e-Business management assessment: framework proposal through case study analysis

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Abstract

Purpose – The purpose of this paper is to propose an e-business assessment framework for organizations that aim to enhance the effectiveness of their online presence and maximize the benefits that result from it. The framework is based on three main pillars derived from the academic literature research: e-marketing strategies, customer relationship management (CRM) strategies and business model strategies.

Design/methodology/approach – This paper reviews the literature from e-Marketing, CRM and business model strategies, leading to the generation of an e-Business assessment framework. Second, it takes 19 case studies and analyzes them using ATLAS.ti, through qualitative content analysis, to validate that framework.

Findings – Pragmatic advice for practitioners derives from research results considering that this framework enables managers to characterize the company in terms of its e-business approach, making it possible to determine the level of depth of competitive online strategies. Lessons for an improved e-business approach can be derived from this paper.

Originality/value – This study proposes a novel e-business framework to assist organizations that want to have an online presence. This framework is comprised of the factors identified in the literature review that contribute to define and scope that online presence. The framework is then validated through the collection of 19 case studies of companies that have this online presence, validating the theoretical findings.

Keywords CRM, Strategy, e-Marketing, Business models, Qualitative content analysis, Case studies, Online presence, Framework, e-Business

Paper type Research paper

1. Introduction

Nowadays it is possible to affirm that internet influenced a set of cultural, economic and social changes, mainly in the beginnings of 21st century. The client comes as the focus of the attention from the business activities and they are the targets of the entrepreneurial strategies, with the increased use of internet as interface for e-business.

The traditional marketing, considered as a way to identify the needs of the individuals and society, allows the exchange between costumers and enterprises to create value and welfare to the costumers (Kotler *et al.*, 2016).

Nevertheless, attending to the marketing dynamics and global evolution, marketing change in the past years, and diversify their approach, tools and techniques applied. In this context, the modern marketing tools found on the information and communication technologies (ICT) the integration of business strategies and models to allow improvements in competitively.

This paper aims to propose an e-business assessment framework for organizations wanting to have an effective online presence and related benefits. To achieve these aims, we analyze 19 selected case studies as examples of e-Businesses in depth.

The present paper is structured as follows. First, we shed light on the nature of e-businesses based on the academic literature, covering the topics of e-marketing (see section 2), customer relationship management (CRM) strategies (section 3) and business models (BM) (section 4). Second, based on the literature, we propose an analytical framework for assessing this kind of businesses (section 5). Third, we explain the method of collecting and analysing the data, reaching a framework based on the case studies analysed (section 6). Finally, we conclude with a discussion on the findings and some suggestions for further research studies (section 7).

2. e-Marketing

The new digital economy supported by the internet and ICT, introduced a large range of marketing tools, which nowadays, have become more available and affordable for any company, including smaller firms. Marketing, by nature, should be a creative and adaptive discipline and management tool that is incessantly regenerating itself (Brownlie *et al.*, 1994). The internet and ICTs induce the appearance of new concepts, and genuine transformation is taking place in relationship marketing (Sheth and Parvatiyar, 1995; Tzokas and Saren, 1997). Recent studies propose that organizations can develop customer acquisition and retention by incorporating ICTs into their marketing practices to foster rich interactions with their customers (Coviello *et al.*, 2001; Brodie *et al.*, 2007; Olomu *et al.*, 2016).

e-Marketing capability represents a firm's competence in using the internet and other information technologies to facilitate rich interactions with customers (Trainor *et al.*, 2011; Markoski and Janeska, 2018). According to Brodie *et al.* (2007), e-marketing technologies extend beyond internet-based advertising and communications to include technologies supporting several marketing functions including CRM, sales activity, customer support, marketing research and planning (Brady *et al.*, 2002), hence, most companies have found that online presence is essential to satisfy customers through all possible means (Sheikh *et al.*, 2018).

e-Marketing has the capability to create value (Trainor *et al.*, 2011), by providing a close association to a company's business processes, providing the customers with direct access to the firm's resources and also to create value by allowing employees to develop their focus on the customer by synchronizing activities and information throughout the organization (Trainor *et al.*, 2011; Markoski and Janeska, 2018). Valuable, outside information can be integrated with other customer records to improve overall sales productivity and organizational efficiency (Kim and Jae, 2007). Furthermore, this valuable customer information can be used by marketers looking to better understand their customers expressed and latent needs to develop a real market orientation (Slater and Narver, 1999; Marino and Lo Presti, 2018). Trainor *et al.* (2011) conceptualized e-marketing capability as a multidimensional construct comprising three critical and complementary resources: First, the authors consider IT resources as the deployment of technology infrastructure supporting e-marketing initiatives. Second, human resources represent any managerial support for technological initiatives and an organizational culture that embraces and

promotes these initiatives. Finally, the business resource dimension captures the extent to which the technology is strategically integrated throughout the organization.

