The adoption of project management methodologies and tools by NGDOs: A mixed methods perspective

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ABSTRACT

Several studies in the area of project management have concluded that development projects implemented by nongovernmental organizations (NGOs) have specific features associated with the diversity of stakeholders, the scarcity of resources, and the importance of intangible objectives. Consequently, classical methodologies may not be suitable. The purpose of this paper is to analyze the project management tools used by nongovernmental development organizations (NGDOs) and their effect on project performance. This was done by studying the perceptions of project managers from Portuguese NGDOs. A mixed methods design was adopted. In an initial phase, a questionnaire was sent to Portuguese NGDOs. The resulting data was analyzed by fuzzy-set qualitative comparative analysis (fsQCA). In a second phase, semi-structured interviews were conducted with a subgroup of selected project managers from these organizations. The results reveal a specific profile regarding the importance of project management tools and methodologies for NGO performance. These results reflect the specific features of these types of projects and organizations.

1. Introduction

Developmental aid has become more and more relevant over the last several decades to improving the social and economic conditions in less developed countries (Ziesemer, 2016). The research defines developmental aid as a vision of progress for sub-developed areas of the world through international financial assistance and advanced technology transfers (Lewis, 2010; Riddell, 2007). This aid involves several areas such as education, health, social services, and economic programs (Michalopoulos, 2017). Therefore, aid has a large number of stakeholders, from public to private organizations (Davis, 2014; Eichenauer & Reinsberg, 2017). In this field, nongovernmental development organizations (NGDOs) have assumed an increasing importance in the management of funds and operations (Fowler, 2016). Yet, overall, there is a strong concern about the effectiveness of the money used by these programs (Edwards & Hulme, 2014; Ziesemer, 2016). NGDOs face stronger competition from an increasing number of organizations, projects, and programs while donors are restricting their funds. This restriction has placed NGDOs under greater scrutiny for their poor use of available funds and lack of efficiency but also their poor organization and failed objectives (Golini, Corti, & Landoni, 2017; Golini, Landoni, & Kalchschmidt, 2018).

This scrutiny has prompted NGDOs to become more professional and more performance oriented. Studies have observed an increasing use of project management by NGDOs in recent years (Andersen, 2016; Golini & Landoni, 2014). Further, the project management's methodologies and its tools have increasingly developed. In several industries and organizations, project management has become the model for strategy and new product developments (Cicmil, Hodgson, Lindgren, & Packendorff, 2009; Gauthier & Ika, 2012). Along with this growth in the use of project management, critics have also emerged and have shown a high level of fallibility (Cicmil, Hodgson, 2006; Gauthier & Ika, 2012; Ika & Donnelly, 2017; Ika & Hodgson, 2014; Shenhar & Dvir, 2007). In fact, most projects tend to have overruns in costs and time and do not meet the different stakeholder's expectations (Cicmil & Hodgson, 2006; Davis, 2014; Flyvbjerg, Bruzelius, & Rothén, 2003). There is a substantial disparity between the theoretical knowledge and the practical efficiency of project management.

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In addition to this criticism of project management, some authors (e.g., Hermano, López-Paredes, Martín-Cruz, & Pajares, 2013; Ika & Donnelly, 2017; Khang & Moe, 2008) pose the question of whether the standardized methods and tools in project management (such as its body of knowledge or PMBOK; PMI, 2017) are adequate to the specific reality of developmental aid. In this case, as these projects tend to be more complex, the use of most of the theoretical and methodological assumptions of traditional project management is questionable (Ahsan & Gunawan, 2010; Brière, Proulx, Navarro-Flores, & Laporte, 2015; Golini & Landoni, 2014; Ika, Diallo, & Thuiller, 2012; Murithi & Crawford, 2003).

In this study, we analyze and reflect on the use of traditional project management’s tools and methodologies in the specific context of developmental aid. Our analysis uses a mixed method approach that adopts a sequential explanatory research design (quant → QUAL) with the participant selection variant (Creswell, 2014; Creswell & Clark, 2011; Teddie & Tashakkori, 2009). This study uses a survey to measure the extent to which Portuguese NGDOs apply project management’s methodologies and tools and to measure the self-reported performance they achieve. In addition, in order to analyze the association between these methodologies and tools and successful NGDO projects, we perform a comparative qualitative analysis. Further, we evaluate the specific methods and tools those development projects need. This evaluation is based on a qualitative analysis of a set of interviews of their managers.

