

External contingency factors and performance measuring: a study in Brazilian NGOs

Abstract

Objective: Analyze the relations between the external contingency factors and the performance measuring management practices in Brazilian non-governmental organizations.

Method: A mail survey was used with 43 organizations members of the Brazilian Association of Non-Governmental Organizations. The variables used to execute the study were subdivided in two blocks. The first block targeted the External Environment contingency factor, by means of the variables intensity of the competition; environmental dynamism and environmental uncertainty. The second block targeted the management practices to measure performance levels, by means of the variables performance planning; performance indicators; performance objectives; data collection tools and rewards and sanctions. As a statistical technique to analyze the results, Spearman's correlation coefficient was used, significance being set at 99% ($p=0.01$).

Results: The results indicated that the external contingency factors were not related to most performance measuring management practices, revealing a lack of correlation between managers' actions and the organizational design of Brazilian non-governmental organizations.

Contributions: Empirical study of non-governmental organizations' external environment and its relation with the performance measuring practices managers use, going beyond ideological aspects. Thus, the article contributed to the literature and professional practice by understanding the intensity of the correlation between management actions and the contingency factors of third-sector organizations.

Key words: External contingency factors, Performance measuring, Non-Governmental Organizations.

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1. Introduction

Due to governments' inability to meet social needs completely, the third sector, which non-governmental organizations (NGOs) are part of, has played a relevant role in society and is gaining an increasing role in the world economy, as it proposes to solve different social problems (Quinteiros, Silva, Costa & Oliveira, 2009; Cruz, Stadler, Martins & Rocha, 2009). Therefore, a greater number of NGOs are participating in social welfare, community building and other public activities, in an effort to constitute a new relationship network with the government.

In recent years, after governmental reforms, the role of NGOs and the understanding of their environment have become more crucial in accelerating the economic and social development of any country (Al-Ammary & Hamad, 2012). The environment in which the entities operate is dynamic and its success depends on the ability to meet the stakeholders' needs. Thus, in order to guarantee the survival and growth of all entities, whether for profit, and especially non-profit, they need to measure, monitor and analyze their performance.

According to Ciucescu and Feraru (2014), the main reasons for implementing performance measurement practices in NGOs, which have been based on the growing interest of academics and professionals, consist in increasing the number of organizations; reductions of entities' budgets; decrease in the number of donors and increase in managerial challenges arising from the multiplicity of social cases, such as terrorism, unemployment, gender issues and consumption.

Nonetheless, it should be noted that there is a particular complexity in the measurement of NGOs' performance, as assessing progress toward their missions and the social benefits they produce is complex in nature to quantify, difficult to measure and depends on values (Kanter & Summers, 1987). According to Ayene, Kumar and Asefa (2014), these difficulties become more worrying, as often there is no well-defined area of action in the sector, besides the lack of mission, vision and established values. The external environment in which the entities of the Third Sector relate is influenced by changes that may affect the performance measurement of entities. Ahmed (2014) notes that social, cultural, and political factors can vary even within developed countries, while NGOs in developing countries like Brazil can act in even more uncertain environments, making it difficult to adopt management practices.

In view of this reality, Kareithi and Lund (2012) have confirmed the need to increase research on factors that are related to NGO performance measurement practices, noting that trends in study results are based on ideological grounds, with no empirical verification. Wadongo (2014) argues that, even though there is a demand to implement managerial performance measurement practices, several external environmental contingency factors have been ignored in the Third Sector, such as competition, uncertainty, and environmental dynamism.

Some international evidence points to a positive relationship between the contingency variables and the managerial practices of performance measurement of the third-sector entities in relation to the external environment (Kaplan, 2001; Beamon & Balcik, 2008; Wadongo, & Abdel-Kader 2014). Brazilian studies have only been focusing on for-profit firms (Guerra, 2007; Junqueira, 2010; Beuren & Fiorentin, 2014; Leite, Diehl & Manweiler, 2015; Lavarda, Gorla, Lavarda & Angonese, 2016; Klein & Almeida, 2017).

Based on these discussions, this study is guided by the following question: **Is there a relationship between the external contingency factors and the managerial practices of performance measurement in the context of Brazilian NGOs?** Thus, the general objective of the research is to analyze the relationships between the external contingency factors and the managerial practices associated with performance measurement within Brazilian non-governmental organizations.

