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## WORKING PAPER

# Agency Consequences of Government Funding in Nonprofit Organizations

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# **Agency Consequences of Government Funding in Nonprofit Organizations**

## **Abstract**

Nonprofit organizations often rely on governmental grants to finance their social programs. Under certain circumstances, the procurement of these grants causes an agency-relation between the board of directors and the management of the organization. Using archival data from a substantial number of nonprofit organizations' financial statements, the influence of different types of government grants on the agency-relation between board and management is tested. The study reveals an increase in the agency-relationship depending on the level of efforts necessary to achieve the grants.

## **Introduction**

There is little discussion on the importance of nonprofit organizations in today's economy. The number of organizations, their employment figures, as well as their economic importance is growing in several countries (Marée et al 2008, 9; U.N. Statistics Division 2003, 3). The academic debate on the reasons for existence, management and efficiency of nonprofit organizations is ongoing.

Nonprofit entities differ from their for-profit counterparts in several aspects. In terms of financing, there are three major differences: nonprofits are bounded by a non-distribution constraint, they do not have formal owners and, therefore, they have different sources of funding. Unlike for-profit firms, organizations quite often heavily rely on donations and grants to finance

their operations. Contrary to a commonly held belief, nonprofit organizations are allowed to make profits. This surplus, however, cannot be distributed to anyone who exercises control over the firm (Hansmann 1980, 838). Equity is not raised through owner contributions, but built through profit accumulation, which are basically excess donations and grants. Tuckman and Chang (1992, 76) argue that this accumulation of equity is a goal of the nonprofit organization.

Due to the lack of formal ownership and the absence of residual claimants, agency problems (Fama and Jensen 1983) are shaped differently in nonprofit organizations than in for-profit firms. In a very broad sense, agency problems may arise when one person (the agent) does something on behalf of the other (the principal). In for-profit settings, agency problems have been documented where managers act as agents and shareholders are principals. As Jensen and Meckling (1976, 312) pointed out, the interest of these managers is different from the interest of the owners. As explained, in a nonprofit organization, there is no ownership in the sense that a founder, board member or member of the organization holds the right to residual claims. Du Bois et al. (2004, 2320) and Olson (2000, 281) argue that, although there is no legal ownership, the nonprofit board does have the right to monitor and control, serving as a principal in an agency-relation with management.

Although academics agree on the existence of agency problems in nonprofit organizations, scientific research in this area is less prevalent than in for-profit corporations. In this paper, we consider the agency-relation between nonprofit board and nonprofit executive staff. We argue that time-consuming applications for governmental grants (as part of the fundraising activities of the board) increase the distance between board and management, due to decreased monitoring

activities by the former. This increased distance results in discretionary spending by the agent, similar to previously documented agency costs in a for-profit setting.

This paper contributes to the literature in different ways. Firstly, while there is ample research on financial implications of agency-related issues in for-profit settings, this aspect has received little attention in non-profit settings. Secondly, this paper focuses on the impact of governmental funding on agency issues whereas former research by Core et al (2006) has dealt with donations. In contrast to large private or corporate donors, government is (as a rule) not represented in the board of directors. Thirdly, rather than focusing on a specific nonprofit sector such as health care or education, the nonprofits in the current paper stem from a variety of sectors.

This paper is structured as follows: after a brief survey of related research in the next section, we spell out testable hypotheses.. This is followed by a methodological discussion and the analysis of the results. The paper ends with a conclusion and issues for further research .

## **Previous Research**

### ***Funding and Spending in Nonprofit Organizations***

Funding plays a truly fundamental role in defining the scope of a non-profit organization. The main goal of organizations is to provide social services to members and/or constituents. Donations, grants and ‘commercial activities’ are crucial to reach these goals. As several authors suggest, governmental grants are an important source of funding (e.g. Bernstein 1991b, 429, Bernstein 1991a, 432, Hughes and Luksetich 2004, 208). Hansmann (1987,28) provides a

classification of nonprofits into 'donative' or 'commercial' organizations, depending on the main source of funding. Organizations that rely on governmental funding and donations are defined as donative and differ from organizations that are mainly financed by user fees paid by the beneficiaries of the social programs. Greenpeace and Doctors without Borders can be seen as examples of donative organizations, whereas private homes for the elderly are more commercial in nature.

