FinVul} = \alpha_0 + \alpha_1\text{Debt}^{(+)} + \alpha_2\text{RevCon}^{(+)} + \alpha_3\text{Margin}^{(-)} + \alpha_4\text{Size}^{(-)}$$
$$+ \alpha_5\text{NumProg}^{(+)} + \alpha_6\text{ProgCon}^{(-)} \qquad [2]$$

The dependent variable (FinVul), is binary, and acquires a value of 1 if the NPO experienced a decline of 20 percent or more over a three year period. This measure of financial vulnerability is based on the work of Trussel (2002), and informed by the financial literature on financial distress of firms (Gilbert et al. 1990). The predictor variables are defined below. The superscripts (+) and (-) indicate the hypothesized sign for the variable.

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Debt: A continuous variable, computed as Total Liabilities divided by Total Assets

RevCon: A measure of revenue concentration, calculated as a Herfindahl Index, taking the square of the proportion of each revenue source of the total revenue source and summing across all sources of revenue, $\sum \left(\dfrac{\text{Revenue}_j}{\text{Total Revenue}} \right)^2$. The maximum theoretical value is 1.00, indicating 100% of revenue obtained from a single source.

Margin: A continuous variable, calculated by dividing the difference between total revenues and total expenses by total revenues

Size: The natural logarithm of total assets

NumProg: The total number of service programs provided by the NPO.

ProgCon: A measure of program concentration, calculated as a Herfindahl Index, taking the sum of the square of the self-reported percentage of emphasis placed on each of the top 4 programs (percentages are provided on the T3010 return by the NPO filing the information). The maximum theoretical value is 1.00 indicating 100% spending on one program.

Model 1 is the basic model, used by Trussel (2002). It builds upon earlier theoretical and empirical work of Tuckman and Chang (1991) and Greenlee and Trussel (2000), and subsequently used by Keating et al (2005). Our intent in using the base model is to test whether the results reported by Trussel (2002) hold in the Canadian context. Model 2 is an extended model, including two additional predictor variables, NumProg and ProgCon, the two proxies for mission drift.

We use data from the T3010 Annual Information returns filed for the years 2000 to 2009 by approximately 80,000 registered charities. This dataset was obtained from the Canada Revenue Agency. The initial number of observations for the decade is approximately 799,000 annual T3010 returns. As our dependent variable, FinVul, is defined as a decrease of 20% or more in net assets over a three year period, there was a reduction in the number of observations due to the computation of the necessary three year cumulative values. Missing data further reduced the

number of observations, to 602,629 valid observations. Of this final sample, 181,892 (30.18%) observations were found as financially vulnerable, and 420,737 (69.82%) were not. Compared to Trussel (2002), our data has a higher incidence of financially vulnerable RCs. Descriptive statistics and results of our logistic regression analysis are reported in the following section.

RESULTS

Descriptive Statistics

The mean, quartile values and standard deviation for our variables of interest are reported in table 1. We provide these values for the RCs that were identified as financially vulnerable (FV) and those that were not financially vulnerable (NFV).

[Insert table 1 here]

As can be observed, financially vulnerable RCs have, on average, more debt (45.9%) than those that are not (25.6%). While the means for revenue concentration, size, number of programs and program concentration are not much different for the two groups, it is interesting to note that financially vulnerable RCs have a much lower operating margin (-19% compared to -3%) than those that are not financially vulnerable.

The Pearson correlations for the variables are reported in Table 2. Interesting, contrary to the findings in the literature, revenue concentration is found to be significantly, but negatively correlated with financial vulnerability. Also, NumProg is not found to be significantly correlated with financial vulnerability. None of the correlations are found to be large enough to warrants multicollinearity concerns.

