Application of resource-based view to project management research: supporters and opponents

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Abstract

The Resource-based View (RBV) of the firm is a strategic management theory that is widely used by managers in project management. The RBV has to date been a promising theory that examines how resources can drive competitive advantage, especially project management (PM) capabilities that have been customized to a specific organizational environment and developed over time. However, Despite the advantages offered by the RBV to practitioners and scholars alike, the theory has been under attack by opponents claiming that there is an overenthusiasm for what the theory can deliver, especially concerning a lack of criteria for generalizability and definitional ailments. This position paper will give an overview of the supporters and opponents of the application of the RBV in PM practice and research. The position of the authors of this paper, which is in favour of the continued application of the theory to PM contexts, will be detailed and supported by conceptual and empirical findings from the literature. This paper will end with future research recommendations that will highlight research that can be done to curb criticisms of the theory and enhance and rejuvenate its use in practice.

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1. Introduction and aims

1.1 Introduction

The most important goal of strategy research is to establish why certain organizations are more effective and efficient in the way they handle their business when compared to others, in addition to understanding the mechanisms leading them to achieve a sustainable competitive advantage.

The Resource-based View (RBV) is a strategic management theory that is widely used in project management, it examines how resources can drive competitive advantage. Competitive advantage is the ability to create more value than rivals, and therefore generate higher returns on investment. Sustainable competitive advantage requires enduring benefits through capabilities that are not easily imitated (Killen et al., 2012). The RBV is built on the concept that resources and capabilities are not heterogeneous across other organizations, and through the utilization of this concept the success rate variations between organizations can be explained. Kraaijenbrink et al (2010) quoted the argument of Barney (1991a, 1994, 2002) that “if a firm is to achieve a state of sustained competitive advantage, it must acquire and control valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities.”

PM resources and capabilities that have been customized to a specific environment and developed over time are not easily imitated. Such capabilities are constantly associated with better performance, leading to viewing PM as strategic organizational capabilities that can provide enduring benefits. Examples of tangible PM resources include methodologies and practices (know what), while intangible resources include tacit knowledge sharing process and facilitation (know how). Following the Resource-based View of the firm concept, the intangible resources are more likely to satisfy the requirement of being rare and inimitable (Killen et al., 2012).

The RBV has become one of the most influential strategic management theories cited in strategic management literature due to its immediate face validity, appealing core message, and ease to grasp and teach (Kraaijenbrink et al, 2010). However, these advantages don’t come without criticism. Those who are against the application of the RBV are criticizing areas that are mainly related to the state of the definitions that RBV is based on, the conceptual and empirical methodology, and so-called deficiencies of the concept. The opponents want to temper what they refer to as an overenthusiastic attitude for the RBV, while the supporters feel the advantages outweigh the disadvantages and that with minor modifications to the theory, it will uphold its historical advantage over other theories and continue to contribute to the advancement of research in other disciplines such as project management (Truijens, 2003). The authors of this paper take up their position alongside others who firmly support the RBV theory in relation to research carried out in PM contexts. For example, Killen et al. (2012) in their study of four diverse organizations reported that PM and PPM research outcomes can be supported by the application of strategic management theories such as the RBV.

The wealth of advantages of the RBV concept to researchers and practitioners cannot be ignored simply because the concept is not perfect or cannot easily be generalized. The Resource-based view has contributed not only to the development of new extensions of the RBV theory, but also to the success of other theories when integrated with them, such as agency and transaction cost theories.

Lado et al. (2006) argued that:

“Scholars have refined and extended the RBV’s core tenets to explain how dynamic capabilities (Dyer &Singh, 1998; Teece, Pisano, & Shuen, 1997) and processes of knowledge development and use (Grant, 1996; Nonaka, 1994; Spender, 1996) generate sustainable strategic advantage. Further, synergies of scholarship have accrued from integration of RBV insights with ideas derived from organizational economics (Mahoney & Pandian, 1992), population ecology theory (Barnett, Greve, & Park, 1994), institutionalization theory (Oliver, 1997), and organizational learning theory (Lei, Hitt, & Bettis, 1996), among others.”

There are many areas for improvement to satisfy the opponents and to bolster the position of the supporters of the theory. This position paper will highlight areas of conflict, show their significance, and propose a course of action for their remedy. It will tackle the areas of criticism and attend to them empirically and conceptually through a literature review of peer-reviewed publications related to the topic.
1.2 Aims of the paper

The aim of this paper is to advance the understanding of resource-based theory and its integration within project management practice, with the intention of aiding researchers and managers in recognizing its challenges and benefits. The paper will emphasize on providing overviews of the supporters and opponents of the Resource-based View, and explain why the authors of this paper side with the supporters. Finally, the findings will furnish the basis for relevant future research that will focus on improving areas of interest to PM and strategy scholars who wish to extend the RBV’s theoretical background. Recommendations for future work will be provided towards the end of this paper.

