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Global projects: A bibliometric study of International Business Journals

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ABSTRACT

Project management is an important process in terms of implementing strategies. Different organizations use these concepts and tools to deploy strategies, acquire, and sustain competitive advantages. Its significance in the proper execution of strategies has garnered attention from several scholars. Global projects have a number of specificities that make them more difficult to manage, such as foreign liability and cultural issues. Since the success of strategies and organizations is linked to project success, understanding global projects means understanding how management theories can be applied to project management to make organizations more successful. This bibliometric study aims to identify current trends in the global projects literature and evaluate its state of the art. Our conclusion indicates a focus on institutional theory, risk analysis/decision process and project marketing. We believe our study can support and encourage scholars to research the existing clusters identified and evaluate how organization theories can be applied to global project management.

1. Introduction

Project management is a new discipline and scholars and practitioners have recognized its importance in the proper execution of strategies. Project execution is considered an important aspect of management in organizations. Due to their unique characteristics and role in the deployment of organizational strategies, the success of global projects is linked to organizations' ability to continuously improve their processes, innovate and make changes to maintain competitive advantage.

According to Shenhar and Dvir (2007), projects are an important driver for innovation and the only means by which organizations can change, execute strategies, innovate and gain important competitive advantage. Project management is also significant when innovation is required (NEWELL, GOUSSEVSKAIA, SWAN, BRESNEN, OBEMBE; 2008) and is an increasingly central concern in most organizations since its framework and concepts are used to leverage internal resources into process improvements, product development and/or the introduction of new services in the market (SAUSER, REILLY, SHENHAR; 2009). Organizations also devise projects to improve their innovative capacity and serve as a strategy to develop new capabilities (WIKSTRÖM, ARTTO, KUJALA, SÖDERLUND; 2010).

"Projectization" of industries has promoted fundamental changes to the way firms organize themselves and develop processes and products (SÖDERLUND, 2002). Organizations use projects to improve their innovative capacity, implement broader system changes, and enhance their ability to adapt to constant changes in the business environment (WIKSTRÖM *et al.*, 2010). Based on the tenets of the Resource Based View (RBV), Davies and Hobday (2005) discuss a new organizational capability: project management.

The link between projects and strategies is a vital part of any organization's administration. The level of alignment among an organization's strategies, its strategic drivers for value and how it manages projects influence the benefits its gains from project management (COOKE-DAVIES, CRAWFORD, LECHLER;

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2009). An example of project-based strategy deployment is the integration of companies after mergers and acquisitions, which is largely handled by project teams whose role is to exploit the synergy of the two companies and ensure it is capitalized in the integrated company (BOHLIN, DALEY, THOMSON; 2000).

Global projects are a special type of project. IPMA (2006, p. 13) defines a project as "a time- and cost-constrained operation to realize a set of defined deliverables (the scope to fulfill the project's objectives) up to quality standards and requirements". Global projects involve individuals from different countries, cultures, business units and functions (ANANTATMULA; THOMAS, 2010).

Certain aspects of global projects make them more difficult to manage: (1) usually team members do not share a common history, (2) they are geographically dispersed and (3) there is a greater need for electronic communication (ANANTATMULA; THOMAS, 2010). Understanding global projects is important not only because of the need to grasp the underlying concepts of project management and its specific tools and techniques, but also to understand how management theory can be applied to project management to make organizations more successful.

This bibliometric study aims to evaluate the state of the art of the global projects literature, identify current trends, evaluate the existence of clusters and gaps in theory. Finally, we believe our study can support and encourage scholars to research the existing clusters identified by using the concepts of bibliometric studies (DE BELLIS, 2009). Our conclusion is that there is a slight concentration of papers on institutional theory, risk analysis/decision-making processes and project marketing.

Our methodology included searching the ISI Web of Knowledge for papers published between 1983 to 2013 using the following keywords: "global projects", "international projects", "transnational projects", "multinational projects" and "cross-border projects". Citation and co-citation analyses were conducted In order to allow a more comprehensive understanding, we performed based on the selected articles.

This study is divided into four sections. Section two reviews the basic concepts underlying global projects and section three explains the methodology used, including database selection. In section four, the data are presented and analyzed and section five details the conclusions draw and outlines the contributions made.

We expect to contribute to organizational management, emphasizing the importance and relevance of global projects by identifying hot topics and analyzing the state of art of this issue, thereby encouraging scholars to further investigate this theme.

2. Theory review

The concept of global projects, their unique characteristics and the fundamentals of project management applied to these projects are the basis of the theory review. The goal is to cover the definition of global projects and how they differ from domestic projects. Additionally, we explore the typical difficulties encountered and the relevance of global projects to the field of organizational management.

Global projects can be defined as projects whose stakeholders are geographically distributed across different countries (CLELAND, 2006), involving individuals from different cultures, countries, business units and functions (ANANTATMULA; THOMAS, 2010). Adenfelt and Lagerström (2006) define transnational projects as cross-border organizational units formed by people from different nationalities working in dispersed units. Lientz and Rea (2003, p. 3) established international projects as involving "multiple locations, entities, organizations and business units".

The implementation of global projects is a consequence of global business. Factors such as mergers and acquisitions, organizational expansion into unexplored markets, the need for global presence in different markets and worldwide manufacturing are some examples of this trend. Processes such as these are implemented as part of a project and global formats differ from domestic or local versions (LIENTZ; REA, 2003). Furthermore, the management of global projects is intrinsically linked to the management of virtual teams that share the same basic characteristics (ANANTATMULA; THOMAS, 2010). These global virtual teams are defined as a "temporary, culturally dispersed, electronically communicating group" (JARVENPAA; LEIDNER, 1999, p. 792).

