



Academia Revista Latinoamericana de Administración

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Article information:

To cite this document:

Álvaro Dias, Renato Pereira, (2017) "Dynamic capabilities and marketing capabilities in Portugal", Academia Revista Latinoamericana de Administración, Vol. 30 Issue: 3, pp.417-430, <https://doi.org/10.1108/ARLA-10-2016-0268>

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Dynamic capabilities and marketing capabilities in Portugal

Dynamic
capabilities

Capacidades dinâmicas e capacidades de marketing em Portugal

417

Received 7 October 2016

Revised 9 January 2017

3 May 2017

Accepted 22 May 2017

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Abstract

Purpose – The purpose of this paper is to offer an operationalization of an aggregate construct and a decisive contribution to building a dynamic capabilities theory with marketing implications. The authors investigate the influence of dynamic capabilities, specifically routine creation through embedding learning and knowledge, on marketing capabilities and performance in Portugal. The authors examine the direct relationship between dynamic capabilities and marketing capabilities, which is indirectly linked to performance depending on the effectiveness of the resulting new resource configuration.

Design/methodology/approach – The authors used four construct dimensions: knowledge creation routines, knowledge transfer processes, marketing capabilities, and firm performance. The study was based on an inter-industry random sample of firms selected from a commercial list. During a nine-month period the authors gathered data from a questionnaire delivered in hand to participating firms and collected through in-depth personal interviews. It was filled out by directors of Portuguese firms who agreed to participate in this study.

Findings – First, dynamic capabilities play an important role in the evolution of marketing capabilities and the maintenance of competitive advantage. Specifically, the authors identified a link between knowledge creation routines and knowledge transfer processes with marketing capabilities. Second, the effect of dynamic capabilities on performance can be considered to be substantially indirect. However, the results also show a direct link between knowledge transfer and performance.

Originality/value – First, the development of a model establishing the contribution to the evolution of marketing capabilities in order to compete in a changing environment, considering the critical effect of knowledge creation and transfer in a non-static market configuration. Second, the analysis of marketing capabilities from different layers, from strategic to more operational aspects.

Keywords Dynamic capabilities, Marketing capabilities, Learning, Knowledge, Routines

Paper type Research paper

Resumen

Objetivo – Este artigo propõe a operacionalização de um construto agregado e oferece um contributo significativo para a definição de uma teoria de capacidades dinâmicas com implicações ao nível do marketing. Investigou-se a influência das capacidades dinâmicas, especialmente a criação de rotinas através da implementação de aprendizagem e de conhecimento, nas capacidades de marketing e no desempenho empresarial, em Portugal. Testou-se a relação direta entre capacidades dinâmicas e capacidades de marketing, que está indirectamente ligada ao desempenho empresarial, dependendo da eficácia da configuração de novos recursos resultante.

Arquitetura/metodologia/abordagem – Utilizaram-se quatro dimensões: rotinas de criação de conhecimento, processos de transferência de conhecimento, capacidades de marketing, e desempenho



Academia Revista
Latinoamericana de
Administración
Vol. 30 No. 3, 2017
pp. 417-430

© Emerald Publishing Limited
1012-8255
DOI 10.1108/ARLA-10-2016-0268

JEL Classification — L1, M3

empresarial. Este estudo baseou-se numa amostra aleatória inter-industrial de empresas selecionadas a partir de um cadastro comercial. Durante um período de nove meses, recolheram-se dados a partir de um questionário entregue em mão às empresas participantes a partir de um processo de coleta efetuado com base em entrevistas pessoais extensivas a diretores de empresas portuguesas que concordaram em participar neste estudo.

Resultados – Em primeiro lugar, as capacidades dinâmicas desempenham um papel importante na evolução das capacidades de marketing e na manutenção de uma vantagem competitiva. Especificamente, identificou-se uma relação entre as rotinas de criação de conhecimento e os processos de transferência de conhecimento com as capacidades de marketing. Em segundo lugar, verificou-se que o efeito das capacidades dinâmicas no desempenho empresarial é essencialmente indireto. Ao mesmo tempo, os resultados demonstram também uma relação directa entre a transferência de conhecimento e o desempenho empresarial.

Originalidade/valor – Primeiro, o desenvolvimento de um modelo que descreve o contributo das capacidades de marketing no contexto da competição numa envolvente em mudança, considerando o efeito crítico da criação e transferência de conhecimento no âmbito de um mercado não-estático. Segundo, a análise das capacidades de marketing a diferentes níveis, dos mais estratégicos aos mais operacionais.

