

# Project management as a competitive advantage for the internationalization of Brazilian companies

André Luiz Spinelli Schelini<sup>1</sup>, Cristina Dai Prá Martens, and Marcos Roberto Piscopo

*Universidade Nove de Julho - UNINOVE, São Paulo, SP, Brazil*

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## ABSTRACT

This study focuses on three theoretical axes: project management (PM), internationalization of companies and the resource-based view (RBV). It aimed to analyze if, and in what way, PM maturity contributes to the international strategy of Brazilian companies from the RBV perspective. The research strategy adopted in three Brazilian companies constituted a multiple case study with a descriptive exploratory approach through intercase and intracase analysis. As an unprecedented result, the study identified five characteristics of mature project management: project sustainability, stakeholder engagement, goal setting and strategy, change management, and risk management. Furthermore, all of these contributed to the internationalization of the companies in question, with an impact on competitive advantage, considering the RBV-VRIO analysis. Thus, the study contributes to the field by aiding companies that are beginning or intend to begin internationalization processes, enabling them to obtain better results through PM. A limitation of the study is the small number of cases investigated, which may be viewed as an opportunity for conducting further studies.

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## 1. INTRODUCTION

Evolving from a national to an international company is an important step for companies wishing to internationalize. Nowadays, it has become more commonplace for companies to consider the internationalization strategy of their operations as a strategy for the survival of their business (Penrose, 2006; Floriani & Fleury, 2012). International customers, global sourcing, global supply chains and joint ventures overseas are reshaping the corporate environment of companies. These rapid changes require companies to become competitive at the global level (Cleland & Ireland, 2008). In a very competitive environment, it is necessary to identify and understand the factors that affect companies' international performance (Porter, 1996; Barney, 2001).

In this context, companies need to seek managerial alternatives, establish differentiated

organizational structures and develop new resources with responses to meet the demands of the national market and compete in the international market (Shenhar & Dvir, 2010). Project-oriented management is an increasingly accepted alternative for organizations to meet corporate challenges (Carvalho & Rabechini, 2011; Kerzner, 2011). Companies that have adopted project management (PM) maturity are better prepared in the race for the market (Kerzner, 2006). PM maturity models allow a learning process for PM practices adopted by organizations and improves PM competences (Carvalho & Rabechini, 2011; Kerzner, 2006).

The opening of new markets outside a company's country of origin can mean the adoption of different business models and strategies (Root, 1987; Anderson & Gatignon, 1986). In this sense, internationalization is a strategic decision for commercial expansion (Porter, 1996; Hitt, Ireland &

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<sup>1</sup> Author's contact: [schelini@gmail.com](mailto:schelini@gmail.com)

Hoskisson, 2011; Penrose, 2006), which companies adopt with planning. However, many companies that seek to internationalize find it difficult to implement management models that make a strategic contribution to this end (Hitt et al., 2011; Hollensen, 2011; Moreira & Silveira, 2013). PM is an alternative that can aid this process (Cleland & Ireland, 2008).

The present study sought to analyze the competitive implications of the PM maturity in Brazilian international companies as a premise for international expansion. It began with the assumption that project management maturity provides a competitive advantage, enabling a company to improve its internationalization strategy (Kerzner, 2006; Cleland & Ireland, 2008; PMI, 2008). For this analysis, the Resource-Based View (RBV) was used (Wernerfelt, 1984; Barney, 1991; Peteraf, 1993; Penrose, 2006), as it provides input for analyzing the strategic international behavior of a company, concentrating on the set of unique competences and resources that belong to or have been acquired externally by it (Barney, 1991; Penrose, 2006). The characteristics of its resources influence the company's capacity to achieve or not achieve a given competitive advantage (Barney, 1991; Grant, 1991).

The three theoretical axes of this work (PM, internationalization and the RBV) have characteristics similar to their conceptual definitions. The internationalization process can be considered a project, as it is subject to fixed goals in terms of time, cost and resources, occurring only once and, therefore, unique. Internationalization, in its totality, is a highly complex goal that needs to be subdivided into smaller units to be manageable as a whole, with subprojects and even stages. From the RBV-VRIO perspective, PM maturity requires excellence in the practice of PM, leading the company to acquire competences that become a key resource and aid success, being a rare resource of value to the business, difficult to imitate and which the company appropriates with time and learning.

Thus, the following research question was asked: Can PM maturity aid the internationalization strategy of Brazilian companies? The aim of this article was to analyze if and how PM maturity contributes to the international strategy of Brazilian companies from the RBV perspective. The multiple case method was used, with three cases of companies using project management maturity strategically to achieve internationalization.

The main results of the study show that PM maturity is a competitive advantage for a company and a resource that contributes to the internationalization strategy of Brazilian companies from the perspective of the RBV. Thus, the results of this study make academic and practical contributions to the use of project management maturity methods for the internationalization of Brazilian companies from the viewpoint of the RBV. Some limitations of the study should be considered, such as the limited exploration of different aspects of PM in companies and the low number of respondents in each case.

The article now turns to the central themes of the study (Section 2), addresses the research method (Section 3), presents and analyzes the results in light of the literature (Section 4) and concludes with the final considerations (Section 5).