Based on the Resource Based View, Davies and Hobday (2005) established *project capabilities* as an

additional resource and capability organizations need to develop. According to the RBV approach, functional and strategic capabilities explain the competitive advantage of an organization and its superior performance. Functional capabilities involve improving the existing operations of an organization (logistic, internal processes, financing, R&D), while strategic capabilities can be defined as an organization's ability to move into new technologies and/or markets. According to Davies and Hobday (2005), *project capabilities* are one of the core organizational capabilities required to compete in a scenario of constant change.

Global projects differ from local projects in a number of ways. According to Lientz and Rea (2003), the differences are multidimensional. Global projects are developed in different locations, with a wider and more complex purpose and scope than local projects, as well as a higher number of organizations involved (business units and headquarters). The impact of a global project on the organization is greater (whether successful or a complete failure), which depends on the results more heavily when compared to local projects. Therefore, global projects are riskier and more complex, but also have more potential benefits while at the same time being more costly.

Considering the general characteristics previously mentioned, global projects exhibit some additional constraints in terms of management. The first of these are the difficulties involved in managing globally dispersed teams. In a study with 72 multinational product development organizations, Thamhain (2013) revealed that most of the root causes of technical problems are in fact related to social, psychological and organizational issues. Human aspects (such as interesting work, recognition, clear organizational objectives, etc.) have the strongest impact on project performance in terms of overall team performance and project success.

Failure to understand the institutional elements that make up an organization is a contributor to project failures. These elements are classified into three categories: *regulative elements* are the formal regulations established by the authorities (government, agencies, etc.); *normative elements* are the informal norms, values, standards, practices and traditions that guide decisions and specify goals and objectives; *cultural-cognitive elements* include the beliefs, logics and mental models established for action. These elements provide the means and significance for organizational routines, constructing organizations and project teams (ORR; SCOTT, 2008). These authors evaluate the *institutional exception*, defined as a reaction to institutional differences.

Thus, the execution of global projects is a fundamental process in the implementation of organizational strategies. Academics and practitioners recognize their importance in the success of the organization. It is through project management that organizations develop capabilities and sustain competitive advantages. Moreover, global projects face the typical technical challenges of "domestic" level projects, as well as difficulties involving important aspects such as the multicultural composition of teams, geographical distance and the need to accommodate the hidden agendas of different groups. Project managers and organizations need to fully consider these difficulties in order to achieve project success.

3. Methodology

This section describes the methodology used in the present study, including an explanation of the basic laws involved in bibliometric evaluation. The selection and screening processes used to identify the relevant articles are also discussed.

3.1 Bibliometric evaluation

A bibliometric study was conducted to evaluate existing research on global projects. Bibliometrics is the application of statistical techniques to evaluate the patterns of published documents and their uses (DIODATO, 1994). This article applies citation and co-citation analyses to better understand the use of documents. Citation analysis examines the citations made by authors and is based on the assumption that the cited article is considered important by a given author in their study. As such, a more frequently cited document is potentially important to the field evaluated by the bibliometric study (TAHAI; MEYER, 1999).

Co-citation analysis relates to the number of articles that have been jointly cited by different authors in order to reveal links between them. When the same articles are consistently referenced, it can be inferred that they have some degree of similarity. In this case, the references of one author are compared to those of another to ascertain how the

same references are used. The co-citation study has the potential to identify groups of authors, topics, methods or other cluster-based aspects of the documents (CHEN, McCAIN; 2002).

Scientific documents are, per se, an important and valuable source of knowledge. They are the result of different types of studies conducted by experts and a validation process through peer reviews and similar methods. Bibliographic citations may be perceived as a link between these scientific methods. Bibliometric research is a mechanism for understanding how this knowledge is generated and interconnected (DE BELLIS, 2009).

3.2 Selection Process and Sample Description

As the primary source for the bibliometric study, data were retrieved from the ISI Web of Knowledge. This database was selected for the following reasons: (1) it comprises more than 20,000 journals, (2) has more than 30 years of bibliometric expertise and 50 years of citation analysis, and (3) is a generally recognized and reliable source for bibliometrics studies. Figure 1 summarizes the screening and selection process of the papers.

As previously mentioned, the database (ISI Web of Knowledge) was the fundamental source for the search following keywords were used in the "topic" option of the search box: "global project(s)", "international project(s)", "transnational project(s)", "multinational project(s)", "cross-border project(s)" and "cross border project(s)" and, finally, the time period from 1983 to 2013 (31 years). Based on these parameters, 1,768 papers were identified in the sample.

A series of filters were used to select appropriate studies. For "Filter 1", only articles were selected, excluding patents, meetings and conferences with a view to identifying papers that were subject to a peer review. We believe that the peer review process adds value to studies and is a valid and reliable legitimation process (FERREIRA, 2014). As a result, 1,050 papers remained in the sample. Filter 2 was linked to the relevance of papers to the focus of this bibliometric study, selecting only subjects related to global projects. This was achieved by reading the title of the paper and, when this was inconclusive, analyzing the abstract of the paper. This process left 184 papers in the sample.