Palabras clave Capacidades dinâmicas, capacidades de marketing, aprendizagem, conhecimento, rotinas

Tipo de papel Trabajo de investigación

1. Introduction

There have been a considerable amount of contributions to the dynamic capabilities approach since the seminal article by Teece *et al.* (1997). This field is changing rapidly (Oliver and Holzinger, 2008; Karna *et al.*, 2016) and is at the forefront of the research agendas of many scholars (Zahra *et al.*, 2006; Helfat and Peteraf, 2015). As already recognized, the resource-based view (RBV) does not explain competitive advantage in more complex and changing environments because of its static nature (Zander and Kogut, 1995; Priem and Butler, 2001; Danneels, 2008; Bingham *et al.*, 2015). The theoretical and managerial relevance of these matters is related to the sustainability of competitive advantage in rapidly changing environments (Teece *et al.*, 1997; Zahra *et al.*, 2006), but also in moderate contexts (Eisenhardt and Martin, 2000) when “firms obviously do integrate, build, and reconfigure their competencies even in environments subject to lower rates of change” (Zollo and Winter, 2002, p. 340). Makadok (2001) considers the type of environment irrelevant but that it always plays a role (Schilke, 2014).

Regardless of environmental circumstances, a dynamic capabilities approach is riddled with heterogeneity and, two decades after its birth, is far from being consolidated, with scholars pointing in opposite directions in a remarkably rich, but often disconnected, body of research (Barreto, 2010).

Amidst all the works published on this subject, some critics have voiced opposition to the dynamic capabilities approach and used attributes like “vague” or “tautological” to describe it (Williamson, 1999; Kraatz and Zajac, 2001). This has triggered elusive responses by those scholars who defend the approach (Eisenhardt and Martin, 2000).

In all this discussion, there are two points of agreement. First, the dynamic capabilities approach is not yet a theory (Teece, 2007; Helfat and Peteraf, 2009; Barreto, 2010). Second, empirical work is in its infancy and, as yet, has a low level of support (Zott, 2003; Moliterno and Wiersema, 2007; Newbert, 2007; Kor and Mesko, 2013).

Against this background, the aim of this paper is to contribute to the development of empirical work in the field, to study the effect of dynamic capabilities on performance through marketing capabilities. Specifically, we have two objectives. First, we aim to develop a model establishing the contribution to marketing capabilities evolution in order to compete in a changing environment, considering the critical effect of knowledge creation and transfer in a non-static market configuration. As stated by Krasmikov and Jayachandran (2008, p. 1), to develop “research providing empirical generalizations for the relationship of different types of capabilities to performance and an examination of how they vary would benefit managers and academics.” We also addressed marketing capabilities because they are crucial for competitive sustainability and “give the organization the means to adapt to market changes” (Day, 2011, p. 185).

Second, considering that it involves the processes that empower firms to build long-term relationships with customers, we want to analyze marketing capabilities from different layers, from strategic to more operational aspects (Day, 1994). Thus, aspects such as planning, as well as other marketing-mix variables, must be considered (Vorhies and Morgan, 2005).

2. Model development

Figure 1 summarizes the theoretical model described in this section. First of all, we argue that the link between marketing capabilities and performance has a nature of short-term dependence. Second, we believe the influence of dynamic capabilities, here considered through knowledge creation and transfer processes through which firms change and reconfigure their marketing capabilities has, therefore, an indirect link to performance (Protopero *et al.*, 2012). Third, we defend that, as considered by many scholars, it should be regarded as a direct link between those dynamic capabilities and performance. The model structure is consistent with Zott's (2003, p. 100) vision of a "chain of causality that implies an indirect link between dynamic capability and firm performance." It is also based on the assumption that dynamic capabilities "consist on identifiable and specific routines" like "[t]ransfer processes [...] are used by managers to copy, transfer, and recombine resources, specially knowledge-based ones" (Eisenhardt and Martin, 2000, p. 1107).

