Impact of quality management adoption in customer performance – moderation effect analysis in the context of exporting Portuguese firms

Master degree in International Business Management

Vânia Filipa Marques Bugalho

Leiria, February of 2022

Impact of quality management adoption in customer performance – moderation effect analysis in the context of exporting Portuguese firms

Master degree in International Business Management

Vânia Filipa Marques Bugalho

Dissertation/Project Report under the supervision of Professor João Neves de Carvalho Santos, and Professor Luís Miguel Machado.

Leiria, February of 2022

Originality and Copyright

This dissertation/project report is original, made only for this purpose, and all authors whose studies and publications were used to complete it are duly acknowledged.

Acknowledgments

I would like to thank the professors João Neves de Carvalho Santos, and Professor Luís Miguel Machado for all the insights provided during the conduction of the current study. I would also like to thank all firm managers that showed interest in the study and provided the necessary data and information.

Last but not the least, I thank my family and friends who have supported me during the period of the creation of the study.

Abstract

The impact of the implementation of ISO norms in the firms' performance has been evaluated considering indicators which are nor easily quantified such as the organizational efficiency or indicators easily measurable such as the stock value or CEO compensation, but that are not directly linked to the implementation of ISO norms in a firm. This study uses customer orientation, product innovation and leadership as quantifiable items that play an important role in the overall firm's performance. The study uses data from the Portuguese firms and will attest whether the implementation of ISO norms can be beneficial for the firms' customer performance. The existing literature has presented different conclusions on the impact of the ISO norms in the firms' performance also due to the type of adoption that the firms use when implementing the ISO norms.

Keywords: ISO norms, customer performance, quality management, product innovation, leadership.

Contents

List of Figures

List of Tables

List of Abbreviations and Acronyms

CP	Customer Performance
CO	Customer Orientation
ESTG	School of Technology and Management
ISO	International Organization for Standards
ML	Management leadership
PII	Product Innovation Incremental
PIR	Product Innovation Radical
QM	Qualtity Managment
QMS	Quality Management Systems
RBT	Resource-based theory
RBV	Resource-based view
SME	Small and Medium Sized Enterprise
TQM	Total Quality Management
VRIO	Valuable, rare, imperfectly imitable and organization

1. Introduction

The use of quality management systems and its impact on firm's performance has been widely debated but the results do not generate consensus on the benefits and impact on performance (Boiral, 2003; Lo & Yeung, 2018; Sampaio, Saraiva, & Rodrigues, 2009). The quality management systems are usually investigated under innovation efforts, continuous improvement, operations management and even financial performance (Sena et al., 2020). The most common quality management system that is used worldwide is the ISO norms, which is used in a large variety of industries, either in manufacturing or in services (International Organization for Standarization [ISO], 2018). The ISO norms were introduced first in 1987 and European firms were the first ones to adopt them (Franceschini, Galetto, Maisano, & Mastrogiacomo, 2010). ISO norms aimed initially the standardization of products in order to facilitate the manufacturing and selling of any product in any country, but it evolved to a concept that offers an understanding of quality management at the international level and firms that adopted the ISO norms became part of the supply chain of customers in Europe more quickly than those who had not adopted the ISO norms (Blind, Mangelsdorf, & Pohlisch, 2018). Nowadays, the ISO norms are widely adopted among firms that are part of the supply chain of the automotive industry, as an example (Lo & Yeung, 2018) and that the adoption of ISO norms goes together with increase of exports and trade especially among firms from developing countries (Blind, Mangelsdorf, et al., 2018; Clougherty & Grajek, 2008).

Despite the extensive research, the financial benefits upon adoption of ISO norms have led to paradoxical conclusions by different authors (Boiral, 2003; Dongmo et al., 2005; Heras-Saizarbitoria & Boiral, 2015; Lo & Yeung, 2018; Sampaio et al., 2009), to the extent that there is a debate on the effectiveness of the adoption and implementation of ISO norms in the firms and how the level of effectiveness can actually contribute to a positive impact on firm performance (Sun, Wen, Yan, & Li, 2019). Throughout the years of investigation on the impact of ISO norms in firm performance, several authors have pointed out that there is lack of data to be quantified and to measure the impact of the adoption of ISO norms in firm performance (Clougherty & Grajek, 2014; Sampaio et al., 2009). Lo & Yeung (2018) have for example measured the impact of the adoption of ISO norms in firm performance by analysing the sales revenues, operational efficiency, shareholder value and CEO

compensation. In this study, the authors found an increase of sales revenues but the shareholder value remained unaffected (Lo & Yeung, 2018).

In the present study we propose to add quantifiable data to the research by looking into different items that are expected to be affected by the adoption of ISO norms and to observe if there is an impact in customer performance (Fang, Chang, Ou, & Chou, 2014a; Hooley, Greenley, Cadogan, & Fahy, 2005) that include customer satisfaction, loyalty and retention which tend to be affected positively by the adoption of quality management systems (Nguyen & Nagase, 2019). Therefore, we have collected via survey the evaluation of exporting firms in Portugal regarding their customer performance related items and also data on adoption of ISO norms, customer orientation, product innovation and management leadership. These items are referred throughout the literature as key aspects for the improvement of the firm performance, either at organizational level, financial or sales revenue (Kim, Kumar, & Kumar, 2012; Lo & Yeung, 2018; Ziggers & Henseler, 2015). We will investigate the possible interaction of the adoption of ISO norms and leadership, customer orientation and product innovation and how customer performance may be affected by using multiple linear regression and hierarchical linear regression using ISO adoption as the moderating effect.

In this study we explain the importance of the exporting firms in the Portuguese economical context, we review the main literature on quality management systems, with focus on the ISO norms, we also review the role of customer orientation, product and service innovation, management leadership in firm performance and lastly we review the literature on customer performance related items. For our model, we propose a series of hypotheses in which we evaluate the role of customer orientation, ISO adoption, management leadership and product innovation in customer performance the impact of ISO norms adoption as a moderating effect under the resource-based view.

2. Literature review

In this chapter we will review existing literature on the role of exports in the international market and how firms use exports as an entry-mode in internationalization and the importance of exporting firms in the Portuguese economic context. We will present the current discussion on the role of quality management systems in firm's performance, motivations for adopting quality management systems, the benefits, and also the downsides of the implementation of these systems. We will further explain the role of innovation in the firms and present in how far innovation can be a connected to firm performance as according to the existing literature. Furthermore, in this section we will also present a review on customer orientation and as well as on leadership in the firms. We finalise the section with the topic on customer performance and why it is a relevant indicator for firm performance alongside other indicators such as financial and organizational performances.

2.1. Export as an entry-mode in internationalization

In this study, we will be analysing a sample made of exporting Portuguese firms. In order to understand the relevance of such sample, the importance of using exports as an entry-mode in internationalization will be explained as well as the context of the exporting Portuguese firms and their economical relevance.

2.1.1. Importance of internationalization

The firms use exports to start their entry into the international market and gradually to increase its presence internationally as according to the Upsala model proposed by Johanson & Vahlne (1977) and the export intensity grows gradually (Vaillant, Lafuente, & Bayon, 2019). The motivation to export is a response to satisfy the needs of the international market, however due to lack of market knowledge and the uncertainty created by this lack of knowledge, the internationalization follows an incremental pattern (Johanson & Vahlne, 1977) but at the same time, firms become more persistent in their efforts to export (Vaillant et al., 2019). Nevertheless, one must consider that in an increasingly globalized world, competitiveness of the firms in the international market has become more import for their economic success and even survival (Chiao, Yang, & Yu, 2006; Puig, González-Loureiro, & Ghauri, 2014). The firms that internationalize tend to become more competitive and grow faster than the firms that do not enter in the international market (Hollender, Zapkau, &

Schwens, 2017; Pangarkar, 2008; Zhou & Wu, 2014). The sooner the SMEs start their efforts in internationalization, the sooner they will bring more value to the economy, and thus the promotion of internationalization becomes an important concert (Vaillant et al., 2019).