In donative nonprofit organizations, the stream of funding is rather unstable and unpredictable (Gronbjerg 1991, 5). As pointed out by Handy and Webb (2003, 261), it is important for charitable nonprofits to secure current wealth to protect the organization from revenue volatility and increase the chances of survival of the organization. These authors modeled the decision of a nonprofit to save or spend money and concluded that nonprofit organizations tend to save less (and spend more) when governmental support is feasible in case of future financial problems. In other words, availability of financial governmental aid might induce increased spending by nonprofit organizations. In a context of financially limited governments and increasing competition between nonprofits in the 'market' for donations, it seems logical that organizations develop 'rainy day' reserves. When resources are not adequate, stable or assured, serious problems may emerge. In this respect, Froelich (1999, p.248) comments that 'the dependence experienced by an organization is determined by the importance and concentration of resources provided. Organizations that rely on few sources for vital inputs, become highly dependent in and beholden to those providers for survival'.

### ***The Effect of Governmental Funding on Board, Management and Agency Issues.***

Several authors have documented the effects of growing reliance on government grants on the composition of and relationship between the board of directors and executive staff of the

nonprofit organization. There seems to be a sharp contrast between two streams of literature. Some authors argue that the board provides direction in such key areas as financial management and management of relationships with the government (Harlan and Saidel 1994,173; Saidel and Harlan 1998,243; Olson 2000, 283; Provan 1980, 234). Others argue that nonprofit boards are insignificant participants in the process of contracting with the government (Bernstein 1991a, 440, Gronbjerg 1991, 23).

More recently, Alonso et al. (2006, 786) discussed the consequences of reliance on governmental funds in terms of the tasks and composition of the board. They argue that the function of the board becomes highly important in providing financial resources for the future.. The board has to take care of the strategic forecasts and the alliances with these providers. Guo (2007, 458) examined the effect of higher levels of government funding on the representative power and strength of the board. In order to gain legitimacy in the eyes of the community, boards might be more representative of this community. On the other hand, in order to gain legitimacy in the eyes of the government and in search of (increased) government funding, nonprofit boards may consist largely of 'corporate, professional and social elites – who are more likely to have linkages with public funding agencies, as well as expertise in grant writing' (p. 461). This is consistent with the findings Stone et al. (2001, 285) that heavily subsidized nonprofit organizations tend to have more professional boards, consisting of businesspeople rather than community representatives.

Bernstein (1991a) found that government funding led to higher ambiguity in the roles and responsibilities of boards and staff. Additionally, she reports that voluntary and professional staff's motivation changed due to more formal work processes as a result of government funding.

Guo (2007, 462) also states that: 'In either case, dependence on government funding generally shifts organizational power from the board to the chief executive'. The reasons for this shift are

threefold. Firstly, government grants can increase the size of the organization, making it more difficult for the board to monitor daily management. Secondly, applying for grants may be more time-consuming than board members are willing to spend. Applying for these grants requires specialized skills and knowledge, increasing the information gap and the distance between the board and executives. Finally, when government funding is associated with defined program goals, the role of the board in program planning and goal setting is minimized.

To summarize, board composition, strength and involvement may vary according to the level and form of governmental aid to the organization. There is some agreement about the fact that increased governmental funding tends to lead to a more professional board of directors that is involved in government contracting. Whether or not agency problems are to a greater or lesser extent present in nonprofit entities compared to for-profit corporations is beyond the scope of this paper. The essence is that the different levels of efforts necessary to attain government funding can affect the monitoring role of the board as well as shift power from the board towards management and thus elicit agency problems.

### ***Financial Aspects of Agency Problems***

Research on the effect of agency problems on nonprofit organizations' financial status is scant, although Jensen (1986, 324) stated that the decision on how to use internal funds is a central element in the conflict between principal and agent. Whether (self-interested) managers choose to spend cash quickly rather than stockpile it as cash reserves is subject to discussion. According to the flexibility hypothesis, self-interested managers will prefer to hoard cash in order to have more flexibility in future investment decisions (Jensen 1986, 323). The spending hypothesis however

states that managers will choose to spend cash quickly to realize firm growth (Jensen and Meckling 1976, 329).