## 2. LITERATURE REVIEW

### 2.1 Project Management and Maturity

A project may be defined as a temporary effort following a specific life cycle to create a unique product, service or result by mobilizing human, material and financial resources (Muriithi & Crawford, 2003; Stanleigh, 2007; PMI, 2008). PM is the result of a set of efforts organized in a structured and determined way, using practices and skills within an organization (Levine, 2002). It involves the use of methodologies, knowledge areas, interdependent activities and multiple resources driven by the triple constraint (Webster & Knutson, 2006) to meet the requirements of budget, schedule and scope and excellence in PM (Kerzner, 2011).

Projects can be considered important instruments of change and development in organizations (Bouer & Carvalho, 2005). Thus, PM creates a competitive advantage (Shenhar, 2004) and becomes an essential skill for success (Shenhar & Dvir, 2010). Companies seek the best practices in PM that aid the planning, execution and control of their resources (Kerzner, 2011). Ongoing improvement should be sought tirelessly, therefore, to understand the effectiveness of the project management of an organization as a determiner of its project management maturity (PMM). PMM is associated with the standard methodology of monitoring processes, contributing to the success of a project (Rabechini, 2005; Kerzner, 2006, 2009).

**Tab. 1**

Comparative analysis of Maturity Models based on the CMM.

Level	CMM	Project Management Maturity Models				
		OPM3	PMMM	KPMMM	MMGP	P3M3
1	Initial	Standardized	Initial Processes	Common Language	Initial	Initial Process
2	Repeatable	Measurement	Structured and Standardized Processes	Common Processes	Known	Repeatable Process
3	Defined	Control	Organizational Standardization and Institutional Processes	Singular Methodology	Standardized	Defined Process
4	Managed	Continuous Improvement	Managed Process	Benchmarking	Managed	Managed Process
5	Optimized	-	Optimized Process	Continuous Improvement	Optimized	Optimized Process

**Source:** Costa & Moura (2009, p. 42)

The literature contains diverse maturity models (Carvalho & Rabechini, 2011) capable of numerically quantifying maturity. Dinsmore (1999) explains that maturity reflects how much an organization has advanced in relation to the incorporation of PM practices, contributing to the effectiveness of their conclusion. Thus, PMM is linked to how capable an organization is in managing its projects (Prado, 2004). Every company, through its experience and learning, uses PM techniques capable of reflecting the maturity of their processes (Dinsmore & Cabanis-Brewin, 2006).

A comparative analysis of maturity models based on the CMM precursor model (Costa & Moura, 2009) is shown in Table 1.

Lopes (2009) points out 20 characteristics of PM that influence the maturity and success of a project: (1) deadline and schedule performance; (2) scope performance; (3) cost performance; (4) time planning; (5) scope planning; (6) cost planning; (7) definition of requirements; (8) meeting technical requirements; (9) definition of goals and strategies; (10) change management; (11) risk management; (12) communication management; (13) closure management; (14) leadership and relationship; (15) delegation of responsibilities; (16) professional ethics of project managers; (17) decision making; (18) stakeholder engagement; (19) control and monitoring; and (20) project sustainability.

Some authors claim that the success of a business depends on projects (Shenhar & Dvir, 2010), and companies that adopt PMM are better prepared for success (Kerzner, 2006). PMM models enable a learning process of the PM practices adopted by the organization and, consequently, the improvement of PM competences (Carvalho & Rabechini, 2011;

Kerzner, 2006). PM is evaluated by many companies as an important tool for dealing with growth and ensuring their survival as it is useful for improving resource allocation (Sbragia, Rodrigues, Piscopo & Moreira, 2009). In this sense, it is also useful for internationalization processes.

## 2.2 Internationalization of companies

Starting with the analysis of PM for the internationalization of companies, a basic assumption that will guide this analysis is the existence of imperfections in the market (Moreira, 2009), corroborating the study of projects, as these imperfections make the market a complex and dynamic environment for companies to operate (Porter, 1993; Hitt et al., 2011). The most competitive companies enjoy better performance and better positions in the market (Porter, 1996; Kotler, 1998).

Internationalization is the degree to which a company earns its revenues from sales and operations outside its country of origin (Elango & Pattnaik, 2007). It can also be characterized as a growing and continuous process of a company's involvement in operations with other countries (Goulart, et. al. 1994) and its involvement in and commitment to international operations over time (Kraus, 2006). Internationalization has been one of the strategies used by companies as a form of growth, whether to access new markets, maintain industrial productivity to combat internal seasonality, acquiring new products, input and technologies or to explore new business opportunities (Dunning, 2001; Floriani, 2010).

There are several models and theories regarding the internationalization of companies, with different viewpoints and arguments (Vianna, Piscopo &

Ryngelblum, 2013). Despite these different approaches, there is a certain level of consensus, according to the authors, that entry to international markets means significant changes for companies. The decision to internationalize is considered a strategic one, as it involves answering questions such as what, why, where, how, when and how much (Vianna et al., 2013; Madeira & Silveira, 2013).

In the stage approach, companies begin to sell products on their domestic markets and gradually seek new countries. Two main models can be identified in the stage approach: the Product Life Cycle Theory of Raymond Vernon (1966) and the Uppsala Internationalization Model (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977, 1990).

The internationalization process can be divided into two theoretical currents: economic approach theory and behavioral approach theory (Almor, Hashai & Hirsch, 2006; Floriani, 2010; Vianna et al., 2013; Madeira & Silveira, 2013). The basis of economic approach theories lies in the main currents of economics and centers on the relationship between a company and its environment (Andersson, 2000; Madeira & Silveira, 2013). Its main aspect is that companies are almost rational in their choice of investments and the decision maker has access to information (Andersson, 2000). Behavioral approach theories have to do with the individual learning of managers as important aspects when it comes to understanding international behavior (Andersson, 2000). They focus on the impact of international experience on the pace and direction of the internationalization process.