2.1 e-Marketing strategies

An e-marketing strategy should engage the exploitation of the internet capabilities for the development of an extended internet marketing mix comprising of five dimensions; the traditional four Ps, i.e. product, place, price and promotion and the customer relations dimension, which accounts for the new knowledge-based applications enabled by the interactivity of the internet (Ainscough and Luckett, 1996; Zhao and Zhu, 2010; Eid and El-Gohary, 2011; Sheikh et al., 2018).

The viability, appropriateness and competitiveness of designing e-Marketing strategies according to these five dimensions are widely argued (Sigala, 2002). Evans and Wurster (1999) suggested that the struggle of competitive advantage on the internet would be along three dimensions, namely, reach, richness and affiliation, i.e. efforts to create and maintain long-term customer relations. O'Connor (1999) stated that electronic distribution strategies should intend to attain reach, content, interactivity and feedback to offer value-added services and lock-in customers. According to Zott et al. (2000a), the personalization of product or information, and the development of virtual communities produce website "stickiness," a critical attribute facilitating repeat transactions. In this view, the effectiveness and competitiveness of the e-marketing strategy is connected to the level of its sophistication/personalization, i.e. the exploitation of the transformational capabilities of the internet. In this context CRM strategy with the use of data mining tools and intelligent agents promises huge online sales and website stickiness (Sigala, 2002).

3. Customer relationship management strategies

The main goal of the majority of companies is the acquisition and retention of customers (Ahuja and Medury, 2010). Hence, managing their relationship with their customers and investing in CRM strategies becomes an integral part of accomplishing this fundamental objective, as in the CRM literature, creating a customer-orientated culture and structure is the most important first step (Kim and Lee, 2019). Within an e-business scenario, it is important to begin by considering e-CRM strategies. E-CRM stands for the use of generic Web-based technologies in CRM. The deployment of e-CRM by companies enables them to use the internet to manage, store and analyze their clients' data. Also, it provides them with a valuable channel to communicate with their customers. E-CRM has the advantage of using technology that is simple to use and implement, and that represents less of a financial burden (Harrigan et al., 2010). Through e-CRM companies can obtain a better understanding of their clients' preferences, predict their needs and improve their satisfaction (Chen et al., 2011).

Through social media, consumers can have access to more information about existing products and they can effortlessly share their opinions on platforms that reach a high number of users. This means that the companies have less and less control over the information that is available about the services and products they offer. The proliferation of social media has, thus, introduced several changes to traditional CRM, leading businesses to adopt social CRM strategies (Malthouse et al., 2013). Social CRM is a strategy that stimulates the collaboration and the engagement of the customer. This strategy creates a two-way communication that increases the company's visibility and accessibility for the client and provides the company with much needed information about their clients. Social CRM entails creating relevant content on social media and playing close attention to and addressing what consumers say (Faase et al., 2011).

Creative content creation drives consumers to participate by posting comments or sharing. The data that derives from these interactions can be processed and analyzed to provide more information about customers, and hence, improve the way companies engage with them. Social media can also be used for collaboration purposes, namely, co-creation. Consequently, clients can be valuable assets in terms of product co-creation and service design, so businesses should search for opportunities to involve the customer in these creative processes. For the companies, it is particularly important to engage the clients that more actively discuss their products and services in either a negative or a positive manner (Choudhury and Harrigan, 2014). The successful deployment of e-CRM procedures leads businesses to establish a base of satisfied and faithful clients that result into repeat purchases, increased sales and higher profits (Kimiloglu and Zarali, 2009).

The pervasiveness of mobile technology in people's daily routines has been one of the most relevant drivers of mobile CRM (m-CRM). M-CRM represents a strategy to deal with the growing mobility of customers and their progressive demand for customized services (Unnithan *et al.*, 2007). The concept of m-CRM can be defined as the delivery of CRM via mobile applications (Rodriguez and Trainor, 2016; Marino and Le Presti, 2018). M-CRM improves the clients' self-service, assist sales and constitutes an important communication medium (Reinhold and Alt, 2009). Moreover, it enables social marketing, widens the access to pertinent information and enriches customer service (Kaufman *et al.*, 2008).