Core et al. (2006, 331) find that nonprofit organizations who are confronted with agency problems tend to have lower efficiency ratios (measured by the ratio of program expenses to total expenses) and higher management compensation. On the other hand, these authors also find that when nonprofits are monitored by large donors, the expenditure of excess cash is encouraged by the board. Hansmann (1990, p.36) also suggests that nonprofit managers will build cash reserves rather than provide services in order to ensure their self-interest such as a lower workload and higher job security. Du Bois et al. (2004, 2322) proxy agency problems by higher management pay. Gore (2009, 183) finds that high cash levels are associated with agency problems, as indicated by high administrative expenses, salaries and bonuses in the public sector (cities). Fisman and Hubbard (2005, 2231) show that poor oversight by the government leads to high managerial compensation and smaller savings. These results are partly consistent with higher levels of spending as a result of agency problems. Research in for-profit firms also acknowledges patterns of higher and unnecessary spending by management as a consequence of agency problems. Harford et al. (2008, 536) conclude that 'self-interested managers choose to spend cash quickly rather than gain flexibility through stockpiling it' in their research on the relation between corporate governance, agency problems and firm cash holdings.

## **Hypothesis development**



The shift in the relationship between nonprofit board and management as a consequence of governmental funding is a key element in this paper. As indicated in the previous section, there are two possible directions of board involvement. According to the first stream of literature, boards play an active and important role in contracting with the government and in raising funds for the organization. As such, boards take on the role of facilitator and 'political advocate'. Harlan and Saidel (1994, p. 175) state that 'they serve important procurement functions when they participate in grant preparation and press for support of grant applications in meetings with government funders.' Other authors suggest that managers are more involved in these processes and boards tend to fulfill an almost ceremonial function. For instance, Bernstein (1991a, p. 187) found that 'managers seem to view the Board as irrelevant in terms of the major political issues regarding contracted services'.

According to the first stream of arguments, boards will be actively pursuing government funding, which often is a technical and time-consuming effort. These efforts by the board can decrease the amount of time and effort to monitor management, thus increasing board-management distance and agency related problems. In the second line of arguments, boards play no role in contracting governmental funds, leading to increased management power.

In fact, this seemingly opposite views can be combined, once one allows for a more detailed analysis. Specifically, one can argue that the involvement of the board depends on the nature of governmental grants. In the Belgian case, for instance, two major types of grants can be distinguished. The first type is a yearly renewable, operational grant. Grants received by schools that depend on the number of students are one such example. Once a nonprofit organization is operational and has received these grants, the next application can be considered to be a 'routine' (although time-consuming) job, and can be dealt with by daily management. In the light of the

previous discussion, there is little or no need for the board to be involved in this type of government contracting. The second type of grants can be called a 'capital grant'. It fundamentally differs from the first type in the sense that it is awarded to a nonprofit organization for important investments, and because both applying for these grants and the follow-up and procurement are complicated processes that require board intervention. In our example of schools, the purchase of a new building by the school might give rise to the application for capital grants. It seems obvious that the board is involved in such a process. This reconciliatory view is supported by Gronbjerg (1991, p. 14): 'The type and amount of work and the nature of decisions nonprofits face in managing funding relationships differ considerably depending on how restrictive the funding source is and also on whether the contract or grant is new or continuing.' Frumkin and Kim (2002, p.19) also support this view, stating that there are difference in the amount of oversight that is attached to government funding.

Summarizing, based on previous literature on the roles, responsibilities, composition and power of the board, we argue that funding sources can have an impact on the roles, responsibilities, composition and power of the board. This induces a changed relationship between the board and the executive staff of the nonprofit organization. When the board is responsible for important government grants, two problems may arise. Firstly, increasing efforts to act as a 'facilitator' or 'political advocate' may come at the expense of the monitoring role of the board. In turn, this may instigate an agency problem, as it increases opportunities for management to act in its self-interest. Whether these self-interest expenses consist of higher pay or higher administrative expenses is not the main question of this paper. Higher expenses lead to decreased cash (and equivalent) levels. Therefore, lower cash levels are used as a proxy for self-interested behavior by management. Secondly, since management is less involved in the process of contracting with the

government, a sense of ‘ownership’ may go lost, making it easier for management to be less parsimonious contrary to funds attracted by their own efforts. Once again, the increased spending is proxied by a lower level of cash and cash equivalent. Figure 1 depicts the hypothesized relationship between governmental funding and the level of cash (and cash equivalent).

[ Figure 1 here]

The argumentation and hypothesis brought forward are built on the spending hypothesis, while discarding the flexibility hypothesis which states that managers rather save money to assure future investments. There are several reasons for this choice. Firstly, in nonprofit organizations, future investments that serve the personal interest of the manager are less available than in corporations (e.g. take-overs). Secondly, the evidence brought forward by Core et al. (2006, 309) suggests that the flexibility hypothesis holds in cases where large donors are members of the board. In this study, donations are very limited and the sponsor at interest is the government, not holding a seat on the board. The arguments of Hansmann (1990, 36) in favor of the flexibility hypothesis are a lower workload and higher job security. This paper does not look into the purpose of the spending (i.e. extra program expenses versus personal expenses) and therefore can not take the effect on workload into account. As for higher job security, except in cases where spending is so dramatic that it causes the failure of the organization, management is quite well protected by Belgian social laws.