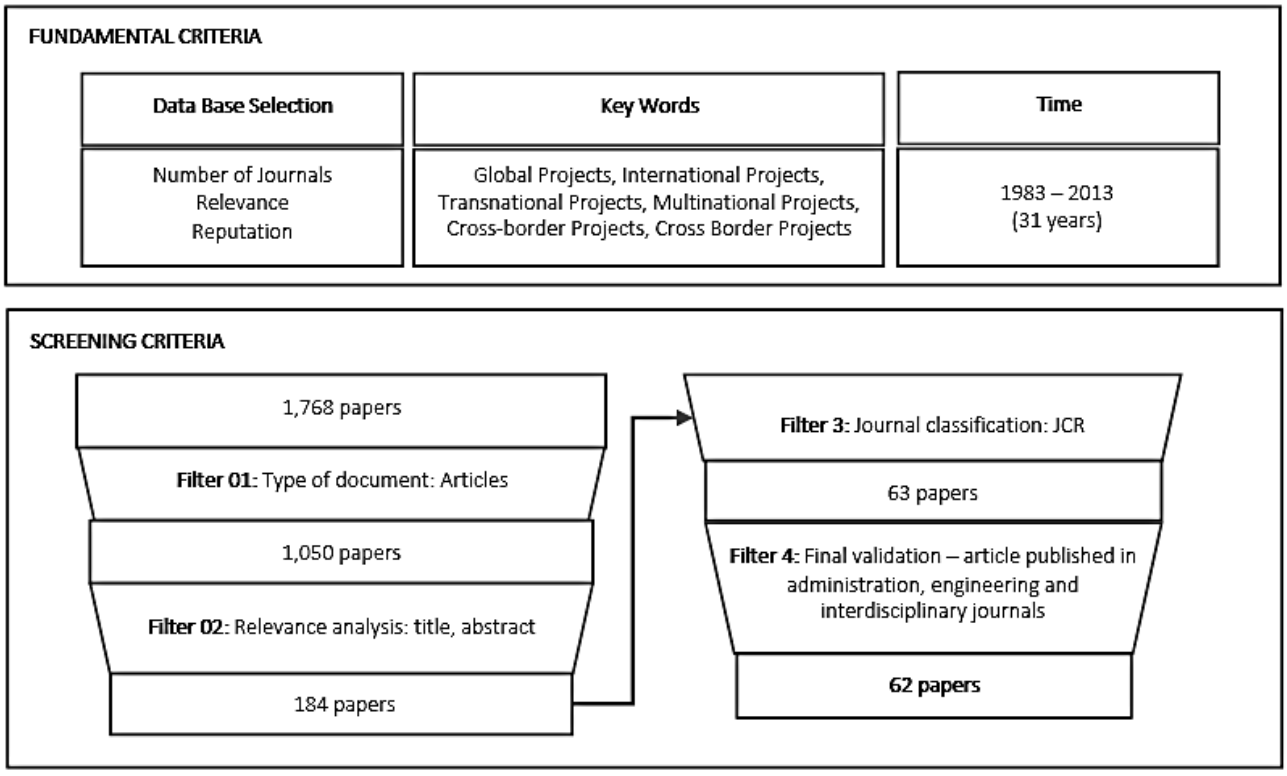


Figure 1: Screening process
Source: Prepared by authors

Filter 3, the Journal Citation Reports® (ISI Web of Knowledge, 2013), was used for journal classification. Only journals with an impact factor were included in the selection process to ensure that only studies with good publication status remained in our sample. After the application of this filter, 63 papers remained in the sample.

The final filter (Filter 4) aimed to identify the "evaluation area" of journals. Studies selected had to be published in the Administration, Engineering or Interdisciplinary areas. The field of administration is a logical consequence of the nature of this bibliometric study, while engineering was considered relevant because project management began in this field (KERZNER, 2013). We also opted to include articles published in journals classified as "interdisciplinary" since different areas of knowledge use the principles of project management and may also be interested in the theme. Thus, the final sample totaled 62 articles.

Table 1 summarizes the number of articles, journal classification according to the JCR Impact Factor 2013, and evaluation area.

4. Results and Discussion

The results are presented and discussed in three different dimensions. Initially, we discuss general data on the selected sample, followed by the results of citation analysis. Although it was not our intention to evaluate each of the papers in the sample, the

Tab. 1.
Journals of the selected articles – ISI Web of Knowledge

Journal	Total articles	Evaluation Areas	JCR Impact Factor 2013
Journal of Construction Engineering And Management - ASCE	13	Engineering	0.867
International Journal of Project Management	9	Engineering	1.758
Project Management Journal	7	Engineering	0.630
Journal of Management in Engineering	3	Engineering	1.111
Industrial Marketing Management	2	Administration	1.897
Journal of Product Innovation Management	1	Administration	1.379
Journal of International Business Studies	1	Engineering	3.560
International Journal of Intercultural Relations	1	Administration	1.216
European Journal of International Management	1	Administration	0.600
Hydrocarbon Processing	1	Engineering	0.083
Habitat International	1	Engineering	1.577
IEEE Software	1	Interdisciplinary	1.230
Mathematics and Computers in Simulation	1	Engineering	0.856
IEEE Transactions On Engineering Management	1	Engineering	0.938
Technovation	1	Administration	2.704
Automation in Construction	1	Engineering	1.822
European Management Journal	1	Administration	0.817
Computers & Mathematics with Applications	1	Engineering	1.996
Journal of Global Information Management	1	Administration	0.920
Journal of Systems And Software	1	Interdisciplinary	1.245
Harvard Business Review	1	Administration	1.831
Journal of Universal Computer Science	1	Engineering	0.401
Journal of Professional Issues In Engineering Education And Practice	1	Engineering	0.716
Information and Software Technology	1	Interdisciplinary	1.328
Journal of the Operational Research Society	1	Administration	0.911
International Business Review	1	Administration	1.489
Management International Review	1	Administration	0.929
International Journal of Computer Integrated Manufacturing	1	Administration	1.019
Nature London	1	Interdisciplinary	42.351
International Journal of Human Resource Management	1	Administration	0.929
Research Technology Management	1	Engineering	0.745
International Journal of Industrial Engineering	1	Administration	0.110
International Journal of Information Management	1	Administration	2.042

Source: Data retrieved from ISI Web of Knowledge – adapted by authors

most cited papers were analyzed in order to better understand the theme in relation to global projects. Finally, the results of the co-citation analysis are presented and articles representing the different clusters were evaluated to properly identify the theme clusters.