An important benefit of m-CRM is the possibility that companies have of using location-based data within CRM systems to provide their clients with customized and real-time services. The opportunities that emerge from using location-based information can create competitive advantage (Negahban *et al.*, 2016). Band (2011) believes that there are five fundamental strategies to harness the potential of m-CRM: having an understanding of what are the roles and needs of the users, defining the goals, determining which CRM strategy to follow, selecting the appropriate technology and complying with the adequate implementation approach. San-Martín *et al.* (2016) argue that companies' technological competence and innovativeness, the support of the employees and the good management of the clients' data are determinant for maximizing the advantages of m-CRM strategies.

There are several approaches to the adoption of CRM tactics. Personalization, for example, can be used as a CRM approach by using the client information that is available to businesses to improve the value of their interactions with their clients. This approach enables companies to provide customers with content that is suitable to their interests to anticipate their needs (Jackson, 2007). Finnegan and Currie (2010) propose a multi-layered approach to CRM implementation that is composed of four layers: culture, process, people and technology. Rather than accounting for each of these layers separately, this approach considers several factors within these layers to depict the relations of interdependence among them. Mack *et al.* (2005) have also argued that CRM implementation should be inclusive of several variables. The authors believe that CRM should follow an integrated strategic approach supported by a customer-oriented philosophy that links concept, strategy, technology, processes and employees.

CRM value propositions determine the particular and measurable goals that generate value for all parties in a CRM strategy. By being specific, value propositions have the capacity to suggest both the benefits and the experiences they offer (IBM, 2004). To understand if the value proposition might lead to a rich client experience, businesses should perform value assessments to measure the importance that clients place on the several features of a product. The process of value creation is regarded as an essential element of CRM, since it transforms business and client strategies into particular statements of value proposition that show the value that will be delivered to the consumers (Payne and Frow, 2005).

In addition, CRM can take advantage of the customer intelligence that derives from CRM analytics. Equally, CRM activities gather important data about the clients that can later be used for CRM analytics (Miles, 2012). In the context of social media, a vast amount of data is generated invalidating traditional manual content analysis and demanding automated methods of data analysis that can be assured by social media analytics. The information that derives from social media is a central part of social CRM, hence social media analytics have become a key part of social CRM (Wittwer *et al.*, 2016). According to Shim *et al.* (2012), the use of data mining techniques for CRM allows businesses to uncover valuable information about their customers. Previous research reports the use of several data mining techniques, such as decision tree, logistic regression, association rule and sequential pattern, to perform several CRM-related tasks. The authors used recency, frequency and monetary (RFM) values to distinguish VIP from non-VIP clients and employed data mining techniques to uncover rules and patterns about their clients' behavior. This information would be then used, for instance, to suggest particular CRM strategies that focus on specific types of clients.

4. Business model

The BM is usually developed in the first phase of a firm creation, mainly by startups. However the concept of BM is not yet consensual and several authors have provided different definitions, such as, it is a description (Applegate, 2000; Weill and Vitale, 2001), a statement (Stewart and Zhao, 2000), a representation (Morris *et al.*, 2005; Shafer *et al.*, 2005), an architecture (Timmers, 1998; Dubosson-Torbay *et al.*, 2002), a conceptual tool or model (Osterwalder *et al.*, 2005), a structural template (Amit and Zott, 2001), a method (Afuah and Tucci, 2001) and a pattern (Brousseau and Penard, 2007). On the other hand Zott *et al.* (2011, p. 1023) argued that the BM "is often studied without an explicit definition of the concept". The same authors revealed that the BM has been employed mainly in trying to address or explain three phenomena: e-business and the use of information technology in organizations; strategic issues, such as value creation, competitive advantage and firm performance and innovation and technology management. Attending to the increased importance of designing BMs, there are special issues of prestigious academic journals dedicated to the topic of BM (Baden-Fuller and Morgan, 2010; Ritter and Lettl, 2018).

At the moment, BM canvas is the most popular tool to develop BMs (Osterwalder *et al.*, 2005). This BM tool presents four dimensions: value, architecture of the relation between firm and exchange partner, what the firm is doing and financial aspects. Canvas provides business practitioners the opportunity to analyze, manage, understand, share, prospect and patent a business better (Osterwalder *et al.*, 2005). Table I shows the four dimensions of the BM canvas and the nine standardized building blocks.