Therefore, a correspondence survey was used, based on the studies by Ferreira and Otley (2009) and Wadongo (2014), involving 43 organizations members of the Brazilian Association of Non-Governmental Organizations (Abong). The proxies selected to execute the research were subdivided into two groups: (1) contingency factor External environment and (2) management practices of performance measurement. Due to the nature of these variables, the data were analyzed through non-parametric tests. The main evidence from the study indicated that the external contingency factors were not related to most performance measurement management practices, suggesting evidence of the absence of association between the actions of the managers and CEO's and the particular characteristics of Brazilian NGOs' external environment.

This research can contribute to the business market of NGOs and to research that is based on Contingency theory because, when investigating the external contingency factors, relating them to management practices of performance measurement, foundations are provided for the managers or presidents of NGOs to balance internal needs and adapt them to external environmental circumstances. Thus, the decision-making process, aiming at meeting the strategic social objectives, can be customized and guided according to the specific external contextual characteristics of the Brazilian NGOs.

In addition to this introduction, the study is divided into four further stages. The second stage presents the theoretical framework, subdivided into performance measurement and external contingency factors. The third step contemplates the methodological procedures used in the research. The fourth step shows the results analysis. Finally, in the fifth step, the final considerations are presented.

2. Theoretical Framework

2.1 Performance measurement

It should be noted that the interest in measuring performance is not new. In the 1970's and 1980's, authors expressed general discontent about performance measurement based on traditional performance indicators, that is, from Accounting (Skinner, 1974; Banks & Wheelwright, 1979; Johnson & Kaplan 1987; Flapper, Fortuin & Stoop, 1996; Bourne, Kennerley & Franco - Santos, 2005; Serrat, 2010).

Initially, critics pointed out the weaknesses of the accounting and costing system, as they stimulated short-term decisions; lack of strategic focus; minimization of variance rather than continuous improvement; not being focused on the external environment; subjectivity in the allocation of costs; and adoption of historical cost in the measurement of assets and liabilities (Skinner, 1974; Banks & Wheelwright, 1979; Johnson & Kaplan, 1987; Flapper et al., 1996).

Later, in the 1980's and 1990's, critics argued that traditional financial indicators, derived from Accounting, should not be excluded from performance measurement but balanced with non-financial performance indicators (Bourne, Kennerley & Franco - Santos, 2005; Serrat, 2010). This era marked the development of balanced or multidimensional performance measurement structures. These new frameworks placed emphasis on non-financial, external, and future performance measures (Bourne, Mills, Wilcox, Neely & Platts, 2000).

It should be emphasized that the measurement of performance through financial or non-financial indicators comes with limitations and advantages. Critics, as discussed earlier, focus their arguments on financial measures; however, these traditional indicators, in addition to revealing useful information for the decision-making process, are objective, while some non-financial indicators are more subjective, entailing the possibility of managers' bias to maximize their utility.

By definition, performance measurement can be understood as the process of determining the performance measures, their range, magnitude and evaluation, aiming at adjusting, adjusting, providing or regulating some activity (Soares, 2006). Concurrently, Poister (2003) notes that performance measurement is a method of identifying, controlling, and using different objective performance measures of the organization and its programs on a regular basis.

Nevertheless, the taxonomy, the basis used in the study, is based on the seminal research of Neely, Gregory, and Platts (1995). In that research, performance measurement is described as the process of quantifying the action, to the point that this action leads to the performance. In a comprehensive way, this quantification process involves the measurement of performance indicators and the implementation of the performance measurement system.

In the context of NGOs, managerial practices of performance measurement consist of a process that involves performance planning, performance evaluation and performance management system (Wadongo, 2014). The practice of performance planning includes how the organization deals with defining and communicating its mission, vision, goals, key success factors, strategies and plans. The practice of performance assessment involves the identification and definition of key performance domains and indicators, performance targets, data collection methods, rewards, and incentives. Finally, performance measurement systems comprise practices related to contextual factors such as information flow systems, use of performance information, system dynamism, and system of strength and coherence. The particular depth and specificity of the system will depend on the individual organization.