Portuguese NGDOs operate mainly in sovereign states that were former colonies, in which Portuguese is the official language—Angola, Cape Verde, Guinea-Bissau, Mozambique, São Tome and Principe, and East Timor. These countries are located mostly in the southern hemisphere and face entirely different realities. For example, Angola is the 23rd largest country in the world, whereas São Tomé and Principe is the second smallest country in Africa (Retò, Machado, & Esperança, 2016). This group also has some of the poorest countries in the world—Guinea-Bissau ranks 177th and Mozambique 180th in the Human Development Index—and in East Timor, Mozambique, São Tomé and Principe, and Guinea-Bissau, the poverty rate is above 50% (UNDP, 2018). The Portuguese NGDOs can have a specific approach to project management but to our knowledge, there are no previous academic studies that focus on this specific topic.

The purpose of this study is to contribute a new methodological approach, data, and results to the research gap that is associated with the importance and adequacy of the traditional methodologies and tools of project management to NGDOs’ projects and their performance, which is in line with Padalkar and Gopinath’s (2016) perspectives.

This study is organized as follows: in Section 2, we present a brief literature review of project management in the development aid and NGDO contexts. Section 3 presents the method and data. Section 4 lays out the results from the quantitative and qualitative phases. Section 5 presents the discussion and concludes.

2. Literature review

Over the last several decades, developmental aid has grown exponentially to become a real “industry.” It joins several industries, large financial institutions, and multilateral and bilateral public and non-governmental organizations (Ahsan & Gunawan, 2010; Michelopoulos, 2017; Navarro-Flores, 2011). NGDOs have grown substantially and have become one of the main pillars of developmental aid (Golini, Kalchschmidt, & Landoni, 2015; Lewis, 2016; Navarro-Flores, 2011; Werker & Ahmed, 2008). Despite being perceived as a “panacea” for a long time, today they are perceived as having strong limitations (even with substantial resources) (Ika et al., 2012; Lewis, 2010). The exposition, scrutiny, and connection to reality indicate that NGDOs still have a significant role in this field.

The new reality of developmental aid (Millennium Goals, Paris Agreement, etc.) is the recognition that NGDOs are fundamental to the success of such initiatives. This importance means the promotion and funding of programs and projects that align the efforts of all entities involved, from donors to governments to NGDOs (Brière et al., 2015; Lewis, 2010). This way, the management of projects for international development is critical to developmental aid.

Projects for international development are primarily middle or large sized. They range from building infrastructures that promote development to the education and health initiatives that are implemented in developing countries (Riddell, 2007; Youker, 2003). Their goals are to support economic development and to fight poverty through funds that mainly come from external donors. Naturally, these projects do not seek profits like regular profit-oriented companies. Therefore, as mentioned by Murithi and Crawford (2003), traditional economic rationality may not be adequate to explain this particular situation (see also Golini & Landoni, 2013; Hermano et al., 2013; Landoni & Corti, 2011). The results from sub-Saharan Africa show that governments consider the classic constraints of project management (such as costs, time, and quality) last as compared to other factors, such as the satisfaction of multilateral institutions. Ika et al. (2012) find similar results and conclude that socio-political aspects are far more critical to a project’s success than project management tools and techniques.

Golini and Landoni (2013) present six “peculiarities” that are intrinsic to international developmental projects: (1) the inexistence of a defined or influential client; (2) the involvement of a large number of stakeholders; (3) a difficult, complex, and sometimes risky environment; (4) scarcity of resources; (5) the difficulty of using project management techniques in the context of other cultures; and (6) the presence of deliverables and intangible objectives that are difficult to quantify and measure. Despite these particular aspects, there are obvious similarities between these types of projects and more standard project management. For Ika and Hodgson (2014), international development projects are only “extreme” cases under the project management scope due to the greater complexity of socio-politics and the diversity of stakeholders (see also Davis, 2014).