Various external or internal issues can influence the success of the internationalization process. The internal issues are related to the organization itself, while the external ones have to do with the market and business environment (Douglas & Craig, 1995). Another issue related to the decision to internationalize is the choice of the appropriate mode of entry. This is a critical determining factor for the involvement and likelihood of success of the organization, which varies according to the commitment and complexity of the operation, and can be done through exporting, brand licensing, strategic alliances, acquisitions and the implementation of a new subsidiary (Root, 1987; Hitt et al., 2011).

Thus, the internationalization process is influenced by aspects related to the internal environment (such as structure, resources and competences) and the internal environment (regulation, culture, barriers, etc.), just like projects. Thus, the internationalization of companies includes (Moreira, 2009): static confrontations (types of operations, commitment and knowledge of the company regarding a determined target market); and dynamic (the evolution of the company's international activities, the risks associated with certain markets and lack of experience in these markets). The influences of the markets in which companies are embedded and compete also contribute to promoting or not promoting a competitive advantage (Porter, 1993), as well as the strategic resources developed by the company. Furthermore, the internationalization of companies may occur as the result of competitive advantages in the domestic market (Goulart et al. 1994).

The competitive implication of the use of mature practices of PM as a premise for international expansion is analyzed in this study from the perspective of the RBV, which will be addressed below.

### 2.3 Resource Based View (RBV)

The RBV provides input for analyzing the strategic international behavior of firms, concentrating on the set of resources and unique competences that belong to or have been acquired by them (Penrose, 2006; Barney, 1991). Intentionally and rationally combining the firm's available resources is a strategic action, achieving goals to attain organizational objectives in a given market, thereby gaining a competitive advantage (Hatch, 1997).

A major goal of a firm is to survive under sustainable conditions with perspectives for growth, with the creation of resources and capabilities being essential to gain a sustainable competitive advantage (Wernerfelt 1984; Barney, 1991; Peteraf 1993). Furthermore, no company can survive in the market without resources (Grant, 1991), which are the basic unit that provides firms with an entry process for their business (Hollensen, 2011). The RBV is a theoretical structure in the field of strategic management used to understand a firm's competitive advantage and its sustainability over time (Barney, 1991; Barney et al. 2007).

**Tab. 2**  
VRIO Model

Is a resource or skill...						
Valuable?	Rare?	Difficult to imitate?	Exploited by the company?	Competitive Implication	Economic Implication	
No	-	-	No	Competitive Disadvantage	Below Normal	
Yes	No	-		Competitive Parity	Normal	
Yes	Yes	No		Temporary Competitive Advantage	Above Normal	
Yes	Yes	Yes	Yes	Sustainable Competitive Advantage	Above Normal	

Source: Costa & Moura (2009, p. 42)

According to the RBV, a firm's strategic resources and the resources available in the sector are the source of sustainable competitive advantages. Thus, a firm's resources are more important than those of the sector. Consequently, the relationships between resources and the company's position in the sector are very close. Company size is related to the influence of market forces in determining the destination and different uses of its resources. In other words, the bigger the company, the less the influence of the market will be (Penrose, 2006).

Initially, a firm's sustainable competitive advantage was based on an analysis of four characteristics that strengthened the potential its resources: valuable resources, rare resources, imperfectly imitable resources, and substitutability (Barney, 1991). These characteristics were later slightly altered, with the first three maintained and the fourth altered (Barney & Clark, 2007). With this change, the resources and capabilities took on four distinct characteristics: value, rarity, imitability and organization (VRIO) (Barney, 2001; Barney & Clark, 2007).

The characteristics presented in the VRIO model enable an analysis based on resources with questions regarding a firm's business activities (Barney & Clark, 2007): (1) Value (do the resources and capabilities enable the firm to respond to threats or opportunities?) (2) Rarity (is the resource controlled by a small number of competitors?) (3) Imitability (are firms without the resource at a disadvantage in terms of the cost of obtaining or developing it?) (4) Organization (does the firm have organized policies and procedures to support the exploitation of its valuable, rare and difficult to imitate resources?) These questions make it possible to understand the potential of return associated with the use of any of a firm's resources or capabilities (Barney & Clark, 2007), as shown in Table 2.

The RBV can help to understand how resources are used in internationalization and how they can confer a competitive advantage in the international market.

#### 2.4 Relationship between Project Management, Internationalization, and RBV

Studies have shown that some organizational characteristics influence the international expansion of companies in certain dimensions, affecting a company's degree of internationalization (Hitt, Hoskissom & Kim, 1997; Barretto & Rocha, 2003). These organizational characteristics are the company's resources, which give the company an advantage, aiding the entry process in specific markets (Madhok, 1997; Hollensen, 2011).