As firms enter in a new market, they will face several constraints and amongst these, lack of foreign market experience, knowledge and experience regarding production, technology, or even organizational processes (Carr, Haggard, Hmieleski, & Zahra, 2010; Paul, Parthasarathy, & Gupta, 2017). Moreover firms, when entering in a new market, will have to overcome the buyer uncertainty: the difficulty of buyers to access the quality of the product before the purchase, which will impact the decision of the buyer as the supplying firm has more information about the product. This generates an asymmetry of information that implies a certain level of risk for the buyer (Akerlof, 1970). The buyer's uncertainty is enhanced in the international market due the information asymmetry that arises from spatial, cultural and linguistic differences (Potoski & Prakash, 2009) and also by the effect of the psychic distance, this is, any other factors that can prevent or disturb the information flow between buyers and suppliers (Johanson & Wiedersheim-Paul, 1975). Lack of information or misunderstanding of the cultures of the targeted countries, regulations, and the inability to appeal to the buyers from the targeted new markets can result in a competitive disadvantage (Zaheer & Mosakowski, 1997) and as the number of countries in which the firms operate increases, more the number of institutional environments firms will have to deal with (Kostova & Zaheer, 1999). Thus, even though firms use more commonly exportation as an entry mode into international markets (Lafuente, Stoian, & Rialp, 2015; Morgan, Katskieas, & Vrohies, 2012), the risk of export failure remains likely to occur (Manolova, Manev, & Gyoshev, 2010; Sapienza, Autio, George, & Zahra, 2006). Such failure brings financial implications not only to the firms' international ventures but also in their domestic activities (Amiti & Weinstein, 2011). Besides, firms that are exporting for the first-time experience smaller revenues from their exports (Rauch & Watson, 2003), which may not even cover the costs of venturing into a new market in the short-term (Das, Roberts, & Tybout, 2007) and resulting in losses for many exporters (Mora, 2015). Considering the uncertainty of outcomes for the novice exports, firms that wish to internationalize should improve their learning processes and organizational performance before entering into the international market (Vaillant et al., 2019). This can be achieved by following a gradual process of internationalization as firms go through a process of learning within their organization (Forsgren, 2002). The gradual process of internationalization allows the firms to learn about their capabilities and the needs to perform at the international market

(Eriksson, Johanson, Majkgård, & Sharma, 1997), and how to respond to the specific needs of the foreign buyer (Vaillant et al., 2019). As the experience with the foreign market increases, the firms accumulate market knowledge, improve or develop new routines and processes in order to operate internationally (Barkema, Shenkar, Vermeulen, & Bell, 1997), increase the information about the features of the products valued by the customers (Casillas, Acedo, & Rodríguez-Serrano, 2020) and this experience altogether helps to reduce the risks of uncertainty (Eriksson, Johanson, Majkgård, & Sharma, 2000) and helps stabilising and increasing the flow of exports during the initial years into a new market (Casillas et al., 2020).

2.2. Quality management systems

Quality has become one of the most important tools used by all economic sectors and firms seek certifications in quality standards to signalise that they comply with the required standards (Medina-Merodio et al., 2020). The adoption of Quality Management Systems (QMS) and certification has brought benefits to the firms such as improvement of organizational competitiveness and success, improvement of operational efficiency and improvement of response to customers' and key stakeholders' requirements(Fonseca, Domingues, Machado, & Calderón, 2017). In this chapter the focus will be especially on one of the QMS certification – the ISO 9001 certification that belongs to the IS0 9000 family of norms. It will be also further explained how the ISO 9001 certification is related to the concept of Total Quality Management (TQM).

2.2.1. International standardization: the introduction of the norms ISO

The globalization of the economy has increased, and this has led to the discussion of the relevance of standardization, alongside adaptation and global strategies for local activities (Shoham, Brencic, Virant, & Ruvio, 2008). As organization aim to increase their efficient, effectiveness and legitimacy (Shoham et al., 2008) and the use of standardization can contribute to increase legitimacy in international markets (Jensen & Szulanski, 2004). In this context, quality has become of the most important aspects across all economic sectors and firms seek to be certified in to signal that they comply with quality standards (Medina-Merodio et al., 2020).

The International Organization for Standards was founded in 1947 in Switzerland and has now more than 150 national-level standards associations worldwide (International

Organization for Standarization [ISO], 2015). The international use of norms from the ISO 9000 family can be related to the creation of European Community in 1992, when trade barriers were removed among some European nations and harmonization of regulatory environments became necessary (S. W. Anderson, Daly, & Johnson, 1999). The quality management ISO norms were developed to create standard products that could be produced and sold in any country (International Organization for Standarization [ISO], 2015). The first version of the ISO 9001 was created in 1987 (International Organization for Standarization [ISO], 2015) and first adoption of these norms was made by European firms (Franceschini et al., 2010). The main goals of the norm ISO 9001:2015 are to certify firms that they are able to supply products and services with consistency, according to customer's and to legal requirements and also to increase the customer satisfaction with system efficiency by continuous improvement (International Organization for Standarization [ISO], 2015). In 1994, the norm ISO 9001 was revised to include focus on the product, design and development control, which led to the elimination of the ISO 9002 and ISO 9003 by unifying these with the ISO 9001. In the year 2000, the ISO 9001 became a standard for quality management by including the process. In the year 2008, the ISO 9001 was updated in order to include customers' requirements in the quality management (Fonseca, Domingues, Machado, & Harder, 2019). In 2015, a new version of the ISO 9001 was published as well as of the ISO 14001 in order to create s structure that could offer better integration of the two standards in the same business operations and adding a clarification of the concepts of goods and services and adding more details for the management of internal and external communications (Medina-Merodio et al., 2020).

As the European market started to adopt the ISO norms, this could be perceived as entry barrier for supplier that did not use the ISO norms, thus firms around the world started to adopt ISO norms in order to become part of the supply chain of European customers (Blind, Mangelsdort, & Pohlisch, 2018). On the other hand, the adoption of ISO norms can also be seen as a new institution that may signalise a market legitimacy (Lo & Yeung, 2018) and to signalise product and service quality (Cao & Prakash, 2011). Currently, the norms ISO have been adopted by firms in all continents and operating in different sectors, such as manufacturing and tourism (International Organization for Standarization [ISO], 2020). Potoski & Prakash, (2009) found that developing countries whose firms have adopted widely the ISO norms have increased bilateral exports about 0.035 to 0.063 percent and medium-wealth countries about 0.026 percent. In the case of Portugal, the quantity of certifications for the ISO norms have increased up to 2014 and decreased since, and the presence of

certified firms with the ISO norms is found in nearly all sectors of activity (International Organization for Standarization [ISO], 2020).

The quality management systems ISO 9001 propose a set of norms that that serve as guidelines for firms to improve their performance and the trust on their products and services by following the principles: customer satisfaction, organizational leadership, commitment, continuous improvement, decision-making process based on evidence and data analysis and customer and supplier relationship management (International Organization for Standarization [ISO], 2015). The ISO 9001 standard had changed its focus throughout its existence: in 1994, when the ISO 9001 was updated, the focus was mainly on the product; in 2000, the ISO 9001 extended its role from quality control to quality management and introduced an approach towards the process; in 2008, the certification ISO 9001 included a focus on the effectiveness of the quality management system towards the customers' needs (Medina-Merodio et al., 2020).

The adoption of ISO norms in the firms and how they impact firms' financial results and firms' internal processes have generated a significant discussion on the benefits of the ISO norms without clear conclusions (Boiral, 2003; Lo & Yeung, 2018; Sampaio et al., 2009). Benefits may be related to sales increase, however the downside effects of the implementation of the norms ISO can be higher operational costs and even deterioration of the organizational performance (Lo & Yeung, 2018). Moreover, firms could be risking their competitive advantage by aiming at standardized processes of production since one of the ways to achieve competitive advantage is to have a unique set of processes and/or products that may be difficult to be imitated by competitors (Barney, 1991), thus firms imitate each other and become more homogeneous as a result of the institutional isomorphism in an effort to reduce uncertainty and risk to the customers (DiMaggio & Powell, 1983). But the adoption of the norms ISO 9001 is also used by firms to signalize the quality of their products and services and even overcome possible negative perceptions linked to the country of origin of the firms (Blind, Mangelsdort, et al., 2018; Clougherty & Grajek, 2008).