Specifically, this paper intends to:

- Highlight the link between RBV and PM.
- Scrutinize the areas of criticism and discuss their implications on organizations and on research.
- Highlight the importance of the RBV to the competitive advantage of PM organizational resources, supported by empirical and conceptual findings drawn from peer-reviewed journals.
- Suggest future research to enhance the continued application of the RBV.

The rest of this paper is organized as follows: The second section will be a summary review of the literature on the RBV and its advantages and drawbacks. The third section will be a discussion and analysis to support the implementation of the RBV followed by a development of the authors’ position in the fourth section. Section five brings together the key findings from the paper and presents implications for practitioners and researchers, leading to the final section which proposes recommendations for future researchers to further address the criticisms of the theory.

2. Review of the literature

Project Management research is advanced through the utilization of strategic management theories that in turn contribute to the improvement and advancement of these theories by providing empirical evidence. Killen et al. (2012) argue that “The linkages between strategy, PM, and PPM are well established and have been explored in the literature for more than two decades.”

In their exploratory study on the application of strategic theories such as RBV to PM and PPM research in four diverse organizations in private and public sectors, Killen et al. (2012) argued that the application of RBV to these studies provided “methodological rigor and increased explanatory power”, and further stated that the “successful application of these strategic management theories to such a diverse set of circumstances indicates that these theories may have wide potential to support further research in PM and PPM.”

Most of the studies on strategic competitiveness since the 1980s have highlighted the importance of the relationship of the firm to its external environment rather than the internal practices leading to such competitiveness. Currently an emphasis is placed on the internal attributes of a firm as an advantage; the firm’s internal idiosyncrasies have been identified as critical factors for its strategic advantage (Habbershon and Williams, 1999; Pablo et al. 2007).

This approach is called the Resource-Based View of the firm. The RBV has been used to explain the differences in the performance of firms that are not related to economic or industry conditions. The origins of the theory can be traced back to the work of David Ricardo in the 19th century (William et al., 2011). However, Habbershon and Williams (1999) stated that some have believed that the RBV first appeared in the work of Bernard (1938); and, others thought that it “started with the contributions by Selznick (1957), Penrose (1959), Pfeffer and Salancik (1978), Rumelt (1984), or Wernerfelt (1984)” (Habbershon and Williams, 1999).

The work of Edith Penrose in the 1950’s was highly regarded as a shift in the practice of the RBV as she explored the linkage between firm resources and firm growth. In her work, she emphasized that “firms should be conceptualized as an administrative framework consisting of a bundle of resources, and thus, she concluded that
The growth of a firm is limited by this crucial aspect of a firm” (William et al., 2011). Penrose argued that a firm’s internal and subsequent external growth through mergers, acquisitions, and diversification, is due to the way in which the resources are exploited (Newbert, 2007).

The impact of the Resource-based View on the academic work, as well as on the strategic management of organizations has been very evident since the theory was formalized by the pioneering work of Wernerfelt (1984) and Barney (1991). The development of the RBV is linked to a few research areas such as strategy and organizational economics. In strategy research, the operationalization of RBV varied in the way the theory explained firm performance, but it was successful in attracting attention to the capabilities and competences at the firm level. In organizational economics, the RBV incorporated agency theory and transaction cost theory among other theories and benefited from their extensions that are related to practical outcomes. Agency theory highlights idiosyncratic resources that have the potential to be sources of competitive advantage. Whereas, transaction cost theory provides a better understanding of the functions and origins of different market structures for exchanging services with the external environment (Habbershon and Williams, 1999).

The concept of the RBV asserts the heterogeneity of firms, “that it is the idiosyncratic, immobile, inimitable, sometimes intangible bundle of resources residing in the firm that gives the firm an opportunity for competitive advantage and superior performance” (Habbershon and Williams, 1999). The theory examines the links between the firm’s internal features and processes, and its performance. “The resource-based view provides an explanation of competitive heterogeneity based on the premise that close competitors differ in their resources and capabilities in important and durable ways” (Helfat & Peteraf, 2003). This means that any firm within an industry is unique in its strategic resources, and these heterogeneous characteristics of a firm have a potential for creating an advantage over its rivals. And, a particular firm’s resources are unique to that particular firm and not perfectly mobile to others, which allows the firm to sustain its competitive advantage for prolonged times due to the unique nature of their resources (Habbershon and Williams, 1999; Pablo et al. 2007).

