

Received July 29, 2020, accepted September 4, 2020, date of publication September 14, 2020, date of current version September 25, 2020.

Digital Object Identifier 10.1109/ACCESS.2020.3023897

# Relationship Between Marketing and Project Management Success Through Cognitive Process Lens

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This work was supported by the Coordination for the Improvement of Higher Education Personnel - Brazil Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) - Financing Code 001.

**ABSTRACT** In recent decades, project management has become more permeable to influences from other areas of knowledge, such as marketing. This influence led to project-based companies becoming market-oriented in their projects to achieve more success. However, the convergence of project management and marketing is still controversial. In this context, this study aims to assess the relationship between the vision of marketing, through conscious and unconscious processes, and its influence on the success of projects. Conscious processes deal with controlled and deliberate cognitive evaluations of anything, while unconscious processes are those that occur without one's control and awareness. These mechanisms occur in parallel and influence our beliefs and behavior. Forty-five professionals working on projects participated in the survey. We collected the data through a structured questionnaire, to the conscious process, and a computerized task for the unconscious data using an instrument called Project Marketing Implicit Association Test. Thus, the study presented analyzes on how project managers conceive their conscious and unconscious perception of how marketing and project management can reconcile into a theoretical and practical convergent concept. The results provide evidence of a positive and significant influence of conscious and unconscious processes on project success. It was also revealed that these processes act independently, enhancing the project's success.

**INDEX TERMS** Cognitive process, market orientation, project management, success in projects.

## I. INTRODUCTION

Over the past few decades, Project Management (PM) has become an administration model widely adopted in organizations [29]. In this context, organizational design has increasingly become a practice in search of better results [41]. This situation occurs due to the need to manage the organization's dynamics in environments with complex problems [22], and uncertainty overcharged [56].

PM proposes that specific objectives are achieved in a given period at previously established costs [62], moving away from failing traps of the project management process [48]. PM success can be reached with the efficient use of resources involved, such as people skills management [46], optimizing resource planning and scheduling [35], or following the best practices [32]. Notwithstanding the aspects

mentioned, in recent years, PM has evolved to incorporate methodological improvements such as agile methods that require flexibility in establishing the scope and time. Besides, this approach allows permeability from other different areas of knowledge, such as marketing [9].

The search for successful projects stimulated researchers and practitioners to strive to find ways to improve the achievement of organizational goals [14]. This search could be reached through an intense discussion about what can be considered a success in projects. According to literature, project success can be interpreted and have different meanings to different people involved in project management. We argue that the project manager can influence the perception of what project success is. However, in the recent project management literature, there are new trends (mostly related to the agile PM) that highlight the importance of customer involvement, one of the marketing fundamentals. These new approaches are integrated into our literature review and

The associate editor coordinating the review of this manuscript and approving it for publication was Jenny Mahoney.

indicate one more time the relationship that we propose between marketing and project management. Project success was previously considered aspects related to scope, compliance with budget, and time [51]. However, Shenhar and Dvir [54] present new dimensions to be incorporated. In essence, efficiency, impact on the project team, the effect on the consumer, business success, and preparation for the future. We can say that these last three dimensions, in particular, reflect a concern of a marketing character of the project's success.

Marketing, applied to PM, shares both project views and market orientation, from product development [61] to building value for the client [7]. It has evolved in recent years as a theory to support PM thinking, involving bidding and relationship [5], and other criteria to merge these areas [8], particularly to manage discontinuity of a project [26]. We emphasize here that both researchers and practitioners have incorporated marketing implicitly or explicitly into PM [43]. According to Durval and Avila [15], managers must incorporate the marketing perspective in projects. PMI [51] suggests that the objectives of a successful project should be discussed with all stakeholders. These objectives should meet the organizational and market purposes, for example, those defined in the Business Case. We stress that there may be conflicts between them due to different views, which also should be mediated.

Therefore, the approximation of these two lines of knowledge, PM and Marketing, proposes that project-based companies' trends to significant benefits in adopting both perspectives in their projects. The basic premise of the marketing area is a market orientation to generate more value for end consumers, as well as better positioning to the organization compared to their competitors [33]. These aspects are fully aligned with the new dimensions of project success prescribed by Shenhar and Dvir [54].

We point out that the interaction between PM and Marketing thinking should provide better performance and sustainable success to organizations and their projects, as satisfying the needs of consumers is to bring about a superior organization performance [43]. In this sense, terms such as "project business" and "project marketing" started to appear in PM literature as evidence of the synergy of PM with the market and business orientation thinking [30].

Jalkala *et al.* [30, p. 125] defined Project Marketing "as a multifunctional process of network management and buyer-seller interaction within and between projects in companies, in which the value creation process includes the search, preparation, bidding, negotiation, implementation and project transition." Therefore, we can affirm that both PM and Marketing thinking seek to create value for the company and its stakeholders.

Despite the highlighted convergence, researchers and practitioners in both areas differ on a more direct and synergistic relationship between these thoughts. This situation can be evidenced by the parallel and independent development of these areas of knowledge. Consequently, a vision of

theoretical non-confluence was established [30], not considering practice and implementation [36], even though a review of the possible link between the two areas was made [50], and organizations were created to foster the interplay [56]. The theoretical contribution of these areas of knowledge has been accumulating independently. However, they seem to converge in the concern of researchers and practitioners with the market impacts of a project earlier [8] and more recently [43].