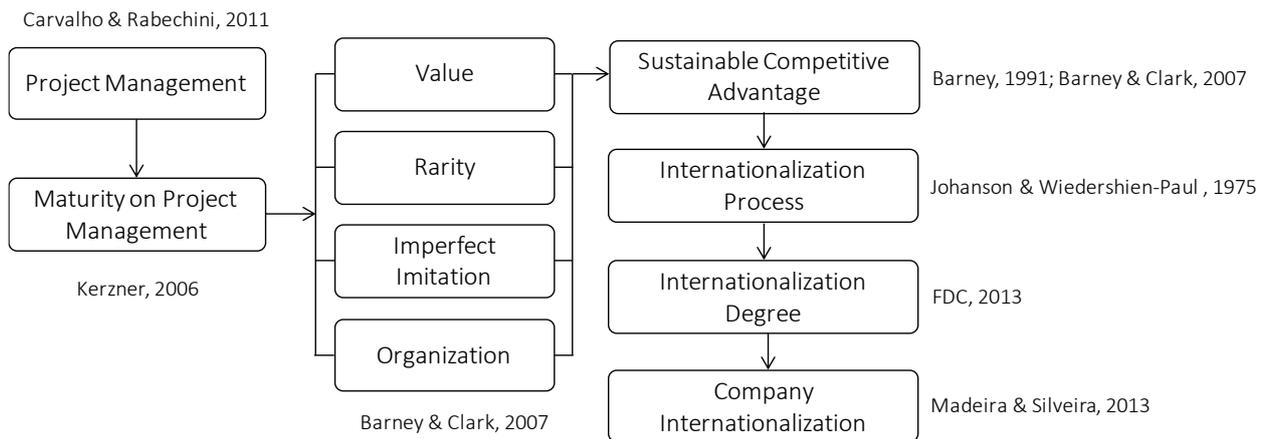
To conduct this study, PM was analyzed as an internal strategic resource of the firm, using the VRIO model, which can confer a sustainable competitive advantage on the internationalization of the firm based on the RBV. In turn, the internationalization of the firm was analyzed based on the internationalization process (Why? How? When? Where? What?).

The theoretical model of the study is shown in Figure 1. The perspective of the model is to investigate this relationship from the viewpoint of project management being a strategic resource that gives a competitive advantage to firms that use it from the outlook of the VRIO variables of the RBV. Thus, it is suggested that the maturity level of the firm in the execution of its projects contributes to the performance of its internationalization.

The research method will be presented below.

### 3. RESEARCH METHOD

The methodological strategy employed was the multiple case study (Eisenhardt, 1989). This is a



**Fig. 1**

Theoretical Model of the study

**Source:** Prepared by the authors

descriptive and exploratory study of a qualitative nature, as the evidence regarding the behavior of the selected companies is reported, investigating the contribution of PMM to the internationalization of the companies from the viewpoint of the RBV, without interference from the researcher.

Three companies served as the focus of the study: the first was from the agribusiness wholesale sector; the second was from the capital goods sector, in the machinery and equipment segment; and the third was from the food segment of the consumer goods sector. The analysis units were defined intentionally and by convenience, based on the following criteria: a) they had to be Brazilian in origin, even if controlled by international groups; b) they had to be large and considered a leader in their sector; c) they had to be companies from different segments; d) they had to be operating regularly in international business for at

least three years; and e) they had to use PM. The international operations of the companies were the focus of analysis, considering group data. To preserve their confidentiality, the companies are referred to here as Alpha, Beta and Zeta.

The data analysis involved intracase and intercase analysis (Eisenhardt, 1989). It began with the general narrative of the collected data, triangulation with diverse sources of information (reports, balance sheets, publications, websites and other documents), with the data then being synthesized. The year 2013 was used as a reference for analyzing the context due to the companies making available consolidated data, revenues, expenditure and their management reports for that year.

In the context of PM, the KPMMM model was chosen for evaluation (Kerzner, 2006), Maturity Level 2 (Common Processes, which proved adequate as

**Tab. 3**

Data collection.

Study	Model	Procedure
PM Maturity	KPMMM	It was decided that a tested questionnaire would be use to evaluate Level 2 (Common Processes) of PMM (Bouer & Carvalho, 2005), in keeping with the KPMMM (Kerzner, 2006). The questionnaire was complete by 15 people (4 at Alpha, 6 at Beta and 5 at Zeta).
Internationalization Process	Uppsala	A semi-structured questionnaire based on the Uppsala Incremental Model was used (Johanson & Vahlne, 1977, 1990), aligned with the strategic motivations for the internationalization of the company (Lientz & Rea, 2003; Hitt <i>et al.</i> , 2011). The questionnaire was completed by 3 people, 1 per company.
Degree of Internationalization of the Firm	UNCTAD	The Transnationality Index developed by the UNCTAD and used in Brazil by the FDC was used. The calculation takes into account the assets, revenue and number of employees of companies (FDC, 2013, p. 11).
Competitive Implication	RBV-VRIO	A structured questionnaire was used, listing the characteristics of PMM (Lopes, 2009), evaluating the competitive implication of the characteristics in light of the RBV-VRIO dimensions (value, rarity, imitability and organization) for internationalization (Barney & Clark, 2007). The questionnaire was completed by 3 people, 1 at each company.