Management performance measurement practices in NGOs are not only a tool that helps organizations assess their impact, results and outputs, but are also considered a feedback tool for internal learning (Ramadan & Borgonovi, 2015). For Kareithi and Lund (2012), the main mission of NGOs is focused on the goals desired by their target beneficiaries and their communities, so the performance of NGOs should be evaluated based on their effectiveness in helping beneficiaries reach mutually identified social goals.

In Brazil, the norms that regulate the registration and maintenance of the status of third-sector entities do not require the adoption of informational models for performance measurement and efficiency comparison among entities (Milani Filho, 2009). Nonetheless, Law No. 9790/1999 provided the advance in the performance measurement practices of the sector, as the remuneration of employees and creation of partnership contracts were allowed. In particular, Law No. 13019/2014, which amended Law 9790/1999, made it obligatory to use Collaboration and Promotion contracts in the legal relationships between the partners (Brasil, 1999; Brasil, 2014).

Through this formalization, performance measurement was stimulated from the perspective of NGOs and, above all, that of public administration. NGOs, when benefiting from Government resources to provide services in areas in need of specialized professionals, such as children and adolescents or persons with disabilities, should measure the performance of the actions carried out and report to the public administration and society itself, while the public administration should compulsorily monitor and evaluate the performance of the actions and resources used from the partnership contracts, and also account for the contracts and the execution of the partnership services.

Thus, it is expected that Brazilian NGOs will have a minimum level of performance measurement management practices aimed at guaranteeing their survival in the market or simply meeting the demands of government agencies. In addition, these practices should be tailored to the characteristics of the external environment of those NGOs.

2.2 External contingency factors

Contingency theory emerged in the 1960's to 1970's, based on the premise that there are no universally fit accounting practices that apply to all firms in all circumstances, as they will depend on contextual factors (Otley, 1980; Ferreira & Otley, 2010).

This theory was constructed from a set of theories that investigate the evolution of the complexity of the companies and their organizational structures (Burns & Stalker, 1961; Woodward, 1965; Lawrence & Lorsch, 1967; Perrow, 1970; Thompson, 1967; Khandwalla, 1972; Waterhouse & Tiessen, 1978; Miles & Snow, 2003) and is intended to study the factors internal and external to the organization, also known as contingency factors, which are guiding factors for decision making (Marques, Souza & Silva, 2015).

The external environment is a contextual variable that is the basis of research that uses Contingency theory in several types of companies, such as public companies, financial companies and industries (Chenhall, 2003). At the international level, one type of literature that has gained ground is research in third-sector organizations (Wagondo, 2014) because, due to the distinct characteristics of these organizations in relation to private companies, the external contingency factors can affect the performance measurement practices.

The socioeconomic situation of the countries can be considered a determining factor of the characteristics of the external environment inherent to these organizations. According to Ahmed (2014), the performance control and measurement mechanisms used by Western NGOs are not easily transferable to developing countries because their sociopolitical contexts are different.

As a result, NGOs in developing countries work in very uncertain environments, to the point that donors fear that the resources invested will not have the right destination and that NGOs will have negative outcomes. Donors say, however, that if NGOs operate effectively and transparently, future performance will be improved, and if operations are transparent, support and funding can be made more secure (Ahmed, 2014).

In order to facilitate the understanding of the effect of the external contingency factors in the NGOs through the environmental contingency variable, this study uses the taxonomy suggested by Wadongo and Abdel-Kader (2014), which classifies the external environment into three variables. The first is the degree of unpredictability or environmental uncertainty. The second variable, the degree of competition. Finally, the environmental dynamism organizations face.

According to Chenhall (2003), the most studied external environment variable may be uncertainty. For the author, uncertainty is a situation in which probabilities of occurrence cannot be determined and even the elements of the environment cannot be predicted, thus distinguishing themselves from risk but affecting the management of organizations.

Environmental uncertainty is associated with the design and implementation of performance measurement and control systems, often focused on non-financial indicators for NGOs, as well as affecting the level of accountability of these organizations (Kaplan, 2001; Poister, 2003; Ferreira & Otley, 2010).