2.1 Marketing capabilities

According to Helfat and Peteraf (2003), capabilities are complex bundles of skills and knowledge embedded in organizational processes, where marketing capabilities can be included (Vorhies and Morgan, 2005; Krasnikov and Jayachandran, 2008). As defended by the RBV of the firm, the resource base proves to be valuable, rare, inimitable, and non-substitutable (VRIN) (Wernerfelt, 1984; Barney, 1986, 1991). Additionally, once the VRIN characteristics are assured, firms can "deploy their resources and capabilities strategically, allowing them to exploit their distinctive competencies in the best way possible to create sustainable competitive advantage" (DeSarbo *et al.*, 2006, p. 909). According to Slotegraaf *et al.* (2003, p. 297) "immobile resources are highly firm specific, legally protected, and likely created as a function of more complex technical or social routines" turning them into idiosyncratic assets to the firm. In an increasingly competitive and dynamic context, the question that arises is how to sustain the competitiveness of those idiosyncratic assets, where cycles of innovation and imitation are the main engine of industry capabilities (Lampel and Shamsie, 2003).

The marketing capabilities effect on firm performance has been pointed out by many scholars (e.g. Day, 1994; Moorman and Rust, 1999; Slotegraaf *et al.*, 2003; Vorhies and Morgan, 2005). The value of the marketing function for market orientation and firm

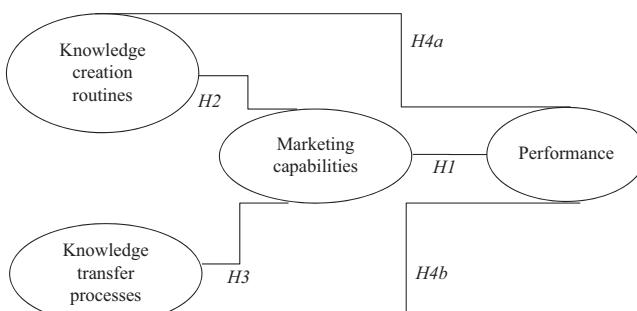


Figure 1.
Relationship between dynamic capabilities, marketing capabilities, and performance

performance is recognized (Moorman and Rust, 1999; Krasnikov and Jayachandran, 2008) by means of facilitating the link between customer and several key firm processes (Day, 1994), including financial performance and customer relationship performance (Moorman and Rust, 1999), and yet by gaining competitive advantage through the interrelation of various firm-level resources and marketing-specific actions in complex ways (Slotegraaf *et al.*, 2003).

For this purpose, Vorhies and Morgan's (2005) approach to marketing capabilities will be considered, including pricing, product development, channel management, marketing communication, selling, market information management, marketing planning, and marketing implementation. Thus:

H1. Marketing capabilities positively affect firm performance.

2.2 Marketing capabilities and dynamic capabilities

As pointed by Haas and Hansen (2005), capabilities can turn into core rigidities, and specifically competitive performance is more dependent on how firms use what they know than on how much they know. From their perspective, knowledge, as well as other organizational capabilities, depends on the task circumstances, suggesting the importance of including a dynamic perspective in our construct, shifting the emphasis from strictly acquiring resources to deploying those owned by the firm (Slotegraaf *et al.*, 2003). Considering the effect of technological turbulence, Song *et al.* (2005) observed, for instance, that the impact of marketing capabilities on joint venture performance can vary. In the dynamic capabilities field, Teece *et al.* (1997) advocates the importance of combining asset positions to shape technological, organizational, and managerial processes. They recognize that "since productive knowledge is embodied [...] only in those instances where all relevant knowledge is fully codified and understood" (p. 425), replication, as a strategic valuable action, can be possible. These knowledge transfer processes are also considered as dynamic capabilities and were detailed in several components by Macher and Mowery (2009). In their empirical research on dynamic capabilities measurement, the effects on firm performance are analyzed.

In the field of resources and capabilities reconfiguration, dynamic capabilities play a relevant role (Teece *et al.*, 1997; Eisenhardt and Martin, 2000; Winter, 2003). Zahra *et al.* (2006, p. 912), "distinguish substantive (used to solve a problem or achieving an outcome) capability from the dynamic ability to change or reconfigure existing substantive capabilities, which we term as the firm's dynamic capabilities."

Dynamic capabilities are the core factors in changing the organization resource base, considered by Winter (2003) as higher-level capabilities altering ordinary capabilities or substantive capabilities (according to Zahra *et al.*, 2006). Eisenhardt and Martin (2000) also use the term capabilities, but Zollo and Winter (2002) refer to routines dedicated to the modification of operating routines, and Danneels (2008) uses the term second-order competences, as they have the ability to build new competences.

Independently of these differences, it seems to be accepted that capabilities and dynamic capabilities are related to one another.