The RBV strives to explain the role of these immobile idiosyncratic resources to create sustainable competitive advantage. The RBV stresses that resources must have specific characteristics to generate advantage. Habbershon and Williams, (1999) cited Barney (1991) who has identified four attributes of such resources:

“(a) It must be valuable, in the sense that it exploits opportunities and/or neutralizes threats in a firm’s environment, (b) it must be rare among a firm’s current and potential competition, (c) it must be imperfectly imitable, and (d) there cannot be strategically equivalent substitutes for this resource that are valuable but neither rare or imperfectly imitable. Firm resources can be imperfectly imitable for one or a combination of three reasons: (a) the ability of a firm to obtain a resource is dependent on unique historical conditions, (b) the link between the resources possessed by a firm and a firm’s sustained competitive advantage is causally ambiguous, or (c) the resource generating a firm’s advantage is socially complex.”

Utilizing these four attributes assists managers in bringing order into the subjective method of assessing resources. They provide a framework for analysing the potential of a firm’s resources and their link to a sustained competitive advantage. Therefore, the RBV provides a “more intimate and systematic integration of organizational phenomena and economic performance indicators” (Habbershon and Williams, 1999).

One of the most common models for the implementation of RBV in organizations is the model proposed by Grant (1991). As depicted in Figure 1, an action plan is proposed by Grant (1991) for managers to identify their resources, then identify the capabilities, appraise competitive advantage, and then to use the applicable strategy that will better exploit these resources and capabilities. Grant’s model outlines the connection between resources and capabilities and their potential competitive advantage. If any resource is considered to be a competitive advantage, the managers should determine the type of resource, the conditions under which they add value, gained capabilities, the potential for sustainable competitive advantage, exploitation of this resource, and what measures to be used to assess its outcome on the overall performance. At this point, this resource could be classified as valuable and rare if it improves the effectiveness and efficiency of the firm (Habbershon and Williams, 1999).

These frameworks and models proposed by Barney and Grant, although they provide a base that project managers can build upon to suit their particular context, they need to be further studied and debated so that they can be adopted easily for daily use, with an easy-to-apply and clear format for managers. And this debate and study comes only through rigorous empirical studies that are based on actual outcomes from practice as strategic theories develop with progress of the body of knowledge of empirical work and the accumulation of experiences. Initial
research indicated that strategy theories such as the RBV can provide important insights to improve research outcomes in PM studies, and provide practitioners with examples of PM resources that are valuable to the organization from the RBV perspective (Killen et al., 2012).

2.1 Overview of criticism to RBV

It is widely acknowledged that criticism highlights areas for theoretical improvements and challenges researchers to constantly improve their findings and validate the work of others. Therefore, the criticism of the RBV theory is very productive in identifying areas of contribution of RBV to PM research. Although the Resource-based view has become one of the most substantial strategic theories in management, critics are still voicing their concerns about areas related to research that are overlooked, the state of the definitions that the RBV is based on, and the issue of generalizability (Barney, 1991; Truijens, 2003; Levitas & Ndofor, 2006).

2.1.1 Definitional concerns

In the field of research, defining the unit of analysis and the basic concepts of the phenomena under study is a prerequisite for the validity and reliability of the research, and the Resource-based View is not an exception to this criteria. Critics have identified certain problems related to the compliance of the RBV to these requirements. There are two major issues related to the definitional soundness of the RBV that are recurring in the literature. The first one is that the definitions are believed to be all-inclusive, and the second one is related to the unit of analysis, as there is no consensus on its definition (Truijens, 2003).
Truijens (2003) signals the non-homogeneous use of terms such as capabilities, assets, resources and competences. “Hypothesizing about rationales to introduce terms as capabilities and competences seen as distinctly different from assets or resources.” (Truijens, 2003). He refers this distinction to strict logic rather than empirical generalization. He argues that it is better to develop insights into which criteria assets should fit to yield competitive advantage, rather than using given asset categories on the basis of arbitrary selection. Truijens (2003) asserted that there were scant attempts to refine basic RBV constructs. He added that there is an accusation by RBV scholars of using all-inclusive definitions. He argued that if everything that is associated with the firm can be considered as a resource, prescriptive implications of RBV that are difficult to measure are of a less importance to practitioners. Truijens (2003) supported his argument by quoting Barney’s agreement that the resources are defined in an all-inclusive pattern.