Thus, to the extent that this divergence is imposed in the theoretical field, as a research paradigm and ontological tradition, we emphasize that it must be observed how the project manager assesses the relationship between these areas of knowledge, apart of the theoretical debate that can be established. Based on this context, the research question that guides this study is how does the project manager assess the relationship between market orientation and project success? So, the objective of this research is to evaluate the relationship between the vision of marketing and project management, through conscious and unconscious processes, and its influence on the project's success. Conscious processes are those characterized by a deliberate and aware mechanism of analysis of anything, more subject to social desirability bias, as a result of social pressure or absence of criticism about some concept. On the other side, unconscious cognitive processes are those that function without people's awareness and control. These two processes happen in parallel and lead to attitude and belief formation, and also to behavior. As a result, our belief and behavior about anything are constructed and remain stable over time, even if they differ. We argue that our conscious and unconscious view about marketing and project management can diverge. This study highlights the importance of parallel mechanisms of cognitive information processing and attitude formation, regarding project management and marketing thought that, although treated as different paradigms, can be reconciled into a standard line of theory and practice to explain project success.

In this research, a survey was carried out that encompasses the conscious and unconscious cognitive processes of this relationship. Measurement scales were used through self-declaration to capture the research subject's assessment of conscious evaluation, altogether with unconscious mechanisms, through a computerized task. Conscious cognitive processes imply that the individual has control and awareness of its evaluation of what is being appraised. It is obtained by merely questioning people through a survey. On the other side, unconscious cognitive processes mean that an automatic and uncontrolled attitude is created about what one must evaluate [4]. To capture this last aspect, additionally, we developed and applied a computerized task called Implicit Association Test for Project Marketing, following the model of Greenwald *et al.* [24]. For the test of hypotheses, hierarchical linear regressions were applied to a sample composed of 45 PM professionals.

This article is organized in 6 sections: the following section presents the theoretical foundation that served as the base

for the construction of the pillars that support the research. The third section offers details of the research method and procedures, which ensure the methodological rigor used. The fourth section presents the results, while the fifth section presents the discussion of these results. Finally, the sixth section offers the conclusion, its contributions, limitations, and suggestions for further research.

## II. THEORETICAL FOUNDATIONS

### A. MARKET ORIENTATION

Essential marketing thinking is about creating superior values to organizations and their customers. This kind of value allows the organization to overcome competing offers, obtain consumer loyalty, and even establish a more advantageous position in the market environment. The concept of market orientation must be incorporated in all areas of the organization, considering themselves as partners and intermediaries [34].

This kind of action contributes to the best overall performance in the sector in which it operates. Thus, market orientation is defined as the organization's ability to generate and disseminate market information and the ability to respond to the market [33]. We hypothesize that organizations that adopt project management must have a market orientation to achieve more success in their projects. This argument has been observed in traditional studies [1], and even more recently on those that evaluate performance in other business contexts, as a function of or interplay with market orientation [19], for companies of all sizes [53]. However, these studies, and others, do not evaluate the relationship between PM and marketing at the project manager's perspective.

### B. PROJECT MANAGEMENT AND ITS RELATIONSHIP WITH MARKETING

PM consists of a set of tools, methods, and techniques to ensure that the objectives determined of a project are achieved, considering the estimated time, cost, and financial performance [32]. Introduced in organizations, PM involves individuals in tasks to control and to plan all things related to resource allocation [39]. PM-related practices also provide subsidies for planning and employing organizational resources in the context of risks and uncertainties [51].

Therefore, PM's objective is to ensure increased results in non-routine activities [2], what happens under a marked scenario by cost, time, and resource restrictions in search of increased performance towards a project success [47].

Although the objectives of the PM are clear, the use of PM practices requires an assessment by organizations due to the way resources are managed. The choice of management processes to be used in the project depends, among others, on the size of the project, the complexity involved, the importance of the project to the organization, and even the methodological approach [51]. The result obtained by one organization may not have the same effect obtained by other organizations [32].

In this context, marketing can assist in project management [59], as the vision focused on customer satisfaction

and the creation of value allows an assessment that is more adherent to the wishes of stakeholders [16], even in more complex projects [37]. As explained by Jalkala *et al.* [30], Project Marketing is a multifunctional process of network management and interaction between different actors in a project, in which the value creation process includes the search, preparation, bidding, negotiation, implementation, and transition of a project.

In this way, we can say that both PM and marketing thinking are synergistic. Cova *et al.* [9] point out that Project Marketing is a complex transaction covering a package of products, services, and labor, specially developed to create capital assets, which produce benefits for a buyer over an extended period. Turner, Lecoivre, and Sankaran [60] claim that Project Marketing considers marketing orientation and philosophy from the perspective of projects, including projects in a broader and business context. In this sense, we can argue that synergistically incorporating marketing assumptions into the project can contribute to success in PM.

### C. PROJECT SUCCESS

The definition of success in projects has been improved over time, motivated by changes in the behavior of organizations, managers are taking into account issues related to restrictions and needs imposed on projects, such as socio-environmental sustainability [44], and leadership [42]. PMI [51] indicates project success is related to controlling the more traditional restrictions of scope, cost, and time, including aspects related to the quality of management and deliverables. Currently, assessing the project's success must also include objectives aligned with the organization's strategy, as well as delivering business results [51].