Therefore, we hypothesize that government funding of nonprofit organizations affects agency problems between board and executive staff. We argue that capital grants will increase the distance between board and management, leading to increased spending by the latter and lower levels of cash and cash equivalent. This is in contrast with operating grants, for which

management is responsible, leading to increased monitoring by the board, lower levels of spending and higher levels of cash. Formally stated, the two hypothesis are as follows:

H1: higher capital grants are associated with lower levels of cash and cash equivalent.

H2 : higher operating grants are associated with higher levels of cash and cash equivalent.

## **Methodology**

In contrast to a large number of former studies using survey or case study data to capture contextual and organizational characteristics, data from financial statements are used to examine the effects of an agency-relation between board of directors and management of nonprofit organizations. Correlation coefficients and multivariate (OLS) regression analyses of financial ratios are used to assess the existence of agency problems. For three important reasons, the current study uses data from Belgian nonprofits. Firstly, the Belgian nonprofit sector is hardly a *suis generis* case, as it is similar to that observed in other modern economies. Secondly, Belgian nonprofit organizations often rely on governmental grants. Nevertheless, donations, membership fees and commercial income can also be identified as a funding source in the financial statements of these organizations. Finally, and importantly, two very distinct forms of governmental grants can be singled out: capital grants and operational grants. The respective characteristics of these grants are precisely such that they are likely to affect the roles and responsibilities in the organization, in the way indicated in section 3.

As indicated above, we need a proxy to test for the existence of agency-relations, given that the latter are as such non-observable. Whereas levels of management pay are used in earlier nonprofit

research, the current paper uses the level of cash and cash equivalent as an indicator of agency-related problems. This approach is similar to the methodology used by Harford et al. (2008, 539). The level of cash and cash equivalent is scaled by total assets in order to correct for the size of the organization. As a sensitivity analysis, we also performed regressions on cash and cash equivalent scaled by other factors, namely total assets minus cash and cash equivalent (Harford et al 2008, 539, Opler et al. 1999, 3) and total revenue (Harford et al. 2008, 539).

The main independent variable to test the influence of governmental grants on agency behavior is the importance of capital grants. Capital grants (reported in the balance sheet of nonprofit organizations) are scaled by total assets. As the argument is that these grants are of such importance that intensive board involvement is needed, at the expense of the latter's monitoring role, a negative relationship with the dependent variable is expected. Similarly, given the hypothesis that yearly renewable, operating grants demand less involvement by the board and are mainly procured by management, a second independent grant-related variable is introduced. This variable measures the importance of these grants on the statement of activities (similar to profit and loss account or income statement) of the organization and is computed as operating grants scaled by total revenue.

Since the level of cash and cash equivalent can evidently be influenced by other factors, some control variables are added to the model. A first group relates to the availability of funding sources, which influences the level of cash regardless of the existence of agency problems, a second group refers to the need to re-invest in fixed assets, as we now explain.

The level of cash and cash equivalent does not merely depend on current decisions by the organization to save or spend money. Past decisions (which can themselves be subject to agency

problems) influence the structure of the balance sheet. When organizations have accumulated wealth in the past, building equity through excess donations, fees and subsidies, cash levels will probably be higher. We therefore expect a positive relationship between the importance of equity (defined as assets minus liabilities and minus capital grants) and the level of cash and cash equivalent. In order to correct for size, equity is scaled by total assets.

Next to equity, liabilities can be an important funding source. Therefore, we added long-term financial liabilities to the OLS-model. The variable (scaled by total assets) serves as a control variable. However, in line with previous arguments, it can be expected that boards are actively involved in the procurement of an important and long term commitments of a financial loan. Therefore, a negative relationship with cash levels can be expected (Opler et al. 1999, 25). Furthermore, a more prudent nonprofit organization will be reluctant to this type of commitments, using it as a last resort when cash is unavailable to finance long-term investments. This is also indicative of a negative relationship between long-term loans and cash levels.