2.1.2 The issues of generalizability and valid constructs

The Resource-based View is constantly criticized for being largely untestable. The methodological complications are frequent issues in the RBV literature. The key challenge is related to measuring resources, as some of them are intangible (Barney et al., 2011). Barney et al. (2011) argue that this disconnect between RBV and the measurement of intangible resources leaves serious questions related to the validity of the empirical test purported to support the use of RBV strategy, which constrains the effectiveness of future research. Barney et al. (2011) further add that recent literature on tests on RBV found out that “intangible resource assessment and construct validation are often enacted as a mechanical, empirical, and unidisciplinary and unilevel process rather than as a conceptual, multidisciplinary, multilevel, and theoretical process.” To effectively operationalize a key resource from others, researchers must identify all factors that play a role in this key resource and establish the interconnections among them. “Generalizability is not only the least relevant of the external validity criteria but also can only be assessed after valid operationalization for constructs are developed across different contexts, industries, samples, and so on” (Levitas & Ndofor, 2006).

3. Discussion

3.1 Definitional Concerns

There is no doubt that researchers suffer from the lack of terminology when it comes to studying resources and capabilities. Sometimes certain elements are labelled differently according to the intention of the researcher to establish own definition. According to Kristandl & Bontis (2007) “This academic dissent is a hindrance to research progress and so far, there is no agreed-on definition”. However, this issue should not hinder the advancement in the RBV research either. In their paper “Constructing a definition for intangibles using the resource based view of the firm”, Kristandl & Bontis (2007) are not only demonstrating that a comprehensive definition of intangibles is possible through the framework they have developed, but also they used the RBV itself to define the intangibles of the resources. This may be a strong indication that the RBV is not that much suffering from definitional ailments. As a matter of fact, the strength of the RBV lies in its ability to construct definitions that are in line with the competitive advantage criteria. Kristandl & Bontis (2007) showed that this is possible by “first applying a resource-based view of the firm, defining intangibles as a subset of strategic resources, and then testing current definitions against this framework.”

3.2 The issues of generalizability and valid constructs

Levitas & Ndofor (2006) on the issue of generalizability and its impact on the advancement of RBV, recalled the work of Cook and Cambell (1979), where they regarded generalizability as the least important of the methodological validities that concern researchers on issues such as internal and causal validities. Levitas & Ndofor (2006) argued that the emphasis on proving external validity may reduce the value of experiments and may “impair the process of scientific discovery.” They are of the view that “advances in knowledge and science are most likely achieved not through confirmation and/or replication of one study's findings by subsequent studies, but
through refutation of preexisting theory by more advanced theory.” The reason for such impairment to the scientific research as argued by Levitas & Ndofor (2006) is that generalizability of empirical findings across all types of firms and industries is dependent on identifying in advance all involved background variables: “arguing for the importance generalizability amounts to a counsel of despair, since a researcher must literally enumerate and anticipate all of the background factors that could interact with treatments” (Levitas & Ndofor, 2006). The efforts exerted in ensuring generalizability would engage scholars in a complicated mission looking for background variables that would eventually slow down scientific advancement. Cronbach (1975) recognized this issue by arguing that systems under which individuals operate are open ones, and therefore isolating all factors affecting the decision making process, in addition to behaviour, will be very difficult. Calder et al. (1982) argue that “rejection of a theory based solely on an examination of empirical association across contexts is not very helpful because one cannot easily determine whether the failure is due to inadequate measures, a mis-specified theory, or both.”

The concerns related to generalizability are legitimate since most of what researchers focus on is imprecisely defined. It may be very difficult to explain which factors attributed to a superior performance of a successful organization. The managers of successful firms may not know the source of their competitive advantage, precluding them from leaving and replicating the advantage elsewhere. The same situation applies to researchers. How can researchers, who know less than the managers about the sources of their advantage, understand and identify the sources and capabilities essential to the competitive advantage? And, given this uncertainty, can researchers operationalize key constructs? It is imperative that researcher before focusing on generalizability, to first operationalize the key constructs and ensure their validity (Levitas & Ndofor, 2006).

Although without construct validity, any findings related to RBV empirical work would be considered insignificant to opponents of the RBV theory, attempts to isolate key resources by researchers to show the robustness of the theory has illustrated common misperceptions (Levitas & Ndofor, 2006). Many studies tried to operationalize the key resources and capabilities of the RBV. Levitas & Ndofor (2006) argued that those attempts were “futile”. They argue that competitive advantage is not inherent in some resources and capabilities, but rather in a complex network of capabilities and resource interactions. The attempt to isolate some key resources and capabilities from others represented in the authors’ view a misunderstanding of Resource-based View. In this regard, they used learning as an example for illustration. To operationalize learning, the researcher must identify all the factors that are related to the learning process and recognize their interconnectedness. Furthermore, much of the knowledge is tacit as it was obtained through experience, and its identification will be very hard to achieve. Therefore, the researchers will find a hard time trying to observe what is not easily observed (Levitas & Ndofor, 2006).