As firms that wish to export need to overcome entry barriers, cultural differences, different regulatory environments, which means that firms will have to operate in different institutional environments (Kostova & Zaheer, 1999). The failure to overcome such barriers due to lack of information, market knowledge, regulations or failing to appeal to the buyers from the targeted markets may result in a competitive disadvantage (Zaheer & Mosakowski, 1997). In this context, the adoption of the ISO norms can be used to overcome institutional and cultural differences as the ISO norms may offer a common language, quality signalling

and even guidelines for conflict-settling, thus reducing costs and risk caused by the asymmetry of information between supplier and buyer (Clougherty & Grajek, 2008).

2.2.2. Motivation factors for certification ISO

The motivations for firms to adopt ISO norms can be sorted into external motivations such as using the certification as a marketing too, signalling quality improvements, corporate image bettering or even customer pressure; or into internal motivations, such as improvement of process and product (Sampaio et al., 2009). When firms are driven by internal motivations to implement ISO norms, firms are more likely to improve their profits using the quality systems and tend to have a more practical approach on the implementation of the quality systems (Llopis & Tarí, 2003). The benefits of implementing ISO norms can also be sorted into external and internal benefits, as listed in the table 2 (Sampaio et al., 2009). The benefits that result from the implementation of ISO norms may be strongly connected to the motivation behind the certification, which results in firms experiencing limited benefits in internal performance when the motivation for certification were driven by external factors (Sampaio et al., 2009).

Table 1 - Most commonly stated ISO 9001 certification benefits (Sampaio et al., 2009)

Most commonly stated ISO 9001 certification benefits reported in the literature	
External benefits	Internal benefits
Access to new markets Corporate image improvement Market share improvement ISO 9001 certification as a marketing tool Customer relationship improvements Customer satisfaction Customer communication improvements	Productivity improvements Product defect rate decreases Quality awareness improvements Definition of the personnel responsibilities and obligations Delivery times improvements Internal organisation improvements Nonconformities decreases Customers' complaints decreases Internal communication improvements Product quality improvement Competitive advantage improvement Personnel motivation

Despite the numerous possible benefits that can arise from the adoption of the norms ISO 9001, the several studies present contradictory results: the financial benefits may be limited when considering the cost of implementation (Lo & Yeung, 2018), firms' results may be little or non-significantly impacted (Sousa & Voss, 2002). The financial benefits may be also related to different variables (Heras-Saizarbitoria, Dick, & Casadesus, 2002), which altogether makes it harder to analyse the direct impact of the ISO 9001 norms in the performance of the firms.

2.2.3. Total Quality Management

The ISO 9001 series were created in Europe amidst the development of the concept of total quality management (TQM) (Mehra & Ranganathan, 2008). The TQM started with the definition of 14 steps to improve quality by Crosby (1979), with the emphasis on the importance of training, solving problems and continuous improvements (Ishikawa, 1976, 1985). The TQM is structured around three cornerstones of the quality management process: planning, organization and control (Juran, 1986). Later the role of the leadership and commitment to implement quality management in the firms' procedures was added (Feigenbaum, 1991). While in Europe the ISO 9001 norms were being adopted in the 1980s and 1990s, firms in the USA started implementing quality control programs from Japan, such as the Deming prize, or the Juran principles (Mehra & Ranganathan, 2008). This resulted in the improvement of quality of products, services and operational performance in firms around the world (Chin, Tummala, & Chan, 2003) but also in the acknowledgment of the importance of the customers' needs into the concept of products and services (Goldman, 2005). TQM became not only a goal aimed to the manufacture of products but also to the entire functioning of all departments in an organization (Mehra & Ranganathan, 2008). The TQM became philosophy that requires all members of the organization to participate in the improvement of quality (Mehra, Hoffman, & Sirias, 2001). The TQM's impact on all levels of the organization is shown by (Mehra et al. (2001, p. 856) as ": [...] the people in the organization are required to make quality a culture in their daily lives. Furthermore, it is also important to understand that TQM is a long-term perpetual improvement process requiring significant resources, both financial and human. It is a dynamic process – not a static one. It is a continuous effort with no deadlines or target dates. The process can never be considered complete since there is no goal or destination; hence, TQM becomes a way of life."

2.2.4. ISO 9001 norms and TQM

The relation between ISO 9001 norms that includes the ISO 9001 certification and the TQM practices is summarized by (Sampaio et al., 2009): firms that had implemented or planned to implement TQM practices were those that had already been ISO 9001 certified (Escanciano, Fernández, & Vasquez, 2001a). The certification using ISO 9001 norms can be seen as first step for firms towards the implementation of TQM philosophy (Idris, McEwan, & Belavendram, 1996). ISO 9001 certification helps firms to create the stable and consistent process changes inside the organisation and prepares employees and improves operational efficiency in order to improve the overall firm performance (Magd & Curry, 2003b). Firms that have experienced benefits and improved results after implementing ISO 9001 norms, are more favourable to adopt the complete TQM in all departments in the organisation (Escanciano et al., 2001a). Authors Sun (2000) and Dwyer (2002) point out that ISO 9001 certification should not be understood as an independent approach from TQM, but as process that can be integrated and implemented alongside TQM, as ISO 9001 certification may help to implement quality systems within the firm more effectively, guiding firms into improving results both in the short- and long-term. Still, author Rahman (2001) found that firms that had implemented TQM without having implemented the ISO 9001 certification first did not have significant differences in results when compared to the firms that implemented TQM while being ISO 9001 certified. Martínez-Lorente & Martínez-Costa (2004) argue even that the certification ISO 9001 is not strategically relevant for the TQM implementation.

2.3. Customer orientation

The competitive advantage of a firm is grown out of the value created for its customers (Porter, 1985) and a superior value is created for customers when firms provide solutions not only for the customers' needs of the present but also of the future (Blocker, Flint, Myers, & Slater, 2011). This requires firms to be market and customer oriented, meaning that firms need to create and share information about customers' needs and to plan actions in order to satisfy those needs (Day, 2000; Kohli & Jaworski, 1990; Narver & Slater, 1990). Market orientation consists of three behaviour elements: customer orientation, competitor orientation and inter-functional coordination (Zhou, Brown, Dev, & Agarwal, 2007), which requires firms to understand better their target customers, the strengths and weaknesses of

their competitors and how they are operating and, firms will have to adapt their own resources in order to orient themselves towards the customers (Narver & Slater, 1990).

Firms take actions to satisfy customers' requests, however there is the understanding that customers also seek for suppliers that are proactive in the search of solutions to satisfy future needs as a part of an ongoing process of value and relationship-creation (Beverland, Farrelly, & Woodhatch, 2007; Flint, Woodruff, & Gardial, 2002; Tuli, Kohli, & Bharadwaj, 2007). This approach was named by Narver, Slater & MacLachlan (2004) proactive market orientation.

Studies reveal that the firms neglect or do not focus on the proactive approach of market orientation (Tuli et al., 2007), which can impact negatively the customer loyalty (Beverland, Farrelly, & Woodhatch, 2004). The challenge for firms to create value for customers lays also in how the perception of customers about value are constantly changing, making this into a moving target to achieve (Day, 2000; Eggert, Ulaga, & Schultz, 2006; Parasuraman, 1997). Thus, when firms fail to access and to respond to the customers' needs, this may result in customer dissatisfaction and end of relationship (Beverland et al., 2004). Thus, market orientation comprises both responsiveness and proactiveness of the firms: the responsive market orientation focus on the customers' express needs, while proactive orientation looks for the needs that the customer does not explicitly mention or finds it difficult to express them (Narver et al., 2004; Slater & Narver, 1998). In the study on proactive customer orientation by Blocker et al. (2011), strong evidence was provided that customers across the globe look for suppliers to help them finding solutions beyond what is currently asked and value suppliers that anticipate their needs. Customer oriented firms can create an advantage of differentiation when they understand the information obtained from their costumers, while competitor-oriented firms will compare themselves to their competitors, to observe how they could achieve a cost advantage (Day & Wensley, 1988; Gatignon & Xuereb, 1997).