To proxy the need to re-invest in new fixed assets, the percentage of accumulated depreciation is added to the model. When accumulated depreciation divided by the historical purchase price of the assets is high, the need to reinvest in new assets is high as well, which may lead to stockpiling cash reserves in order to finance future investments. Therefore, a positive relationship between the age of the assets and cash levels is expected.

The OLS-regression model as well as the definitions of the variables can be found in table 1. In order to control for sector-related differences, the independent variable is corrected with the median level of cash and cash equivalent per sector (Harford et al. 2008, 539). To avoid influence of outliers, all explanatory variables are winsorized at the 1 percent level of each tail of the distribution. However, 'raw' cash levels were used as a sensitivity analysis.

Former studies identified variability in revenue as an explanatory factor of the level of cash hoarding (Fisman and Hubbard 2005, 2242; Core et al. 2006, 315), therefore the standard deviation of revenue divided by the mean revenue over the past three years is included as a control variable. Since the direction of the variability may be of importance, two more variables are added to the model. A dummy variable for the change in subsidies and donations (1 is a decrease in 2007, 0 is an increase in 2007) as well as an interaction term (variability x decrease) control for negative versus positive changes in revenue. Due to data availability since 2006, these variables can only be computed for the last year of the three year time horizon. It can be expected that higher variability and a former decrease in subsidies and donations is positively related with high cash levels as a result of a more parsimonious policy.

[table 1 here]

## **Data Description and Univariate Analysis**

In 2006, Belgian nonprofit organizations were confronted with a new obligation to use accrual accounting techniques and to make financial reports publicly available. Depending on the size of the organization, the standard format of financial reports is either a 'full report' (very large organizations) or an 'abbreviated report' (large organizations). Small nonprofits are not obligated to publish financial reports. Data regarding operating and capital grants are only available in full financial reports. In September 2006, 925 full financial reports were electronically available (eighty percent of the population of full report filers). Additional data for this list of organizations

were gathered for 2007 and 2008. Since some organizations ended their activities in this period, or switched from a full report to an abbreviated report, some data regarding grants are missing.

The organizations are active in twenty sectors. Similar to other countries (see e.g. Core et al. 2006, 313), the largest sectors are education (59.5% of the sample) and health care (18.6%). Smaller sectors are – amongst others- sport and leisure (3.7%), business-related activities (3.7%), tourism (1.1%), research and development (0.5%). For 54 organizations (5.8%), the sector is undefined.

[table 2 here]

The mean, median and standard deviation of all variables are shown in table 2. The mean level of cash and cash equivalent relative to total assets is 30.79 percent. The median of 23.22 percent is significantly lower, indicating a skewed distribution. To take sector differences into account, cash levels are corrected by the median per sector. This correction is only performed for sectors with at least 5 observations per year. The mean level of sector-corrected cash levels is 6.33 percent.

For all explanatory variables, descriptive statistics are reported before and after winsorizing at the one and 99 percentile. Differences in the means of all variables due to winsorizing are limited. Obviously, standard deviations are reduced by omitting the extreme values of the distribution.

The distributions of CAPgrant, FINDEBT, OPERgrant and VARrev are skewed. The mean value is (significantly) higher than the median value. It can be noted that, on average, 10.6 percent of total assets are financed by capital grants. About forty percent of the organizations do not receive capital grants, but for three percent of the organizations it is the main financing source (untabulated). This is similar to the importance of financial debts. More than 38 percent of organizations do not have financial long term and short term debts (untabulated), leading to an



average of 16 percent of total assets. Only in ten percent of the cases are financial debts the main source of financing (untabulated). The analysis of revenue shows that operating grants make up 43 percent of total revenue on average. For 55 percent of organizations, operating grants are the main source of operating revenue. The degree of self-financing and the percentage of accumulated depreciation (AGEassets) are normally distributed with a mean of, respectively, 41 and 47 percent.

Since the differences between the original and winsorized data are very limited, the latter are used in the univariate analysis as well as in the OLS regression to mitigate the influence of outliers.

[table 3 here]

The Pearson and Spearman rho's correlation coefficients are tabulated in table 3. All correlation coefficients of the dependent variable with the explanatory variables have the expected sign, with the exception of the variability of revenues. Prior research (Core et al. 2006, 317) shows that a greater variability in revenue leads to accumulation of cash as a 'rainy day reserve'. The negative coefficient is not (Pearson) or borderline (Spearman) significant. The negative sign might be induced by the fact that variability does not take the 'direction' of the change into account. Cash management may be different for organizations with declining revenue (less spending) than for organizations with growing income (more spending). This is somewhat confirmed by the positive correlation between the level of cash and a decrease of revenue and the interaction term of variability and decrease in past years. The correlations between explanatory variables are modest and do not suggest exclusion of variables for reasons of multicollinearity.