[Insert table 2 here]

The results of model 1, the basic model from Trussel (2002), are presented in Table 3 below. All four predictor variables are found to be significant at a p<.001 level. However, the sign for Revenue Concentration is found to be negative, which seems to suggest that in general, RCs having a greater concentration of revenue sources are less likely to be financially vulnerable. This result appears to contradict theoretical expectations and empirical findings of the literature on financial vulnerability of NPOs (Greenlee and Trussel 2000; Trussel 2002; Tuckman and Chang 1991).

Debt as ratio of total assets was found to be positively related to an organization's financial vulnerability and significant. As expected the greater the organization's debt (liabilities) the greater their financial vulnerability. Margin as a ratio of total revenue was found to be negatively related to an organization's financial vulnerability and significant. As expected the less net income the greater their financial vulnerability. Size, as measured by the natural log of total assets (Size) was found to be negatively related to an organization's financial vulnerability and significant. As expected the greater the organization's total assets the less their financial vulnerability.

Having generally confirmed the general consistency of the basic model results between jurisdictions (USA, UK and Canada) and across decades (1990 – 2009) the follow up was to extend the model to include potential mission drift variables. It is suggested that organizations experiencing mission drift are more susceptible to financial vulnerability. Mission was operationalized as two distinct dimensions. The first was a pure numeric measure of the number of program services offered (NumProg). It is suggested that the greater the number of programs offered the greater the potential for mission drift. To this extent the number of program offerings is expected to be positively related to financial vulnerability. The greater the number of program

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offerings the greater the potential for mission drift the greater the likelihood of financial vulnerability.

It is acknowledged that the number of program offerings does not fully capture the operations of a charity to the extent that they may devote the majority of their efforts to one or more specific program offerings while undertaking dozens of minor program offerings. As such the second dimension relating to program concentration (ProgCon) was calculated based upon the emphasis placed upon specific program offerings. The higher the index the greater the concentration upon a specific program offering. It is suggested that the greater the concentration on a specific program offering the greater the charity's focus upon mission. This translates to a negative relationship between program concentration (ProgCon) and financial vulnerability. The results of the expanded model including the proxies for mission drift, are presented in table 4.

[Insert table 4 here]

The results of the multivariate model including the proxies for mission drift remain consistent with those for the basic model for the four initial predictor variables, namely, debt, revenue concentration, margin and size. The results also confirm our expectation that RCs are for financially vulnerable when the potential for mission drift is present. However, the potential for financial vulnerability is greater only for RCs having a large number of program offerings (NumProg). There was no statistical significance observed for program concentration (ProgCon). However, although financially vulnerability appears to increase with the increased number of program offerings , our model is unable to discriminate the quality of program offering and as such relies upon the management of the RC to be focused upon mission directives.

Robustness Tests

We ran several additional models to test the robustness and sensitivity of our model. First, the basic model (model 1) was run over individual years (2002 through 2009). The results hold for each of the years, although we document deterioration in the Nagelkerke R-squared over the years, from 12% in 2002 to 2.2% in 2009. This suggests an opportunity for further research into determining additional predictors of financial vulnerability. Alternatively, research could be done to improve upon the definition of financial vulnerability. For brevity, these results are not reported.

Secondly, we ran our tests using dummies for various charity sectors. Previous studies have examined differing charity sectors including Welfare, Health, Education, Benefits Community and Faith-based. Greenlee and Trussel (2000), Hager (2001), Trussel (2002), Fischer et al. (2011), Yetman and Yetman (2013) Frumkin and Keating (2011) and Mayer et al. (2012) and Calabrese (2012) all examined some variation of multiple sectors in the USA. The Canadian dataset includes all categories and as previously discussed was divided into five broad categories consistent with the ICNPO and NTEE classification codes; Welfare, Health, Education, Faith-based and Benefits Community. Benefits Community includes Arts, Cultural, Sporting and Recreation organizations consistent with previous studies. The results of this additional analysis are presented in table 5.

[Insert table 5 here]

Panel A provides a comparison of the composition of our sample against that of Trussel (2002). Of interest is the observation that the Faith-based category is the largest grouping in Canada accounting for approximately 47% of RCs. The results of the logistic regression model are presented in Panel B, and are found to be materially unchanged for our extended model 2.