Customers also look for quality offers from their providers which happens when customers perceive the offer from a supplier as having relative superiority compared to alternatives provided by competitors (Lapierre, 2000). This is regarded often a core element of value perception in the decision making of the customer in the context of business buyers (Lapierre, 2000). Alongside, service support provided by firms such as installation, trainings, or other added services to the offers serve a way of creating value to the customers (Eggert et al., 2006; Homburg, Kuester, Beutin, & Menon, 2005; Lapierre, 2000, Homburg et al., 2005) and the building of good personal interactions in the communication between customer and supplier improve business relations over time (Eggert et al., 2006).

The level of demandingness of customers is based on to which extend customers demand for superior product or service (Li & Calantone, 1998). Demanding customers look for products or services that offer benefits, are more likely to pay attention to nuanced differences in products, show more interest in tailor-made products or services that fit better their own needs (Zhou et al., 2007). However, as customers are heterogenous, so their need and demands can be very specific and diverse (Monroe, 1990). Thus, markets are heterogenous, and firms must collect sufficient information on their target customers and to analyse it in order to create and offer products or services that will be perceived as superior (Day & Wensley, 1988; Zhou et al., 2007).

Customer oriented firms are expected to outperform competitors and to deliver value perceived as superior (Homburg, Müller, & Klarmann, 2011) and customer orientation also leads firms to achieve a better position among competitors (Zhou, Brown, & Dev, 2009) and the monitoring of customers' evaluations and needs helps the firms to develop products and solutions that better fit the customers' needs which leads to improvement of customer-related performance (Zhu & Nakata, 2007; Ziggers & Henseler, 2015) and also business sales (Macintosh, 2007). Thus, firms have an interest to invest in customer orientation within their organization as this leads to the creation of value to the customer, leading to customer satisfaction and loyalty (Narver & Slater, 1990).

The importance of customer orientation in an exporting context is related to the fact firms face challenges due to physical and cultural distances and different competitive scenarios (Alteren & Tudoran, 2016). Business relationships are not merely economic transactions based on prices and information, but also include long-term relational exchange, as proposed by Macneil's relational paradigm (Macneil, 1978). When observing the relationships developed in the context of exporting firms, long-term business relationships bring benefits to the business partners and commitment plays key role in the relation paradigm (Dwyer, Schurr, & Oh, 1987; Leonidou, Samiee, Aykol, & Talias, 2014; Morgan & Hunt, 1994). Firms that invest in high levels of commitment are dedicated to closer and longer relationships (Kim & Frazier, 1997) and put efforts to ensure lasting relationships (Dwyer et al., 1987; Morgan & Hunt, 1994). Customer orientation is seen as driver for firms' performance (Hult & Ketchen, 2001; Kumar, Venkatesan, & Leone, 2011; Sousa, Martinez-Lopez, & Coelho, 2008; Zhou et al., 2007), research has not clarified how it impacts performance as some studies find a direct positive relationship in an export context (Cadogan, Diamantopoulos, & Siguaw, 2002; Rose & Shoham, 2002), while other studies observed a negative relationship (Solberg & Olsson, 2010).

Firms that follow a customer-oriented approach will adapt their activities to the customers' needs (Grönroos, 1989), which implies closer contact with the customers (Solberg & Olsson, 2010), listening to customers' questions and complaints (Siguaw, Brown, & Widing, 1994), and looking to understand the customers' situation in order to orient the sales towards the customer (Cross, Brashear, Rigdon, & Bellenger, 2007). In the export context, the customer orientation approach helps business building relationships, thus managers should follow-up all customer feedback on complaints, requests and satisfaction (Alteren & Tudoran, 2016). Nevertheless, firms operate in a reality where customers' perceptions about the benefits of a product or service are always changing; thus, it is necessary for firms to analyse the changes of customers' perceptions in order to keep up with the market, and thus a stronger link between customer orientation and performance is likely to occur, especially in developed markets with highly demanding customers (Zhou et al., 2007).

2.4. Product and service innovation

Firms that are capable to sense the market and to develop the capabilities to understand the customers tend to show higher levels of innovation performance (Fang, Chang, Ou, & Chou, 2014b). Innovation in products is seen as one of the main drivers of value creation (Visnjic, Wiengarten, & Neely, 2014). When firms innovate by developing new products and services and being able to meet customers' expectations or needs by having better customer-linking capabilities, firms tend to have better market performance outcomes (Hooley et al., 2005). Innovation does not only apply to product and services, but also to all new applications of knowledge, ideas, processes, and skills, which altogether create unique capabilities difficult to imitate and that may provide competitive advantage to firms (Andersson, Lindgren, & Henfridsson, 2008). Furthermore, firms do not look for proving solely products to the customers, but also start to orient their business model to services as a way to create value to the customer (Visnjic et al., 2014).

Product innovation refers to the changes made to a product or service being provided and the innovation made to the product can be either incremental or radical (Kim et al., 2012). Incremental innovation refers to when products undergo minor changes in terms of technology, when firms target existing customers, the level of risk is low (Kim et al., 2012). Incremental innovation is related to minor changes of product design, function, price, and features (Garcia & Calantone, 2002; Koberg, Detienne, & Heppard, 2003); incremental

innovation is more focused on refining and enhancing existing products and services, deals with lower risk (Gatignon, Tushman, Smith, & Anderson, 2002; Koberg et al., 2003). By contrast, radical innovation refers to the introduction of new products using new technologies, targeting new customers, creating of new needs for customers (Jansen, Van Den Bosch, & Volberda, 2006) and thus deal with higher level of risk at the market (Moguilnaia et al., 2005). Customer feedback and information is used by firms to have incremental changes of the order to respond to customers' needs and lead to a better performance of a new product through incremental innovation, while customer input in new products introduced by radical innovation may negatively affect the new product performance (Menguc, Auh, & Yannopoulos, 2014).

Table 2 - Comparison between technological radical and incremental innovation adapted (Kim et al., 2012)

Dimension	**Technological innovation**	
	Radical innovation	Incremental innovation
Objective	Create new customers and markets by introducing a previously unrecognized demand, replacing old technologies, or disrupting a current technology trajectory.	Meet needs of existing customers by refining, broadening, or combining a current technical trajectory, knowledge, and skills.
Subject of innovation	Radical product innovation: products or services. Radical process innovation: processes.	Incremental product innovation: products or services. Incremental process innovation: processes.
Level of change	Major changes of technological directions, approaches, or linkages among core components.	Minor changes of existing components, design, price, function, quantity, or time.
Approach	Mainly a bottom-up approach initiated by lower level technicians and R&D workers.	Mainly a bottom-up approach conducted by lower level technicians and R&D workers.
Level of risk	A high level of risk due to a high degree of complexity and technical/market uncertainties.	A low level of risk due to a greater level of certainty with known information.
Output	Occur rarely but create entirely new product categories; identify unrecognized demands or methods; result in technological and marketing discontinuities; restructure marketplace economics.	Occur often and enrich the depth of technology innovation; improve certain dimensions of products or processes; expand brands and product categories; develop existing competencies.
Protection of output	Mainly protected by intellectual property law, such as patent; diffused under the technology transfer contract.	Mainly protected by intellectual property law, such as patent; diffused under the technology transfer contract.

2.5. Management leadership

The definition of leadership and management may often overlap: management is associated with fulfilment of the goals and process for the firm, while leadership is linked to the leader's role in setting a purpose or envisioning the necessary changes, and to create the processes that will allow individual and collective efforts to learn and achieve the defined goals of the firm (Berson, Nemanich, Waldman, Galvin, & Keller, 2006). Still, leadership can also be seen as subset of management, but both leadership and management are important for the firm performance (Bedeian & Hunt, 2006). Nevertheless, management leadership can also be understood as the role of the top management in establishing quality goals, strategies and being involved in the evaluation of quality performance (Kim et al., 2012).