A traditional approach to project management foresees a specific way “to think about projects and their management” (Bredillet, 2010; Shenhar & Dvir, 2007; Van der Waldt, 2011). For example, PMBOK and other analogous methods (e.g., PRINCE2, APMBOK) adopt an approach to traditional or conventional project management (Shenhar & Dvir, 2007; Wysocki, 2014) that emphasizes the standardization of procedures (Cicmil et al., 2009; Cicmil & Hodgson, 2006; Cooke-Davies, Cicmil, Crawford, & Richardson, 2007) to ensure “its robustness and applicability to a wide variety of projects from the smallest and simplest to the largest and most complex” (Spundak, 2014, p. 941). More recently, a growing number of authors have identified one of the crucial disadvantages of these traditional methodologies with the approach of “one size fits all” (Cicmil & Hodgson, 2006; Golini & Landoni, 2014; Shenhar & Dvir, 2007; Van der Waldt, 2011). According to these authors, the projects have become progressively more complex and involve a greater number of stakeholders, tasks, and complex interrelations that the traditional approach to project management (based mainly on hierarchical and stable relationships) is not able to reflect (Spundak, 2014). The evidence of the inadequacy of the traditional approach to deal with the greater “structural complexity of projects” (Williams, 2005) along with a growing recognition of the high fallibility of projects and their management (Cicmil & Hodgson, 2006; Gauthier & Ika, 2012; Ika & Hodgson, 2014; Shenhar & Dvir, 2007) has led to the emergence of alternative methodologies. In this context, as described by Spundak (2014), the most common designation is “agile” or “adaptive” project management (Aguanno, 2004; Fernandez & Fernandez, 2008; Highsmith, 2004; Wysocki, 2014). The common element in this agile approach is the adaptability of different types of projects to changes in the life cycle of a project (Aguanno, 2004; Shenhar, 2008). In this sense, as opposed to a “management-compliant” philosophy (Shenhar, 2008), change is accepted as an integral part of a project under the assumption that planning the entirety of a project at the outset is almost impossible.
However, both approaches have advantages and disadvantages depending on the inherent characteristics of the various types of projects and organizations (Spundak, 2014). The traditional approach is more appropriate for projects in which the goals and objectives are clear, the method to achieve them is clear at the outset, and therefore presents a lower level of uncertainty. In this type of project (e.g., civil construction), the changes are expected to be low, and the involvement of clients or beneficiaries throughout the project is not mandatory or necessary (Shenhar & Dvir, 2007; Wysocki, 2014). Further, some studies suggest that this approach is more appropriate when facing big projects or organizations in which the project team demonstrates inexperience or has significant turnover (Aguanno, 2004; Coram & Böhner, 2005).

An agile and adaptive approach shows greater adequacy in projects with unclear goals and objectives or with a high degree of uncertainty that is associated with expected but unpredictable requests at the outset (Spundak, 2014) that require a more flexible and adaptive management (Shenhar, 2008). Consequently, teams organize these projects in an iterative and nonlinear fashion that have constant modifications and updates that require close and frequent collaboration with their beneficiaries, end-users, and other stakeholders (DeCarlo, 2004; Shenhar & Dvir, 2007; Wysocki, 2014). In this sense, and despite the growing appreciation of soft skills within traditional approaches (Cooke-Davies et al., 2007), the research points out that the dimension of communication, proximity among team members, and their high skill set are critical success factors (Highsmith, 2004; Spundak, 2014).

Little research exists on the project management by NGDOs. It mainly focuses on the methodologies and tools typically used in this sector (Couillard, Garon, & Riznic, 2009; Crawford & Bryce, 2003; Golini et al., 2015; Golini & Landoni, 2013; Landoni & Corti, 2011). According to Project Management Institute (PMI, 2017), a project management methodology is a system of practices, techniques, procedures, and rules used by those who work in project management with the main concern of assuring the success of a project. Because each project has a life cycle that evolves through the application of different processes, every project management process uses appropriate tools and techniques to produce outputs from one or more inputs (PMI, idem). Empirically, data on project management in NGDOs shows that the logical framework is probably the most common tool in the universe of organizations that are linked to development (Biggs & Smith, 2003; Landoni & Corti, 2011) and Project Cycle Management (PCM) the most common methodology (Golini et al., 2017). The German international cooperation agency (Gesellschaft für Technische Zusammenarbeit - GTZ) was able to surpass the limitations of the first generation of the logical framework through the creation of the “Ziel Orientierte Projekt Planung (ZOPP)” Based on collaborative planning with the beneficiaries, it offers a more integrated, systematic, and participative process. The results have led to the adoption of this methodology by several bilateral and multilateral institutions (Couillard et al., 2009; Landoni & Corti, 2011). Further, a third generation has emerged more recently that assumes the need and promotes the integration of the logical framework with other contemporary project management tools.

