Journal of Business Research xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Journal of Business Research

journal homepage: www.elsevier.com/locate/jbusres

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

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ARTICLE INFO

Keywords:
International development projects
Non-governmental organizations
NGDOs
Project management methodologies and tools
Mixed methods research
Fuzzy set QCA

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 NGDO 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, & Rothen, 2003). There is a substantial disparity between the theoretical knowledge and the practical efficiency of project management.

☆ The authors acknowledge financial support, via ADVANCE-CSG, from the Fundação para a Ciência e a Tecnologia (FCT Portugal) through the Multi-Year Funding Program for R&D Units (UID/SOC/04521/2019). The authors are grateful to many anonymous referees for their helpful comments in the 2018 Gika conference. The authors would also like to thank Ricardo Rodrigues for his valuable insights.

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https://doi.org/10.1016/j.jbusres.2019.01.067
Received 10 June 2018; Received in revised form 29 January 2019; Accepted 30 January 2019

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, Navaro-Flores, & Laporte, 2015; Golini & Landoni, 2014; Ika, Diallo, & Thuillier, 2012; Muriithi & 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; Teddlie & 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, Sao 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 (Reto, 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; Michalopoulos, 2017; Navarro-Flores, 2011). NGDOs have grown substantially and have become one of the main pillars of developmental aid (Golini, Kalchschmidt, & Landoni, 2015; Lewis, 2010; 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 Muriithi 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 developmental 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

(Shenhar, 2008; Spundak, 2014; Williams, 2005; Wysocki, 2014).

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 & Bohner, 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 fiir 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 benefactors, 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 (Hurmerinta-Peltomaki & 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; Rihoux & 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; Seidel & 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 follow the guidelines of the European Union (2004) or the Camões – Instituto de Cooperação e da Língua (ex-ICP). The adoption of other methods (PMBOK, IPMA, PRINCE2, PM4DEV, and PMDPro) is infrequent.

Regarding the importance that is assigned to the main tools of project management (defined from the reference guidelines for project management, like Golini et al., 2015), the logical framework matrix, progress reports, communication plan, and cost accounting and control have average values above four. The three tools that are considered less important (values less than two on a scale of one to five) are the work breakdown structuring (WBS), earned value management (EVM), and the critical path method (Fig. 1).

Regarding the extent of the application of project management tools by NGDOs, the logical framework matrix, progress reports, cost accounting and control, Gantt chart, communication plan, and scope management are widely used (51–75% of projects). A risk analysis and stakeholder matrix are adopted frequently (26–50% of projects) among the Portuguese NGDOs. The organizational breakdown structure (also called organizational chart), project milestone schedule, responsibility assignment matrix, and occurrence record are not used often (1–25% of projects). The critical path method, earned value management systems, and work breakdown structure tend not to be used. Regarding the performance achieved by the projects, the 23 NGDOs had high average scores regarding the perception of their internal and external performance (respectively 4.35 and 4.04 on a scale of 1 to 5), which are quite similar to those of Golini et al. (2015). The internal performance indicators are associated with the budget, schedule, and quality compliance; and the external performance indicators are all the others (stakeholders' involvement, monitoring, and satisfaction; economic stability after the end of the project; long-term impact).

In line with these results, this study's purpose is to analyze the relation between the applications of PCM (due to its strong prevalence) and the levels of adoption of and diversity in the project management tools with the NGDOs' performance. The research model is presented in Fig. 2.

4.2. Comparative qualitative analysis

In order to evaluate the relation between the adoption of project management's methodologies and tools and the NGDO's 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 nonmembership, 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 nonmembership. 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

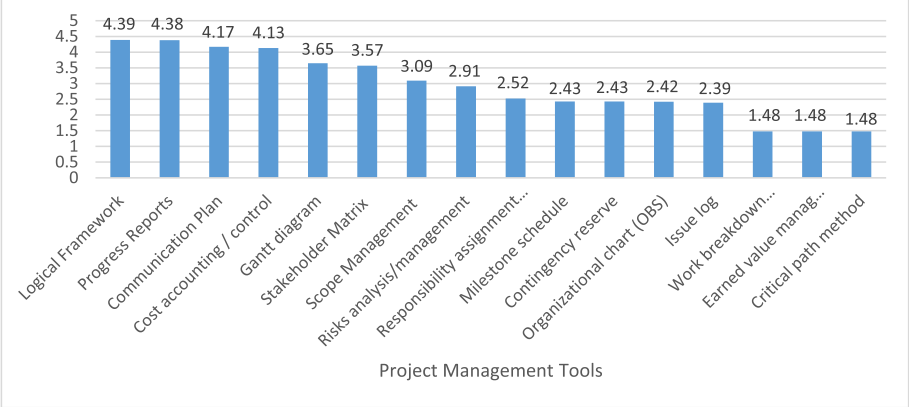

Fig. 1. Importance of project management tools.