In the context of quality management, the manager has the role of driving and leading the changes in the firm in order to implement the process of quality and achieve the defined goals (Albacete-Sáez, Fuentes-Fuentes, & Bojica, 2011).. The commitment of the management towards quality is considered as an indispensable condition for firms to undergo the necessary changes to achieve the quality goals (Beer, 2003; Bhat & Rajashekhar, 2009; Talib, Rahman, & Qureshi, 2011). Therefore, it can be argued that without the strong support of the management leadership, it may be very difficult to implement the needed environment for quality management successfully in a firm and several studies indicate the positive relationship between management leadership and quality management related practices, such as training, human resources management, supplier management, customer relations and product development (Flynn, Schroeder, & Sakakibara, 1995; Kaynak, 2003). The top management of a firm is able to allocate the financial support necessary for changes in training of employees not only by improving the skills of the workforce but also by empowering employees and increasing their performance (Kim et al., 2012). Managers may drive the changes that occur in the firm in order to adapt the quality management systems but often firms designate one person to be in charge of the implementation of the quality management systems, often named as quality manager (Albacete-Sáez et al., 2011).

Management leadership impacts the relationship with the supplier network of a firm, which is also crucial for the overall firm performance as suppliers must provide quality raw materials, services and share important information on innovative processes or materials needed for the final productor services provided to the customers (Ahire & Ravichandran,

2001; Flynn et al., 1995; Kaynak, 2003). Moreover, the top management is linked positively to customers relations, as when the top management is committed in achieving higher customer satisfaction and providing quality products or services, the relation with the customers improves (Kim et al., 2012). The involvement of the top management in the quality management through managerial processes can be positively related to innovation, may it be incremental or radical, at the product, processes and administrative levels (Kim et al., 2012).

2.6. Customer performance

Customer performance is one of indicators based on customer-related items that are related to firm performance alongside market performance and financial performance (Fang et al., 2014b; Hooley et al., 2005). A high customer performance is necessary for a higher financial performance, which can be achieved through enhancing of customer relationships and the capabilities of the firm to manage those same relationships (Boulding, Staelin, Ehret, & Johnston, 2005; Herhausen & Schögel, 2013). For the model proposed in this study, customer performance will be evaluated using several items that had been considered by several authors in previous studies. (Hooley et al., 2005) had considered in customer performance had included items on customer loyalty and satisfaction, and comparison with competitors. Fang, Chang, Ou, & Chou (2014) used for measuring customer related performance items that reflect the capability of the firms to related to their customers: understating customer needs, maintaining customers and building good relationships with customers. Ngo & O'Cass (2012) use customer satisfaction, customer relationship, customer attraction and customer retention to measure customer performance. Chih, Huang, & Yang (2016) used items referring to customer satisfaction and acquisition of new customers. Herhausen & Schögel (2013) measured customer performance considering customer satisfaction, customer retention and customer loyalty (all items in comparison to competitors).

In the following chapters, customer satisfaction, retention and loyalty and how their roles affect firm performance will be explored in more detail. The importance of firms to understand customers' needs and how they process the information about customers will also be explored.

2.6.1.1. Customer satisfaction, retention and loyalty

Customer satisfaction can be defined as the comparison between customers' expectations and their assessment of their experience with the supplier's product or service (Huarng & Yu, 2019). Customers who experience that they obtained value from the product or service acquired may become loyal, and this customer loyalty can turn into retention and lead to higher profits (Trasorras, Weinstein, & Abratt, 2009). Firms that focus on the customer satisfaction can see the levels of customer loyalty improved and when the customer has experienced a grater satisfaction, there will be a greater level of willingness to purchase again (Huarng & Yu, 2019). The failure to retain customers has a strong impact on the financial performance (Reichheld & Sasser, 1990), thus firms need to understand why they may lose customers in order to keep them (Trasorras et al., 2009). As such, firms nowadays have changed their goals regarding customers: while in the past, the main goal was to obtain new customers, nowadays firms focus on marketing strategies to secure and improve customer loyalty (Bruhn & Grund, 2000). Firms have observed that economic advantages of customer satisfaction and customer loyalty: increase of repurchasing rates, increase of cross-buying potential, increase of willingness of customers to buy for higher values, positive recommendation, and less tendency to switch (Bruhn & Grund, 2000).

In order to understand the role of customers loyalty and customer satisfaction in the overall firm performance, it is necessary to analyse elements that serve as precedents of customer satisfaction and loyalty (Anderson, Fornell, & Lehmann, 1994; Anderson & Sullivan, 1993; Anderson & Weinstein, 1997; Fornell, 1992; Oliver, 1997; Oliver, 1980) and to factors that surround customer satisfaction and customer loyalty, for example, in the proposal by (Bruhn & Grund (2000) for a chain of success considering customer satisfaction and loyalty as predecessors for economic success.

Customer satisfaction and loyalty can be linked to repurchasing intentions (Anderson & Sullivan, 1993; Bolton, 1998; Boulding, Kalra, Staelin, & Zeithaml, 1993; Mittal & Kamakura, 2001; Zeithaml, 2000) and relationship between satisfaction and repurchasing evolves throughout time (Mittal, Kumar, & Tsiros, 1999). When linking customer satisfaction to financial performance, higher customer satisfaction can accelerate the cash flows, increase volume of cash flows and reduce risk associated to the same cash flows of firms (Gruca & Rego, 2005; Srivastava, Shervani, & Fahey, 1998) and overall revenues (Anderson & Sullivan, 1993; Kerin, Mahajan, & Varadarajan, 1990; Loveman, 1998; Reichheld & Sasser, 1990; Reichheld & Teal, 1996). This can be explained by having customers buying additional products or services (Anderson & Sullivan, 1993; Bolton,

Kannan, & Bramlett, 2000; Fornell, 1992; Fornell, Mithas, Morgeson, & Krishnan, 2006; Reichheld & Sasser, 1990; Seiders, Grewal, & Godfrey, 2005), increase share of satisfied customers (Cooil, Keiningham, Aksoy, & Hsu, 2007; Keiningham & Perkins-Munn, 2003), having more customers that are willing to pay more (Homburg et al., 2005; Reichheld & Sasser, 1990) and acquisition of additional customers (Williams & Naumann, 2011). Higher levels of customer retention and customer satisfaction can also be linked to the increase of profits due to the combination of higher revenues with the reduction in the costs of operations (Reichheld & Teal, 1996; Srivastava et al., 1998).

The relationship between customer satisfaction and financial performance can be better understood with the model satisfaction-profit chain (Anderson & Mittal, 2000; Heskett, Sasser, & Schlesinger, 1994). This model predicts that attribute performance (such as service quality) can lead to greater customer satisfaction, which in its turn can lead to higher customer retention and thus, as an accumulative effect, to higher profits. However, despite multiple studies having found that there is a strong and positive relationship in the satisfaction-profit chain, the relationship may be asymmetric and non-linear (Williams & Naumann, 2011).

Firms that focus on customer orientation seek to improve the levels of customer satisfaction, and one of the key strategies that firms may use is the continuous process improvement, where customer feedback plays a key role as driver of process improvement (Williams & Naumann, 2011). Furthermore, firms that put significant efforts in improving their quality of relationship, communication, innovativeness of product and customer service have observed increase of customer satisfaction (Williams & Naumann, 2011).

In a more competitive market, customer loyalty and retention become more important and customer satisfaction alone does not lead to loyalty, but it is the first step into loyalty that must be combined with value for the customer, trust and meeting beyond the expectations of the customers (Trasorras et al., 2009). By analysing the buyer-seller relationship, Levitt (1983) concluded that relationship between does not end after the sale, but it may become stronger, and this after-sale period becomes critical for customer evaluation of the product or service and deciding on a next purchase. The absence or failure of the seller to manage customers' concerns in the after-sale period will lead to a deterioration of the relationship (Trasorras et al., 2009).

Previous literature has found positive relationship between market orientation and firm performance (Jaworski & Kohli, 1993; Kumar, Subramanian, & Yauger, 1998; Narver & Slater, 1990; Noble, Sinha, & Kumar, 2002; Pelham, 1999, 2000), and between customer

satisfaction and firm performance too (Anderson et al., 1994; Anderson & Weinstein, 1997). However, the role of customer satisfaction is not always clear to firm performance as it may not be significant in some literature (Bernhardt, Donthu, & Kennett, 2000). Guo & Wang (2015) investigated in the context of the business-to-business firms (B2B) how market orientation component contribute to the customer relationship results. In this study, it is presented that customer satisfaction can also be seen as component of market orientation, as argued by the authors Singh & Ranchhod (2004).