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Significant differences were observed for the sectors, with Faith based charities and those that provide Benefits to the community being found to be less likely to be financially vulnerable.

Finally, we tested model 2 was examined across revenue size as measured by total revenue. We included dummies for revenue sizes. We included two dummy variables. The first was coded as 1 if total reported revenue was less than $1 Million, and zero otherwise. The second dummy was coded as 1 if total revenue exceeded $5 Million, and zero otherwise. Thus, the reference group was RCs with revenues between $1 Million and $5 Million annually. The results of these tests are reported in table 6.

[Insert table 6 here]

While the results from model 2 remain materially unaltered, it is interesting to note that significant differences were observed across revenue sizes. Compared to mid-sized RCs with revenues between $1 Million and $5 Million, smaller RCs (revenues less than $1 Million) are less financially vulnerable, while the larger ones (revenues more than $5 Million), are more financially vulnerable. It should be noted that while revenues too could be seen as a proxy for size, we used the natural logarithm of total assets for our size variable. Furthermore, since revenues could be restricted for use in specific programs, or unrestricted, using revenues as a proxy for size could be misleading. Finally, as Calabrese (Calabrese 2011, 2012) notes, RCs might be under pressure to not accumulate wealth, and thus try to spend most of their revenue on programs.

The differences observed with respect to revenue size prompted us to examine our model (model 2) for RCs belonging to different total revenue categories. For brevity, we do not present results for RCs with revenues less than $1 Mn and those with revenues between $1 Million and

$5 Million, since the results were qualitatively the same as reported earlier. However, we do present the results for the large revenue sample (revenues exceeding $5 Million) in table 7.

[Insert table 7 here]

The sign for revenue concentration is found to be positive, and significant, **consistent** with the extant literature. However, margin, and both our proxies for mission drift, are rendered non-significant. This reinforces our result that RCs with larger revenues are fundamentally different from those with smaller revenues. The extant literature has tended to focus on larger charities. In testing our model for financial vulnerability across all amounts of revenue, we demonstrate that the drivers of financial vulnerability are different for small or mid-sized RCs. Furthermore, the threat from doing too much, as in trying to provide too many programs, can cause RCs to become financially vulnerable. At the same time, such RCs tend to be sheltered from financial vulnerability by having a more concentrated source of revenue. It is likely that such RCs either receive funding from the government, or private benefactors, who are less likely to induce a revenue shock (i.e. reduction or discontinuation of funding). In contrast, larger RCs may be subject to greater variability in revenue, and hence, try to diversify their revenue sources.

CONCLUSIONS

The Basic Model as suggested by Tuckman and Chang (1991) and developed by others was found to be consistent within the Canadian context. All variables were significant and had predicted signs, with the exception of revenue concentration. The Basic Model was also consistent across time periods as first suggested in 1991 and this data covers the most recent decade in Canada (2000-2009). The suggestion that Mission Drift may contribute to financial vulnerability was also supported, but only the number of programs dimension was found to contribute to increased financial vulnerability. These findings were supported for the decade and

across sectors and revenue size in general. However, our study shows that significant differences exist among RCs with respect to their total revenues. Larger RCs, with greater than $5 Million in revenues, are less susceptible to the effect of mission drift. In fact, it might well be necessary for them to engage in providing various programs so as to also ensure a greater diversification of their revenue sources.