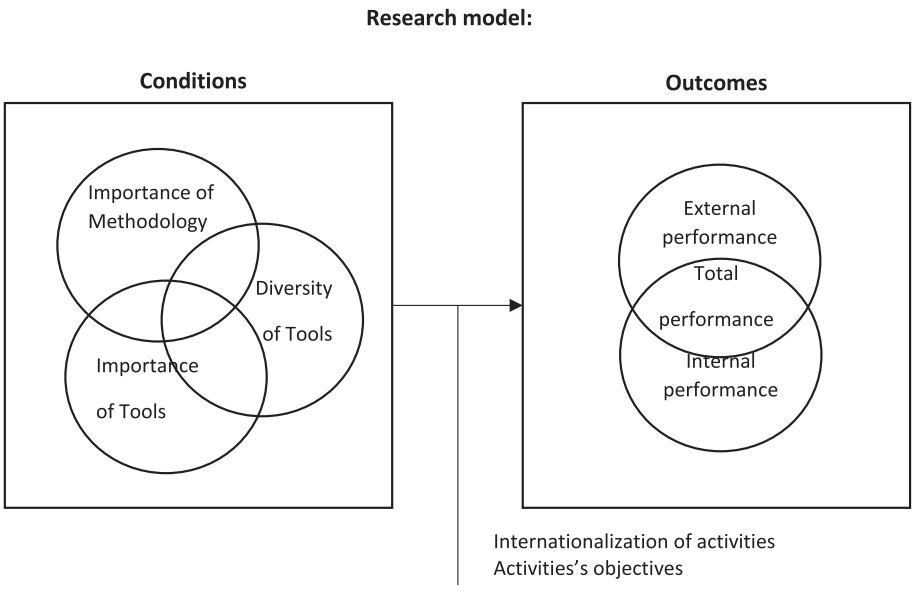

Fig. 2. Research model.

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
Conditions, controls and outcomes.

Conditions	Variables	Scale	Computation	Calibration
Importance of main methodology	Knowledge about Project Cycle Management (PCM)	1 (very low) to 5 (very high)		fm: 5 cop: 3 fnm: 1
Diversity of tools	From 16 different tools, the respondents should identify, for each, the level of importance of	1 (very low) to 5 (very high) scale	Percentage of tools presenting high or very high importance for the NGDO	fm: 0.625 cop: 0.375 fnm: 0.25 (90%, 50% and 10% percentiles)
Importance of tools	each tool		Sum of the level of importance over 80 (maximum importance)	fm: 0.715 cop: 0.55 fnm: 0.443 (90%, 50% and 10% percentiles)

Controls	Variables	Scale	Computation	Calibration
Internationalization of activities	Ratio of n° of international projects to total projects			fm: 0.9 cop: 0.5 fnm: 0.1
Projects objectives	The NGDO is devoted to projects aiming at developing/promoting of social, economic or environmental services?	1 = Yes 0 = No		fm: 1 fnm: 0

Outcomes	Variables	Scale	Computation	Calibration
External performance	6 indicators of external performance	1 (very low) to 5 (very high)	Average of scores	fm: 4.5 cop: 4 fnm: 3.5
Internal performance	3 indicators of internal performance			fm: 5 cop: 4.33 fnm: 3.667
Total performance	9 indicators of internal and external performance			fm: 4.622 cop: 4.111 fnm: 3.689

Notes: fm = full membership, cop = crossover point, fnm = full nonmembership.

Table 2
Solutions for the presence of high total performance.