3. Method

Described as a “third methodological movement” (Teddlie & Tashakkori, 2009), the academic research through “mixed methods” has expanded its visibility over the last decade to several areas of business research (Cameron, Sankaran, & Scales, 2015; Creswell & Clark, 2011). The mixed method approach proposes several typologies to identify, validate, and classify research strategies (Herminter-Peltomäki & Nummela, 2006; Teddlie & Tashakkori, 2009). In this study, we adopt a sequential explanatory research design (quant → qual) with the participant selection variant (Teddlie & Tashakkori, 2009) due to its scientific robustness. This type of research design (Creswell, 2014) typically involves two stages in which the researcher collects quantitative data (e.g., with a questionnaire) and analyzes the results. Subsequently these results are used to plan the second phase that is qualitative data collection (e.g., interviews) that enables a deeper understanding of the phenomenon under study (Cameron et al., 2015). With this approach, in addition to the identification of associations between variables, we can study the “how and why.”

Thus, the first phase is the quantitative research, which is based on the study originally developed by Golini and Landoni (2013) and Golini et al. (2015), that we adapt to the Portuguese NGDOs to investigate the extent of their adoption of the methodologies and tools of project management. The questionnaire (available on request) was sent by email to the 68 national NGDOs that were associated with the Portuguese NGDO Platform. We requested that they be completed by someone with knowledge of the day-to-day management of international projects. The total response rate was 36.5% or 23 valid responses. Next, we performed a qualitative comparative analysis of fuzzy sets (Legewie, 2013; Ragin, 2008; Rioux & Ragin, 2009; Schneider & Wagemann, 2012). This method (commonly expressed by the acronym fsQCA) is based on set theory and Boolean algebra. It also uses the concepts of necessary and sufficient conditions and was initially developed by Ragin (1987). The fsQCA provides a systematic way of analyzing a reduced number of cases (Emmenegger, Schraff, & Walter, 2014) that identifies the patterns of associations across them, and thus provides support for the eventual existence of causal relations. This analysis determines whether the various patterns that are identified describe a causal relation that makes sense both theoretically and empirically (Legewie, 2013; Schneider & Wagemann, 2012).

Following the analysis of the data collected during the quantitative phase, we sent a report with the preliminary results to all the respondents and requested their feedback. According to the participant selection variant strategy (Creswell, 2014; Creswell & Clark, 2011; Teddlie & Tashakkori, 2009), we invited a subgroup of 10 managers to participate in the qualitative phase. Their selection was the result of the weighting (values above average) of a set of variables (the ratio of international developmental projects, and the percentage of project management methodologies and tools the organization used) for the importance of international developmental projects in the NGDO's activities. Four of these 10 project managers answered our request positively. In this context, a semi-structured interview script (available on request) was developed (Saunders, Lewis, & Thornhill, 2009). The compliance with the ethical rules that are associated with the privacy rights of participants in scientific research was ensured by previously sending a consent form (Respect Project, 2004).

We analyzed the data collected through primary sources (i.e., expert opinion, questionnaire results, and interview transcripts) and secondary bibliographic sources through an NCT (Notice – Collect – Think) analysis (Corbin & Strauss, 2008; Seidell & Kelle, 1995).

4. Results

4.1. Descriptive statistics

While the sample has some larger NGDOs, most are small organizations (up to 20 employees) with an average annual revenue of €1,022,806. Over 2015 and 2016, our sample was involved in 324 projects of which 156 were international developmental projects. Only six of the NGDOs reported participation in more than 10 projects (26%). For project sizes, 11 NGDOs had an average project size of less than €100,000, and only four NGDOs (17% of the sample) had projects with an average size exceeding €500,000. The remaining eight NGDOs had average sizes that ranged between the two. The average duration of the 23 NGDO projects was 24 months. However, most of these organizations (66%) were involved in projects that lasted more than one year, while only seven NGDOs reported projects that lasted more than two years.

In terms of project aims and using the classification proposed by
Golini and Landoni (2013) and Golini et al. (2015), they fall into five categories:

- Projects to develop social, economic, or environmental services (e.g., education, health, or financial aid)—18
- Awareness-raising projects (promotion of particular issues like human rights, child labour, and HIV)—12
- Projects to construct infrastructures (such as bridges, roads, or wells)—4
- Projects for the delivery and integration of products and tools—3
- Others—7

Of the NGDOs selected, two distinct main purposes exist for their projects. Regarding the importance of international developmental projects to their global activity, eight NGDOs referred to them as of nuclear importance, seven NGDOs as important, and eight NGDOs as having marginal importance; none of the 23 NGDOs reported an activity as exclusively dedicated to this kind of project. Despite the relatively small size of the sample, this data indicate that the NGDOs tend to develop different projects in parallel with different dimensions and purposes.