Market orientation is shown to be positively related to customer satisfaction (Lings & Greenley, 2009), where both costumer orientation and competitor orientation play a role. Guo & Wang (2015) concluded that the roles of costumer orientation and competitor orientation in customer satisfaction are different in the B2B context: costumer orientation does not only contribute to the increase of customer satisfaction but also has a direct impact on customer retention, thus having a long-term effect, while competitor orientation contributes to higher customer retention levels, but indirectly, as firms that focus on competitors tend to produce value to the customer by offering new or better products, thus creating an immediate customer satisfaction. But as Guo & Wang (2015) suggest, firms that focus on customer orientation will aim to maintain customers and to have new purchases from the existing customers.

However, when examining the inter-functional coordination between departments in manufacturing firms in order to achieve a more coordinated approach to customer orientation and competitor orientation to achieve even higher results with customer satisfaction and retention, Guo & Wang (2015) found that these values would decline and one explanation suggested for this phenomenon could be that customers may not drive firm's innovativeness (Kohli & Jaworski, 1990; Voss & Voss, 2000) and that competitor oriented firms may have short-term strategies that may lead to the decline of customer satisfaction (Day & Nedungadi, 1994).

Therefore, the focus of the current study will be on components that contribute not only to customer satisfaction alone but also to customer retention. Despite customer satisfaction being often related to customer retention, the competitor-oriented strategies, as exemplified by the study by Guo & Wang (2015) when applied to increase customer satisfaction may not be reflected in the customer retention, which is one of the dimensions suggested by Hooley et al. (2005) for customer performance, thus showing that studying customer satisfaction alone is not a sufficient predictor to understand firms' relations towards their customers.

3. Conceptual model

3.1. Resource-based theory

In order to understand the role and importance of adoption of quality management systems in the firms' performance, it is necessary to analyse how these norms can be viewed under the resource-based theory (RBT). RBT has become widely used in the marketing research as an important framework to explain and even predict competitive advantages and performance outcomes (Kozlenkova, Samaha, & Palmatier, 2014). The resource-based theory results from the resource-based view developed in order to how firms can build sustainable competitive advantage by using and developing unique resources and capabilities in order to have more economic value in comparison to competitors on the same market and to avoid being imitated by competing firms (Barney, Ketchen, & Wright, 2011; Slotegraaf, Moorman, & Inman, 2003; Vorhies & Morgan, 2005). Seeing the firm's resources as important to the success of the firm's outcome started with Penrose (1959), but the framework that is based on the analysis of the firm's resources in order to understand its success and path to achieve competitive advantage starts to be shaped during the 1980's with Wernerfelt (1984) in contrast to the previous predominant view that that factors at the industry-level would determine the profit potential (Porter, 1979). Barney (1991) provides a major contribution to the RBV by focusing on the unique and/or scarce resources and capabilities within each firm. Barney (1991) argues that firms in order to achieve a sustainable competitive advantage need to seek for valuable resources that are either rare, unique, difficult to imitate and non-substitutable, thus resources that are difficult for competitors to acquire. This can also be considered the VRIO framework (valuable, rare, imperfectly imitable, and organization) according to Barney & Hesterly (2012). Such resources can be informal organizational processes, tacit knowledge, training and all actions that lead to the improvement of efficiency of the firm (Barney, 1991). The resource-based view has evolved into acceptance as a theory (Barney et al., 2011) and the term "resource-based theory" started to be widely used since 2010 and 2011 (Kozlenkova et al., 2014).

The resources that firms can focus on to develop their competitive advantaged are summarized below (Table 3) alongside how they can be categorized under the RBT terminology (Kozlenkova et al., 2014).

Table 3 - Definitions of resource-based theory terminology (Kozlenkova et al., 2014)

Terminology	Definition	Source
Resources	"Tangible and intangible assets firms use to conceive of and implement its strategies" (p. 138).	Barney & Arikan (2001)
Capability	A subset of resources, which represent an organizationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm" (p. 389).	Makadok (2001)
Dynamic Capabilities	Capabilities that can "continuously create, extend, upgrade, protect, and keep relevant the enterprise's unique asset base" in a changing environment (p. 1,319).	Teece (2007)
Market-Based Resources	A subset of the firm's assets and capabilities that are related to marketing activities such as building brands, relationships, innovation, and knowledge.	Srivastava et al. (1998)
Complementary Resources	Resources are considered complementary "when returns to one [resource] are affected by the presence of another" (p. 286).	Morgan, Slotegraaf, et al. (2009)
Resource Heterogeneity Assumption	"Strategic resources are distributed unevenly across firms," or "different firms possess different bundles of strategically relevant resources" (p. 317).	Peteraf & Barney (2003)
Resource Immobility Assumption	Difficulty of trading resources across firms, which allows the benefits of heterogeneous resources to persist over time.	Barney & Hesterly (2012)
VRIO Framework	A tool for internal analyses of the different resources and capabilities a firm possesses and the potential of each of these to generate competitive advantages. Stands for Value, Rarity, Imperfect imitability, and Organization.	Barney & Hesterly (2012)
Valuable Resource	Resources that "enable a firm to develop and implement strategies that have the effect of lowering a firm's net costs and/or increase a	Barney & Arikan (2001)

	firm's net revenues beyond what would have been the case" without these strategies (p. 138).	
Rare Resource	Resource is controlled by a small number of competing firms.	Barney & Hesterly (2012)
Imperfectly Imitable Resource	A resource that is substantially costly to obtain or develop for competing firms.	Barney & Hesterly (2012)
Organization	A firm's policies and procedures "organized to exploit the full competitive potential of its resources and capabilities" (p. 94).	Barney & Hesterly (2012)
Competitive Advantage	Creation of "more economic value than the marginal (breakeven) competitor in its product market" (p. 314).	Peteraf & Barney (2003)
Sustained Competitive Advantage (SCA)	A firm has SCA "when it is creating more economic value than the marginal firm in its industry and when other firms are unable to duplicate the benefits of this strategy" (p. 52).	Barney & Clark (2007)

As quality management systems lead to changes and improvement of processed within the firm with the aim of increasing the efficiency and firm performance, these can be viewed as capabilities that are uniquely developed within the firm, thus, "as organizationally embedded non-transferable firm specific resource whose purpose is to improve the productivity of the other resources possessed by the firm" (Makadok, 2001, p. 389). When considering the concept of dynamic capabilities introduced by Teece, Pisano, & Shuen (1997), which considers capabilities that can "continuously create, extend, upgrade, protect, and keep relevant the enterprise's unique asset base" in a changing environment (Teece, 2007, p. 1319), the continuous improvement by required by the ISO 9001 norms can be also considered as part of the dynamic capabilities. This follows the recent literature review performed by Lianto, Dachyar, & Soemardi (2018) concerning how internal resources play an essential role as factors for continuous improvement.

Previous research has also reviewed the role of market orientation, customer relationship, capabilities to collect intelligence about the customers and to understand customers' need under the lens of RBT (Kozlenkova et al., 2014). In the marketing research, focus is on market-based resources that are a subset of firm resources that refer to marketing capabilities such as building customer relationships, knowledge about the customers, innovations (Kozlenkova et al., 2014). However, and despite the importance of marked-based resources

for firm performance (Srivastava et al., 1998), researchers have found difficulties in capturing the role of market-based resources in the improvement of firm performance (Kozlenkova et al., 2014). With the present research, we intent to add more data to the literature that considers firms' procedures and processes, customer orientation and innovation as resources that play a role to the results of the firm performance.