In this framework, the resulting question is: What organizational "second order" competences should we consider as dynamic capabilities? Answering this question is the core of academic research in this area. In their paper, Eisenhardt and Martin (2000), while responding to criticisms, enumerated several dynamic capabilities, such as product development routines, strategic decision making, routines for replication and brokering, and others. For the purpose of this research, we highlight that "other dynamic capabilities focus on reconfiguration of resources within firms. Transfer processes [...] are used by managers to copy, transfer, and combine resources, especially knowledge-based ones, within the firm" (p. 1107).

Danneels (2008, p. 519) defines dynamic capabilities as a “competence to build competences,” exemplifying that an explorative competence allows firms to build new competences and is based on the concept that “accumulation of new resources to form new organizational competences is a form of organizational learning” (Danneels, 2008, p. 520), and then suggesting a link between the evolution of dynamic capabilities and learning mechanisms (Zollo and Winter, 2002).

Against this background, in this paper, we have considered knowledge creation routines and transfer processes as dynamic capabilities; therefore, our objective is to evaluate the role of knowledge creation and transfer processes on marketing capabilities, given their importance on firm performance. Moorman and Rust (1999) empirically established the connection between knowledge and skills of customer-product, customer-service, and customer-financial accountability and the marketing function value of the firm. Li and Calantone (1998, p. 14) presented the importance of market knowledge competence on new product advantage as being “particularly significant because (it) is a higher order resource.”

The link with other kinds of knowledge is an object of scholarly discussion. Hurley and Hult (1998) argued that innovation is a better focus for the market orientation model than learning, but Homburg and Pflesser (2000) showed evidence that shared values, such as openness of internal communication, positively affects the presence of norms for market orientation, and market knowledge “usually develops over time through learning and experimentation” (Krasnikov and Jayachandran, 2008, p. 3).

Collins and Smith (2006) established an indirect link between social climate and firm performance through their effects on knowledge exchange and combination, recognizing that human resource practices “lead to higher performance when they develop the organizational social climate and employee-based capabilities that are important to firm performance” (p. 548).

Considering a broader concept of knowledge, including market knowledge among other sources internal and externally captured by the firm:

H2. Marketing capabilities are affected by knowledge creation routines.

H3. Marketing capabilities are affected by knowledge transfer processes.

2.3 Dynamic capabilities: the link with performance

The discussion about the direct relationship between dynamic capabilities and firm performance started at the same time as the concept itself. On one hand, performance can be directly affected by dynamic capabilities (e.g. Teece *et al.*, 1997; Makadok, 2001; King and Tucci, 2002; Zollo and Winter, 2002). On the other hand, performance is a result of competitive advantage produced by the new configuration of resources, which is built through dynamic capabilities (Eisenhardt and Martin, 2000; Døving and Gooderham, 2008; Helfat and Peteraf, 2015). As observed by Pablo *et al.* (2007, p. 703) “the managerial actions (use of dynamic capabilities) appear to be critical in achieving the desired organizational goals.”

A third perspective, indirect relationship, can also be considered whenever the quality of substantive capabilities is altered by dynamic capabilities (e.g. Zott, 2003; Zahra *et al.*, 2006). To test direct and indirect relationships, we argue that the model should include both perspectives. As the indirect perspective is considered on *H2* and *H3*, in this section we hypothesize the direct link to performance. First, referring to Eisenhardt and Martin’s (2000) perspective on the relation of knowledge creation routines and performance, the outcome predictability depends on the market’s velocity of change. Second, taking into consideration the previously presented relationship of knowledge exploitation through transfer processes (Teece *et al.*, 1997; Macher and Mowery, 2009), we hypothesize:

H4a. Knowledge creation routines affect firm performance.

H4b. Knowledge transfer processes affect firm performance.

3. Methods

3.1 Sample and research procedures

To test our hypotheses, we began using literature-based insights to structure each of the four construct dimensions: knowledge creation routines, knowledge transfer processes, marketing capabilities, and firm performance. A preliminary survey was developed and evaluated by two professors of marketing and strategy, followed by a face-to-face pre-test with a small group of ten top managers from different Portuguese firms. The survey was then refined according to the pre-test and feedback results.

Similarly, to previous research on dynamic capabilities (e.g. Kale and Singh, 2007; Kusunoki *et al.*, 1998; Song *et al.*, 2005), our study was based on an inter-industry random sample of firms selected from a commercial list, it included micro firms (less than ten employees), small firms (10-49 employees) and medium sized firms (50-249 employees). We sorted 311 companies from the list. During a nine-month period in 2014-2015, we called every company in order to assess their interest to respond the questionnaire and to receive the promised report. For those that respond positively (207 companies), a specific day was scheduled to visit and gather data from a questionnaire delivered in hand through in-depth personal interviews. It was filled out by directors of Portuguese firms who agreed to participate in this study. In line with Cavusgil and Zou (1994), inter-industry research, we also "believed that the data collected through in-depth personal interviews were more comprehensive, accurate, and reliable than what would have been possible through a mail survey" (p. 6).