4.1 General Data

The sample was distributed among 33 scientific journals, with impact factors (JCR) ranging from 0.083 to 42.351 and most papers (64%) within the range of 0,500 to 1,500. With regard to the area of evaluation, most of the studies included were from the Engineering field. The Journal of Construction Engineering and Management accounted for the highest number of papers, (13 in total), which addressed risks and uncertainties (six articles – 46%), the application of institutional theory to understand global projects (three articles – 23%) and project performance (two articles – 15%). This reveals two important aspects: first, a concern with a key element of projects (risk), confirming the assessment of the authors referenced (LIENTZ; REA, 2003; SHENHAR; DVIR, 2007) and; second, the use of *institutional theory* to evaluate global projects. The three papers that addressed the latter were published between 2007 and 2010 and can be considered representative of how the principles of management can be applied to better understand global projects.

Figure 2 shows the journal classification of the selected papers and their relevant areas of evaluation.

Another analysis performed was the type of papers. We analyzed all the articles in the sample based on the "abstract" and when the result was inconclusive, the paper was marked as "undefined". Thus, 37 papers were classified as case studies (60%), 18 as theory review (29%), one as a bibliometric study and one a grounded theory. – Five studies could not be classified. Of the 32 studies published in the last 5 years of the sample (2009 to 2013), 19 were case studies and 10 were theoretical in nature. The latter may be an indicator of greater concern among academics in developing or adjusting existing theories to global projects. Figure 3 shows the number of papers published from 1983 to 2013.

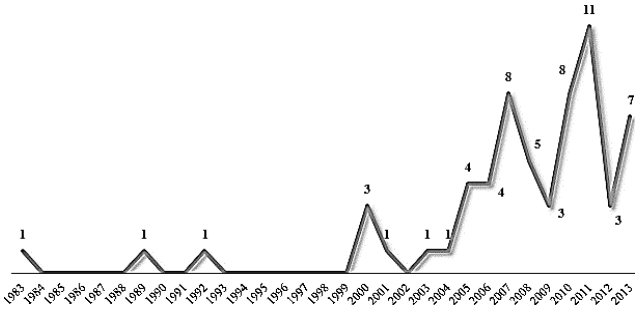
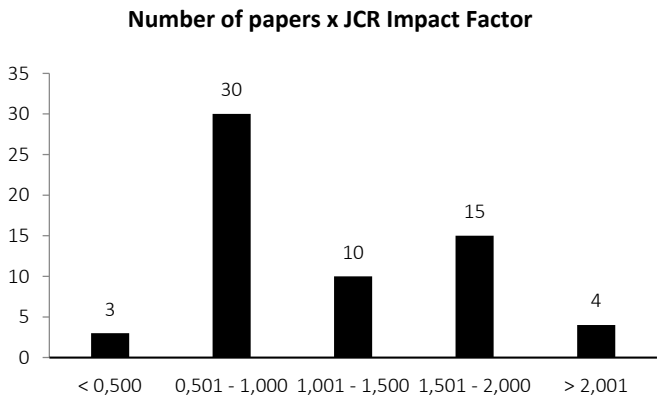


Figure 3: Evolution of papers published
Source: Prepared by authors

The graph indicates that interest in global projects started in 2005. The first published paper focused on how to form better teams for international projects. It is interesting to note that the study published in 1992 analyzed the management of complex projects and proposed project management training and support systems to support the handling of transnational projects. From 2000 to 2013, 59 papers were published, of which 18 were published between 2009 and 2013.



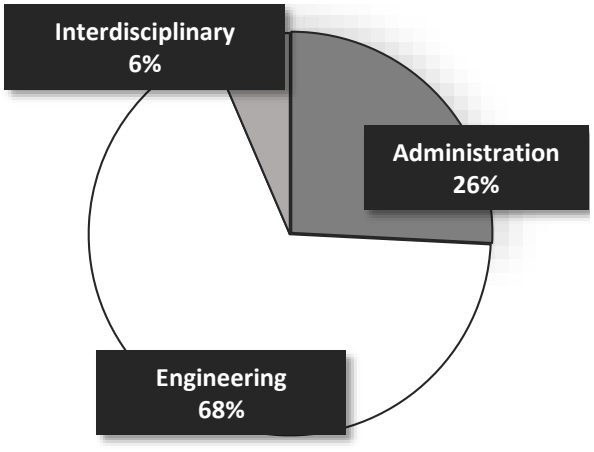


Figure 2: Journal classification: selected sample of 62 articles
Source: Adapted by authors

4.2 Citation analysis

The aim of citation analysis was to identify the studies referenced by authors. The underlying concept is that referencing frequency is an indicator of importance, whereby the higher the frequency the greater the importance of the subject to the theme researched. Citation analysis also allowed us to establish the influence of an individual on a particular field of study.

A total of 62 articles were identified as part of global projects, with 577 citations pinpointed and an average number of 9.31 citations per article. The total number of articles cited was 486. The "h-index" citation was 14, meaning that 14 articles had 14 citations or more. BibExcel (PERSSON, 2014) was used for citation analysis and to generate the document for co-citation analysis.

Table 2 summarizes the number of citations per article for the 20 most cited references, which accounted for 75% of all citations (431 citations). One of the oldest studies on the list was published in 2000 and is the third most frequently cited reference.