Elements	BM canvas
Dimensions	Building blocks of BM canvas
Value	Value proposition
Architecture of the relation between firm and exchange partner	Key partners, customer relationship, customer segment, channels
What the firm is doing	Key activities, key resources
Financial aspects	Cost structure, revenue streams

Source: Osterwalder *et al.* (2005)

Table I.
Elements of
BM canvas

The total value creation of a BM is the total value for all business stakeholders such as customers, partners and suppliers (Brandenburger and Stuart, 1996). A more recent contribution about value creation considered that value creation and value capture mechanisms take place in a value network where the network partners complement the firm resources (Zott *et al.*, 2010b).

There are some specific key elements for creating a BM Canvas. First of all, the value proposition that is the heart of the canvas (Osterwalder, 2004) designed to serve customers. According to Osterwalder and Pigneur (2010, p. 22) "the value proposition bundles products and services that create value for a specific customer segment".

The second key element is the architecture of the relation between the firm and its exchange partners. Here, it should be included:

- The customer segment, considering that the value proposition is created for specific customers with specific needs and wants.
- Channels and customer relationship. The building block channels is defined as "how a company communicates with and reaches its customer segment to deliver a value proposition' (Osterwalder and Pigneur, 2010, p. 26) and "the types of relationships a company establishes with specific customer segments" (Osterwalder and Pigneur, 2010, p. 28).
- Key Partners. Firms must require resources outside then key partners are essential. This building block is "the network of suppliers and partners that make the business model work" (Osterwalder and Pigneur, 2010, p. 38).

The third element is the architecture of what a firm is doing. This is composed by key resources and activities: Key resources "describes the most important assets required to make a business model work" (Osterwalder and Pigneur, 2010, p. 34). Key activities are "the most important things a company must do to make its business model work" (Osterwalder and Pigneur, 2010, p. 37).

Finally, the last element to create a BM Canvas is the financial aspects such as revenue stream and cost structure. The revenue streams "represent the cash a company generates from each customer segment" (Osterwalder and Pigneur, 2010, p. 30). And the cost structure "describes all costs incurred to operate a business model" (Osterwalder and Pigneur, 2010, p. 40).

4.1 Business model strategy

The BM strategy explains how a firm creates and maintains value in the long term to sustain the competitive advantage. Firms can compete through their BMs (Casadesus-Masanell and Ricart, 2010) and they embody a potential source of competitive advantage (Markides and Charitou, 2004). Several authors studied the strategy of competition, value capture and competitive advantage, where the BM concept appears to center more on cooperation, partnership, and joint value creation (Magretta, 2002; Mansfield and Fourie, 2004; Mäkinen and Seppänen, 2007). Additionally, other approaches focus on the BM concept on the value proposition and emphasize the role of the customer in the value creation (Chesbrough and Rosenbloom, 2002; Mansfield and Fourie, 2004). Richardson (2008) argued that the BM explains how the activities of the firm work together to execute its strategy.

Casadesus-Masanell and Ricart (2010) view BM as an expression of a firm's realized strategy. Teece (2010) studied the importance of BM and examined their connection with business strategy, innovation management and economic theory and believed that increased understanding of the essence of BMs should facilitate the understanding of a diversity of

subjects such as market behavior, competition, innovation, strategy and competitive advantage.

The numerous research perspectives in strategic management therefore primarily focus on observing, analyzing, classifying and describing BM (Osterwalder and Pigneur, 2010). Teece (2010) proposes that to enhance the understanding of the essence of BM, the following limits of current research should be addressed: little research suggests common languages, conceptual frameworks and visual schemas that could be applied to facilitate both the understanding and the design of BMs. Without a clear conceptualization, the research in strategic management on BMs innovation and competition will remain complex; Concerning the "how-to-build" issue, research primarily focuses on decision-making. It barely addresses the process of design thinking, prototyping and exploring alternative solutions that is so central to the design of strategies and BM (Osterwalder and Pigneur, 2010). Also, just a few authors (Sosna *et al.*, 2010) contemplate the trial-and-error learning process in designing BMs. Recent research focused on the digitalization of the BM as a new trend in this research (Kotarba, 2018; Bouwman *et al.*, 2018; Bressanelli *et al.*, 2018).