Some studies have investigated the empirical relationship of this variable in the performance control and measurement practices, as in the study by Hoque (2004), based on a contingency framework that investigated the determinants and consequences of performance measures. In general, it analyzed the role of choosing performance measures in the relationship between (a) strategic priorities and performance and (b) uncertainty and environmental performance. The results revealed a significant and positive association between strategic choice and manager performance through the high use of non-financial measures for performance evaluation. On the other hand, the study found no evidence of a significant relationship between environmental uncertainty and performance through the use of non-financial performance measures by management. The qualitative empirical evidence from Wadongo's (2014) study in third-sector organizations in Kenya found that the requirements and demands of stakeholders indicated that donor demands and accountability were particularly predictable. The results of the quantitative study showed that various stakeholders mentioned performance measurement practices, including: governments, donors, regulators, the public interest group and the beneficiaries. The justification for high unpredictability of stakeholder demands, specifically donors, may be due to a lack of clear communication of the requirements and conditions attached to donor funding. In turn, environmental uncertainty was negatively related to data collection and performance-based rewards, while at the same time being positively related to performance indicators, strength and consistency of the performance management system and information flows of the performance management system. The second variable used in the study was the degree of intensity of environmental competition among NGOs. Normally, environmental competition is associated with private-sector companies (Wadongo & Abdel-Kader, 2014). This characteristic is normal, as private companies aim to make a profit, considering all aspects of the market, such as scarcity of resources, dispute for customers, suppliers, internal competitions, among others, which encourage the adaptation of management controls to these environmental conditions.

The NGOs also need to respond to growing market pressures and competitiveness in the third sector though, so competition is characterized by intense competition by staff and volunteers, external funding, new innovative projects and community resources (Wadongo & Abdel-Kader, 2014).

In the same sense, Beamon and Balcik (2008) argue that one of the justifications for implementing mechanisms to control and measure performance in NGOs is due to increased competition in a growing series of organizations, internal competition in organizations and the search for donors to finance activities.

International research results, such as Kaplan (2001), Beamon and Balcik (2008) and Ferreira and Otley (2010), show that performance measurement practices and formal controls and budgets are directly related to the competitive environment of organizations.

In the same direction, the quantitative evidence of Wadongo (2014) showed that there is great environmental competitiveness. External financing and competition for local and community resources emerged as the most competitive factors though. The results revealed that the participants considered competition for financing as a significant determinant of performance measurement. In addition, environmental competitiveness was positively related to performance planning practices and data collection methods, but was negatively related to the use of project indicators.

The last variable of the external environment was the degree of environmental dynamism. According to Wadongo and Abdel-Kader (2014), environmental dynamism is highly uncertain and the organization faces frequent changes in the regulatory, socioeconomic, political and technological environment.

In the context of NGOs, environmental dynamism, which includes turbulent economic and political climates, regulatory concerns and a rapidly changing technological environment, often poses challenges for the third sector and may affect performance measurement and control practices (Wadongo & Abdel-Kader, 2014). Also, Kaplan's (2001) study indicates that the dynamic environment is positively related to formal controls and budgets. The empirical evidence from Wadongo's (2014) research indicated that environmental dynamism was directly related to the use of project indicators, strength, and consistency of the performance management system. In addition, it was related to the use of performance information. There was a negative relation between the use of data collection methods based on Information and Communication Technology (ICT) in the sector and environmental dynamism though. These results were justified because Kenya has witnessed a number of natural disasters, terrorist attacks, post-electoral violence and hunger in recent years, leading NGOs to reorient their activities, and thus had an impact on the performance control and assessment process.

In view of the discussions and evidence presented, we postulate that managers and presidents of Brazilian NGOs adapt the use of managerial practices associated to performance measurement according to the specific characteristics of the external environment (competition, dynamism, and uncertainty) without establishing a general administrative strategy applicable in all organizations and in all circumstances, as Contingency theory argues. Therefore, the following research hypothesis is raised:

H₀: A relationship exists between external contingency factors and the use of managerial practices associated with performance measurement in the context of Brazilian NGOs.

3. Methodological Procedures

In order to investigate a particular reality of Brazilian NGOs about the relationships between external contingency factors and performance measurement management practices, a descriptive and quantitative typology based on survey research is used. According to Gil (2009), the survey is based on the request of information to a group of people, whose behavior one intends to find out. For this study, the group is represented by managers and presidents of Brazilian NGOs. Regarding the descriptive typology, Cervo and Bervian (2002) affirm that it is characterized by knowing the situations and relationships that occur in social, political, economic life and in other aspects of human behavior, both of the individual alone and of groups and more complex communities. Finally, quantitative research is supported by the use of quantification, ranging from the information collected to the final analysis through statistical techniques, regardless of their robustness (Richardson, 1999).