**Source:** Prepared by the authors.

Tab. 4

Correlation Matrix: Project Management x RBV (VRIO) x Internationalization of the Company

PM Criterion (Resources and Capabilities)	RBV-VRIO Characteristics	Competitive Implication	Contribution to Internationalization
Deadline and Schedule Performance	Is it valuable?	Competitive Disadvantage	Does it contribute to the internationalization process?
Scope Performance			
Cost Performance			
Time Planning			
Scope Planning			
Cost Planning	Is it rare?	Competitive Parity	
Definition of Requirements			
Meeting Technical Requirements			
Definition of Objectives and Strategies			
Change Management			
Risk Management	Is it imitable?	Temporary Advantage	
Communication Management			
Closure Management			
Leadership and Relationship			
Delegating Responsibilities			
Professional Ethics of Project Managers	Is it exploited by the organization?	Sustainable Advantage	Does it not contribute to the internationalization process?
Decision Making			
Stakeholder Engagement			
Control and Monitoring			
Project Sustainability			

Source: Prepared by the authors based on Barney & Clark, 2007.

most companies have yet to reach Levels 3, 4 and 5, traditionally achieved by companies whose activities require greater attention and dedication, such as aerospace, oil, petrochemicals, construction, armaments and telecommunications (Bouer & Carvalho, 2005)). This maturity assessment considers PM aspects related to the use of management techniques involving scope, cost and deadline, and the existence of a project manager.

In the context of internationalization, behavior over time was considered, conducting interviews with a semi-structured questionnaire based on the Uppsala incremental model (Johanson & Vahlne, 1977, 1990), also aligning the company's strategic motivations for internationalization (Andersen, 1993; Lientz & Rea, 2003; Hitt et al., 2011). Managerial reports and balance sheets were used as complementary sources. To evaluate PM as strategic resources, the correlation matrix was used, based on the analysis of the successful characteristics of projects (Lopes, 2009) in RBV dimensions to achieve a sustainable competitive advantage (Barney & Clark, 2007). This matrix included four key issues in the RBV-VRIO (Barney & Clark, 2007): (1) The question of Value (is the company able to respond to opportunities or threats with its resources/capabilities?); (2) The question of Rarity (Do a few competing companies control the resource?); (3) The question of Imitability (Will companies without the resources be at a

disadvantage in terms of cost to obtain or develop them?); and (4) The question of Organization (Does the company have organized policies and procedures to support the exploitation of its valuable, rare and difficult to imitate resources?).

The data collection instruments were tested during the validation stage. It was then applied electronically, having obtained responses from 5 people at Company Alpha, 7 at Beta and 6 at Zeta (all related to PM). Interviews were also conducted with executives from the international area of each case (one per company). The proposed model enabled an analysis of these PM characteristics as resources and capabilities, as shown in Table 4.

The study also considered the transnationality of the companies to complement the analysis from the internationalization viewpoint. This analysis considers the calculation of the UNCTAD transnationality index, as used by the FDC in Brazil, taking into account the assets, revenue and number of company employees (Figure 2).

$$\frac{\text{Assets Overseas}}{\text{Total Assets}} + \frac{\text{Revenue Overseas}}{\text{Total Revenue}} + \frac{\text{Employees Overseas}}{\text{Total Employees}}$$

3

Fig. 2

Formula for calculating the transnationality index overseas.

Source: FDC (2013, p. 11).

The time required for all the protocols was approximately 2 hours per company, considering the

online stage (multiple respondents) and the face-to-face stage (interview with single respondent), with another twenty minutes for notetaking and observations. Several sources were used to triangulate the data: (i) At Company alpha, a managerial report, report on the founding of the company, sustainability report, expansion project report, financial report with business volume, magazines, press releases and website; (ii) At Beta, an integrated managerial report, a book on the company's 50 years, balance sheet, report with data on the registration of the companies in the group, magazines, press releases and websites; and (iii) At Zeta, managerial reports, GRI report, financial report, magazines, press releases and websites. The intention was to access a number of project managers at each company and at least one respondent from the top management to complete the questionnaire and conduct interviews.

#### 4. ANALYSIS OF THE RESULTS

The companies in this study (Table 5) operate in highly competitive sectors, where negotiations are decided with small price variations. Even with the international macroeconomic environment in crisis from 2008 to 2009, the three companies remained focused on the international market, with deliberate and planned strategic decisions for internationalization. Elements of the three cases show PM practices, although only Beta has a more projected organizational structure, with a structured project office.

From the results, a comparative analysis of the companies was conducted based on three variables to compare them equally, considering they operate in different sectors with different sizes and distinct international presence. The three variables were: (1) maturity analysis, using each company's score in the

maturity phase of the KPMMM; (2) internationalization analysis, using the transnationality index obtained using the formula calculating the assets, revenue and company employees; and (3) competitive implication analysis, with contribution to internationalization using the coefficient of the number of times the companies showed the same mature characteristics of PM with a sustainable competitive advantage, contributing to their internationalization.

From the viewpoint of the Project Management Maturity analysis, the companies have different scores, although the embryonic phase is the only one in which they had practically the same scores. A high score in this phase means that the companies supposedly understand and profile the benefits of PM, especially in the operational and supervision structures (Bouer & Carvalho, 2005). Figure 3 contains the average score of the three technical areas investigated in the companies to evaluate PM maturity.