In conclusion, our study makes the following contributions to the literature. First, we contribute to the literature on financial vulnerability of nonprofit organizations by providing empirical validation of Trussel's (2002) model in a non-US setting, using a large sample comprising of over 600,000 observations. However, in documenting differences amongst RCs with different revenue sizes, we suggest that care should be taken while evaluating the financial information from such sources as the T3010 returns to estimate the likelihood of financial vulnerability. We also extend the literature by providing evidence that nonprofits might also be financially vulnerable if they are engaged in providing a large number of service programs. We also hope to initiate a discussion within the Accounting community about how the fundamental differences among nonprofit organizations and the forprofit firms require a reimagination of performance metrics for the former. There has been a renewed interest in the accounting issues related to nonprofit organizations, such as donors' interpretation of low-quality information on program ratios (Yetman and Yetman 2012), the incidence or tax expense allocations to taxable activities by nonprofit organizations (Yetman 2001), and misreporting of expenses by such organizations (Krishnan et al. 2006). There are many other issues related to NPOs that should be examined further. With regards to financial vulnerability, we feel that there is room for further research into refining the concept.

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Table 1: Descriptive Statistics

Statistics								
TrusFinVul20			Debt	RevCon	Margin	Size	NumProg	ProgCon
.00	N	Valid	430320	455815	433394	429594	455815	455815
		Missing	25495	0	22421	26221	0	0
	Mean		.2656	.6495	.0370	11.6268	1.925517	7298.82
	Std. Deviation		1.44270	.24403	1.50219	2.25882	1.3101054	3207.459
	Percentiles	25	.0000	.8568	-.0381	10.1572	1.000000	5200.00
		50	.0065	.6378	.0365	11.8099	1.000000	8496.00
		75	.2090	.4923	.1745	13.2373	3.000000	10000.00
1.00	N	Valid	188735	211964	204133	187861	211964	211964
		Missing	23229	0	7831	24103	0	0
	Mean		.4588	.6609	.1908	10.8405	1.950099	7291.33
	Std. Deviation		1.54204	.22876	2.11292	2.41096	1.2867933	3165.832
	Percentiles	25	.0000	.8644	-.0774	9.2510	1.000000	5000.00
		50	.0650	.6350	.0085	10.8385	1.000000	8528.00
		75	.7302	.4981	.1191	12.5071	3.000000	10000.00

Table 2: Correlation Table

Correlations[a]

		TrusFinVul20	Debt	RevCon	Margin	Size	NUMPROG	PROGCON
TrusFinVul20	Pearson Correlation	1	.068[**]	-.011[**]	-.042[**]	-.156[**]	.001	-.013[**]
	Sig. (2-tailed)		.000	.000	.000	.000	.252	.000
Debt	Pearson Correlation	.068[**]	1	.001	-.026[**]	-.066[**]	-.013[**]	-.008[**]
	Sig. (2-tailed)	.000		.521	.000	.000	.000	.000
RevCon	Pearson Correlation	-.011[**]	.001	1	-.051[**]	-.127[**]	.002	-.033[**]
	Sig. (2-tailed)	.000	.521		.000	.000	.235	.000
Margin	Pearson Correlation	-.042[**]	-.026[**]	-.051[**]	1	.052[**]	.007[**]	-.002
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.122
Size	Pearson Correlation	-.156[**]	-.066[**]	-.127[**]	.052[**]	1	.076[**]	.039[**]
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
NUMPROG	Pearson Correlation	.001	-.013[**]	.002	.007[**]	.076[**]	1	-.458[**]
	Sig. (2-tailed)	.252	.000	.235	.000	.000		.000
PROGCON	Pearson Correlation	-.013[**]	-.008[**]	-.033[**]	-.002	.039[**]	-.458[**]	1
	Sig. (2-tailed)	.000	.000	.000	.122	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

a. Listwise N=602629

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Table 3: Estimates from Model 1

Model 1: Dependent Variable is FinVul

	B	S.E.	Wald	df	Sig.	Exp(B)
Debt	.103	.003	1307.776	1	.000	1.109
RevCon	-.353	.014	665.070	1	.000	.703
Margin	-.041	.002	608.328	1	.000	.959
Size	-.149	.001	13657.318	1	.000	.862
Constant	1.044	.018	3264.523	1	.000	2.840

a. Variable(s) entered on step 1: Debt, RevCon, Margin, Size.