With regard to the adoption of project management methods, 78.3% (or 18 of the 23 NGDOs) said that they used the Project Cycle Management (PCM). Almost half of the NGDOs used this method in 76% to 100% of their projects. Six of the 23 project managers stated that they had certification; and the reported level of knowledge was relatively high (3.74 on a scale of one to five). The use of the method Applied Method of Planning and Evaluation of Projects (MAPA) is also relevant (17.4% or four of the 23 NGDOs were evaluated). This methodology was developed by Ulrich Schiefer for the Portuguese Cooperation Institute - ICP (Schiefer et al., 2006; Schiefer & Döbel, 2001).

The influence of grant makers and donors in the adoption of these methods is very important: 14 of the 23 managers stated that they had certification; and the reported level of knowledge was relatively high (3.74 on a scale of one to five). The use of the method Applied Method of Planning and Evaluation of Projects (MAPA) is also relevant (17.4% or four of the 23 NGDOs were evaluated). This methodology was developed by Ulrich Schiefer for the Portuguese Cooperation Institute - ICP (Schiefer et al., 2006; Schiefer & Döbel, 2001).

The in

4.2. Comparative qualitative analysis

In order to evaluate the relation between the adoption of project management's methodologies and tools and the NGDOs' performance, we use a comparative qualitative analysis of fuzzy sets (Legewie, 2013; Ragin, 2008; Rihoux & Ragin, 2009; Schneider & Wagemann, 2012). In addition, we also analyze the level of internationalization and the project's objectives as controls. Following Ragin (2008), the study establishes three different anchors that are necessary to calibrate the data: an anchor to define full membership, another to define full non-membership, and an anchor for the crossover point (0.5). We do the direct calibration (Legewie, 2013; Ragin, 2008) by applying the values five, three, and one where five represents the value of total membership, three the value of greater ambiguity, and one the value of full non-membership. We analyze the subsequent truth tables to determine whether all combinations have consistency scores that exceed the threshold of 0.8 (Ragin, 2000). A condition, or a combination of conditions, is called “necessary” or “almost always necessary” if the consistency score exceeds this threshold.

Based on the literature review, the research model aims to analyze the following propositions:

P1: The presence of a highly important methodology, a high diversity of tools, and a high importance of tools is associated with a higher performance for NGDOs.

P2: The internationalization and the projects' objectives are

Fig. 1. Importance of project management tools.
associated with the NGDOs’ performance.

The conditions, controls, variables and their scales, and the calibration options are presented in Table 1.

Based on Crilly, Zollo, and Hansen (2012), we replace the fuzzy-set scores that equal 0.5 after the calibration with 0.499 to avoid dropping the cases during the fsQCA software analysis. One of the main outputs of the fsQCA analysis is the presentation—through the application of

### Table 1

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Variables</th>
<th>Scale</th>
<th>Computation</th>
<th>Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of main methodology</td>
<td>Knowledge about Project Cycle Management (PCM)</td>
<td>1 (very low) to 5 (very high)</td>
<td>fm: 5</td>
<td>cop: 3</td>
</tr>
<tr>
<td>Diversity of tools</td>
<td>From 16 different tools, the respondents should identify, for each, the level of importance of each tool</td>
<td>1 (very low) to 5 (very high)</td>
<td>fm: 0.625</td>
<td>cop: 0.375</td>
</tr>
<tr>
<td>Importance of tools</td>
<td>Percentage of tools presenting high or very high importance for the NGDO</td>
<td>(90%, 50% and 10% percentiles)</td>
<td>fm: 0.715</td>
<td>cop: 0.55</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Controls</th>
<th>Variables</th>
<th>Scale</th>
<th>Computation</th>
<th>Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization of activities</td>
<td>Ratio of n’ of international projects to total projects</td>
<td>1 = Yes</td>
<td>fm: 0.0</td>
<td>cop: 0.5</td>
</tr>
<tr>
<td>Projects objectives</td>
<td>The NGDO is devoted to projects aiming at developing/promoting of social, economic or environmental services?</td>
<td>1 = Yes</td>
<td>fm: 1</td>
<td>cop: 0</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Variables</td>
<td>Scale</td>
<td>Computation</td>
<td>Calibration</td>
</tr>
<tr>
<td>External performance</td>
<td>6 indicators of external performance</td>
<td>1 (very low) to 5 (very high)</td>
<td>Average of scores</td>
<td>fm: 4.5</td>
</tr>
<tr>
<td>Internal performance</td>
<td>3 indicators of internal performance</td>
<td></td>
<td></td>
<td>fm: 5</td>
</tr>
<tr>
<td>Total performance</td>
<td>9 indicators of internal and external performance</td>
<td></td>
<td></td>
<td>fm: 4.622</td>
</tr>
</tbody>
</table>

Notes: fm = full membership, cop = crossover point, fnm = full nonmembership.
Table 2
Solutions for the presence of high total performance.