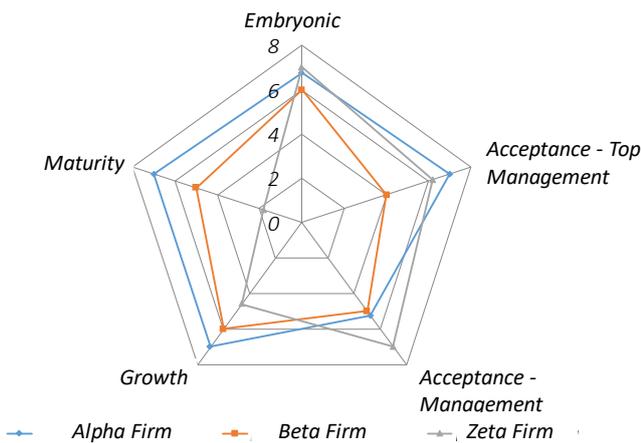
An analysis of the results shows Company Alpha performing well in the evaluation of its PMM level, obtaining a score of 7 (out of 12) in the Embryonic, Executive Management Acceptance, Growth and Maturity phases, with only 5 in the Management Acceptance phase. This appears to be a natural reflex of its business model, considering that the company is dependent on processes and controlled schedules throughout its productive activity. This performance suggests that its maturity is higher than Level 2, and may be between Level 3 (Singular Methodology) and Level 4 (Benchmarking), as shown by its high score in the Growth and Maturity phases, both with a score of 7. The Growth phase is crucial for the company, as it marks the beginning of a developing PM process, the main focus in this case being to standardize the methods of project planning, execution and control (Kerzner, 2009).

**Tab. 5**

Principal data of the selected companies.

Characteristics	Company Alpha	Company Beta	Company Zeta
Legal Status	Ltd.	Corporation	Corporation
Market Sector	Retail	Capital Goods	Consumer Goods
Business Segment	Agribusiness	Machinery and Equipment	Food
Company Size	Large	Large	Large
Employees	3,949	29,099	1,958
Value of Exports in 2013	Over US\$ 100 million	Over US\$ 100 million	Up to US\$ 50 million
Internationally active	Since 2000	Since 1970	Since 2000
No. of countries	4 countries	28 countries	3 countries
Project Office	No	Yes	No
Home State	Mato Grosso	Santa Catarina	Santa Catarina

Source: Prepared by the authors.



**Fig. 3**  
Comparative Analysis of the PM Maturity evaluation of the companies  
**Source:** Prepared by the authors.

Company Beta has an adequate and balanced performance in its PMM scores. The company scored 6 in the Embryonic phase, 4 in the Executive Management Acceptance phase, 5 in the Line Management Acceptance phase, 6 in the Growth phase and 5 in the Maturity phase. Even with considerable variations in the results, Company Beta managed to stay close to an average of 6 in its general score. Its structure is organized to handle management by projects and by operations. In management by operations, processes, routines and products that will be produced to fill lots and orders for delivery are clearly defined, basically by serial production of machinery, equipment, parts and other products especially manufactured for large companies at a lower cost than on the domestic market. In management by projects, the business structure channels research and development to find new solutions and technological applications, stimulating innovation. In this model, the focus is on special projects, with specific contracts such as bidding, public contests, production chains with customized solutions and applications designed according to customer needs. In these cases, the added value to services is higher, enabling higher levels of profitability. This organizational configuration contributes to the balanced performance in the evaluation of Beta's maturity, showing that the company is at Maturity Level 3 in PM: Singular Methodology.

Company Zeta had a high score in the Embryonic (7), Executive Management Acceptance (6) and Line Management (7) phases, but low scores in the Growth (5) and Maturity (2) phases. This suggests

that Zeta perceives and recognizes the benefits of PM, mainly at the operational and supervision levels of the company. Furthermore, the high score in phases 2 and 3 means that the concepts and practices of PM are broadly accepted, with the visible support and efforts of the company leaderships in sponsoring and conducting projects. As there was a tendency to have low scores from the Growth phase, confirmed by the score in the Maturity phase, this means that the company is still seeking to standardize a methodology for the planning, execution and control of its projects. Maturity was not achieved, and a number of factors may account for this. These may include the company's resistance to adopting rigid controls for deadlines and costs, with regular and systematized reports, the development of a grade of competence and skills in PM and the professionalization of PM as a career (Bouer & Carvalho, 2005). These results suggest that Company Zeta is still at Level 2 (Common Processes) in PM maturity.

To measure international presence the transnationality index was used. The results of these calculations were: (a) Alpha with an index of 0.153; (b) Beta with 0.382; and (c) Zeta with 0.130. Comparatively, the difference in the indices does not mean that one company is farther behind than another in its internationalization strategy, meaning, for instance, that a company has a greater internal market share than the other. The index shows the proportion of operations overseas in relation to the total volume of operations (FDC, 2013).

The analysis of the RBV-VRIO competitive implication in the companies was based on the calculation of the coefficient achieved from the number of times each company showed PMM characteristics with a high level of contribution to internationalization with the implication of a sustainable competitive advantage. The results were: (i) Alpha showed 11 characteristics, representing 55% of 20 characteristics; (ii) Beta showed 17 characteristics, representing 85% of the 20 characteristics; and (iii) Zeta showed 10 characteristics, representing 50% of the 20 characteristics. The results show that Beta has a greater sustainable competitive advantage with PM as a strategic resource for international expansion.

Table 6 shows the evaluation matrix of the companies in question by comparing the three variables: PM maturity, transnationality and RBV-VRIO.