## **Multivariate results and sensitivity analysis**

We performed an ordinary least squares regression on the cash levels (cash and cash equivalent scaled by total assets) corrected for sector differences (by subtracting sector median). To present a full analysis of the data, the parameter estimates of five models are summarized in table four. Firstly, we estimated the effects of the main variables (model one) and control variables (models two and three) separately. We merely have one-year observations for variability in revenue: therefore, models are estimated without (models one, two and four) and with earnings variability (models three and five).. The focus is on the analysis of models four and five, combining main and control variables.

[table 4 here]

Models four and five combine the main variables of interest with the control variables. The difference between the models consists in the inclusion of variability of revenue and decrease in revenue in model five, which reduces the dataset to a one-year period and a lower number of observations. The coefficients of both main variables are highly significant, in the predicted direction. Higher capital grants (operating grants) are linked with lower (higher) cash holdings. These findings confirm the hypothesis that the type and importance of grants influences the cash levels of a nonprofit organization, which, in turn, is affected by the existence of agency problems. As hypothesized, the level of self-financing and the state of the assets (percentage depreciated) give rise to higher cash levels, whereas the level of debt financing is related to lower levels of cash and cash equivalent. Earnings variability has a significant and negative relationship with the independent variable. This is in line with the univariate findings, but in contradiction with

previous research (Core et al. 2006, 317). The negative relationship is explained by the direction of the changes in revenue, not merely the extent of the changes. When organizations are confronted with large declines in revenue, they act differently than in the case of large growth of revenue. In the first case, more parsimonious behavior occurs, leading to higher cash levels. In the second case, organizations are more inclined to spend cash more quickly. This is confirmed by the significantly positive coefficient of the interaction term (variability x decrease). This indicates that a decrease in strongly varying revenue in the previous period is consistent with higher cash levels in the current period. The explanatory power of the full models is satisfactory: the adjusted  $R^2$  is 34.7 (model 4) and 37.4 (model 5) percent. The F-value is significant, indicating a good fit of the model.

The first model only includes the variables that are directly linked with our central hypotheses, i.e. the importance of capital grants and operating grants. The second (2006-2008) and third model (2008) include only control variables to determine their effect on the level of cash holdings separately. All models show parameters consistent with our hypotheses and expectations.

Overall, the regression analysis is consistent with the hypotheses formulated in section 3 of this paper and therefore supports the argument that time-consuming applications for capital grants influence the relationship between board and management of the nonprofit organization. This effect is not present when operating grants are concerned. Similar to the results of Hughes and Luksetich (2004, 214) who find that 85% of government support is going into an increase in net assets, we find that higher operating grants are related to higher cash balances.

Three types of sensitivity analyses were performed. Firstly, a regression analysis on cash levels (cash and equivalent scaled by total assets) that are not corrected for sector differences showed

very similar results. The direction and level of significance of the dependent variables are exactly the same as for models four and five. Dummies were added to these models to test for the effect of different subsectors. Several sectors have significantly higher cash levels (business related services, tourism, recreation/arts/sports, recycling), whereas cash levels tend to be lower in educational nonprofits. These sector dummies are not significant when added to the original models, indicating that the correction with the sector median is effective.

Secondly, in the original model, total assets were used as a deflator for all variables except operating subsidies. As a sensitivity analysis, operating grants were scaled by total assets without changes to the results and conclusions. Thirdly, total revenue was used as a deflator on all variables. In those models, financial debts and operating grants are not significant in explaining the level of cash and equivalent, resulting in a lower explanatory power ( $R^2$  adjusted 27.6 percent in model 4 and 29.5 percent in model five). Overall, the sensitivity analyses result in very similar conclusions as the original OLS models.