<table>
<thead>
<tr>
<th></th>
<th>Solution 1A</th>
<th>Solution 1B</th>
<th>Solution 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of methodology</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Diversity of tools</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Importance of tools</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Internationalization</td>
<td>○</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Objectives</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Consistency 0.866 0.798 0.765
Raw coverage 0.269 0.462 0.122
Unique coverage 0.132 0.266 0.064
Overall solution consistency 0.786
Overall solution coverage 0.657

Notes: ● = core causal condition present, ○ = peripheral causal condition absent.

Table 3
Solutions for the absence of high total performance.

<table>
<thead>
<tr>
<th></th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of methodology</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Diversity of tools</td>
<td>○</td>
<td>○</td>
<td>●</td>
</tr>
<tr>
<td>Importance of tools</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Internationalization</td>
<td>○</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Objectives</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Consistency 0.700 0.685 0.690
Raw coverage 0.230 0.236 0.160
Unique coverage 0.081 0.091 0.036
Overall solution consistency 0.327
Overall solution coverage 0.372

Notes: ● = core causal condition present, ○ = peripheral causal condition absent.

Table 4
Solutions for the presence of high internal performance.

<table>
<thead>
<tr>
<th></th>
<th>S1</th>
<th>S2A</th>
<th>S2B</th>
<th>S2C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of methodology</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Diversity of tools</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Importance of tools</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Internationalization</td>
<td>●</td>
<td>○</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Objectives</td>
<td>○</td>
<td>○</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Consistency 0.916 0.779 0.804 0.811
Raw coverage 0.131 0.254 0.243 0.457
Unique coverage 0.025 0.022 0.070 0.250
Overall solution consistency 0.750
Overall solution coverage 0.652

Notes: ● = core causal condition present, ○ = peripheral causal condition absent.

Table 4. There are two solutions (first-order equifinality), and solution 2 has three neutral permutations (second-order equifinality). Solution 1 is based on the absence of objectives as a core condition that is combined with the absence of both diversity and the importance of tools but with the presence of the importance of the methodology. Solution 2A is based on the presence of the diversity of tools as a core condition that is combined with the presence of the importance of the methodology and the absence of the importance of tools and internationalization, whereas solution 2B considers the presence of the importance of tools and objectives but, as in solution 2A, with the absence of internationalization as peripheral conditions. And, solution 2C combines the diversity of tools with the importance of tools, the presence of internationalization, and the importance of the method. This configuration is highly consistent (consistency of 0.811) and represents around 46% of the cases (coverage of 0.457).

The configurations that lead to the absence of high internal performance are presented in Table 5. Three solutions exist where the second solution has two neutral permutations. Solution 1 is based on the absence of the diversity of tools and the presence of internationalization as core conditions and the presence of the importance of the methodology and the absence of the importance of tools as peripheral conditions. Solution 2 is also based on the absence of the diversity of tools as a core condition but adds the presence of objectives. Solution 2A is based on the absence of the importance of the methodology and internationalization as peripheral conditions, whereas solution 2B is based on the presence of the importance of the methodology and the importance of tools as peripheral conditions. Solution 3 has the presence of the importance of the methodology and objectives and the absence of internationalization as core conditions that are combined with the presence of the diversity of tools as a peripheral condition.

Table 6 displays the solutions for the presence of high external performance (in line with Golini & Landoni (2013), performance associated with the involvement of stakeholders, satisfaction of the community, long-term impact of the project etc.). Three solutions exist.
4.3. Analysis of interviews

During the first phase of our study, we identified a significant diversification in situations among the 23 NGDOs regarding the adoption of the methods and tools of project management in their developmental projects, and in their project objectives and level of internationalization. The introduction of a qualitative perspective to our study allows us to better understand the issues under research.