We assured confidentiality and promised a final summary to ensure a higher rate of return. We chose general or marketing directors because they should be knowledgeable of the overall firm strategy, marketing, organizational decisions, and performance compared to direct competitors.

Out of 207, 197 companies attended the interview meeting and responded to the entire questionnaire. The 197 responses included 52 (26.40 percent) from the manufacturing industry, 66 (33.50 percent) from retail commerce, and 79 (40.10 percent) from services.

3.2 Description of the measures

We have operationalized marketing capabilities by applying Vorhies and Morgan (2005) scales to pricing, product development, channel management, marketing communication, selling, market information management, marketing planning, and marketing implementation.

We used Tanriverdi (2005) knowledge management capability scale to measure knowledge creation routines. It covers several aspects of knowledge management, like creation, transfer, integration and the degree of R&D, marketing and management political change. For the purpose of this study, we selected questions related to knowledge creation, using only questions 1, 5 and 9 from his twelve-item scale, and eliminated the others, because they were the ones related to knowledge creation.

Consistent with our conceptualization and in line with Macher and Mowery's (2009) perspective of knowledge transfer processes, we measured knowledge transfer processes by combining two as sub-scales: intelligence dissemination and cross-functional collaboration. These items focused on the extent to which knowledge dissemination was emphasized in the firm and were measured using Jaworski and Kohli's (1993) intelligence dissemination items. We chose this scale because of its relevance in marketing processes and for recognizing the importance of embedding individual or group practices on organizational processes (Zollo and Winter, 2002). In order to include the second component, the scale also included several items that addressed cross-functional collaboration adopted from De Luca and Atuahene-Gima (2007). For the purpose of his paper, this scale contributes to acknowledging the behavioral activities of marketing interface with other knowledge intensive functions, in line with prior research marketing activities communication and cooperation (Li and Calantone, 1998).

The data collection yielded 197 valid responses, with a sample composition of 75.9 percent micro and small firms, and 24.1 percent medium sized firms. The average sample size was 98.05 workers, and 67.6 percent of the responses focused on the commerce and service sectors. This composition mirrors the Portuguese marketplace.

For performance, we adapted Katsikeas *et al.*'s (2006) customer satisfaction and financial performance scales. The measurement of customer satisfaction considers value added perception and customer retention. Financial performance also uses a four-item scale evaluating managers' perception of profitability evolution (as a percentage of sales), ROI, ROS, and the reaching of financial goals.

We modified the scales to address firm evolution considering a multi-item scale for each construct, using a five-point Likert-type scale. Basically, each respondent was asked to indicate the current situation of the firm compared to that of competitors, such that 1 = Much Worse and 5 = Much Better. This modification was intended to measure a dynamic perspective of each construct.

4. Results and discussion

We purified our measures using exploratory factor analysis and reliability analysis for each of the eight Vorhies and Morgan's (2005) marketing capabilities: pricing, product development, channel management, marketing communication, selling, market information management, marketing planning, and marketing implementation. The results of the measurement analysis are shown in Table I.

Measurement for knowledge creation routines ($M = 3.49$; $SD = 0.67$) on a three-item scale computed α of 0.932, which gives a high-level reliability. Sub-scales for knowledge transfer processes were, as defined, intelligence dissemination seven-item scale ($M = 3.69$; $SD = 0.63$) and cross-functional collaboration three-item scale ($M = 3.60$; $SD = 0.65$), also presenting a good reliability result (0.915 and 0.897, respectively). Performance included customer satisfaction and financial performance. The former ($M = 3.88$; $SD = 0.63$) computed a 0.899 α and the latter ($M = 3.35$; $SD = 0.84$), a reliability value of 0.957.

After ensuring the reliability of constructs, we carried out a correlation analysis to identify relationships between constructs. $H1$ proposed that the greater the marketing capabilities, the greater the performance. Positive and strong correlations can be found between marketing capabilities and performance ($r = 0.493$; $p < 0.01$). We believe this suggests that establishing a market presence through marketing planning and operational tools are important strategic actions for competitiveness.