If the construct validity is not possible in the case of RBV, then an estimation process can do the job as argued by Levitas & Ndofor (2006). The first step in this estimation correction process is to actually acknowledge the ignorance in constructs and their operational characteristics. This ignorance can be modelled by the utilization of “fixed-firm effects” in statistical techniques; it can overcome the issues related to measurements and identification of constructs. And, an alternative to the issue of complex network among capabilities and resources by the utilization of estimation techniques that model for such interactions. One technique is the “Simultaneous Equation Models” that allows for multiple linkages among constructs. In this way elements that we are aware and unaware of, will be statically modelled. “Indeed, perhaps the combination of observable variables and fixed effects in this manner can be used to model a more complex and ethereal advantage” (Levitas & Ndofor, 2006).

4. Our Position

The Resource-based View of organizations has gained its reputation as a vital theory since it combines the strategic and organizational insights on the firm’s competitive advantage. The application of the RBV in project management involves work that identifies PM resources and capabilities that shape the competitive advantage of the firm.

The authors of this paper are of the view that RBV theory has been remarkable in shaping the strategic and organizational issues of firms in the past decades. It has proved its importance in explaining important relationships among elements related to the firm’s capabilities and resources that lead to the maximization of the
firm’s potential. It was the first to establish that PM resources are viewed as a source of competitive advantage. It is important to ensure that the RBV continues to contribute to the success of project management and organizations. Foss and Knudsen (2003) cited (Barney, 1991 and Peteraf, 1993) to stress that there is no doubt about how successful the Resource-based view is to organizations. Further, they argue that the deficiencies pointed out by critics are legitimate and provide an area for improvement to strengthen the standing of the theory and the practice of the firms: “the RBV was built in a hurry by a few key contributors. Arguably, this has resulted in some aspects being less clear and less developed than one may wish them to be” (Foss and Knudsen, 2003). Therefore, further empirical and conceptual investigations into the RBV theory application in PM, by researchers who should be mindful of the criticism, will advance the success gained over the past decades and will improve its value to practitioners and researchers alike. And, as was detailed earlier in this paper, the intention to achieve generalization is counterproductive in RBV research. On the one, hand it is the least important factor in external validity of findings, and on the other, it is only considered after the valid operationalization of constructs across different contexts is achieved.

5. Conclusion

The Resource-based View of the firm is a strategic management theory that is widely used by managers in project management. It allows them to spread resources according to alignment with strategy, to identify the value of such resources and required capabilities for the competitive advantage of the organization, in addition to providing the managers a snapshot of strength for intervention, or for mergers and acquisition. This position paper focussed on the importance of the RBV theory to PM research and practice. Its importance was highlighted and the mechanism for its implementation was introduced as well. The aim of this paper was to respond to the criticism surrounding the implementation of the theory in general, and take a clear position in supporting the implementation of the theory in project management research and practice. The areas of criticism: definitional flaws, generalizability, and construct validity were analysed to show the significance of the criticism, and to build solid grounds for the refutation of the allegations of their dysfunction.

The criticism reveals areas for theoretical consideration as it challenges theorists to revise their methodologies and improve their work. Therefore, this paper ends with “future research” suggestions highlighting all three areas of criticism in this paper and proposing practical responses to criticisms of the RBV whilst upholding its benefits to PM and PPM. The proposed research should be compared to other studies that are not using similar techniques of estimations or homogeneity and try to either confirm or reject that such techniques are reducing the criticisms of the theory.

6. Future research

This position paper has highlighted various areas for improvement to be considered by researchers in order to optimize the outcomes of adopting a Resource-based View in the research of PM, and to minimize the criticism surrounding its application. The criticism is mainly focused on the generalizability and operationalization of the constructs. To reduce such criticism, in-depth longitudinal studies on refining the definitions used to measure intangible resources in PM are recommended for future researchers. This, as mentioned earlier, can be done through the use of estimation techniques and valid operationalization for constructs, the outcome of which will advance the application of RBV in PM research.

In the view of the authors of this paper, the RBV as detailed earlier is one of the most important theories in strategic management, and is integrated with other theories as well. Furthering this research and putting the theory to work within research or practices will narrow the areas of criticism.

Future research should utilize case studies and questionnaires to collect data on RBV utilization in research and practice. The data and its analysis can then be triangulated to strengthen the credibility and validity of the findings, and subsequently help guide further research studies and practices with detailed models and frameworks for achieving competitive advantage.
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