The first time period for publications on global projects (from 1983 to 1999) appears not to be

Tab. 2
Global Projects - most cited references

Title	Authors	Year of publication	Total Citations
Institutional exceptions on global projects: a process model	Orr, Ryan J.; Scott, W. Richard	2008	55
Approaches for making risk-based Go/No-Go decision for international projects	Han, SH; Diekmann, JE	2001	49
Global R&D project management and organization: A taxonomy	Chiesa, V	2000	33
Project delivery systems and project change: Quantitative analysis	Ibbs, CW; Kwak, YH; Ng, T; Odabasi, AM	2003	27
Institutional theory as a framework for analyzing conflicts on global projects	Mahalingam, Ashwin; Levitt, Raymond E.	2007	25
Key project management practices affecting Singaporean firms' project performance in China	Ling, Florence Yean Yng; Low, Sui Pheng; Wang, Shou Qing; Lim, Hwee Hua	2009	24
Relationship between total quality management (TQM) and continuous improvement of international project management (CIIPM)	Jung, JY; Wang, YH	2006	23
Enabling collaboration in distributed requirements management	Sinha, Vibha; Sengupta, Bikram; Chandra, Satish	2006	21
Contractor's risk attitudes in the selection of international construction projects	Han, SH; Diekmann, JE; Ock, JH	2005	21
Managing technology-based projects in multinational environments	Kruglianskas, I; Thamhain, HJ	2000	19
A web-based integrated system for international project risk management	Han, Seung H.; Kim, Du Y.; Kim, Hyungkwan; Jang, Won-Suk	2008	18
Predicting profit performance for selecting candidate international construction projects	Han, Seung H.; Kim, Du Y.; Kim, Hyoungkwan	2007	17
Outsourced IT projects from the vendor perspective: Different goals, different risks	Taylor, Hazel	2007	16
Mobilizing Institutional Knowledge for International Projects	Javernick-Will, Amy; Levitt, Raymond E.	2010	15
Exploring the performance of transnational projects: Shared knowledge, coordination and communication	Adenfelt, Maria	2010	13
Who Needs to Know What? Institutional Knowledge and Global Projects	Javernick-Will, Amy N.; Scott, W. Richard	2010	13
Re-examining the role of training in contributing to international project success: A literature review and an outline of a new model training program	Kealey, DJ; Protheroe, DR; MacDonald, D; Vulpe, T	2005	13
Causes of bad profit in overseas construction projects	Han, Seung H.; Park, Sang H.; Kim, Du Y.; Kim, Hyoungkwan; Kang, Yun W.	2007	12
Reconciling knowledge management and workflow management systems: The activity-based knowledge management approach	Dustdar, S	2005	9
Managing Global Projects: A Structured Approach for Better Performance	Anantatmula, Vittal; Thomas, Michael	2010	8

Source: Adapted by authors

relevant, since only one reference was made to these articles. In terms of the evolution of global project research, we suggest it is a new area of management, given that only three papers were published between 1983 and 1999. Four studies were published from 2000 to 2001 and are still considered relevant by scholars, with a total of 102 cited references, 61 of which were published from 2009 to 2013.

4.3 Most cited references - analysis

An analysis of the five most cited papers (representing 33% of the 577 total citations) is presented in this section. The aim is to provide a better and more comprehensive understanding of the concepts related to Global Projects.

The most cited paper (ORR; SCOTT, 2008) dealt with institutional theory and its main objective was to understand how cross-cultural friction arises in major cross-border projects. Institutional theory is linked to social structure. According to North (1991), institutions provide the incentive structure of an economy, becoming an "authoritative" guideline for social behavior, which is formed by schemes, rules and norms that shape social behavior. Institutions are the rules of the game in a society; they are the constraints that shape the way humans interact with each other. These institutions promote social behavior incentives and their changes are responsible for the way social structures (political, social or economic) evolve over time.

Based on 23 cases of large-scale global projects, the authors suggested that failing to understand cognitive-cultural, normative and/or regulative elements of institutions leads to unforeseen costs. The study focused on episodes involving entry to a market through a global project. Initially, the entrant organisation was surprised by institutional differences between itself and local project players and/or stakeholders. Following this initial surprise, the entrant made sense of these differences and then adapted to them. The author denominated these episodes *institutional exceptions*. Considering this concept, authors evaluated how these exceptions

Tab. 3
Institutional exceptions – Global Projects

PHASE	STEP-SEQUENCE	CHARACTERISTICS
01: Challenging a Host´s Institution	Institutional ignorance	Lack of knowledge of local institutions Reliance on non-local institutional knowledge
Outcome →	Deviant act	Commission: perpetration of an offense Omission: failing to take an action
	Outcomes of ignorance	Triggering of disapproval from "host" Costs of ignorance: relationship damage, reputation damage, resource costs and time loss.
02: Making sense of a Host´s institution	Sensemaking	Entrant operates under 2 extremes: open and closed minded Open mindedness: understand the institution difference Closed mindedness: denial of responsibilities, blame the host
Outcome →	Local knowledge search behavior	Decipher local institutions code
	Outcomes of sensemaking	Changes to state of knowledge of local institutions Incurrence of costs for local knowledge search Costs of sensemaking: time spent on mettings, communication, opportunity costs and delays
03: Responding to a host´s institution	Response (Define and select a response)	Decision making process after being convinced
Outcome →	Response action	Strategies: acquiesce, defy, compromise, avoid and manipulate
	Outcomes of response	Reduction in the original costs of ignorance Costs of response: absorbing initial costs of ignorance, committing time resources to educate a host and expending further resources to execute response actions

Source: Prepared by authors based on Orr and Scottt (2008)

arose, how they were resolved by the entrant organization and finally, the conditions that caused the increase in project costs. Table 3 shows the results of the study.

It is interesting to observe the connection made by institutional theory and global project authors in terms of the three facets of institutional elements (cultural-cognitive, regulative and normative). Even more significant is the lack of any relationship with institutional exceptions and the traditional set of knowledge defined by project management associations such as PMI (2013).