$H2$ establishes that investment in knowledge creation routines has a positive impact on firms' marketing capabilities. Results clearly show this correlation ($r = 0.497$; $p < 0.01$). This evidence is consistent with literature, and supports the role of dynamic capability on "first order" change in competitive markets.

| Marketing capabilities | Items | α | Mean | SD |
|-------------------------------|-------|----------|------|------|
| Pricing | 4 | 0.783 | 3.45 | 0.60 |
| Product development | 5 | 0.904 | 3.85 | 0.74 |
| Marketing communication | 5 | 0.872 | 3.49 | 0.80 |
| Channel management | 5 | 0.924 | 3.56 | 0.73 |
| Selling | 5 | 0.908 | 3.57 | 0.74 |
| Market information management | 6 | 0.904 | 3.54 | 0.71 |
| Marketing planning | 5 | 0.921 | 3.38 | 0.65 |
| Marketing implementation | 5 | 0.928 | 3.37 | 0.65 |

Note: $n = 197$

Table I.
Summary statistics of
the measurement
analysis – marketing
capabilities

H3 considers that knowledge transfer processes also have an effect on marketing capabilities development. Positive and significant correlation was determined ($r = 0.406$; $p < 0.01$). These findings show that knowledge creation is important, but that the way it is spread through the organization, is also critical.

H4a and *H4b* stands for the direct link between knowledge creation and transfer and the performance of firms. The performance construct computes a positive correlation with knowledge transfer processes ($r = 0.406$; $p < 0.01$), but, interestingly, there is no correlation with knowledge creation routines. As recognized by Lampel and Shamsie (2003), mobilizing and transforming capabilities are directly related to market performance. However, knowledge creation routines can be understood as a source of wisdom that must be operationalized into competitive factors with an indirect link with performance. In line with Barney *et al.* (2001), these findings underline the importance of marketing and RBV on the relationship between marketplace changes and the evolution of key resources. More recent RBV publications recognize that the link between firm resources and performance is more complex, depending on the influence of different factors (Andersén, 2011). The key role of knowledge transfer is also consistent with previous research. For example, Ray *et al.* (2005) highlights the importance of IT based shared knowledge and the “rare” characteristic of this capability.

At this point, support for *H4b* is strong, meaning that dynamic capabilities are directly related with performance, as indicated in early publications. But the rejection of *H4a* opens the way to the opposite perspective, which defends an indirect link to performance, in line with more recent publications on the dynamic capabilities field.

In order to further test our model, we conducted a stepwise regression. With this model we intend to insert, as predictors, the moderators presented in our model (knowledge creation routines processes and knowledge transfer processes) and analyze the differences and changes in R^2 values. The results are presented in Tables II and III.

According to Table II, the first model F value ($F = 71.004$, $p < 0.01$) suggests an overall improvement in performance due to the model. In the second model, when we included knowledge creation routines as a predictor, the F value remained unchanged, indicating that it does not contribute significantly to the model, as confirmed by the T test ($T = 0.356$, $p > 0.05$). The change in R^2 was null, confirming these results and meaning that the performance impact depends only on the effect of marketing capabilities. The β value ($b = 0.686$) indicates that an increase in marketing capabilities contributes to an increase in performance, but there is no evidence that knowledge creation routines have a significant direct impact on firm performance. These results fully confirm *H1* and *H4b*. This is very

| Independent variables | Dependent variable |
|--|--|
| <i>Model 1 (marketing capabilities)</i> | |
| β values | 0.686 (0.896) |
| F value | 71.004* |
| R^2 | 0.470 |
| t values | 8.426* |
| <i>Model 2 (marketing capabilities plus knowledge creation routines)</i> | |
| β values | Marketing capabilities: 0.686 (0.896) Knowledge creation routine: 0.033 (0.028) |
| F value | 71.004* |
| R^2 change value | 0.470 |
| t values | Marketing capabilities: 8.426* Knowledge creation routines: 0.356** 1.919 |
| Durbin-Watson | |
| Notes: * $p < 0.01$; ** $p > 0.05$ | |

Table II.
Stepwise regression
(model 1)
results – dependent
variable: performance

| Independent variables | Dependent variable | Dynamic capabilities |
|---|--|----------------------|
| <i>Model 1 (marketing capabilities)</i> | | |
| β values | 0.686 (0.896) | |
| F value | 71.004* | |
| R^2 | 0.470 | |
| t values | 8.426* | |
| <i>Model 2 (marketing capabilities plus knowledge transfer processes)</i> | | |
| β values | Marketing capabilities: 0.096 (0.132) Knowledge transfer processes: 0.912 (0.940) | |
| F value | 995.719* | |
| R^2 change value | 0.945 | |
| t values | Marketing capabilities: 3.274* Knowledge transfer processes: 31.208* | |
| Durbin-Watson | 2.336 | |
| Note: * $p < 0.01$ | | |