	Solution 1A	Solution 1B	Solution 2
Importance of methodology		•	•
Diversity of tools	●	●	
Importance of tools	●	●	∘
Internationalization	∘	•	○
Objectives	•		○
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 present, ○ = core causal condition absent, ∘ = peripheral causal condition absent.

the Quine-McCluskey algorithm (Boolean reduction)—of the various combinations of conditions that are sufficient to achieve the outcome (e.g., higher performance) (Más-Verdu, Ribeiro-Soriano, & Roig-Tierno, 2015; Ragin, 2008). Based on the truth table algorithm, we obtain the configurations of conditions for the presence and absence of high total, internal, and external performances. The cut offs are always higher than 0.75 (Ragin, 2008). The presentation of the results is based on Crilly et al. (2012).

Table 2 shows two solutions for the presence of high total performance (first-order equifinality). Solution 1 has two neutral permutations (second-order equifinality) that are based on the presence of the core conditions: diversity of tools and importance of tools. Solution 1A includes the presence of objectives and the absence of internationalizations as peripheral conditions. Solution 1B, in turn, includes the presence of the importance of the methodology and internationalization. This configuration is highly consistent (consistency of 0.798) and represents around 46% of the cases (coverage of 0.462). Solution 2 is based on the absence of internationalization and objectives as core conditions for high performance that are combined with the peripheral conditions for the presence of the importance of the methodology and the absence of the importance of tools.

Table 3 shows the solutions for the absence of high total performance (first-order equifinality). Solution 1 is based on the absence of the diversity of tools and the presence of the importance of tools as core conditions and the absence of internationalization and presence of objectives as peripheral conditions. Solution 2 is based on the presence of the importance of the methodology, internationalization, and objectives with the absence of the diversity of tools. Solution 3 is based on the presence of the importance of the method and the objectives and the absence of the importance of tools as core conditions and the presence of the diversity of tools and the absence of internationalization as peripheral conditions.

The solutions for the presence of high internal performance (compliance with quality, expected time, and budget) are presented in 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).

Table 4
Solutions for the presence of high internal performance.

	S1	S2A	S2B	S2C
Importance of methodology	•	•		•
Diversity of tools	∘	●	●	●
Importance of tools	∘	∘	•	•
Internationalization		∘	∘	•
Objectives	○		•	
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 present, ○ = core causal condition absent, ∘ = peripheral causal condition absent.

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 methodoly 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

Table 3
Solutions for the absence of high total performance.

	S1	S2	S3
Importance of methodology		•	●
Diversity of tools	○	∘	•
Importance of tools	●		○
Internationalization	∘	•	∘
Objectives	•	•	●
Consistency	0.908	0.822	0.911
Raw coverage	0.230	0.236	0.160
Unique coverage	0.081	0.091	0.036
Overall solution consistency		0.835	
Overall solution coverage		0.372	

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

Table 5
Solutions for the absence of high internal performance.

	S1	S2A	S2B	S3
Importance of methodology	•	∘	•	●
Diversity of tools	○	○	○	•
Importance of tools	∘		•	
Internationalization	●	∘		○
Objectives		●	●	●
Consistency	0.913	0.743	0.858	0.777
Raw coverage	0.327	0.355	0.243	0.197
Unique coverage	0.157	0.190	0.056	0.053
Overall solution consistency		0.768		
Overall solution coverage		0.684		

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

Table 6
Solutions for the presence of high external performance.

	S1	S2	S3A	S3B
Importance of methodology	•	•		•
Diversity of tools		∘	●	●
Importance of tools	∘		●	●
Internationalization	○	●	∘	•
Objectives	○	●	•	
Consistency	0.808	0.815	0.874	0.785
Raw coverage	0.123	0.224	0.259	0.433
Unique coverage	0.065	0.088	0.122	0.191
Overall solution consistency			0.758	
Overall solution coverage			0.708	

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

where solution 3 has two neutral permutations. Solution 1 has the absence of internationalization and objectives as core conditions and the presence of the importance of the methodology and the absence of the importance of tools as peripheral conditions. By contrast, solution 2 is based on the presence of internationalization and objectives as core conditions and the presence of the importance of the methodology and the absence of the diversity of tools as peripheral conditions. Solution 3 is based on the presence of the diversity of tools and the importance of tools as core conditions that are combined with the absence of internationalization and the presence of objectives (solution 3A) or the presence of the importance of the methodology and internationalization (solution 3B) as peripheral conditions.