5. Framework proposal for assessing e-business

Based on the literature review, Figure 1, presents the framework. The framework is composed of three categories and their correspondent indicators: e-marketing strategies, measured via mobile presence, marketing penetration (sales volume/total sales), type of e-marketing style, type of e-marketing approach (multiple replies possible) and electronic means channel distribution (compared to traditional sales); BM strategies, assessed through BM type, cost structure, revenue model, target market and resources and CRM strategies evaluated through eCRM, social CRM, mCRM (possible features), type of CRM approach, value proposition and CRM analytics.

The e-business framework proposed by the authors (Figure 1) to characterize competitive business management in e-business allows to propose the following propositions:

P1. e-Marketing strategies have a positive effect on building a competitive business management.

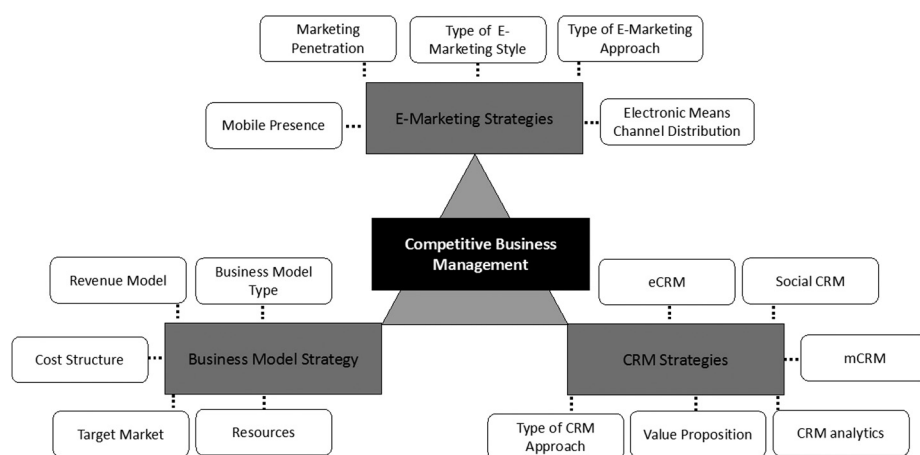*P2.* CRM strategies have a positive effect on building a competitive business management.

Figure 1.
Framework for competitive business management in e-business

P3. BM strategies have a positive effect on building a competitive business management.

Table II presents the coding Agenda, based on the framework proposed.

6. Research methodology and data analysis
In the present study, we have employed a qualitative approach based on interview material and secondary data gathered from 19 e-businesses. Purposive sampling, which is commonly used in qualitative studies, was used to select relevant cases and informants. It allowed us to identify information-rich typical cases (Patton, 2015). The criteria used to select these cases were their diversity and differences and the representativeness of various sectors.

To analyze these research propositions, we have abductively analyzed 19 selected case studies as examples of e-businesses, in depth, exploring their unifying constituents and characteristics. We have followed an abductive process considering that is the type of reasoning whereby one seeks to explain relevant evidence by beginning with some commonly well-known facts that are already accepted and then working toward an explanation.

Table III present a characterization of the 19 case studies analyzed.

Considering the legitimacy and the increasing use of software as a support for the analysis of empirical material in qualitative research (Bandeira-de-Mello, 2006; Maietta, 2008), ATLAS.ti software was used as a tool to support analysis and CmapTools as software to support the construction of concept maps. Figure 2 is the outcome of the research process, and presents the conceptual framework.

7. Discussion and conclusion
A global management of the project landscape is necessary to strive for a competitive advantage (Eloen and Artto, 2003). Furthermore, companies are facing more challenging customers (Homburg *et al.*, 2002) and are keen on serving customers better. Customer integration and a project portfolio management (PPM) alone are not new research fields. However, the growing importance of both has not yet paved the way to an integration of both approaches. In this study, customer integration is presented as a means to further develop PPM and to better satisfy customer needs. The management of customer relationship and project portfolios should be brought together (Tikkanen, 2007).

A conceptual framework is developed that describes the relationships between customer integration into PPM and portfolio success. The construct of relationship value is introduced as a central mediator between customer integration into PPM and portfolio success. Customer integration into PPM is suggested through a connection between the management of the customer relationship portfolio and PPM. A CRM process serves as a blueprint for the management of the customer relationship portfolio. This study has several implications for the research and practice of PPM. It closes the missing link between the growing importance of PPM and the growing importance of the customer. The study investigates customer integration on the project portfolio level for the first time. It suggests that the customer portfolio should be considered in decisions on which projects to prioritize, which projects to be added or taken out of the portfolio, and how to allocate resources among the projects.