425

Table III.
Stepwise regression
(model 2)
results – dependent
variable: performance

interesting and supports the indirect effect of dynamic capabilities on performance even further. Knowledge creation needs to be applied to business procedures and strategic decisions in order to contribute to competitive advantage. This sequence concept is consistent with Teece's (2007) perspective of dynamic capabilities micro-foundations. We acknowledge Zahra *et al.*'s (2006) findings that dynamic capabilities may damage organizational performance when misused (e.g. mistakes resulting from wrong cause-effect assumptions).

Concerning knowledge transfer processes, we can observe in Table III, that this predictor does have a meaningful impact on the fitness of the model ($F = 995.71$, $p < 0.01$). In fact, the knowledge transfer processes β value ($b = 0.912$) suggests that this predictor has a greater impact on the model than marketing capabilities. The analysis of t values for marketing capabilities ($t = 3.274$; $p < 0.01$) and knowledge transfer processes ($t = 31.208$; $p < 0.01$) variables attest this discrepancy. From model 1 to model 2, the introduction of a knowledge transfer processes predictor makes an important contribution to the model, as confirmed by the high F values. The inclusion of this predictor explains a considerable percentage of performance variation (47.5 percent), meaning that the model including marketing capabilities and knowledge transfer processes as predictors explains 94.5 percent of performance variation. These results show that firms with better knowledge transfer processes had significantly stronger marketing capabilities and, consequently, better performance, consistent with $H3$ and $H1$ and our findings regarding knowledge transfer discussed earlier.

In sum, the hypotheses regarding the link between marketing capabilities and performance ($H1$), knowledge creation routines ($H2$), and knowledge transfer processes ($H3$), were supported by the results. The analysis also suggests that $H4b$ is supported in terms of the direct link between knowledge transfer and performance. $H4a$ received some support in correlation but was not supported in stepwise regression. The indirect influence of knowledge transfer processes on performance through marketing capabilities received strong support. Knowledge creation routines' indirect link was not supported.

Our study focuses on two specific objectives. The first intends to develop a model establishing the contribution to the evolution of marketing capabilities in order to compete in a changing environment, considering the critical effect of knowledge creation and transfer in a non-static market configuration. Several authors propose approaches that seek to instill dynamism in marketing capacities. For example, Day and Moorman (2010) consider that marketing capabilities should not be confined to their operational dimension, and should play a strategic role, this being essential to promote customer value leadership, innovate new value, capitalize on the customer as an asset and capitalize on the brand as an asset.

In another perspective, Morgan *et al.* (2009) consider that market orientation is essential to align the resource base of companies, in a way that is more accurate than competitors.

The dynamism of marketing capabilities can be understood from an outside-in perspective, from the classical marketing approach to market research or from an inside-out perspective (Day, 2011), the field of dynamic capabilities. The question that arises is how to develop these capabilities that allow firms to adapt their own marketing capabilities.

According to our results, knowledge creation and transfer plays an important role in marketing capabilities dynamism. On the one hand, the routines associated to the creation of knowledge allow us to perceive the trends that occur in the market, functioning as an early warning system referred by Day (2011) when he refers to "vigilant learning capability" that allows companies to develop capabilities that help them see sooner.

On the other hand, the acquired knowledge does not only allow the change from a reactive attitude to organizations that respond in advance to the evolution of the context, but that also do it in a superior way.

Underlying the dynamic capacities framework is the evolutionary perspective of the organizational resources and capabilities to respond to change in the environment (Teece *et al.*, 1997). However, the ability to evolve is based on second order capabilities, such as, transformative and absorptive capabilities proposed by Pandza and Holt (2007) and adaptive and innovative capacities suggested by Wang and Ahmed (2007). As defended by Wang, Senaratne and Rafiq (2015) absorptive and transformative capabilities are mutually reinforcing internal capabilities. This link between dynamic capabilities and first order capabilities (such as marketing capabilities) is also discussed by Levinthal and Rerup (2006) considering the interdependence of behaviors based on routines (and consequently less mindfulness) and the adoption of mindfulness-related practices in the field of organizational studies such as the ability to effectively carry out novel action in a flexible manner or sustain high levels of attention.