Model Chi-square = 17,773; Nagelkerke R-squared = .041

Table 4: Estimates from Model 2

Model 2: Dependent Variable is FinVul

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Debt	.103	.003	1311.121	1	.000	1.109
	RevCon	-.355	.014	672.597	1	.000	.701
	Margin	-.041	.002	610.956	1	.000	.959
	Size	-.150	.001	13660.869	1	.000	.861
	NUMPROG	.023	.003	86.913	1	.000	1.024
	PROGCON	.000	.000	1.244	1	.265	1.000
	Constant	1.019	.021	2460.234	1	.000	2.770

a. Variable(s) entered on step 1: Debt, RevCon, Margin, Size, NUMPROG, PROGCON.

Model Chi-square = 17,897; Nagelkerke R-squared = .041

Table 5: Including dummies for charity sectors

Panel A: Category Segments

	Trussel (2002)			Our study	
Welfare	7,094	41.5%		121,671	18.2%
Health	3,541	20.7%		29,002	4.3%
Education	1,767	10.3%		84,615	12.7%
Faith-based	611	3.6%		312,772	46.8%
Benefits Community	611	22.2%		118,804	17.8%
Undefined	303	1.8%		915	0.1%
Total	17,112	100 %		667,779	100 %

Panel B: Estimates from extended model 2 including dummies for charity sectors

Model 2: Dependent Variable is FinVul

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Debt	.094	.003	1189.260	1	.000	1.099
	RevCon	-.327	.014	563.545	1	.000	.721
	Margin	-.041	.002	595.728	1	.000	.960
	Size	-.148	.001	13008.619	1	.000	.863
	NUMPROG	.037	.003	208.025	1	.000	1.037
	PROGCON	.000	.000	.027	1	.871	1.000
	SectWelfare	.026	.075	.125	1	.724	1.027
	SectHealth	-.004	.076	.003	1	.956	.996
	SectEducation	-.133	.075	3.142	1	.076	.875
	SectFaithBased	-.319	.075	18.126	1	.000	.727
	SectBenComm	-.252	.075	11.292	1	.001	.777
	Constant	1.149	.077	220.046	1	.000	3.156

a. Variable(s) entered on step 1: Debt, RevCon, Margin, Size, NUMPROG, PROGCON, SectWelfare, SectHealth, SectEducation, SectFaithBased, SectBenComm.

Model Chi-square = 20,206; Nagelkerke R-squared = .047

Table 6: Including dummies for revenue sizes

Model 2: Dependent Variable is FinVul

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Debt	.083	.003	979.015	1	.000	1.087
	RevCon	-.416	.014	912.276	1	.000	.660
	Margin	-.043	.002	633.645	1	.000	.958
	Size	-.192	.001	18208.672	1	.000	.825
	NUMPROG	.024	.003	92.430	1	.000	1.025
	PROGCON	.000	.000	.779	1	.377	1.000
	RevLess1Mn	-.635	.012	2650.111	1	.000	.530
	RevOver5Mn	.600	.022	727.517	1	.000	1.822
	Constant	2.094	.027	5903.113	1	.000	8.120

a. Variable(s) entered on step 1: Debt, RevCon, Margin, Size, NUMPROG, PROGCON, RevLess1Mn, RevOver5Mn.

Model Chi-square = 22,971; Nagelkerke R-squared = .053

Table 6: Estimates for group with revenues greater than $5 Million

Model 2: Dependent Variable is FinVul

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Debt	.825	.049	288.562	1	.000	2.283
	RevCon	.192	.097	3.897	1	.048	1.212
	Margin	-.011	.049	.050	1	.824	.989
	Size	-.057	.014	15.603	1	.000	.945
	NUMPROG	.027	.018	2.230	1	.135	1.028
	PROGCON	.000	.000	.628	1	.428	1.000
	Constant	-.394	.268	2.170	1	.141	.674

a. Variable(s) entered on step 1: Debt, RevCon, Margin, Size, NUMPROG, PROGCON.

Model Chi-square = 447; Nagelkerke R-squared = .050