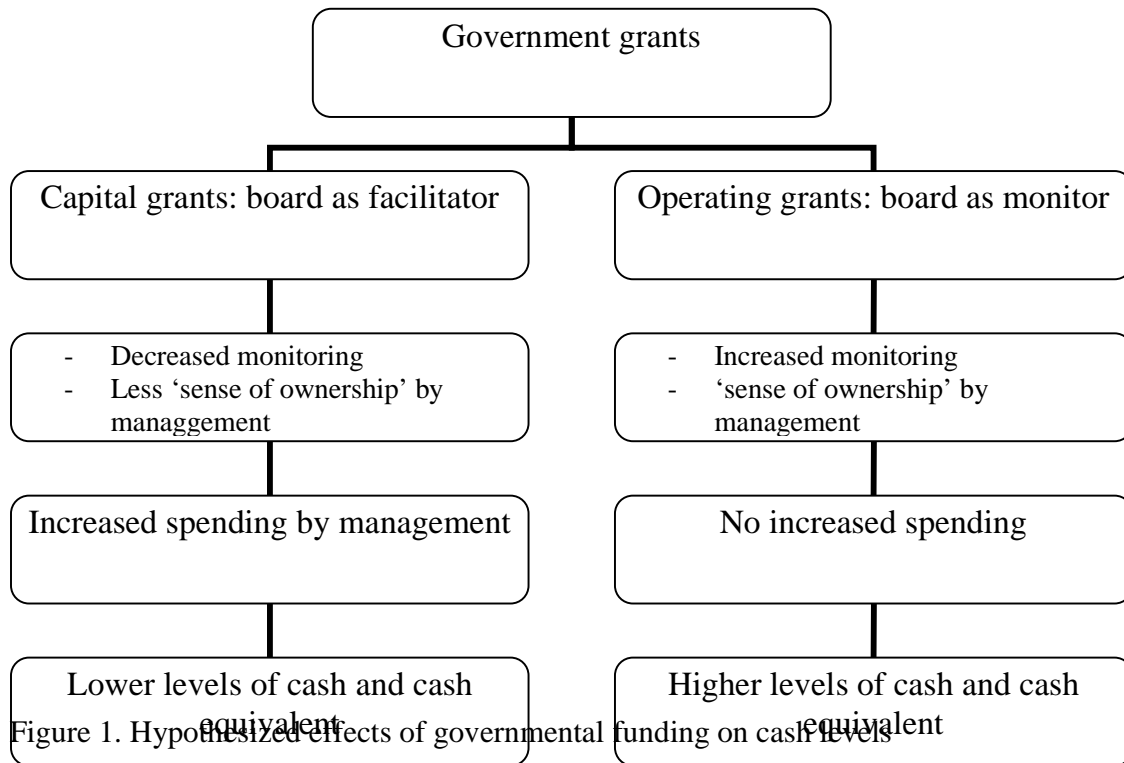
## **Conclusions and Issues for Further Research**

Former research (Jensen, 1986) clearly identified the existence of an agency relation between the board of directors and the management of nonprofit organizations. However, the existing views on the role (and strength) of the board are conflicting. Some authors state that the board is essential in attaining resources for the organization (Harlan and Saidel, 1994; Saidel and Harlan, 1998; Olson, 2000; Alonso et al. 2006). Others argue that they are insignificant participants (Bernstein, 1991a; Gronbjerg, 1991).

In this paper, we have combined these views in light of the type of funding. We have identified two types of governmental grants that are very different in terms of the effort needed to procure them. Operating grants are yearly renewable grants for which the involvement of the board is unnecessary. Therefore, the procurement of these grants is in the hands of management. The second type of grants, capital grants, are often associated with large investments in fixed assets and are time-consuming, high-level decisions. Here, the board is actively involved in the process. In the first case, the board has time to monitor management, who have a 'sense of ownership' of the received funds. In the latter case, the board is involved as a facilitator, leaving less time for their monitoring role. Due to the fact that management is less involved in the procurement of the grants, there is less 'sense of ownership' of the funds received. This indicates that the agency-relation between board and management is influenced by the type of funding by the government. To capture this agency-relation, which is unobservable, we used the level of cash and cash equivalent (similar to Harford et al. 2008).

Consistent with the hypothesis that managers choose to spend cash quickly and consistent with the idea of increased agency problems in the case of capital grants, we find that cash levels (when controlled for funding choices and sectoral differences) are lower when capital grants are important and higher when operating grants are more important. This indicates that contracting with the government can change the internal relations of an organization, creating distance between nonprofit board and nonprofit management.