Regarding the absence of high external performance, Table 7 identifies two solutions. The first solution is based on the presence of the importance of tools and the absence of the diversity of tools as core conditions and has two neutral permutations. Solution 1A includes the absence of internationalization and the presence of objectives as peripheral conditions, and solution 1B contains the presence of the importance of the method and objectives as peripheral conditions. In turn, solution 2 is based on the presence of the importance of the method and objectives and the absence of internationalization as core conditions and the presence of the diversity of tools as a peripheral condition.

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.

Table 7
Solutions for the absence of high external performance.

	S1A	S1B	S2
Importance of methodology		•	●
Diversity of tools	○	○	•
Importance of tools	●	●	
Internationalization	∘		○
Objectives	•	•	●
Consistency	0.914	0.921	0.805
Raw coverage	0.244	0.266	0.208
Unique coverage	0.017	0.039	0.087
Overall solution consistency		0.823	
Overall solution coverage		0.369	

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

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 NGDO 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

the possibility of comparing different project proposals against a common framework. However, as pointed out by some interviewees, in line with Gasper (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 NGDO 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 transference 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

Aguanno, K. (2004). *Managing agile projects.* Lakefield, Canada: Multi-Media Publications Inc.

Ahsan, K., & Gunawan, I. (2010). Analysis of cost and schedule performance of international development projects. *International Journal of Project Management, 28*(1), 68–78.

Andersen, E. (2016). Do project managers have different perspectives on project management? *International Journal of Project Management, 34*(1), 58–65.

Biggs, S., & Smith, S. (2003). A paradox of learning in project cycle management and the role of organizational culture. *World Development, 31*(10), 1743–1757.

Bredillet, C. (2010). Blowing hot and cold on project management. *Project Management Journal, 41*(3), 4–20.

Brière, S., Proulx, D., Navaro-Flores, O., & Laporte, M. (2015). Competencies of project managers in international NGOs: Perceptions of practitioners. *International Journal of Project Management, 33*(1), 116–125.

Cameron, R., Sankaran, S., & Scales, J. (2015). Mixed methods use in project management research. *Project Management Journal, 46*(2), 90–104.

Cicmil, S., & Hodgson, D. (2006). New possibilities for project management theory - A critical engagement. *Project Management Journal, 37*(3), 111–122.

Cicmil, S., Hodgson, D., Lindgren, M., & Packendorff, J. (2009). Project management behind the façade. *Ephemera, 9*(2), 78–92.

Cooke-Davies, T., Cicmil, S., Crawford, L., & Richardson, I. (2007). We're not in Kansas anymore, Toto: Mapping the strange landscape of complexity management. *Project Management Journal, 38*(2), 50–61.

Coram, M., & Bohner, S. (2005). The impact of agile methods on software project management. Greenbelt *Proceedings of the 12th IEEE international conference and workshops on the engineering of computer–based systems* (pp. 363–370). .

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks: Sage.

Couillard, J., Garon, S., & Riznic, J. (2009). The logical framework approach - Millennium. *Project Management Journal, 40*(4), 31–44.

Crawford, P., & Bryce, P. (2003). Project monitoring and evaluation: A method for enhancing the efficiency and effectiveness of aid project implementation. *International Journal of Project Management, 1*(21), 363–373.

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks: Sage.

Creswell, J., & Clark, V. (2011). *Designing and conducting mixed methods research* (2nd ed.). London: Sage.

Crilly, D., Zollo, M., & Hansen, M. T. (2012). Faking it or muddling through? Understanding decoupling in response to stakeholder pressures. *Academy of Management Journal, 55*(6), 1429–1448.

Davis, K. (2014). Different stakeholder groups and their perceptions of project success. *International Journal of Project Management, 32*(2), 189–201.

DeCarlo, D. (2004). *eXtreme project management.* San Francisco: Jossey–Bass.

Edwards, M., & Hulme, D. (2014). *Non-governmental organisations-performance and accountability: Beyond the magic bullet.* New York: Routledge.

Eichenauer, V., & Reinsberg, B. (2017). What determines earmarked funding to international development organizations? Evidence from the new multi-bi aid data. *The Review of International Organizations, 12*(2), 171–197.