The conceptual framework that has been developed enhances the rapidly developing body of knowledge in PPM, and it combines PPM and strategic marketing approaches for a department-level view on PPM. It describes one connection between business operations and projects, whereas PPM is the hub between both (Levine, 2005).

This study also enhances marketing research by presenting a new application for the strategic marketing approach CRM in PPM. The potential of customer integration and customer

Content themes	Categories	Codes
e-Marketing strategies	Mobile presence	MP none MP some MP medium MP high
	Marketing penetration (sales volume/total sales)	MKTP lower (<40%) MKTP medium (40%-50%) MKTP high (>50%)
	Type of e-marketing style	Promotion only or mainly of products or services Promotion and sale of products or services
	Type of e-marketing approach (multiple replies possible)	Web based App based Virtual community (forum/comment style) Email based
	Electronic means channel distribution (compared to traditional sales)	No online sales Medium online Sales (40%-50%) High online Sales (>50%)
BM strategies	BM type	BMM (Manufacturer) BMD (Distributor) BMR (Retailer) BMF (Franchise) BMPS (Public Service)
	Cost structure	CD (cost-driven[a]) VD (value-driven[b])
	Revenue model	HVC (Acquire high-value customers) SVC (Offer significant value to customers) DPHM (Deliver products or services with high margins) PCS (Provide for customer satisfaction) MMP (Maintain market position) FB (Fund the business)
	Target market	GEO (Geographic) DSO (Demographic/socioeconomic) PSY (Psychographic) BES (Behavioural segmentation)
	Resources	PHY (Physical) FIN (Financial) INT (Intellectual) HUM (Human)
CRM strategies	eCRM	Low eCRM capabilities (i.e. contact customer through few channels) Medium eCRM capabilities (i.e. contact customer through various channels) High eCRM capabilities (i.e. contact customer through most of the know channels)
	Social CRM	Low social media response from company (in few platforms) Medium social media response from company (in significant platforms) High social media response from company (in most platforms)

(*continued*)

Table II.
Coding agenda

Content themes	Categories	Codes
	mCRM (possible features)	Possibility of clients' self-service through mobile devices
		Company usage of location-based data
	Type of CRM approach	None or low personalization focused (few aspects of the company contribute to CRM strategically)
		Medium personalization focused (several aspects of the company contribute to CRM strategically)
		High personalization focused (all aspects of the company contribute to CRM strategically)
	Value proposition	Company with low engagement in value proposition activities
		Company with medium engagement in value proposition activities
		Company with high engagement in value proposition activities
	CRM analytics	Company evidences no or little usage of social media analytics
		Company evidences medium usage of social media analytics
		Company evidences high usage of social media analytics

Notes: [a]This business model focuses on minimizing all costs and having no frills. e.g. Low cost airlines. [b]Less concerned with cost, this business model focuses on creating value for their products and services. e.g. Louis Vuitton

Table II.

relationship management has so far only been investigated in the context of existing product portfolios, not complete project portfolios. The study also suggests a construct for measuring relationship value, both for the customer and for the respective company. The framework includes a strong assumption that relationship value completely mediates the relationship between the customer integration and project portfolio success. This assumption is only adequate if the measurement of relationship value represents the net value, i.e. if it includes costs or sacrifices for the integration as well. Otherwise, the direct effect could also be negative.

The managerial implications of this study are somewhat limited as the conceptual model must be empirically tested with further collection of exemplars with different characteristics and correspondent validation. However, some important conclusions can be drawn. On the basis of the propositions, companies can apply the suggested factors of the model to develop a portfolio prioritization strategy in accordance with the customer prioritization strategy. The dimensions of portfolio success serve as benchmark for their PPM (Meskendahl *et al.*, 2013). In addition, practitioners are presented with starting points to interconnect customer relationship portfolio management and PPM. Interfaces between both processes have been identified. Customer orientation, inter-functional climate and the formalized integration of marketing and PPM are important aspects for this interconnection. Regarding this study's limitations, the conceptual model focuses on project portfolios consisting of projects with external customers. Project portfolios with internal customers, such as IT projects contain different characteristics. Future users of IT systems can also be considered to be customers of IT projects. However, there is no function as the marketing function available to represent these users in the PPM process. In addition, the derivation of constructs is based on research on R&D projects. An extension of other types of projects may lead to adjustments of the conceptual model.