The study universe consists of all the Brazilian NGOs listed in the Brazilian Association of Non-Governmental Organizations (Abong). After consulting the Abong website (www.abong.org.br), in total, 240 associated NGOs representing the organizations under study were identified.

Specifically, the Northeast region with 39% and the Southeast with 38% concentrate the largest number of organizations in Brazil, while the South represents the third largest concentration, totaling 10% of NGOs registered in Abong. On the other hand, the North and Center-West, with 8% and 6% of the registered NGOs, were the regions with the lowest concentration. The choice of organizations listed in Abong is due to the organization's time of operation, which is more than two decades, being considered the largest third-sector association and one of the first NGO networks in the country, and especially due to the criteria Abong requires for its affiliates, such as: activities for at least 2 years, description of mission and values, as well as annual presentation of the financial reports. Thus, Abong-listed organizations are expected to have a minimum level of professionalization, which tends to lead to the use of performance measurement practices.

The representatives (presidents and managers) of all 240 NGOs listed on Abong were invited to participate in the study through electronic correspondence. In total, 43 questionnaires answered by NGO representatives were obtained though, corresponding to the study sample.

As a data collection technique, a correspondence survey was used, using a standardized and structured questionnaire, based on the studies of Ferreira and Otley (2009) and Wadongo (2014). To create and send the survey by correspondence to the e-mails of NGOs listed in Abong, Google Docs was used as a tool.

The data collection period was 3 (three) months, beginning in August 2016 and ending in October 2016. The first questionnaire answered by the representatives (managers or presidents) of the NGOs was received on 8/8/2016 and the last questionnaire was received on 10/12/2016.

To develop the study, a set of ordinal Likert-style variables was selected, divided into two blocks according to Table 1, based on the specific literature of companies in the third sector, in order to serve as support for the data collection instrument and the further analysis of the results (Poister, 2003; Waweru & Spraakman, 2009; Ferreira & Otley, 2010; Wadongo, 2014). The Likert scale used in the study aims at identifying the intensity of the attitudes (Likert, 1932) of the presidents and managers of the NGOs in relation to a series of suggested statements about the external environment and the management practices of performance measurement used.

Table 1
Structural Variables of the Study

Block	Categories	Variables	Reference Sources	Measuring Scale
I. Contingency Factors	External Environment	Intensity of competition; Environmental dynamism; Environmental uncertainty.	(Poister, 2003; Ferreira & Otley, 2010; Wadongo, 2014)	Ordinal
	Planning Practices and Performance	Mission, Vision, Values and Objectives, Key success factors	(Waweru & Spraakman, 2009; Wadongo, 2014)	Ordinal
II. Performance	Performance Measuring Practices	Performance targets; Performance indicators; Performance objectives; Performance data collection tools; Rewards and sanctions.	(Waweru & Spraakman, 2009; Wadongo, 2014)	Ordinal

Source: Elaborated by the authors

The contingency factor External Environment, according to Block I, is investigated through three variables: intensity of competition, environmental dynamism and environmental uncertainty. Regarding the variable Intensity of Competition, the respondents were asked to answer a linear Likert scale, ranging from 1 (Non-competitive) to 6 (Very competitive), for a series of statements aiming to determine the level of competition in certain areas, such as: dispute over staff and volunteers, external funding, innovative programs and projects and community resources among NGOs. In the variable Environmental Dynamism, the participants indicate in the Likert scale how frequently external environmental factors could be modified on the basis of assertions linked to the regulatory (for example, laws, regulations), socioeconomic (e.g., inflation, population, crime and disaster), political (e.g. elected leaders, politics and violence) and technological environments (e.g. innovations). Finally, in the variable Environmental Uncertainty, participants indicate on the Likert scale whether the environment was represented by 1 (not predictability) to 6 (highly predictable), for statements about stakeholder requirements and accountability of other demands, such as: accountability to government, donors, beneficiaries and society.