The fifth most cited paper (MAHALINGAM; LEVITT, 2007) also addressed cross-national interactions in global projects using institutional theory. The study focuses on conflicts in global projects using the institutional environment as the background theory to understand these conflicts. The authors demonstrated how this theory can describe the challenges faced by global projects and provided a model to classify types of conflict, the causes behind them and how to solve them. In addition, the authors identified gaps in the application of institutional theory to global projects and proposed a research trajectory to brodge these gaps. Based on an empirical study on projects executed in the construction industry, the authors identified three conflicts in these types of projects: problems in (i) project planning, (ii) design and (iii) the construction phase. The aim was to determine the institutional elements that govern global projects and predict areas of conflict and design interventions to mitigate these conflicts. However, the authors recognized the existence of gaps in the environmental theory that supports these answers (analysis of institutions in the construction area and "how" institutional viewpoints can be changed).

The second most cited paper (HAN; DIEKMANN, 2001) focused on construction projects, their associated risks and the "go/no go" decision to enter the international construction market. The paper proposed a comprehensive approach to the decision-making process for international projects, which is analyzed considering risks divided into five categories: political, economic, cultural/legal, technological and other general risks. The authors proposed a model for go/no go project decisions involving cross-impact analysis. This method is considered a powerful tool to deal with uncertainty and poor data.

The third most cited study (CHIESA, 2000) investigated the management and organization of global R&D projects with a focus on innovations to be exploited in different countries. Based on the study of 12 multinational enterprises, the authors identified four different structures for conducting these projects, namely center of excellence, supported specialization, network and specialized contributor. For each of these structures, the author analyzed the organizational success factors and appropriate context in which to operate the structure.

Finally, the fourth most cited paper (IBBS et al., 2003) also falls under the construction market segment. The authors investigated 67 global projects to understand project performance as it relates to the concept of project delivery. They compared a traditional project delivery method (first design, bid and then build) to an alternate one (design and build), where a master builder is responsible for design and construction. The authors concluded that the design and build approach did not provide the expected benefits to project performance.

4.4 Co-citation analysis

Based on the document generated by BibExcel®, Ucinet® version 6.528 (BORGATTI, EVERETT, FREEMAN; 2002) and VOSViewer® 1.5.7. (VAN; WALTMAN, 2014) were used for co-citation analyses.

Co-citations measure the degree of conceptual affinity between documents and can be used to trace the relationships between these articles and visualize the structure of these connections (DE BELLIS, 2009). To put it more simply, co-citation can be understood as the frequency with which two documents are cited together. Co-citation analysis is based on the co-occurrence of the same citation by two different authors. In co-citation, a social network is established in order to reveal convergence with a specific area of knowledge. As previously mentioned, the higher the frequency of co-citation, the greater the similarity between the co-cited authors (CHEN et al., 2002).

The network is a map composed of nodes connecting the authors and allows us to identify author proximity. Figure 4 shows the co-citation map of the 20 most cited references from the 62 articles in the sample, based on the Ucinet®. It can be concluded that there is no single predominant paper and that the most co-cited papers are distributed among five studies: (1) Eisenhardt (1989), Orr and

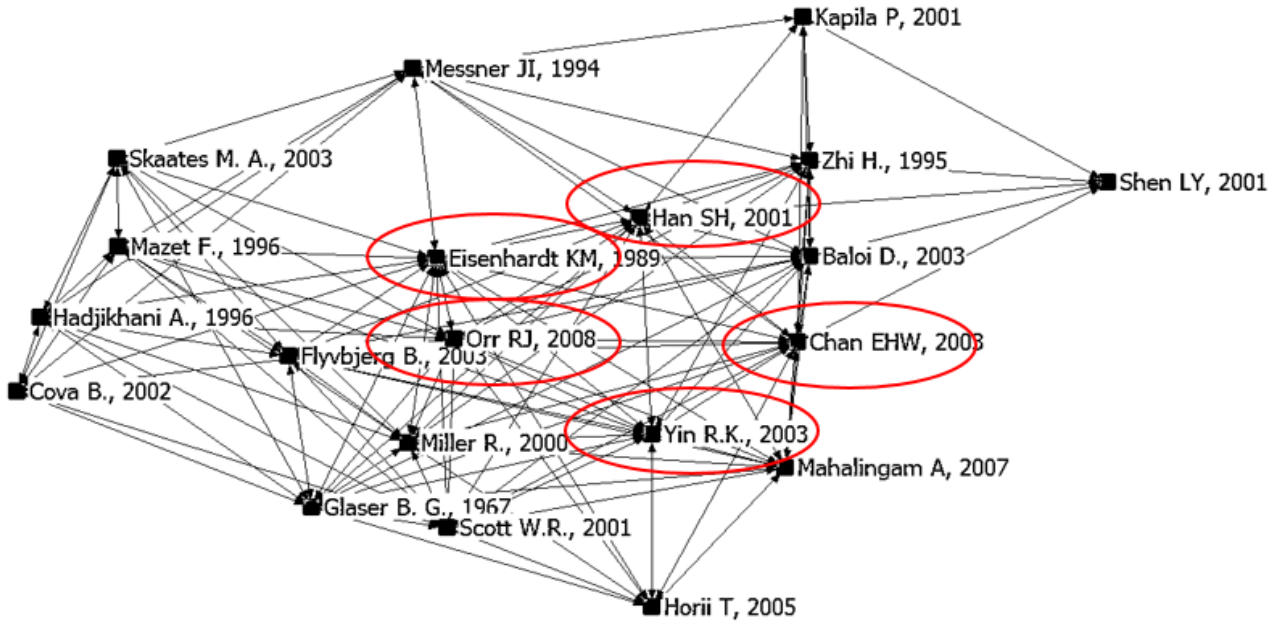


Figure 4: Co-citation network – top 20 more cited papers
Source: Prepared by authors based on UCINET Software

Scott (2008), (3) Han and Diekmann (2001), (4) Chan (2003) and (5) Yin (2003).