Four project managers were interviewed. They had, on average, 15 years of professional experience in the field of international development or cooperation development. Their academic background was extensive with two doctorates, six master's degrees, and three other post-graduate degrees. They had held positions in more than a dozen organizations, national and foreign, that were related to development. Their work in the sector focused predominantly on the Portuguese-speaking African countries (PALOP) and Timor-Leste.

The Portuguese NGDOs are essentially composed of two types of organizations: a small group with a high degree of professionalization and specialization and a relatively larger group with less expertise and focus. Both are registered in “Camões - Instituto de Cooperação e da Língua” (Camoes ICL). This organization coordinates Portuguese foreign policy in the areas of international cooperation and the promotion of the Portuguese language and culture. However, registration in Camoes ICL does not mean the NGO has regular activity in cooperative developmental projects outside the country.

Based on the perceptions of the interviewed project managers, we selected the main causes that contributed to this situation: (a) issues specifically related to the history and development of the main NGDOs that lead the sector; (b) scarcity of financial resources available at the national level (in line with the perspectives of Ferreira, Faria, & Cardoso, 2015 and Oliveira, 2013); (c) poor visibility of their activity and results; (d) less capacity to support the investment in human resources and materials necessary for regular access to the EU funding streams and, consequently, to the co-financing of the Camoes ICL; (e) implementation, not always on time, of international developmental projects in cooperation with organizations having distinct core businesses in the national territory (e.g., social support, local development, education development, promotion of entrepreneurship); and (f) the relative ease of access to the legal status of NGDOs.

The interviewees also described their projects around a set of constraints, specificities, and attributes close to those identified by Golini and Landoni (2013): (1) a basic commitment to social transformation and improvement of the living conditions of their beneficiaries; (2) barriers to communication and coordination between the various parties involved; (3) inaccessibility of essential goods and services and political instability (e.g., projects in Guinea-Bissau); (4) shortage of skilled and trained human resources and logistical difficulties in destination countries; (5) influence of cultural differences (e.g., visions of the world, different mentalities, concepts of time, and work ethics); and (6) difficulty in measuring and finding evidence of the real impact of projects.

The research questionnaire identified the PCM as the main project management methodology for the NGDOs. Additionally, this method was inseparable from the logical framework approach (LFA) and its central tool (the logical framework matrix). In the interviews, we sought to analyze the advantages and disadvantages inherent in these choices. Although the interviewed managers identified some advantages in using the logical framework matrix, they mainly highlighted the instrument’s limitations, which is in line with what some authors have expressed (Biggs & Smith, 2003; Couillard et al., 2009; Gasper, 1999; Golini & Landoni, 2013; Golini & Landoni, 2014; Ika & Donnelly, 2017).

One of the factors that all respondents emphasized is the oversimplification, as traditional methods and tools propose, of the complex reality they face. The academic literature associates this limitation with the simple linear causality that is inherent in the logical model that supports it (Fernandez & Fernandez, 2008; Hermano et al., 2013; Roduner, 2008). Describing this narrowness, one of the project managers stated that the logical framework matrix was permanently outdated and that, in fact, only made sense at the end of the project.

The project managers highlighted the influence of donors as another factor. Despite the fact that some NGDOs internalized the use of the logical framework matrix, this tool resulted primarily because the donors required it for access to project financing (Gasper, 1999; Ika et al., 2012). For the donor entities, the organization of a project around the logical framework matrix offers some advantages like a coherent and consistent summary presentation of the key elements of a project and

Table 6

Solutions for the presence of high external performance.

<table>
<thead>
<tr>
<th></th>
<th>S1A</th>
<th>S1B</th>
<th>S2</th>
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<tr>
<td>Importance of methodology</td>
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<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Diversity of tools</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Importance of tools</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Internationalization</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Objectives</td>
<td>●</td>
<td>●</td>
<td>○</td>
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<td>Unique coverage</td>
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<td>Overall solution consistency</td>
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<tr>
<td>Overall solution coverage</td>
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</tbody>
</table>

Notes: ● = core causal condition present, ○ = peripheral causal condition present, □ = core causal condition absent, ○ = peripheral causal condition absent.

Table 7

Solutions for the presence of high external performance.