3.2. Model and hypotheses

The implementation of quality management systems based on the ISO 9001 norms has been studied in order to analyse the motivation and potential benefits that these norms can bring to the firms (Sampaio et al., 2009). Several studies suggest benefits that can improve the achievement of firms' goals towards customer satisfaction and market share (Brown, van der Wiele, & Loughton, 1998; Bryde & Slocock, 1998; Buttle, 1997; Corbett, Luca, & Pan, 2003; Douglas, Coleman, & Oddy, 2003; Escanciano, Fernández, & Vasquez, 2001b; Gustafsson, Klefsjo, Berggren, & Granfors-Wellemets, 2001; Jones, Arndt, & Kustin, 1997; Lee & Palmer, 1999; Lipovatz, Stenos, & Vaka, 1999; Llopis & Tarí, 2003; Magd & Curry, 2003a; Mo & Chan, 1997). Studies have also linked positively the implementation of ISO 9001 norms to the firm performance (Adam et al., 1997; Boulter & Bendell, 2002; Curkovic & Pagell, 1999; Dick, Gallimore, & Brown, 2002; Gupta, 2000; Lee, Lee, & Chang, 2001; Mann & Kehoe, 1994; Ozgur, Meek & Toker, 2002; Quazi & Jacobs, 2004; Romano, 2000; Singels, Ruel, & van de Water, 2001; Tarí & Molina, 2002; Tarí & Sabater, 2004; Terziovski & Samson, 1999; Wisner & Eakins, 1994; Withers & Ebrahimpour, 2000). On the other hand, several studies have shown inconclusive results regarding the potential benefits of the ISO 9001 norms for firms (Conca, Llopis, & Tarí, 2004; Quazi, Hong, & Meng, 2002; Terziovski, Samson, & Dow, 1997), including that the certification with the ISO norms may be a poor predictor of firm performance (Terziovski et al., 1997). Sousa & Voss (2002) found for example that the link between the ISO 9001 norms and financial performance is not always significant.

Further studies done recently have continued to try to answer in how far and in which context the implementation of the ISO 9001 norms can be beneficial. Blind et al. (2018) explores the potential benefits for exporting companies from developing countries that use the certification ISO 9001 to signalise product and service quality. The conclusions of Blind et al. (2018) support that ISO 9001 norms can lower information asymmetries between the

firms and customers and increase trade. Clougherty & Grajek (2008, 2014) and Potoski & Prakash (2009) had already found a positive link the between certified companies especially in developing countries and their trade with customers in developed countries. Lo & Yeung (2018) proposes to investigate the impact of the adoption of ISO 9001 norms on not only operational efficiency but also on sales revenue, shareholder value and senior executive compensation by analysing data from U.S. firms and concluded in their study that the adoption of ISO norms was positively linked to increase of sales revenue and CEO compensation, despite of the additional findings about firms showing deterioration of performance at the operational level after the certification.

The inconsistency of results has led to further questions, namely the topic on the effectiveness of the adoption in achieving the intended results set by the firms, as investigated by Sun, Wen, Yan, & Li (2019) in the Chinese context. Among Chinese firms, about nearly about a quarter of the firms claim that they have not fully achieved the results intended with the adoption of ISO 9001, meanwhile about fifty percent of the firms did not agree nor disagreed with the fulfilment of the intended results with the adoption of ISO 9001 and about a quarter of the firms have indeed claimed to achieve the intended results until a certain extension Sun et al. (2019). Facing such results, the authors decided to investigate the gap between the effectiveness of the certification ISO 9001 and the results that the firms were expecting to achieve with the certification (Sun et al., 2019). The effectiveness of ISO 9001 adoption can be perceived differently by each firm, as it is up to each firm to define the which are the results to be aimed at and this can differ from one firm to another (Sun et al., 2019). The effectiveness of the ISO norms can be perceived on aspects such as organizational improvement, reduction of cost, increase of customer satisfaction (Psomas, Kafetzopoulos, & Fotopoulos, 2012) and these aspects are related to the motivations for the certification adoption, that can be either grouped into internal or external motivations (Sampaio et al., 2009; Sun et al., 2019). As the motivations work as a guideline for the direction that the adoption of ISO 9001 norms should follow to reach the set of results, inversely motivations also work as barriers and can increase the effectiveness gap of the ISO 9001 (Sun et al., 2019).

Considering the widespread adoption of ISO 9001 norms among the Portuguese firms, we aim in this study to evaluate the impact of the adoption the quality systems as according to the ISO 9001 adoption in the context of the exporting firms in Portugal and to contribute to the existing literature with further data about the subject of the impact of the ISO 9001 norms that has led to unanimous results.

3.2.1. Customer orientation on customer performance

Literature on market orientation has provided results that link positively market orientation with customer satisfaction (Gainer & Padanyi, 2005; Kirca, Jayachandran, & Bearden, 2005; Moorman & Rust, 1999; Sanzo, Santos, Vázquez, & Álvarez, 2003). Among the dimensions of marketing orientation, customer orientation aims at gathering information on customers' needs and use the information on the customers to develop strategies and take coordinated actions within the firm's structure to achieve better results with customers (Deshpand, Farley, & Webster Jr., 1993; Kohli & Jaworski, 1990; Narver & Slater, 1990). Customer orientation is the dimension of market orientation has more direct impact on customer satisfaction when compared to competitor orientation and inter-functional coordination within the firm's internal structure (Guo & Wang, 2015) and a proactive customer orientation approach has shown strong positive results in the creation of value cross-culturally and in the B2B context (Blocker et al., 2011).

As previous literature suggests, organisational culture plays a role in the developing of marketing capabilities (Day, 1994; Foley & Fahy, 2009; Hooley et al., 2005), as organisational culture is defined by the set of beliefs and values that impact the firm's selection of outcomes and that set the normative and behavioural guidance towards the selected outcomes to be achieved (Deshpand et al., 1993). Thus, the customer-oriented approach will influence the organisational culture, this includes the attitudes towards the customer relationships and how to enhance the results with the customers (Rapp, Trainor, & Agnihotri, 2010). Therefore, customer orientation is not only expected to improve the customer satisfaction, but also to be impact positively the overall customer performance.

H1: Customer orientation is positively linked with customer performance

3.2.2. Product innovation and customer performance

Innovation can be seen as a multi-stage process that firms undergo in order to turn ideas into new improved products, services or processes, so firms can advance, compete or differentiate themselves successfully in the market (Berraies & Hamouda, 2018). Innovation is necessary for firms in order to survive and compete on the market, which will require building of new ideas and integrating these into already existing products and services in order to meet

customers' changing needs (March, 1991; Nonaka & Takeuchi, 1995) or these new ideas must be converted into new products and services that will be radically new in nature (March, 1991). Firms should take into consideration when developing new products their customers' needs in order to ensure success at innovation (Hauser, Tellis, & Griffin, 2006). Product innovation has been shown over a sustained period in literature to be one of the main drivers of value creation (Visnjic et al., 2014) and the input of customers can be useful in creating value through innovative changes (Franke, von Hippel, & Schreier, 2006; Mahr, Lievens, & Blazevic, 2014).

Firms should aim their actions towards meeting the needs of current customers and also to innovate towards future customers' needs and being able to explore latent needs (Berraies & Hamouda, 2018). However, it is important for firms to consider that customers have a unique knowledge about their needs and preferences that should be explored in product development by using customer input (Mahr et al., 2014). Actually, identifying customer needs and creating products accordingly becomes a difficult task as customers are also likely to have difficulties to express the which benefits an innovative product must fulfil (Rosa & Spanjol, 2005).

Firms that use customer input to development of product have better results product performance when customer input was applied to products that firms were already initiating and customer feedback, information and knowledge was used to implement incremental changes in the product (Menguc et al., 2014). On the other hand, customer input seems to undercut the performance of new radically created products (Callahan & Lasry, 2004; Menguc et al., 2014). This difference in results is explained by the fact that customer involvement in product development led to changes that do not require structural alterations to the existing product and these changes are usually based on the level of satisfaction of the customers with the product and how the product satisfy the customer needs (O'Connor, 1998). Incremental changes in products are built in already existing knowledge and experience and are more useful in a context where the customer needs are already known (Menguc et al., 2014). Studies have shown that interactions with customers persuades firms to invest in continuous innovations and ensures long-term survival of new products that have been developed using customer input (Jang & Chung, 2015). By contrast, radical product innovation offers entire new products to the market that offer breakthrough benefits to customers, who will use and experience these new products in a very different way (Chandy & Tellis, 1998, 2000). Nevertheless, firms tend to engage more often in incremental product innovation over time (Sorescu & Spanjol, 2008).