Additionally, success varies regarding the perception of each stakeholder, and its meaning can change over time [54]. Thus, establishing a single concept of project success is a complex task in the eyes of an appraiser. Freeman and Beale [17] indicate that success presents itself differently to different people. The authors explain that an architect can consider the success of a project the aesthetic appearance of the product; an engineer can take into account technical skills; an accountant will take into account financial inputs and outputs; a human resources manager will take into account aspects associated to the people development of the organization, and the executives will evaluate the success of a project in terms of market results.

Therefore, based on the more traditional restrictions of scope, cost, and time [51] representing the efficiency of the project, new factors have been incorporated. Authors such as Pinto and Mantel [48], Freeman and Beale [17], and Dietrich *et al.* [12] indicate that for dealing with the success of the projects in a more direct way, managers have to measure success by a set of benchmarking criteria, implementation, performance, technical and organizational aspects, and customer satisfaction. Hadjikhani [26], and Baccarini [3] emphasize the need for such criteria, including factors like business and product strategy, and mainly,

PM techniques. Furthermore, Gardiner and Stewart [20] added financial aspects, such as Net Present Value. Authors such as Dietrich *et al.* [12] expanded the definition of success in projects considering the success not only of the project but also its impact on the organization.

We considered in this study the definition of Shenhar and Dvir [54] that considered various types of success in dimensions with multiple criteria. First, they represent the “impact on the client or consumer” with the fulfillment of the operational and technical specifications outlined in the scope of the project, satisfaction of their needs, solution of operational problems, including with the customer’s use of the project product after implementation. This dimension also reflects the perception of a variety of stakeholders about the success of the project, in terms of satisfaction and loyalty to new project development, product use, and efficacy. The other dimension is “impact on the project team”, which reflects the team’s satisfaction in working on the project, the perception of the development of their skills, including retaining the team for future projects. Impact on the team also reflects motivation aspects to engage members of the team in the project, with an endless dedication to the project in which they are involved. This high dedication to the project indicates that the team has an interest in continuing to be part of the company as a result of the project conducted. The project may improve the team’s skills and professional competencies, reflecting a personal improvement. The fourth dimension is “benefits for the organization”, which demonstrates some level of commercial success, an increase in the percentage of the market served, or both. The last one is “preparing for the future,” which indicates a concern with the positioning of the company, for example, opening a new market, generating a new product line, or developing new technology.

In a more recent scenario, Martens *et al.* [38], and Shenhar and Holzmann [55] suggest the adoption of market dimensions to establish project success. Because of these definitions, it is evident that the project success is closely related to the organizations’ strategies, performance, financial control, and customer satisfaction, to the practices and techniques used in project management to respond to market issues.

Thus, in this context of concern with the competitiveness of an organization aligned with the managed projects, it is expected that managers make decisions aligned to the fulfillment of the market success criteria, despite the conflicts that can be generated in meeting the more structural measures of the organization itself, related to the restriction of resources. These concepts must be discussed at the individual level too. Therefore, in the next section, we will discuss the conscious and unconscious cognitive mechanisms that can interfere in the decision-making process of project managers.

#### **D. CONSCIOUS AND UNCONSCIOUS COGNITIVE PROCESSES**

Cognitive processes are regarded as the ability to process information received through the five senses and are comprised of perception, attention, categorization, and

formation of schemas, memory, and attitude, and belief formation. In other words, any information we receive is somehow perceived, and a certain degree of attention (mental activity) is devoted to that stimulus. Then, this information is interpreted and stored in memory as pertained to a particular category (an instance of the meaning) and schema (an organized knowledge structure about categories), linked to attitudes (overall evaluation of any object, with different levels of strength, and with a valence of favorability or not), that can become beliefs [4]. These attitudes and beliefs can then be used in our daily life to guide behavior. It is an academic consensus that the valence of our attitudes will drive action in the same direction. That is, if our perspective to a given object is favorable, our behavior to this object will follow this valence. For example, if our attitude to blood donation is positive, it is expected that our intention will be favorable to blood donation, and we are more likely to perform blood donation [4]. Then, this behavior may repeat along with our life, until a new attitude to the object is formed and replaces the older one. This process is more studied through a paradigm of conscious attitude formation, even though massive literature amounts to consider unconscious processes [21]. Unconscious processes occur early in the individual’s mental mechanisms to mediate overt action [6]. This balance, conscious and unconscious processes, happens all the time in our daily lives, in all human activities, shaping our beliefs and assessments to guide behavior. These assessments become attitudes that can be consciously controlled, explicitly, or can be formed unconsciously, implicitly, without deliberate control on the part of the individual [57]. For example, the choice of a tourist destination, or a product, or even the choice of specific administrative technique can be the result of a cognitive process of conscious reflection and deliberation. On the other hand, attitudes may be unconscious (or implicit) formed to guide behavior. We can make choices because of the mediation of unconsciously developed attitudes and beliefs that are parallel to conscious processes. For example, in situations of prejudice and stereotypes [10], concerning early bad habits [45], or food choice [52], as well as in the performance of other activities. These unconscious attitudes may become automatic, or effortless, without one’s deliberation to retrieve from memory. The mere exposure to the object may activate the intuitive and unconscious perspective of this object. For example, just by seeing a brand name, a lot of information is retrieved from memory and start our attitude to this brand and the network of social information linked to it. The same may happen when we see the link between marketing and project management.