5. Conclusions

The objective of the study was to develop and empirically test a model of marketing capabilities supported by dynamic capabilities. Our research implications are both theoretical and practical. An important theoretical contribution of our study is the finding that dynamic capabilities affect marketing capabilities' ability to produce competitive advantage and long-term profitability. This finding is consistent with Zahra *et al.*'s (2006) view of dynamic capabilities as the ability to reconfigure a firm's resources and routines according to the managers' perspectives.

In this paper, we attempted to offer some understanding of performance antecedents according to the dynamic capabilities context. The effect of marketing capabilities on firm performance has already been established by several authors (e.g. Moorman and Rust, 1999; Vorhies and Morgan, 2005; Krasnikov and Jayachandran, 2008). The novelty in our paper is the articulation of this relationship with dynamic capabilities, as we formulated and tested theory linking knowledge creation and articulation (as dynamic capabilities) to marketing capabilities. This integrated model is concerned with the acknowledgment of the propensity of firms' ability to provide customer and financial outcomes through marketing capabilities. Similar conclusions related to dynamic capabilities and the predisposition to offer broader scope services were obtained by Døving and Gooderham (2008) in small accountancy firms in Norway.

We argued that, as pointed out by Zott (2003), learning and knowledge creation are strategically important. First off, because of their direct effect on performance, as considered by Teece *et al.* (1997) and Makadok (2001). Second, "because of the trajectories it shapes that then determine the firm's resource manipulation paths" (Zott, 2003, p. 119). This perspective undermines the difficulty of distinguishing the creation of a new capability from the transformation of an existing one. The "result is that dynamic capabilities have been conceptualized and assessed in ways that make it difficult or even

impossible to separate their existence from their effects" (Zahra *et al.*, 2006, p. 923). In this paper, we tested both direct and indirect links between dynamic capabilities. Our findings are consistent with "the approach suggesting an indirect link between dynamic capabilities and performance may hold the most promise" (Barreto, 2010, p. 275), which is, in fact, more plausible as referenced in more recent publications (e.g. Zahra *et al.*, 2006; Teece, 2007; Protogerou *et al.*, 2012).

Our contribution supports the growing group of scholars who recognize the indirect link between dynamic capabilities and performance, where this "second-order capabilities" permits the firms' bundle of resources and capabilities to change to a higher level of competitiveness.

5.1 Managerial implications

The effects discovered are relevant from a managerial standpoint. Our research provides several insights for managers who want to formulate and implement marketing strategies. First, we draw attention to the importance of knowledge creation and transfer processes on marketing strategies, especially to the understanding of competitive advantage maintenance drivers, in order to avoid a zero-profit condition resulting from competitive parity. Second, for decision makers, it is important to recognize the relevance of being aware of environmental changes that can include useful opportunities for marketing planning and other operational activities. Third, the recognition that knowledge creation and transfer processes provide a dynamic background give managers clear guidance to establish long-term profitability strategies. Finally, in their business plans, managers must consider competitive factors and they need to structure knowledge creation and dissemination routines that work for maintaining a competitive advantage. These routines permit the exploration of new sources of competitiveness, but they are not necessarily directly linked to performance. This means that managers must consider them over a long-term period and evaluate their outputs with different metrics.

5.2 Limitations and future research

A limitation of this research is that it was conducted exclusively in the context of Portuguese firms. Future research is encouraged to replicate this study using a sample that ranges through countries, cultures, and industries.

Another limitation comes from unmeasured exogenous variables, like those related to environmental turbulence. Therefore, in future research projects, environmental measures should be included in order to test their relevance and to bring some light to the discussion of whether dynamic capabilities apply only to a rapidly changing global environment, as defended by Teece (2007), or whether they are also essential in more stable contexts, as argued by other scholars (e.g. Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Zahra *et al.*, 2006).

Finally, the moderating effect of firms' other specific variables (e.g. human resources or managerial flexibility) should be analyzed in future works, and the indirect effect of dynamic capabilities on performance should be studied in an amplified model, as proposed by Eisenhardt and Martin (2000), Zott (2003), and Barreto (2010).

Our study raises also another interesting question. As we have seen, the knowledge transfer processes played an important role in our model, but knowledge creation routines did not. Thus, the question arises: how is it that some firms are able to apply the knowledge created to develop marketing capabilities, while other firms are apparently unable to do so?

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Further reading

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