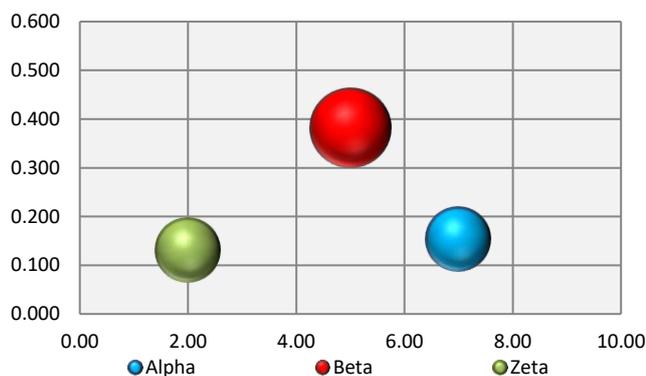
**Tab. 6**  
Evaluation Matrix: Maturity x Transnationality x RBV-VRIO

COMPANY	MATURITY	TRANSNATIONALITY	RBV-VRIO
Alpha	7.00	0.153	55%
Beta	5.00	0.382	85%
Zeta	2.00	0.130	50%

**Source:** Prepared by the authors.

Although Company Alpha has greater PM maturity than the other companies, it did not succeed in converting PMM into a sustainable competitive advantage, obtaining only 55% of the RBV-VRIO characteristics and its transnationality index between that of Beta and Zeta. This also occurs with Company Zeta, although hits case is more evident, as it did not achieve a good score in the maturity phase and has only half of the PM characteristics with an implication of sustainable advantage, with a lower transnationality index. Company Beta has the best result, with a good score in maturity, a high transnationality index and 85% of the PMM characteristics applied for internationalization with implication of a sustainable competitive advantage.

Figure 4 shows a spatial perspective of the position of the companies regarding the three variables. The X Axis represents the maturity level, the Y Axis the transnationality index, and the size of the spheres the percentage of the RBV-VRIO characteristics.



**Fig. 4**  
Evaluation Matrix: Maturity x Transnationality x RBV (VRIO)

**Source:** Prepared by the authors.

The analysis of this matrix suggests that with regard to the three cases in question, the simple use of the characteristics of project management maturity does not imply major internationalization, as Level 2 (Common processes) only considers the scope, cost and deadline variables, which are fundamental conditions for the beginning of PMM. Nevertheless, some PM characteristics with a greater contribution to internationalization with implications of

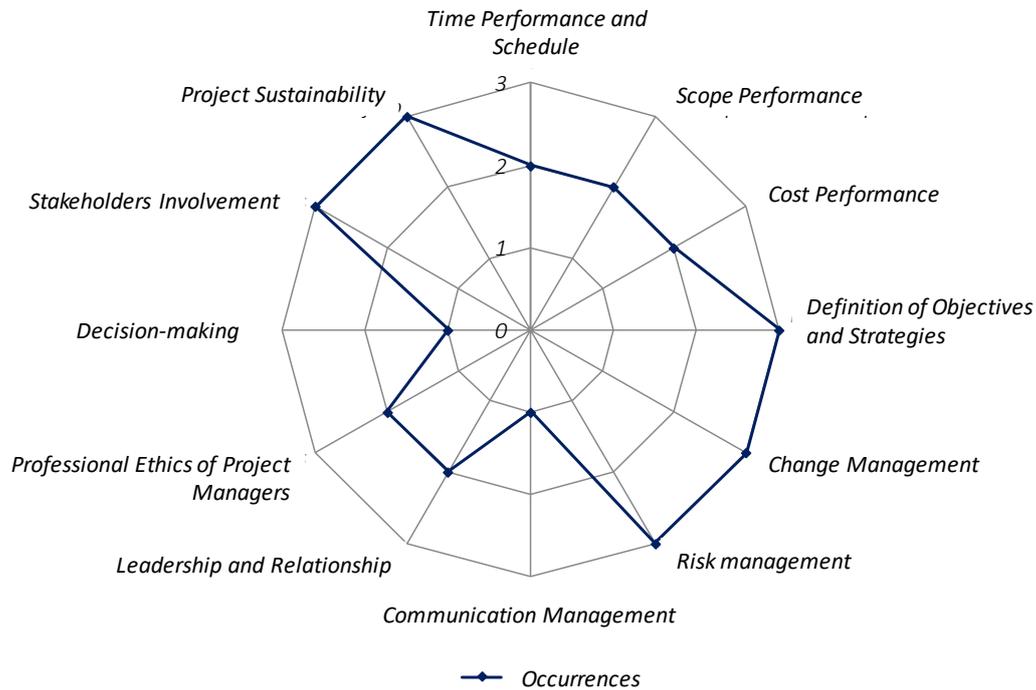
sustainable competitive advantage were identified. Other aspects need to be assessed, such as the economic scenario, availability of financial resources in the companies, and market opportunities. However, considering the results obtained by the research and analyzing Figure 4 (PM characteristics with greater contribution to internationalization with implications of sustainable competitive advantage) it may be concluded that Company Beta uses the characteristics of PMM with greater propriety to achieve its sustainable competitive advantage, resulting in a better position in terms of transnationality.

Of these 12 characteristics, only 5 were common to the three cases in question. From this, the 5 project management maturity characteristics with the greatest contribution to internationalization that confers a sustainable competitive advantage to the three cases in question were charted.