These evaluations can converge to the same valence, or they can diverge [57]. For example, we consciously and unconsciously like a specific football team. But we can deliberately declare ourselves to be in favor of a person (as it is socially expected), while unconsciously feel unfavorable to the same person. In this way, these dual attitudes can coexist and be divergent [23]. That is the purpose of this study. To establish the relationship and conjoint effect of second attitudes to

project management and its connection to marketing through the project managers' standpoint. It should be noted in this study that we have adopted, as a premise, the conscious and unconscious attitudes to the incorporation of marketing assumptions in project management. Therefore, beliefs such as the construction of value, and the search for customer satisfaction, fundamental elements in marketing, are studied here based on the evaluation of project managers.

### III. METHOD

#### A. THEORETICAL MODEL AND HYPOTHESIS DEVELOPMENT

In this study, the joint dimensions of Impact on the consumer, Impact on Business, and Preparation for the future were considered as the second-order construct of project success, based on the items of Shenhar and Dvir's study [54]. These dimensions can be regarded as marketing output, as they reflect the generation of benefits to the market, not only for the organization that is executing the project. To the extent that the market orientation represents the search for the best positioning of the company in the market and the search for a more significant generation of value to the customer, this orientation is expected to have a positive influence on the project success in their market dimensions [54]. So, the first hypothesis of this study is:

**H1:** Market orientation has a positive and significant relationship with project success.

Similarly, this study follows the current theoretical argument that establishes that conscious and unconscious processes are aligned when there is no controversy or cognitive conflict involved [31]. Both theorists and practitioners agree that the search for a better market position is essential for the organization. Central to the entire discipline of marketing and project management is the concept of value creation for the client [54]. It is stated by extant literature and practitioners that companies may benefit from being client-oriented. Having established in theories of marketing [33], and project management procedures and practice [43]. As this orientation to the client is promoted in theory, as well as in the implantation of project plans, instilled in project managers orientation, it is expected that the unconscious attitude to project marketing can favorably match the project success, as it can be considered through clients point of view, giving rise to hypothesis two:

**H2:** The unconscious attitude to project marketing has a direct and positive relationship with project success.

At the same time, the conscious and unconscious processes may come together when a particular issue is congruent with a person's mind and overt behavior. Thus, we expect that professionals 'orientation to the companies' success may lead then to the search for ways for a better positioning on the market, which should reflect in their unconscious concern with the success of their projects, as a contribution to the company [4]. It leads us to the third hypothesis:

**H3:** The conscious market orientation has a positive relationship with the unconscious attitude to project marketing.

At the same time, extant literature proposes that conscious and unconscious processes occur in parallel. Still, a conscious evaluation has a response mediation mechanism through the unconscious process [4] because it happens in advance to conscious processes (milliseconds) to drive behavior, simply because it is much faster and automatic. An unconscious process of attitude formation and change may be automatic as the object of attitude is observed, or even when part of this object is seen, being able to elicit and activated a network of information regarding that object. This happens automatically. So, the alignment between both processes is expected, and more than that, one is expected to reinforce the other, indirectly [13], leading to the fourth hypothesis of this study:

**H4:** Unconscious project marketing assessment mediates the relationship between conscious market orientation and project success.

Based on the theoretical issues discussed earlier, and to achieve the objectives of this study, these four hypotheses were developed and are represented in Figure 1.

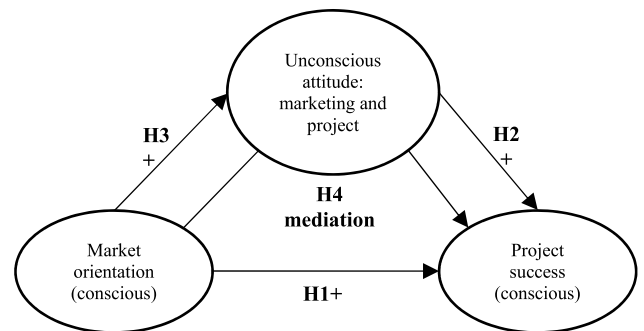


FIGURE 1. Theoretical model.

The following section describes the methodological procedures adopted to test these hypotheses.

#### B. PROCEDURES, SCALES, AND TECHNIQUES

Project success and market orientation are second-order constructs. In this study, the joint dimensions of Impact on the consumer, Impact on Business, and Preparation for the future were considered as project success, based on items of Shenhar and Dvir's study [54]. The dimensions of Generation and Dissemination of intelligence were used, in addition to Responsiveness to measure market orientation, based on the seminal research of Kohli and Jaworski [33]. We clarify that all dimensions use a 5-point Likert scale, from "strongly disagree" to "strongly agree" and follow the epistemological paradigm in PM studies [38] of measurement through self-declaration (see appendix A) [24]. Consequently, they are variables that adopt a conscious view of the constructs. This choice is justified by the search to respect the current tradition of deliberately evaluating these constructs, and then to represent the conscious path of cognitive processes in the project professional.