Block II is subdivided into two categories. The first category of performance measurement practices was planning, investigated by the following variables: mission, vision, values and objectives and key success factors. NGO representatives are invited to answer a linear scale ranging from 1 (Never) to 6 (Always), on a series of statements, namely: mission and vision are communicated; goals and targets are well specified and communicated; plans and strategies are clearly linked to objectives and mission; actions and programs reflect mission and vision; the strategic planning process involves workshops and, finally, management has a set of clear strategic activities in the NGO. The second category involves a set of variables, such as: performance goals; performance indicators; performance objectives; performance data collection tools, rewards and penalties. Participants also respond to claims about Likert-type linear usage levels, ranging from 1 (Never) to 6 (Always), on performance goals (team goals, individual goals, and organizational goals); types of indicators used (inputs, process or activity, results/impacts, revenues, administrative costs, savings, efficiency, productivity, quality of service, beneficiary satisfaction, sustainability, innovation, supply chain effectiveness and flexibility); types of data collection tools used (key interviews with informants and focus groups; e-mail/website; phone/mobile phone interviews; research forms/questionnaires; personal/casual conversation; project/unstructured program visits, among other aspects); and, ultimately, the use of rewards and penalties (team rewards, individual rewards, layoffs, downgrades/terminations, and termination of the program or project).

After all data collection procedures were performed, the reliability of the measurement instrument was analyzed using the Cronbach alpha coefficient. Thus, the test results demonstrate a Cronbach alpha coefficient of 97%, therefore superior to the acceptable minimum parameter of 70%.

For the results analysis process, this research uses Spearman's correlation coefficient as the statistical technique, as this test is a non-parametric option of Pearson's correlation when the research variables (contingency factor and performance) are ordinal. According to Martins and Theóphilo (2009, p. 131), the Spearman Correlation test aims to measure the "intensity of the correlation between two variables as ordinal measurement levels, so that the objects or individuals under study can be arranged by ranks, in two ordered series". Thus, this statistical technique measures the intensity of relationships, not capturing the meaning because there are no determined dependent or independent variables. In this study, the Spearman correlation coefficients, which corresponded to 99% levels ($p = 0.01$), were considered statistically significant.

4. Analysis of the Results

Based on the collected data, statistical tests were performed to identify possible statistical significance of the relationships tested.

Considering the relationships between performance planning practices and factors associated with the external environment (Intensity of competition, Environmental dynamism and environmental uncertainty), it was verified that none of the relationships investigated presented a statistically significant Spearman correlation coefficient, suggesting that these factors did not relate to performance planning practices. Similar results were obtained when considering the performance goals and factors associated with the environment, where none of the investigated relationships had a statistically significant Spearman correlation coefficient.

Then, the relationships between the use of indicators and the factors associated with the external environment were tested. The variables related to competition and uncertainty did not present statistically significant relationships, unlike environmental dynamism. The results are displayed in Table 2.

Table 2

Correlation between Use of Indicators and External Environment (dynamism)

Use of indicators	Regulatory environment	Socioeconomic environment	Political and safety aspects	Technological environment
Input indicators	0.17	0.27	0.21	0.33
Process indicators	0.23	0.11	0.02	0.31
Output indicators	0.32	0.24	0.11	0.39
Impact indicators	0.36	0.18	0.04	0.34
Revenue indicators	0.19	0.23	0.16	0.30
Administrative cost indicators	0.13	0.19	0.15	0.24
Economic indicators	0.14	0.06	-0.01	0.21
Efficiency indicators	0.06	0.03	-0.10	0.16
Productivity indicators	0.09	0.04	-0.08	0.19
Service quality	0.23	0.10	-0.06	0.27
Satisfaction	0.27	0.19	0.05	0.31
Sustainability indicators	0.16	-0.02	0.03	0.15
Innovation indicators	0.30	0.01	-0.08	0.28
Efficacy indicators	0.31	0.16	0.02	0.28
Supply chain flexibility	0.07	-0.14	-0.17	-0.02

Obs. 1: The coefficients in the table are correlation coefficients

Obs. 2: Coefficient highlighted, corresponding to 99% ($p=0.01$)

Source: Research data

Based on the results obtained, this time, it was verified that the use of a type of performance indicator presented a positive and statistically significant coefficient with environmental dynamism. Specifically, the use of outcome indicators is directly related to the dynamism of the technological environment, that is, possible changes in aspects such as technological innovations, for example, may lead NGO managers and presidents to use performance indicators. This result corroborated the surveys by Kaplan (2001), Wadongo and Abdel-Kader (2014) and Wadongo (2014), as the environmental dynamism variable was directly related to the use of performance measurement indicators. The relationships between the collection instruments and the factors associated with the external environment were also tested. None of the variables tested showed statistically significant relationships. The relations between rewards and sanctions and external contingency factors were also analyzed. The variables related to competition and dynamism did not present statistically significant relationships, unlike uncertainty. The results are displayed in Table 3.