The papers by Eisenhardt (1989) and Yin (2003) encompass the methodologies used for case studies. These are seminal papers regarding the case study-based approach and how theory can be built from empirical observations. The significant presence of these authors in the global project sample may be due to the fact that most papers (60% of the 62 articles, total of 37 articles) are "case study-oriented".

Investigations by Orr and Scott (2008) (institutional theory applied to global projects) and Han and Diekmann (2001) (risks and go/no go decisions for construction projects) were discussed in the section on citation analysis. In addition to being the most cited articles, studies by these authors were also the most co-cited (32 co-citations for each of the papers).

Chan and Tse (2003) also reported on the construction segment, exploring the cultural aspects of global projects, such as politics, legal and economic issues and the cultural backgrounds of project participants. The article uses the findings of two surveys to establish groundwork for further research on the impact of cultural issues on contracts. The objective is to help organizations identify cultural impact on contractual arrangements, causes of conflicts and dispute resolution in global construction projects.

Based on statistical analysis, the authors concluded that cultural differences contribute to

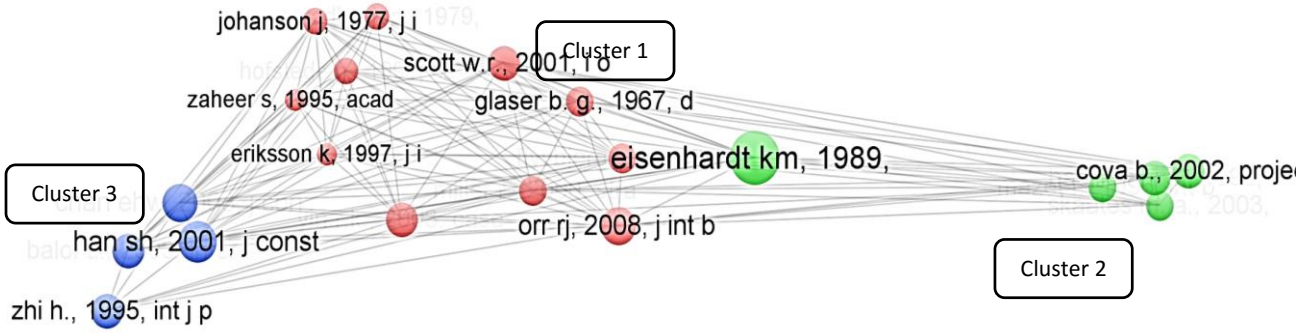


Figure 5: Co-citation clusters
Source: Prepared by authors based on VOS Viewer ®

disputes in international projects, the most significant of these being inappropriate contractual arrangements and cultural clashes. As such, cultural differences can be potentially damaging to an organization. Recognizing these differences and managing them accordingly could improve both the profitability and efficiency of international projects.

4.5 Cluster analysis

In order to identify additional areas of knowledge, VOSViewer® was used to visualize clusters within the network. This software clusters data and is used to view and explore maps of social networks. Figure 5 shows the result, using the same data set (20 most cited papers).

The largest cluster (Cluster 1) is in the center of Figure 5 (in red) and is associated with the internationallization of organizations and the difficulties faced by companies in this process. These challenges may stem from cultural differences or foreign liability, among others.

The cluster on the left of Figure 5 (Cluster 2, in blue), focuses clearly on risk management and cultural differences. Finally, cluster 3 (in green)

Tab. 4
Cluster analysis

Cluster	Authors	Aim of the paper	Area of knowledge
Cluster 1 Red	Eriksson, K., Johanson, J., Majkgard, A., & Sharma, D. D. (1997). Experiential knowledge and cost in the internationalization process. Journal of International Business Studies, 337-360.	Understand the effect of lack of knowledge in the areas of foreign business, foreign institutions and firm internationalization on the perceived cost of the internationalization process.	Behavioral approach
	Scott, W. R. (2001). Institutions and organizations. Thousand Oaks et al.: Sage.	Not identified.	Not applicable
	Zaheer, S. (1995). Overcoming the liability of foreignness. Academy of Management journal, 38(2), 341-363.	Identify whether organizations face a "liability of foreignness" and the extent to which importing capabilities or copying local practices have the potential to overcome this liability.	Institutional theory
	Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: strategies for qualitative research. Aldine Publishing Co.	Grounded theory construction.	Not applicable (for the purpose of this study on global projects).
	Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm-a model of knowledge development and increasing foreign market commitments. Journal of International Business Studies, 23-32.	Establish an internationalization model for the firm.	Internationalization of organizations
	Orr, R. J., & Scott, W. R. (2008). Institutional exceptions on global projects: a process model. Journal of International Business Studies, 39(4), 562-588.	Understand how cross-cultural friction arises in major cross-border projects.	Institutional theory
Cluster 2 Blue	Chan, E. H., & Tse, R. Y. (2003). Cultural considerations in international construction contracts. Journal of Construction Engineering and Management, 129(4), 375-381.	The article uses the findings of two surveys to establish groundwork to help organizations identify cultural impact on contractual arrangement, causes of conflicts and dispute resolution in global construction projects.	Cultural difficulties
	Han, S. H., & Diekmann, J. E. (2001). Approaches for making risk-based Go/No-Go decision for international projects. Journal of Construction Engineering and Management	Risks and go/non go decisions for construction projects – discuss the decision to enter the international market.	Risk management
	Zhi, H. (1995). Risk management for overseas construction projects. International Journal of Project Management, 13(4), 231-237.	Not identified	Risk management
Cluster 3 Green	Cova, B., Ghauri, P. N., & Salle, R. (2002). Project marketing: beyond competitive bidding: J. Wiley.	Not identified	Project marketing
	Skaates, M. A., & Tikkanen, H. (2003). International project marketing: an introduction to the INPM approach. International Journal of Project Management, 21(7), 503-510.	Review the contributions of the International Network to project marketing, emphasizing the connection between the business relationships of individual projects and the wider environment in which project marketing takes place.	Project marketing

Source: Prepared by authors based on VOS Viewer ®

addresses the concept of project marketing, focusing on the process used by organizations to develop strategies not only based on its capacities but also in the choice and management of customers, the acceptance and management of competitors (BANSARD, COVA, SALLE; 1993). Table 3 presents a summary of the analysis.