On the other hand, it was also used implicit attitude towards Project Marketing, which is defined by the authors

of this study as the individual’s unconscious assessment of the relationship between Marketing and Projects. This view follows another epistemological paradigm that proposes a reconciliation between marketing and PM [8], disregarded for some researchers in PM [43], but considered necessary for project-based organizations [59], being recently brought to discussion again [60]. We clarify that this view was measured unconsciously, using an instrument called project marketing IAT, that is, the Implicit Association Test for Project Marketing, based on the model of Greenwald, Mcghee, and Schwartz study [24].

Project marketing IAT consists of a computerized task in which respondents make automatic associations between words and images. In summary, the activity seeks to assess the speed of associations between concepts and valences (positive and negative). The shorter the time of automatic and unconscious association, the stronger the attitude incorporated in the individual’s belief. The software was programmed with five images of Projects, for the category named “Projects” and five images of Marketing for the category called “Marketing”. The images were representative of marketing thought and project management, like the words “marketing”, “market”, “competitors” and “project”, “PMO”, “PMI”, respectively, stylized in pictured symbols in different ways. The IAT computerized task is based on the theory of dual attitudes, which consists of conscious (explicit) and unconscious (implicit) attitudes towards attitude objects or its consequences [13]. The images were then randomly associated with categories of simple words for the favorable or unfavorable association. This is due to measuring the direction (favorable or not) and strength (number size) of the unconscious belief of the respondent regarding the association displayed.

Project marketing IAT is a non-intrusive task in which participants are asked to associate words and images as fast and correct as they can. The images are shown in the center of the screen, randomly, and respondents must link these images to categories of good or bad (representing favorability or not for the association observed), combined to PM or Project Marketing images, also in a random manner. By doing this, people respond faster when the association is more congruent in his or her mind, meaning that the attitude formed is representative of a belief. On the other side, how much slower the association, the weaker the belief is. The reasoning behind the task is that an unconscious attitude can mediate the evaluation and drive the mechanical act of choosing one kind of association, without time to reflecting on it. The programming used the words “Pleasant”, “Cool”, “Wonderful”, “Great” and “Beautiful”, for the category named “Positive words” (meaning favorability of the association), and the words in the “Negative words” category, were “Terrible”, “Horrible”, “Ugly”, “Poor” and “Bad” (meaning an unfavorable association), therefore representing a positive and negative value respectively. The software produces a “D” indicator of the testing effect, varying between -2 and 2. In this study, the more negative the effect, the greater the aversion to the

idea of Project Marketing; on the other hand, the more positive the effect, the greater is the favorability to the concept of marketing in projects.

The respondents were all project professionals, which is a condition for participating in the study. The 45 professionals who constituted the sample were then informed of the strictly academic purpose of the research; they were also instructed on how to complete the questionnaire and use the software. The survey data collection took place between October 2019 and January 2020. Their work area in several and distinct areas, ranging from construction, software, tourism, consultancy, and so forth. This was intended in this study to capture the phenomena without industry bias.

The address of the survey was sent through a link via the internet. The items in the structured questionnaire are randomized at each access. The same participants were approached personally for the computerized task of collecting the variable Project Marketing, unconsciously, called Implicit Attitude to Project Marketing.

For testing the hypotheses, SPSS v.21 software was used, using hierarchical linear regressions [27], procedures described by Hayes & Montoya [28] for mediation tests, using Process® Macro 4, in addition to additional statistical regression tests. A significant statistical test and proven hypothesis for p-value ≤ 5% were considered. The β (beta) coefficients were observed on the relationship between the variables to indicate the strength and direction of this relationship, the R<sup>2</sup> adjusted (explained value of the dependent variable), as well as the test’s significance indicators (Fisher’s F-test and student’s t-test). The performance of these regression tests can be outlined in the general equation:

$$VD = \beta 1. Var1 + \beta 2. Var2 + \dots \beta n. Varn + \beta y. (Var1. Var2. Varn) + k.$$

VD is the tested dependent variable (project success), and Var is the independent predictor variables (Market orientation and Implicit attitude to project marketing). The multiplication of these variables represents the interactions between the variables, thus comprising an observed moderation, and “k” represents the model constant. Mediation corresponds to the indirect influence of an independent variable “X” on a dependent variable “Z” through an independent variable “M”, as shown in Figure 2.

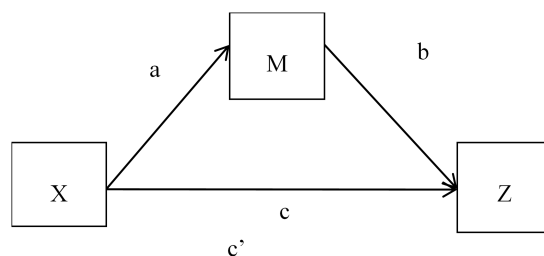


FIGURE 2. Mediation model.

In this model, shown in Figure 1, “a” is the path coefficient between variable X and the mediating variable M, “b” is the path coefficient between variable M and the dependent variable Z. Besides, “c” represents the direct relationship between X and Z, and “c’ ” describes the interaction effect between “a” and “b”, or mediation, or even the effect of the indirect relationship between X and Z. It should be made clear that it does not need to be a significance of “c” to consider the existing mediation since indirect effects do not depend on the direct effect for its occurrence.