Emmenegger, P., Schraff, D., & Walter, A. (2014). *QCA, the truth table analysis and large-N survey data: The benefits of calibration and the importance of robustness tests.* St. Gallen: Compass (Working Paper 2014-79).

European Union (2004). *Project cycle management guidelines.* Brussels: EuropeAid Cooperation Office.

Fernandez, D., & Fernandez, J. (2008). Agile Project Management - Agilism versus traditional approaches. *The Journal of Computer Information Systems, 49*(2), 10–17.

Ferreira, P., Faria, F., & Cardoso, F. (2015). *O Papel de Portugal na Arquitetura Global do Desenvolvimento: Opções para o futuro da Cooperação Portuguesa.* Lisboa: IMVF/

ECDPM.
Flyvbjerg, B., Bruzelius, N., & Rothen, W. (2003). *Megaprojects and risk: An anatomy of ambition.* Cambridge: Cambridge University Press.
Fowler, A. (2016). Non-governmental development organisations' sustainability, partnership, and resourcing: Futuristic reflections on a problematic trialogue. *Development in Practice, 26*(5), 569–579.
Gasper, D. (1999). *Evaluating the logical framework approach: towards learning-oriented development evaluation.* The Hague: Institute of Social Studies (Working Paper Series No. 303).
Gauthier, J.-B., & Ika, L. A. (2012). Foundations of project management research: An explicit and six-facet ontological framework. *Project Management Journal, 43*(5), 5–23.
Golini, R., Corti, B., & Landoni, P. (2017). More efficient project execution and evaluation with logical framework and project cycle management: Evidence from international development projects. *Impact Assessment and Project Appraisal, 35*(2), 128–138.
Golini, R., Kalchschmidt, M., & Landoni, P. (2015). Adoption of project management practices: The impact on international development projects of non-governmental organizations. *International Journal of Project Management, 33*(3), 650–663.
Golini, R., & Landoni, P. (2013). *International development projects: Peculiarities and managerial approaches.* Pennsylvania: Project Management Institute, Inc.
Golini, R., & Landoni, P. (2014). International development projects by non-governmental organizations: An evaluation of the need for specific project management and appraisal tools. *Impact Assessment and Project Appraisal, 32*(2), 121–135.
Golini, R., Landoni, P., & Kalchschmidt, M. (2018). The adoption of the logical framework in international development projects: A survey of non-governmental organizations. *Impact Assessment and Project Appraisal, 36*(2), 145–154.
Hermano, V., López-Paredes, A., Martín-Cruz, N., & Pajares, J. (2013). How to manage international development (ID) projects successfully. Is the PMD Pro1 guide going to the right direction? *International Journal of Project Management, 31*(1), 22–30.
Highsmith, J. (2004). *Agile project management.* Boston, MA: Addison–Wesley.
Hurmerinta-Peltomaki, L., & Nummela, N. (2006). Mixed methods in international business research: A value-added perspective. *Management International Review, 46*(4), 439–459.
Ika, L. A., Diallo, A., & Thuillier, D. (2012). Critical success factors for World Bank projects: An empirical investigation. *International Journal of Project Management, 30*(1), 105–116.
Ika, L. A., & Donnelly, J. (2017). Success conditions for international development capacity building projects. *International Journal of Project Management, 35*(1), 44–63.
Ika, L. A., & Hodgson, D. (2014). Learning from international development projects: Blending critical project studies and critical development studies. *International Journal of Project Management, 32*(7), 1182–1196.
Khang, D. B., & Moe, T. L. (2008). Success criteria and factors for international development projects: A life-cycle-based framework. *Project Management Journal, 39*(1), 72–84.
Landoni, P., & Corti, B. (2011). The management of international development projects: Moving toward a standard approach or differentiation? *Project Management Journal, 42*(3), 45–61.
Legewie, N. (2013). An introduction to applied data analysis with qualitative comparative analysis (QCA). *Forum: Qualitative Social Research, 14*(3).
Lewis, D. (2010). Nongovernmental organizations, definition and history. In H. K. Anheier, S. Toepler, & R. List (Eds.). *International encyclopedia of civil society* (pp. 1056–1062). New York: Springer.