## Tables and figures



<i>Regression model</i>	$C\&CE = \alpha + \beta_1 CAPgrant + \beta_2 OPERgrant + \beta_3 SELFFIN$ $+ \beta_4 FINDEBT + \beta_5 AGEassets + \beta_6 VARrev$ $+ \beta_7 DUMdecrease + \varepsilon$	
<i>Variable</i>	<i>Expected sign of <math>\beta</math></i>	<i>Definition</i>
C&CE		Cash and Cash equivalent (Cash at bank and in hand + Short term financial investments) / Total assets
CAPgrant	-	Importance of capital grants Capital grants / Total assets
OPERgrant	+	Importance of operating grants Operating grants / Total revenue
SELFFIN	+	Control variable Equity build with past excess revenue and own funds (Own funds + reserves + retained earnings) / total assets
FINDEBT	-	Control variable Long-term financial loans / total assets
AGEassets	+	Control variable Accumulated depreciation / historical cost of depreciable fixed assets
VARrev	+	Control variable Standard deviation of revenue (t-2 to t) / mean revenue (t-2 to t)
DUMdecrease	+	Control variable 1 if subsidies and donations decreased in t-1 versus t-2, 0 otherwise
VARxDECR	+	Control variable Interaction term of VARrev and DUMdecrease

Table 1. Regression model and definition of variables

<i>Variable</i>	<i>Number</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>
<b>C&amp;CE</b>	2695	,3079	,2322	,2512
(corrected by sector median)	(2475)	(,0633)	(,0000)	(,2374)
<b>CAPgrant</b>	2721	,1061	,0204	,1564
(winsorized at 0.00 and 0.62)	(2721)	(,1049)	(,0204)	(,1517)
<b>OPERgrant</b>	2500	,4251	,3196	,3903
(winsorized at 0.00 and 0.99)	(2500)	(,4258)	(,3196)	(,3884)
<b>SELFFIN</b>	2701	,4187	,4102	,4128
(winsorized at -0.30 and 0.99)	(2701)	(,4268)	(,4102)	(,2758)
<b>FINDEBT</b>	2706	,1594	,0455	,2209
(winsorized at 0.00 and 0.84)	(2706)	(,1575)	(,0455)	(,2130)
<b>AGEassets</b>	2549	,4723	,4694	,2346
(winsorized at 0.00 and 0.98)	(2549)	(,4721)	(,4694)	(,2342)
<b>VARrev</b>	840	0,1037	0,0632	0,1564
(winsorized at 0.01 and 0.85)	(840)	(0,1003)	(0,0632)	(0,1321)
<b>DUMdecrease</b>	925	703 cases with increase (76%), 222 with decrease (24%)		

Table 2. Descriptive statistics



<i>Pearson</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
<i>Spearman rho</i>										
1	C&CE	1								
2	CAPgrant	-.339	1							
		-.343								
3	OPERgrant	.089	.163	1						
		.103	.226							
4	SELFFIN	.493	-.298	-.020	1					
		.519	-.215	-.004						
5	FINDEBT	-.338	-.022	.168	-.421	1				
		-.392	.207	.177	-.380					
6	AGEasset	.237	-.204	-.156	.039	-.317	1			
		.232	-.201	-.164	.077	-.347				
7	VARrev	-.001	-.142	-.122	.098	-.043	.113	1		
		-.086	-.121	-.191	.003	-.100	.017			
8	DUMdecrease	.062	-.149	-.062	.037	.043	.086	.222	1	
		.054	-.187	-.079	.045	.000	.071	-.001		
9	VAR x DECR	.059	-.125	-.125	.043	-.056	.173	.720	.548	1
		.078	-.183	-.094	.037	-.066	.080	.051	.995	

Table 3. Pearson and Spearman Rho's correlation coefficients

<i>Variable</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
<b>Constant</b>	.087 ***	-.163 ***	-.196 ***	-.076 ***	-.107 **
<b>CAPgrant</b>	-.545 ***			-.384***	-.364***
<b>OPERgrant</b>	.085 ***			.097***	.104***
<b>SELFFIN</b>		.389 ***	.397***	.282***	.287***
<b>FINDEBT</b>		-.110 ***	-.089 **	-.213***	-.188***
<b>AGEasset</b>		.173 ***	.250***	.118***	.185***
<b>VARrev</b>			-.285 **		-.304 **
<b>DUMdecrease</b>			.031		.022
<b>VARxDECR</b>			.245 **		.347 **
<b>R<sup>2</sup> adjusted</b>	.132	.287	.321	.347	.374
<b>F-value</b>	175.339 ***	319.287***	60.093***	241.378***	54.113***
<b>N</b>	2284	2370	749	2258	711

Table 4. Ordinary Least Squares regression of sector-corrected cash levels.

(\*\*\* P < .001, \*\* P < .05, \* P < .1)

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