Participating cases	Country/Continent	No. of employees	Annual turnover	No. of clients/sales	Sector	BM type
Public Services						
INSS Angola	Angola/Africa	n.a.	n.a.	113.400 enterprises + 113.236 Retired[a]	Public sector/services	Distributor public
Step Ahead e Nova School of Economics and Business	Portugal/Europe	n.a.	n.a.	n.a.	Education/services	Distributor public
Municipal Water and Sanitation Services of Oeiras and Amadora	Portugal/Europe	420	€53,750m	185.000	Public municipal company/services	Distributor public
Autoridade Tributária e Aduaneira (AT)	Portugal/Europe	n.a.	n.a.	10,460 million	Public service/services	Distributor public
Manufacturing						
Resiquímica, Resinas Químicas, SA	Portugal/Europe	110	€49,77m	n.a.	Production of plastic materials/manufacturing	Manufacturer
Hager	Germany/Europe	11.650	€1.9bn	n.a.	Producers of electrical material/manufacturing	Manufacturer
Saborista (Sumol+Compal)	Portugal/Europe	1,379	€341.3m	n.a.	Producers of juice drinks/manufacturing	Manufacturer
Bimby (Vorwerk Portugal)	Portugal/Europe	105 effective employees + 1,117 agents	€100m, Portugal	n.a.	Kitchen robots producers/manufacturing	Manufacturer
Siemens	Germany/Europe	360.000	€79.64bn	50 millions person	Electronics and manufacturing/services	Manufacturer
Havaianas (Alpargatas SA)	Brazil/America	12850	R$4,126bn	n.a[b]	Shoes manufacturers/manufacturer	Manufacturer
Volkswagen	Germany/Europe	610.076	€213.292bn	10.3 millions[c]	Automobile manufacturer	Manufacturer
Services						
Sport Lisboa e Benfica SAD	Portugal/Europe	308	€88,377m	157.000	Football club/services	Distributor
FON@ZON	Portugal/Europe	n.a.	n.a.	> 2 million	Telecommunications company/services	Distributor

(*continued*)

Table III.
Characterization of the entities

Table III.

Participating cases	Country/Continent	No. of employees	Annual turnover	No. of clients/sales	Sector	BM type
Pharol (ex-Portugal Telecom)	Portugal	10.000	€284.9m	10 million	Telecommunications company/services	Distributor
Booking.com	USA/America	14.000	$13.8bn	n.a.[d]	Tourism reservations/services	Distributor
Xpand-IT	Portugal/Europe	>100	n.a.	>800 around the world	IT service provider/services	Distributor
NDrive	Portugal/Europe	40	n.a.	n.a.[e]	Web apps/services	Distributor
Santander Totta	Portugal/Europe	6.393	€303m[f]	422.000 (online digital customers)	Banks/services	Distributor
Barclays	United Kingdom/Europe	129.400	£26.755m	Na	Banks/services	Distributor
Cartão Continente	Portugal/Europe	21.383	€3.687/m	3.5 millions of users (total)	Retail/services	Distributor
Sanolabor	Slovenia/Europe	n.a.	n.a.	1.600 customers in Slovenia	Marketing and distribution of pharmaceutical products/services	Distributor
NETFLIX	USA/America	3.700	$7.16bn	93.8 million	Entertainment/services	Distributor
Quoty (Mediapost)	USA/America	n.a.	n.a.	n.a.	Marketing/services	Distributor
SAMS – Medical Social Assistant Service	Portugal/Europe	n.a.	n.a.	n.a.	Medicine/services	Distributor
APPLE	USA/America	115,000	$215bn	416 apple store; 15.89% IOS market share – global; 2.2 million number of available apps in apple app store	Telecommunications and computers manufacturing/services	Distributor
AWA (Aeronautical Web Academy)	Portugal/Europe	n.a.	n.a.	n.a.	Flying courses/services	Distributor
Warmrental	China (Hong Kong)/Asia	n.a.	n.a.	n.a.	Tourism/services	Distributor