<table>
<thead>
<tr>
<th></th>
<th>S1A</th>
<th>S1B</th>
<th>S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of methodology</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Diversity of tools</td>
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<td>Internationalization</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Objectives</td>
<td>●</td>
<td>●</td>
<td>○</td>
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<td>Consistency</td>
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<td>0.805</td>
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<td>Unique coverage</td>
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<tr>
<td>Overall solution consistency</td>
<td>0.823</td>
<td></td>
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</tr>
<tr>
<td>Overall solution coverage</td>
<td>0.369</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: ● = core causal condition present, ● = peripheral causal condition present, ○ = core causal condition absent, ○ = peripheral causal condition absent.
the possibility of comparing different project proposals against a common framework. However, as pointed out by some interviewees, in line with Gaper (1999), Biggs and Smith (2003) and Landoni and Corti (2011), the top-down imposition of this tool increases the risks of irrelevance, impracticability, underutilization, and a cosmetic adoption.

When questioned about what they considered the key discussion around methods and tools, respondents stressed issues such as the need for greater flexibility and practical utility and the importance of the process of communication. They also pointed out the difficulty in transferring the developments in these methods and tools of project management that were primarily designed for private sector challenges to the NGO sector. This difficulty confirms the doubts about their applications to NGDOs without any adaptation.

5. Discussion and conclusions

The results from fsQCA provide multiple configurations of conditions that lead to the presence or the absence of high performance in NGDOs. Based on Golini and Landoni’s (2013) perspective of performance (internal, external, and total), this research analyzes the importance of the Project Cycle Management (PCM). We find it to be the most prevalent method in the project management of Portuguese NGDOs. We also find the importance and diversity of project management tools as conditions. Controls are the level of internationalization and project’s objectives. Data collected allows the validation of all of the research propositions.

Through our interviews, we find that adaptive methods have elements and specificities more appropriate to the practical needs evidenced by the interviewed project managers compared to the linear nature and the apparent inability of the tools and methodologies traditionally used in the development sector. This finding is associated with the average size and “value added factors” normally associated with the NGDOs such as flexibility, speed of reaction, commitment to values and communities, operation in risky environments and intangible objectives (Golini & Landoni, 2013). Additionally, the transfer of standardized methods for this sector, such as the PMBOK that some authors suggest (Martens, Riet, & Santos, 2013), is in fact inadequate due to specific characteristics that these projects present (Hermano et al., 2013; Ika & Donnelly, 2017; Ika & Hodgson, 2014; Khang & Moe, 2008). However, it is important to bear in mind another equally important feature of social developmental projects: their complexity comes not only from the socio-political dimension but also from the fact that they include multisector projects with very different purposes and scopes (Ika & Hodgson, 2014; Youker, 2003), such as training projects, promoting entrepreneurship (so-called “soft”), and simultaneously with infrastructure projects (i.e., “hard”). Likewise, the fact that the NGDOs work repeatedly with and through other local organizations, coupled with the scarcity of trained human resources in the destination countries, jeopardizes the proximity and high quality of the project team, which are identified as conditions for successfully applying an adaptive approach (Highsmith, 2004; Spundak, 2014).

Specifically, in the first phase of our study we identify a common shared profile regarding the adoption of the methodologies and tools of project management among national NGDOs: a profile mainly focused on the PCM and the adoption of simple project management tools. In the second phase, we try to better understand the context of these organizations through the perceptions of the aforementioned project managers. The reports of these project managers illustrate the manifest complexity usually associated with their projects that is reflected as a propensity to formally adopt the PCM despite its limitations because of the needs and expectations of the donor.

Overall, this study highlights the complexity of the project management in NGDOs by enhancing the understanding of the main factors that can lead to high performance. We provide both a qualitative and a quantitative analysis that indicate that although project management methodologies and tools are important, different combinations of these attributes exist that lead to an outcome. The study is useful for NGDO managers as it gives a better understanding of what influences their performance. It allows managers to redefine their strategies by focusing more on those attributes. For policymakers, this study is relevant because it considers different configurations that lead to the NGDO’s high performance, for example when analyzing funding requests. Finally, for academics, this research contributes to enhancing knowledge about NGDO’s project management practices.

Despite the integrative approach of this study, the development of further studies to understand this phenomenon better might be of great interest. First, in this study, we controlled for multiple attributes of NGDOs (e.g., level of internalization, dimension) that could be deepened. Second, since the data was collected only from Portuguese NGDOs, future studies could assess to what extent these results prevail across different economic, institutional, and cultural contexts in other countries. Finally, since the performance was self-reported by each NGDO, another interesting avenue to explore would be the stakeholders’ perspective of NGDOs’ performance by interviewing private and public donors, suppliers, and communities.

References