Mediation is obtained by multiplying a\*b, where the confidence intervals do not contain zero. This study used Process® Macro 4 [28]. In the next section, the following descriptive data of the study, as well as the results of the hypotheses tests, in addition to other additional complementary regression tests.

**IV. RESULTS**

For an f<sup>2</sup> effect of 0.30, with two predictive variables for the dependent variable, 95% confidence, and 5% error, GPower [18] establishes a sample size of 43 respondents. This value is lower than that collected in this study, which allows valid inferences about its results, as in other studies of reduced sample size for still preliminary and exploratory works as in Miceli and Pieters [40] experiment 1.

The study presented in this article has 45 participants, all of them with high involvement in PM, academic training in projects, and complete higher education, most are men (71%), with an average age of 41 years (sd = 7.26 years).

Table 1 presents descriptive and reliability data for the scales.

The average of the constructs and their dimensions proved to be high. Thus, both the market orientation and project success are consciously evaluated favorably. The Implicit Attitude to Project Marketing was almost neutral, but with an unfavorable trend in the perception of the evaluated group.

**TABLE 1. Descriptive and reliability data.**

Construct	N	Mean	Std dev.	Variance	Cronbach's Alpha
<b>1.Project Success</b>	<b>45</b>	<b>4.105</b>	<b>0.528</b>	<b>0.279</b>	<b>0.872</b>
2.Consumer impact	45	4.293	0.671	0.450	0.846
3.Business impact	45	4.049	0.593	0.352	0.712
4.Preparing for the future	45	4.037	0.592	0.351	0.701
<b>5.Market orientation</b>	<b>45</b>	<b>3.356</b>	<b>0.615</b>	<b>0.378</b>	<b>0.847</b>
6.Generating intelligence	45	3.386	0.856	0.733	0.789
7.Intelligence dissemination	45	3.166	0.678	0.460	0.247
8.Market responsiveness	45	3.442	0.589	0.347	0.673
<b>9.Implicit attitude to project marketing</b>	<b>45</b>	<b>-0.086</b>	<b>0.570</b>	<b>0.326</b>	<b>-</b>

These results indicate an important trend towards a favorability to the conscious relationship between PM and marketing orientation (mean>2.5). On the other hand, the unconscious attitude suggests a negative trend towards

this relationship, although with a relatively small number (D<sub>mean</sub> = -0.086). Table 2 presents the correlation between the study variables, which allows us to explore the strength and direction of the relationships between the primary constructs of the study.

**TABLE 2. Correlations.**

	1	2	3	4	5	6	7	8
1	1							
2	0.822*	1						
3	0.877*	0.594*	1					
4	0.880*	0.605*	0.635*	1				
5	0.583*	0.473*	0.503*	0.525*	1			
6	0.547*	0.511*	0.412*	0.503*	0.895*	1		
7	0.651*	0.479*	0.543*	0.642*	0.865*	0.725*	1	
8	0.440*	0.387*	0.460*	0.295	0.884*	0.646*	0.685*	1
9	0.249	0.223	0.227	0.198	-0.009	0.095	0.069	-0.118

\*p<0,05, Variance Inflation Factor (VIF) < 5

We can say after these initial results that there was no significant correlation between the Implicit Attitude to Project Marketing and any other dimension of the Market Orientation and Project Success constructs. This result suggests that conscious and unconscious processes are independent mechanisms, as all dimensions and constructs measured consciously have achieved significant correlation. The opposite relationship observed between conscious and unconscious processes indicates the conflict in project managers beliefs that marketing is a PM subject matter. Still, the small effect size elicits a relatively low belief, subject malleability [10]. After the descriptive analysis of the data, the hypothesis test of the proposed model was followed, which aims to answer the general objective of this study.

*Hypothesis Test:*

To test the hypotheses, we sought to perform a series of hierarchical regressions to evaluate influence relationships between the independent variables market orientation (conscious) and Implicit Attitude to Project Marketing (unconscious), and their impacts on project success in their marketing dimensions (conscious). The model achieved good fit (R<sup>2</sup> adjusted = 0.373, F = 12.911, ΔR<sup>2</sup> = 0.405, Durbin-Watson test = 1.899). Table 3 presents a summary of the hypothesis tests.

**TABLE 3. Hypothesis.**

H's	Relationship	Effect	t-test	p-value	Status
<b>1</b>	Marketing orientation → Project Success	0.496	4.675	< 0.05	Confirmed
<b>2</b>	Implicit attitude to Project Marketing → Project Success	0.245	3.035	< 0.05	Confirmed
<b>3</b>	Marketing orientation → Implicit attitude to project marketing	-0.206	1.235	> 0.05	Not confirmed
<b>4</b>	Mediation of Attitude Implicit to Project Marketing	-0.002	0.069;0.109]	> 0.05	Not confirmed

Hypothesis 1 was confirmed; the relationship between Market orientation and Project Success proved to exist (β = 0.496, t<sub>45</sub> = 4.675, p<0.05). Also, Hypothesis 2 was

confirmed because the relationship between the Implicit Attitude to Project Marketing and Project Success is positive and significant ( $\beta = 0.245$ ,  $t_{45} = 2.035$ ,  $p < 0.05$ ). These hypotheses represent the parallel paths, conscious and unconscious of the marketing orientation, towards success in projects.