Martens, P., Riet, v. M., & Santos, R. M. (2013). *The management of international development projects: Enhancing sustainable outcomes improved project management education and training.* Maastricht: Maastricht School of Management Research Conference.
Más-Verdu, F., Ribeiro-Soriano, D., & Roig-Tierno, N. (2015). Firm survival: The role of incubators and business characteristics. *Journal of Business Research, 68*(4), 793–796.
Michalopoulos, C. (2017). Aid, trade and development: 50 years of globalization. *Aid, trade and development* (pp. 1–7). Palgrave Macmillan.
Muriithi, N., & Crawford, L. (2003). Approaches to project management in Africa: Implications for international development projects. *International Journal of Project Management, 1*(21), 309–319.
Navarro-Flores, O. (2011). Organizing by projects: A strategy for local development - The case of NGOs in a developing country. *Project Management Journal, 42*(6), 48–59.
Oliveira, A. (2013). *Cooperação Portuguesa: Uma Política de Estado?* Lisboa: Plataforma Portuguesa das ONGD.
Padalkar, M., & Gopinath, S. (2016). Six decades of project management research: Thematic trends and future opportunities. *International Journal of Project Management, 34*(7), 1305–1321.
PMI (Ed.). (2017). *Project management of body knowledge (PMBOK® guide)*(6th ed.). PMI Publications.
Ragin, C. (1987). *The comparative method: Moving beyond qualitative and quantitative strategies.* Berkeley: University of California Press.
Ragin, C. (2000). *Fuzzy-set social science.* Chicago: University of Chicago Press.
Ragin, C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond.* Chicago and London: University of Chicago Press.
Respect Project (2004). *An EU code of ethics for socio-economic research.* Bighton: The Institute for Employment Studies (IES Report 412).
Reto, L. A., Machado, F. L., & Esperança, J. P. (2016). *New atlas of the Portuguese language.* Lisboa: Imprensa Nacional.
Riddell, R. (2007). *Does foreign aid really work?* Oxford: Oxford University Press.
Rihoux, B., & Ragin, C. (2009). *Configurational comparative methods: Qualitative comparative analysis (QCA).* Thousand Oaks: Sage.
Roduner, D. (2008). Logical framework approach and outcome mapping. *Rural Development News, 2*(1), 9–19.
Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Harlow: Pearson Education Limited.
Schiefer, U., Bal-Dobel, L., Batista, A., Dobel, R., Nogueira, J., & Teixeira, P. (2006). *Método Aplicado de Planeamento e Avaliação: Manual de Planeamento e Avaliação de Projetos.* Cascais: Principia.
Schiefer, U., & Döbel, R. (2001). *MAPA - Project: A practical guide to integrated project planning and evaluation.* Budapest: OSI-IEP Publications.
Schneider, C. Q., & Wagemann, C. (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis.* Cambridge: Cambridge University Press.
Seidel, J., & Kelle, K. (1995). Different functions of coding in the analysis of data. In K. Kelle (Ed.). *Computer aided qualitative data analysis: Theory, methods, and practice.* Thousand Oaks: Sage.
Shenhar, A. (2008). Unleashing the power of project management. *Industrial Management, 50*(1), 1–7.
Shenhar, A. J., & Dvir, D. (2007). Project management research—The challenge and opportunity. *Project Management Journal, 38*(2), 93–99.
Spundak, M. (2014). Mixed agile/traditional project management methodology–reality or illusion? *Procedia-Social and Behavioral Sciences, 119*, 939–948.
Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences.* London: Sage.
UNDP (2018). *Human development indices and indicators.* New York: United Nations Development Programme.
Van der Waldt, G. (2011). Adaptive project management: A tool for more realistic municipal planning. *Administratio Publica, 19*(2), 2–20.
Werker, E., & Ahmed, F. Z. (2008). What do nongovernmental organizations do? *Journal of Economic Perspectives, 22*(2), 73–92.
Williams, T. (2005). Assessing and moving on from the dominant project management discourse in the light of project overruns. *IEEE Transactions on Engineering Management, 52*(4), 497–508.
Wysocki, R. K. (2014). *Effective project management: Traditional, agile, extreme* (7th ed.). Indianapolis: Wiley.
Youker, R. (2003). *The nature of international development projects.* Baltimore: PMI Conference.
Ziesemer, T. (2016). The impact of development aid on education and health: Survey and new evidence for low-income countries from dynamic models. *Journal of International Development, 28*(8), 1358–1380.