Table 3

Correlation between Rewards and Sanctions and External Environment (uncertainty)

Rewards and sanctions	Government	Donors	Beneficiaries	Public and community
Team Rewards	0.17	-0.13	0.11	0.14
Individual Rewards	-0.16	-0.16	0.02	-0.16
Dismissal	-0.05	-0.01	0.04	0.12
End of the program	0.48	-0.02	0.11	0.37

Obs. 1: The coefficients in the table are correlation coefficients

 Obs. 2: Coefficient highlighted, corresponding to 99% ($p=0.01$)

Source: Research data

The uncertainty stemming from the requirements of accountability to the Government was directly associated with the sanctions linked to the termination of the NGO program or project. This result, although statistically significant, contradicted the evidence from Wadongo's study (2014), where environmental uncertainty was negatively related to performance-based rewards.

Overall, most of the evidence from this study was not in accordance with previous studies (Kaplan, 2001; Hoque, 2004; Beadongo & Balcik, 2008; Wadongo, 2014; Wadongo & Abdel-Kader, 2014), which independently of the sense of the coefficients' signals presented statistically significant relationships between the external contingency factors and the use of performance measurement practices. In addition to the specific differences between Brazilian NGOs listed in Abong and the organizations investigated previously, other factors may justify the results.

In this context, financial issues, human resources, management skills and internal communication are specific between developed and underdeveloped countries, possibly influencing the evidence found. Bromideh (2011) also highlights national and international factors. Nationally, NGOs have challenges, relationships with other NGOs and interaction with other sectors. In turn, at the international level, they present factors such as religion, politics, internationalization and financial crisis.

5. Final Considerations

The objective of this study was to analyze the relationship between external contingency factors and management practices associated with performance measurement within Brazilian non-governmental organizations. For the development of the study, a correspondence survey was used, based on the research by Ferreira and Otley (2009) and Wadongo (2014), involving 43 organizations listed in Abong. Spearman's correlation coefficient was used as the analysis technique.

Regarding the results of the correlations between management practices associated with performance measurement and external contingency factors (competition, dynamism and uncertainty), we have identified only two positive and statistically significant correlation coefficients linked to the use of performance indicators and rewards and sanctions. Initially, managerial practice performance indicators, through result metrics only presented a direct relationship with the dynamism of the technological environment. In turn, the practice of measuring performance, rewards and sanctions was positively related to the environmental uncertainty arising from the requirements of accountability to the Government. Specifically, the unpredictability of transparency requirements to the Government was directly related to the use of sanctions linked to the termination of the NGO program or project.

Based on the results, it was verified that the external environment contingency factor, through the environmental variables uncertainty and dynamism, showed evidence of a relationship in the actions of managers and presidents of Brazilian NGOs in the customization of their performance measurement management practices.

Nevertheless, the research hypothesis (H0) was rejected, as most of the relations investigated did not present statistically significant associations, contrary to the specific literature on the third sector. Therefore, external contingency factors were not significantly related to most performance measurement practices.

These results can be justified when assuming that Brazilian NGOs did not present high levels of competition, dynamism and uncertainty, that is, a representative change in the organizational configuration and in the actions of the managers towards the external environment was not necessary, as observed in internationally active NGOs.

It should be noted that the results obtained have limitations, as they are focused only on NGOs, that is, they cannot be generalized to other third-sector organizations in Brazil, besides the traditional limitations of studies originating in correspondence surveys, which are, however, dependent on the perceptions of the presidents and managers of NGOs listed in Abong.

Further research can be conducted to deepen discussions on the causes of particular associations between performance measurement practices and the external environment of third-sector organizations in Brazil. In addition, qualitative studies can be conducted with Brazilian NGOs to identify external and internal contingency factors, as well as performance measurement management practices.

6. References

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