The H3 hypothesis represents the relationship between orientation to the market (conscious) and the Attitude to the Marketing of Projects (unconscious), and it was not significant ( $\beta = -0.206$ ,  $t_{45} = 1.235$ ,  $p > 0.05$ ). The conscious and unconscious processes of Market orientation do not have a theoretical relationship. Hypothesis H4 establishes that the unconscious process of Attitude to Project Marketing would mediate the relationship between Market orientation and Project Success. However, this hypothesis was also not confirmed (a\*b effect =  $-0.002$ , CI, Confidence Interval  $[-0.069; 0.109]$ ,  $p < 0.05$ ).

## V. DISCUSSION

The results bring evidence mainly that both cognitive processes of evaluating the influence of marketing thinking, conscious and unconscious, affect Project Success and are parallel mechanisms. This statement can be made because of the confirmation of H1 and H2. However, the strength of this influence is different. The influence of Market orientation in Project success, through a conscious mechanism, is more significant ( $\beta = 0.496$ ,  $t_{45} = 4.675$ ,  $p < 0.05$ ) than the influence of the unconscious, implicit attitude to Project marketing ( $\beta = 0.245$ ,  $t_{45} = 2.035$ ,  $p < 0.05$ ). Thus, the conscious process of market orientation affects more than the unconscious process, although both do so in a positive way. Based on these analyses, we can infer that the greater the market orientation, conscious or unconscious, the greater the chance of project success. Also, we can say that a better understanding of success in projects should require considering both processes, conscious and unconscious.

It is also worth noting that the unconscious and conscious processes even seem to function independently of each other, as independent cognitive mechanisms for the project's success. Furthermore, we also verified the non-significance of the relationship between these processes, as can be seen in the H3 tests ( $\beta = -0.206$ ,  $t_{45} = 1.235$ ,  $p > 0.05$ ), corroborating what it is observed through the correlation between the unconscious process and the dependent variable, both the project success, the 1st order construct, and with their dimensions, that do not have significant indicators, as shown in Table 2.

In this sense, it is observed that the construction of a general assessment of what the project's success is following different paths. One more subjective, based on a deliberate evaluation, and the other unconscious, and antagonistic in this sample, given that the average Implicit Attitude to Project Marketing was slightly negative ( $D = -0.086$ ). This ambivalence is expected in matters involving opposing beliefs like stereotypes [10], as it seems to be the vision pointed out by the separate evolution of PM and Marketing disciplines,

and the mindset of project professionals, which represents a direction guided by the norms, practices, and techniques of project management.

We stress that the challenge for these professionals is to realistically establish the objectives of the projects regarding the cost-term-quality balance consciously and to manage the expectations of the client and the team involved throughout the project to meet the defined objectives. This reality reflects decisions that are made in the face of any change, without allowing unconscious influence. However, the tradition of the team's responsibility and, especially, the manager's responsibility for the results of the project, which has always focused on criteria based on project management, is still strong. Incorporating flexibility to meet changing business and emerging strategies has been the focus of more agile methods. Thus, this divergence between the conscious and unconscious levels suggests the difficulty of incorporating and expanding the market view in managers who responded to the survey; these same ideas just be presented by Martens *et al.* [38] e Shenhar and Holzmann [55]

As for the unconscious processes being a mediation mechanism for conscious evaluations in projects, the relationship between Market orientation and success in projects, the research corroborates the independence of these mechanisms. H4 hypothesis did not confirm the mediation process (a\*b effect =  $-0.002$ , IC $[-0.069; 0.109]$ ,  $p < 0.05$ ), a correspondent who establishes that the influence of Market orientation on Projects Success is not indirect, mediated by an unconscious process, only occurring directly. These results show the importance of developing conscious and unconscious attitudes and beliefs favorable to project success. Still, it also reveals their independence as mechanisms for building beliefs and assessing project success.

The fact that hypotheses H3 and H4 are not confirmed may be related to the essential characteristics present in project marketing. Project marketing essentially has actions related to project planning, legislation, and negotiation to create value for the organization, but also customers [30]. These actions are often promoted without considering time-critical factors such as financial control and customer relations, which can negatively impact regular project success criteria [20].

Another scenario that may contribute to explain the non-confirmation of hypotheses H3 and H4 may be constituted by the particularities of the marketing and PM areas in search of success. Marketing has a long-term relationship when it comes to carrying out projects. In contrast, PM practices and techniques have their orientation with a previously determined start and end, using resources in their activities in the context of risks and uncertainties [48], [52], seeking efficiency, meeting the previously planned scope, cost, and deadlines, in addition to the pre-determined aspects of project management quality [48].

Thus, in the context presented here about project marketing, it seems that there is a relationship of dissonance,



TABLE 4. Scales of the study.