Participating cases	Country/ Continent	No. of employees	Annual turnover	No. of clients/ sales	Sector	BM type
Domino's	USA/America	260.000	$2bn (in digital sales)	1.5 million pizzas each day	Food Chain/services	Franchise
McDonalds	USA/America	1.5 million	$24.62bn	69 million customers per day	Food chain/services	Franchise
Makro Portugal	Holanda/Europe	1,190	€258m	>300.000	Cash and carry retail/services	Retailer
Farfetch	Portugal	600	€1bn	10 million site visits per month and ships to customers in almost 190 countries	Online sales of clothes and luxury accessories retail/services	Retailer
Wine.com.br	Brazil/America	>400	€60m	300.000	Retail/services	Retailer
Continente Online	Portugal/Europe	21.383	€3.687m	150.000	Retail/services	Retailer
Oriflame	Sweden/Europe	7.500	€1.2111bn	60 countries	Cosmetics/services	Retailer
Perfumes and Companhia	Portugal/Europe	53 stores in Portugal	n.a.	n.a.	Cosmetics/ services	Retailer
Importrading	Angola/Africa	270	n.a.	n.a.	Furniture and decoration importers/ services	Retailer
Cartão Universo (Continente)	Portugal/Europe	21.383	€3.687m	n.a.	Retail/Services	Retailer

Notes: [a]Based on the information available online: [b]Available in 80 countries; [c]10.3 millions vehicles sold: [d]1,149,207 hotels/accommodation in 225 countries and territories; [e]Several million active users in more than 50 countries; [f]Consolidated profit
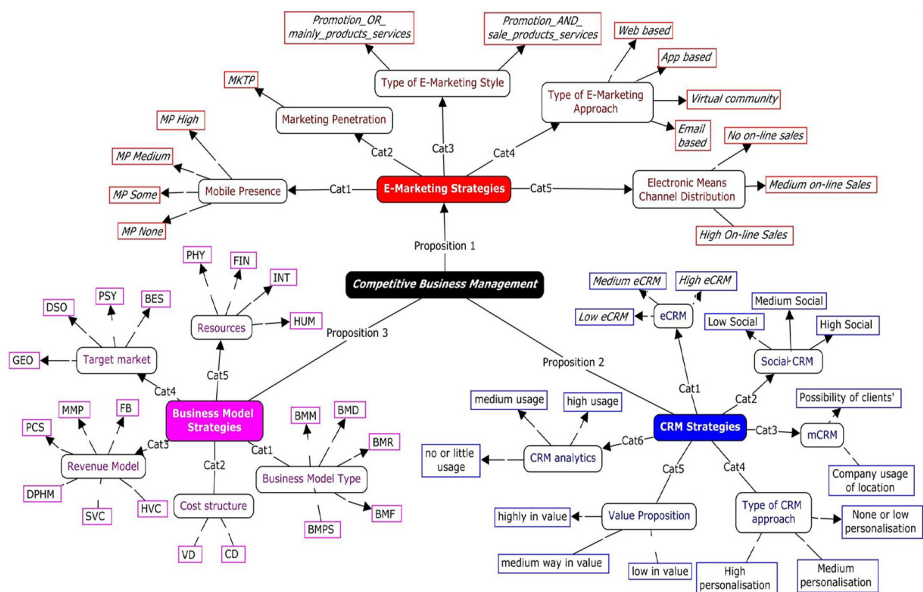**Source:** The authors

Table III.

Figure 2.
e-Business
assessment
framework for
organizations

There are two avenues for future research based on this study: an empirical validation of the conceptual model and the model's further development. The propositions can be tested within a quantitative study investigating companies with a project portfolio with a certain number of simultaneously executed projects. In addition, a multiple-informant design for PPM and success measures from diverging management levels should be incorporated to obtain a broad view of customer integration, PPM activities and success as well as to avoid biased results. In addition, this study can also serve as a starting point of a recurring, longitudinal study in the PPM context to better understand modern companies (Söderlund, 2004). The conceptual model itself can be enhanced by considering other types of projects in the portfolio: projects with internal customers or users of the project results. Moreover, the relationship portfolio can be extended to other relationships than customers, e.g. suppliers and other external stakeholders. Seeing PPM as a hub, the framework can be adjusted to investigate the connection between projects to other business operations and functions in the company. The model can also be further developed by adding internal and external moderating factors as well as control and contextual factors to ensure a statistically profound investigation. Moreover, deviating from marketing research, customer attributes can be determined to answer the question of which customers should be considered in PPM.

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