**5. CONCLUSIONS**

The results of the study suggest that five project management maturity characteristics (resources) contributed to the internationalization of the companies in the study, providing them with a sustainable competitive advantage in the market. This corroborates the literature review in the sense that a company develops a competitive advantage through its strategic resources. The principal organizational changes and the initiatives to create competitive advantages have mostly been executed through organizational projects (Bouer & Carvalho, 2005). The use of the RBV-VRIO analysis proved to be a powerful tool for identifying and evaluating the resources and internal capabilities of the companies, so that once these resources were identified, they could be developed to the point of competence and contribute to achieving a sustainable competitive advantage.

The five characteristics of PM maturity shared by the companies under study are aligned with internationalization theory and the process developed by the three cases: (a) Definition of Objectives and Strategies: during the internationalization process, in addition to the target market, the companies define the goals they will pursue and the actions that support the internationalization strategy; (b) Change Management: change management also sees alterations in commercial agreements and rules, as



**Fig. 5**

Characteristics of PM with the greatest contribution to internationalization with a sustainable competitive advantage implication.

**Source:** Prepared by the authors.

well as in behavior and the analysis of the impacts of the culture of the target market; (c) Risk Management: the major concern of the companies surveyed is the risk of changes to legislation in the target market that might preclude their internationalization, in other words, the legal security of the operation; (d) Stakeholder Involvement: as it is a strategic decision of the company, it commits its entire structure and resources, the interested parties should be involved in the entire internationalization process; (e) Project Sustainability: this has to do with supporting the company through its internationalization in international markets and to what extent this strategy ensures long-term survival.

Thus, there is a perceived convergence between the characteristics identified with companies' crucial decisions during internationalization, suggesting that when a company intends to gain access to international markets it should consider the PM characteristics that contribute more intensely to internationalization and consequently to gaining a sustainable competitive advantage during this process.

The study makes a practical contribution and aids Brazilian companies intending to expand their

business internationally in that PMM practices can be considered strategic resources for sustainable internationalization. Although the results show that PMM at Level 2 (common processes) does not confer a sustainable competitive advantage to a company (characteristics of scope, cost and deadline are fundamental practices for excellence in PM), the study identified the five characteristics of project management maturity for the competitive implication of the company, categorizing them according to the RBV-VRIO.

The limitations of the study include: (a) it was not a more in-depth study of PM in the companies, including typology, number of team members, number of projects and other issues; (b) low number of participating respondents in both the PMM research stage and the survey of internationalization and the RBV-VRIO; (c) only one interviewee to reflect on the contribution of PM to the company's internationalization from the RBV perspective, representing the company's view.

Future studies could explore the use of the 5 maturity characteristics of PM in internationalized companies, making further analyses of the

competitive advantage of companies with these characteristics.

It can be concluded that the analysis of the contributions of PMM to internationalization considering the RBV perspective has proved adequate and valid with the results obtained. PMM practices, when used by companies, aid internationalization, delivering projects within previously established deadlines and budgets to meet the requirements of supply such as quality and certification, which include aiding the evaluation of the scope, risk management and other aspects. PMM also aided strategic alignment of the forms of entry into the markets and the relationship with the stakeholders of the companies in question, giving them a competitive advantage over the competition.

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## ABOUT THE AUTHORS

- **André Luiz Spinelli Schelini** holds a Master's in Business Administration by UNINOVE/SP; and holds a Specialization in Public Administration, Communication Management, Institutional Marketing, and Teaching of Higher Education by Universidade Castelo Branco, Rio de Janeiro/RJ, Brazil. E-mail: [schelini@gmail.com](mailto:schelini@gmail.com)
- **Cristina Dai Prá Martens** holds a Ph.D and a Master's in Business Administration by PPGA/EA/UFRGS, a post-doctoral at CERAG/UPMF- Université Pierre Mendès-France. Also, is professor at PPGA and MPA-GP UNINOVE, São Paulo, Brazil. E-mail: [cristinadm@uninove.br](mailto:cristinadm@uninove.br)
- **Marcos Roberto Piscopo** holds a Ph.D. and Master's in Business Administration by FEA/USP, with a research period abroad at Bocconi University in Milan, Italy. Also, was professor at MPA-GP UNINOVE, São Paulo, Brazil. *Ad memoriam*.

# **A gestão de projetos como vantagem competitiva para internacionalização de empresas brasileiras**

André Luiz Spinelli Schelini, Cristina Dai Prá Martens, and Marcos Roberto Piscopo

*Universidade Nove de Julho - UNINOVE, São Paulo, SP, Brasil*

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## RESUMO

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Este estudo concentra-se em três eixos teóricos: gestão de projetos (GP), internacionalização de empresas e visão baseada em recursos (RBV). Teve como objetivo analisar se, e de que forma, a maturidade em GP contribui para estratégia de atuação internacional de empresas brasileiras sob a perspectiva da RBV. Adotou-se estudo de múltiplos casos, de abordagem exploratória-descritiva, com análise intercaso e intracaso, em três empresas brasileiras. Como resultado inédito, o estudo identificou que cinco características da gestão madura de projetos: sustentabilidade do projeto, envolvimento dos stakeholders, definição de objetivos e estratégias, gerenciamento da mudança e gerenciamento de riscos, contribuem para a internacionalização das empresas pesquisadas, com implicação de vantagem competitiva sustentável, considerando a análise RBV-VRIO. A pesquisa apresenta contribuições para as empresas que estão ou pretendem iniciar sua internacionalização, de forma que obtenham melhores resultados utilizando a GP. Como uma limitação, aponta-se o número reduzido de casos investigados, o que pode também ser uma oportunidade para desenvolvimento de novos estudos.

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