Dimension	Item
(MO) Intelligence generation	In this organisation, we meet with customers at least once a year to find out what products or services they will need in the future
	In this organisation, we do a lot of in-house market research.
	We are slow to detect changes in our customers' product references
	We survey end users at least once a year to assess the quality of our products and services.
	We are slow to detect fundamental shifts in our industry (eg. competition, technology, regulation)
(MO) Intelligence dissemination	We periodically review the likely effect of changes in our business environment (eg. regulation) on customers.
	We have interdepartmental meetings at least once a quarter to discuss market trends and developments.
	Marketing personnel in our organisation spend time discussing customers' future needs with other functional departments.
	When something important happens to a major customer of market, the whole department or organisation knows about it within a short period.
	Data on customer satisfaction are disseminated at all levels in this organisation on a regular basis.
(MO) Responsiveness	When one department finds out something important about competitors, it is slow to alert other departments.
	It takes us forever to decide how to respond to our competitor's price changes
	For one reason or another we tend to ignore changes in our customer's product or service needs.
	We periodically review our product development efforts to ensure that they are in line with what customers want.
	Several departments get together periodically to plan a response to changes taking place in our business environment.
	If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately
	The activities of the different departments in this business are well coordinated.
	Customer complaints fall on deaf ears in this organization
	Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion.
	When we find that customers would like us to modify a product or service, the departments involved make concerted efforts to do so.
(PS) Impact on Customer	The product improved the customer's performance.
	The customer was satisfied.
	The product met the customer's requirements.
	The customer is using the product.
	The customer will come back for future work.
(PS) Business and Direct Success	The project was an economic business success.
	The project increased the organization's profitability.
	The project has a positive return on investment.
	The project increased the organization's market share.
	The project contributed to shareholders' value.
(PS) Preparation for the Future	The project contributed to the organization's direct performance.
	The project outcome will contribute to future projects.
	The project will lead to additional new products.
	The project will help create new markets.
	The project created new technologies for future use.
	The project contributed to new business processes.
	The project developed better managerial capabilities

\*MO=Marketing Orientation based on Shenhar and Dvir's study [54]  
 \*PS=Project Success based on Kohli, Jaworski, and Kumar [33]

mainly unconscious, influenced by the assumptions of marketing. The long-term view related to marketing actions is impacted by the restrictions provided for PM. This view was evident in the evaluations of the project professionals observed. On the other hand, marketing, in his turn, allows actions based on the application of resources to be considered in the long term, being understood as market investments.

We emphasize that this is not a natural change of mindset, especially when the predictability of project management changes due to long-term market views.

This study aimed to evaluate the relationship between the vision of marketing, through conscious and unconscious processes, and its influence on the success of projects. This objective was achieved by developing a valid model that explained 40% of the success variance in projects ( $R^2$  from 0.340 to 0.400). Additionally, the study determined the relationship between conscious and unconscious cognitive processes of the influence of marketing in projects on success in projects based on the professional's cognitive processes. The study theoretically contributes in two main ways. Firstly, it contributes by adding additional explanations for project success to the project and project marketing literature, which are presented here through Market orientation. Second, this is the first study that we are aware of that aims to analyze unconscious influences on Project success. This new perspective allows a new and broad path of research to open to the understanding of project-related phenomena. The methodological contribution adds to the positivist paradigm of project studies by operationalizing the first form of unconscious evaluation of project phenomena within the scope of project management. For practitioners, this study contributes by provoking that the success of a project is influenced by a Market orientation that must be in the conscious and unconscious of those involved with projects. We emphasize that technical preparation in project management is not enough; project professionals must develop a look at the market, both deliberately and unconsciously, introjected. This should reflect the predisposition to empathize with the client, as well as clear objectives to meet the needs and expectations of not only the internal sponsor of the organization but mainly clients and users of the project's result, in the form of products or services.

## VI. CONCLUSION

This study has argued that the relationship between PM and the vision of marketing should be analyzed through conscious and unconscious processes, to a better understanding of its conjoint influence on the project's success. The study has identified that both conscious and unconscious attitudes towards marketing orientation, and its relationship with PM, influence project success, independently and in parallel. These findings suggest that in general, for better results for projects, the integration of marketing into project management is a crucial aspect, not just in terms of discipline, but also into practice. Even more, companies and project managers should benefit from these results, as it became incorporated into their culture and beliefs, respectively. These findings will be of interest to researchers and practitioners, as it is the first time that conscious and unconscious processes reconcile to explain project success.

A limitation of this study is that it lacks a greater sample size, even though it is an explanatory study. We also consider that the contribution provided by practitioners is more

valuable than generalization. Also, it was not possible to assess the generalization of the study; therefore, it is unknown if other variables influence the results. Several questions remain to be answered. Another limitation of the study is the small Cronbach's Alpha of the dimension Intelligence Dissemination. It may have happened due to the lack of this aspect in the organizations of the sample respondents. Even though it does not overshadow the main results, it poses a limitation. But the Cronbach Alpha of the second-order construct, Market Orientation, remained high. New studies can explore the operationalization of constructs in an unconscious way, such as soft and hard skills, as well as replicating previous studies only with an implicit evaluation of the models previously studied. Another critical point is to check if the market view has differences, when the project management practices employed are cascade, agile, or hybrid, an assessment that was not considered in this research. Notwithstanding these limitations, the study suggests an import avenue for further research integrating PM and marketing, through unconscious processes, as the conscious one is the current epistemological paradigm.

## APPENDIX

See Table 4 here.

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