5. Discussion and Final Remarks

This bibliometric evaluation aimed primarily at assessing the state of the art in the global project literature. To achieve this objective, a review of project management concepts and their importance to the management of organizations was presented. Global projects were defined and the differences from domestic projects were discussed in order to understand how these projects are used by organizations to achieve sustainable competitive advantages. Based on this principle, we selected "global projects" and related words to search the ISI Web of Knowledge to define our sample.

A series of filters was used to identify the most relevant global project papers. Only papers (peer review process) linked to the management of global projects from interdisciplinary journals and those in the fields of administration and engineering were selected. As a result, 62 articles remained in our sample.

The number of published articles has increased recently, indicating a positive trend in terms of interest in global projects. From 2000 to 2013, 59 papers were published, of which 18 were published between 2009 and 2013. On the other hand, from 1983 to 2000 only three papers were published, revealing that global projects are a recent concern for scholars.

In the construction area, papers focused on risks and uncertainties, project performance and applying institutional theory to global projects. Most studies were based on empirical observations (60%), but papers focused on theory alone seem to also be relevant, representing 29% of the sample. When taken together, these data reveal interesting aspects: (i) the number of papers on global projects is rising and (ii) there is a tendency to cover theoretical aspects of global project management in current organizational theory, such as the application of institutional theory concepts.

The citation analysis identified 577 cited references, with an average of 9.31 references per article. More significant, however, is that the 20 most cited articles account for 75% of all citations. On analyzing the five most cited papers, there is a slight predominance of studies on institutional theory (two papers), risks and decision-making in global projects and innovations. Since the subject of global projects is relatively new, it could be emphatically stated that the field is in fact a predominant concern for authors. This was confirmed after the co-citation analysis.

The co-citation analysis was carried out using the 20 most cited articles and identified the five most co-cited authors. Of these articles, two applied a case study methodology. The other three focused on: (1) institutional theory (most cited study), (2) risk and decision-making in global projects and (3) the external aspects of global projects. These areas of knowledge were further explored in a cluster evaluation, where the first cluster confirmed the use of institutional theory in global projects, cluster two was associated with risk management and cluster three focused on project marketing.

Based on the group of data collected from the 62 papers, it can be concluded that there is growing interest in the management of global projects, with a focus on elements such as institutional theory, risk management and project marketing, although the impact of cultural difficulties on project management are also highlighted. On the other hand, it cannot be stated that there is a clear trend in terms of future areas for research, since the concentration of knowledge is not yet clear. Indeed, this should serve as an incentive to other scholars to expand studies on global projects since a series of questions call for additional investigation, including human relations in global projects, the complexities of project management and their impacts on organizational success, considering the peculiarities of global projects.

There are a number of limitations in this study. First, the limited number of articles included is considered insufficient for bibliometric studies and cannot be used as an indicator of trends for future research. As previously mentioned, the number of articles currently being published indicates constant growth, does not allow us to indicate clear hot topics and future trends. Second, we did not perform a content analysis of the articles. Finally, the exclusion

of conference papers, patents and books may have concealed some new and relevant studies.

We believe that future research could include at least two additional dimensions: evaluating and understanding how the specificities of global projects can be used to improve the added value of these projects (internal environment), with a focus onthe alignment of organizational strategies and projects, organization of project teams, cultural differences and impacts on global projects; analyzing the external environment and how it relates to global projects, including market uncertainty, dynamics of change and complexity as examples of external factors that influence global project execution.

We feel that our study contributes not only to the field of project management, but organizational management and the important aspects and impacts of global projects on successful strategy execution. Additionally, we hope it will encourage other scholars to conduct further more comprehensive studies on global project management.

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Projetos globais: Um estudo bibliométrico de jornais internacionais de administração

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RESUMO

A gestão de projetos é um processo fundamental na implementação de estratégias. Diferentes organizações se utilizam dos seus conceitos e ferramentas para a implementação destas estratégias, na obtenção e manutenção de vantagens competitivas. A importância da gestão de projetos na execução adequada das estratégias tem recebido a atenção de vários acadêmicos apresentando uma série de especificidades que tornam sua aplicação mais difícil de gerenciar, como aspectos culturais e deficiências internacionais. Considerando que o sucesso das estratégias e das organizações está relacionado ao sucesso dos projetos, compreender os projetos globais implica no entendimento de como as teorias de administração podem ser aplicadas à gestão de projetos para tornar as organizações mais bem-sucedidas. Este estudo bibliométrico tem como objetivo identificar as tendências atuais relacionadas à literatura de projetos globais e avaliar o estado da arte destas publicações. Nossa conclusão indica um foco em teoria institucional, processos de análise / decisão de riscos e marketing de projetos. Acreditamos que nosso estudo possa incentivas e dar suporte a outros acadêmicos a pesquisar os agrupamentos existentes e avaliar como as teorias organizacionais podem ser aplicadas à gestão de projetos globais.