The existing literature has investigated the effects of customer orientation on product innovation, whether incremental or radical (Baker & Sinkula, 2005; Fang et al., 2014b; Govindarajan, Kopalle, & Danneels, 2011; Lukas & Ferrell, 2000; Salojärvi & Sainio, 2014; Zhou, Yim, & Tse, 2005) and found several positive relations. Still, there is a gap in the literature when considering the impact of product innovation of the firms on customer performance, as the goals of firms is not only to satisfy customers but also to acquire new customers and increase the retention of customers. Therefore, we propose to study the impact of product innovation on customer performance.

H2: Incremental product innovation has a positive relation to customer performance.

H3: Radical product innovation has a positive relation to customer performance.

3.2.3. Management leadership on customer performance

Leaders and managers are play the fundamental role in the execution of strategy if the firm (Ateş, Tarakci, Porck, van Knippenberg, & Groenen, 2015; Chadwick, Super, & Kwon, 2015). Leaders and managers have to embrace the firm's strategies and to lead employees to adopt processes and behaviours, and to create a consensus among employees with little variance in how strategies and the goals should be perceived (Weller, Süß, Evanschitzky, & von Wangenheim, 2020). This includes the setting of customer orientation within the firm: "customer-oriented values and beliefs are uniquely the responsibility of top management. Only the CEO [chief executive officer] can take responsibility for defining customer and market orientation as the driving forces." (Webster Jr., 1988, p. 37). Firms' top managers set the strategic goals to be accomplished and managers must communicate in a clear way and the goals throughout the firm and to engage the employees in achieving the defined goals (Sosik, Gentry, & Chun, 2012; Stanton, Young, Bartram, & Leggat, 2010). This can be done, for example, by providing customer orientation trainings to employees in order to create a common ground for employees to operate (Weller et al., 2020) and to be willingly to meet and satisfy costumers' needs and not to be focused only in overall sales revenue (Liaw, Chi, & Chuang, 2010). Moreover, customer-oriented employees are not only able to increase the level of customer satisfaction (Hennig-Thurau & Thurau, 2003; Susskind, Kacmar, & Borchgrevink, 2003) but also to maintain long-term relationships with customers (Kelley, 1992; Kotler, 1980)and to improve the customer perception on service quality (Brady & Cronin, 2001b, 2001a). Firms that are customer-oriented understand that "everyone's job is

defined in terms of how it helps to create and deliver value for the customer, and internal processes are designed and managed to ensure responsiveness to customer needs and maximum efficiency in value delivery." (Webster Jr., 1994, p. 263).

The involvement of the leadership in the development of behaviours that foster support among co-workers, promoting behaviours that help employees to achieve the collective goals, to manage heavy workloads, to share resources and to provide advice for more difficult situations, helps the employees to deal with customers better, to obtain and manage useful customer information, which altogether reflects positively on customer orientation and consequently on customer related performance outcomes (Liaw et al., 2010).

Leadership's role is to also coordinate the internal organizational processes of the firm, but also to detect changes that are external to the firm and to adapt the firm organization in order to deal with such changes (Kivipõld & Vadi, 2013). This means, leaders should be sensitive to the information about the market and customers' needs (Liaw et al., 2010) but should also be sensitive to the quality management which has also provided evidence of benefits to organizational performance of the firms (Douglas & Judge, 2001; Easton & Jarrell, 1998; Hendricks & Singhal, 1997).

Thus, leadership plays a significant role in setting the goals for the firm and the strategies to obtain such goals, thus including the market orientation and therefore the leadership must orient the firm's organization towards the customers and market demands (Kivipõld & Vadi, 2013), and also managing the quality within the firm (Anderson, Rungstusanatham, & Schroeder, 1994; Dean & Bowen, 1994; Repenning & Sterman, 2002). The impact of leadership is not only observed in employee satisfaction and customer satisfaction (Weller et al., 2020) but can also be positively related to firm performance items such as financial performance and customer performance (Kivipõld & Vadi, 2013).

Therefore, it is expected that a leadership that is engaged in the setting of goals for the firm, including customer-oriented goals and improvement of organizational performance and the perceived quality of products and services is positively related to the customer performance.

H4: Management leadership is positively related to customer performance.

3.2.4. ISO 9001 norms and customer performance

Most studies about ISO adoption investigate the impact on operational efficiency (Terziovski, Power, & Sohal, 2003), while the analysis on the market level is often ignored

(Chatzoglou, Chatzoudes, & Kipraios, 2015), despite the findings by Williams & Naumann (2011) that suggest that when companies are costumer focused, the customer satisfaction can be improved, which can be achieved through continuous process improvement.

ISO certification can be positively related to customer satisfaction, increase of market share and even increase sales revenue (Casadesus & Gimenez, 2000; Sharma, 2005; Terziovski et al., 2003) and as investigated by the study conducted by Chatzoglou et al. (2015), using as sample Greek certified firms, the adoption ISO 9001 norms does have a direct impact on customer satisfaction but does not have direct impact on market share and sales revenue. Instead, the study reveals that the adoption of ISO 9001 norms mediates the market share and sales revenue's effect on overall financial performance. The previous studies confirm the positive link between the adoption of ISO 9001 norms to the customer satisfaction. Still, the results with the market share and sales revenues are shown through mediation and do not provide information on customer retention nor customer relationships.

As listed by Sampaio et al. (2009), motivations grouped as external motivations for adoption of ISO 9001 norms are related to customer performance items, such as in market share improvement, customer relationship improvements, customer satisfaction and customer communication improvements. However, as the study by Prajogo (2011) using 328 Australian firms has shown, external motivations affect the operational performance of the firms differently than the internal motivations, as when firms that implemented ISO 9001 norms mainly due to external factors, the use of ISO 9001 norms has presented a negative moderating effect which translated into weaker operational performance when the external factors played a larger role in contrast to a positive moderating effect of ISO 9001 when implementation was driven mainly by internal motives.

Thus, to analyse the potential impact of the ISO 9001 norms on the customer level, we use in the current analysis the construct of customer performance, following a proposal by Hooley et al. (2005) that considers as part of the customer performance the outcome of firms' activities to create satisfied and loyal customers by acquiring new customers, solidifying the relationships with existing customers and increasing customer satisfaction. This approach can add to the existing literature whether the adoption of ISO 9001 norms can impact customer performance. For the purpose of this study, we will investigate the moderating effect of the adoption of ISO 9001 norms on each independent variable of the model and the contribution of the interaction on the model.

3.2.5. Moderating effect of ISO norms on customer orientation

ISO 9001 norms also focus on customers' needs, satisfaction and complying with customers' requirements (International Organization for Standarization [ISO], 2020), by adding the need for evaluation of customer satisfaction and gathering customer feedback on product and service satisfaction. This requires firms to evaluate customer's satisfaction by sending a questionnaire to customers or by analysing the customers' demands based on marketing policies in order to fulfil the certification requirement on monitoring, measuring, analysing and evaluating customer satisfaction not only with the product, but also with service, technical performance and processes (Medina-Merodio et al., 2020). By doing so, ISO 9001 norms have integrated within their set of goals the dimension of customer orientation and even extended customer-oriented approach to the technical and process management of product and/or service supply, which implies changes across the organisational functioning of the firm by targeting process performance improvement, product quality increase, shortening of production and delivery times (Medina-Merodio et al., 2020). Therefore, ISO 9001 norms have not only integrated among their requirements a customer-oriented approach, but also contribute to the organisational culture changes of the firm and altogether the adoption of ISO 9001 norms may affect the role of customer orientation on customer performance.

H5: ISO 9001 adoption presents a moderating effect between customer orientation and customer performance.

3.2.6. Moderating effect of ISO norms on product innovation

Several authors have investigated the role of quality management practices in the innovation in firms, showing a positive relation between quality management and innovation (e.g., Abrunhosa, Moura, & Sa, 2008; Hoang, Igel, & Laosirihongthong, 2006; Martinez-Costa & Martinez-Lorente, 2008). Some authors explored the impact on product innovation (D. I. Prajogo & Sohal, 2004) and other authors have also explored the impact of quality management practices both in process and product innovation (Feng, Prajogo, Tan, & Sohal, 2006; Martinez-Costa & Martinez-Lorente, 2008). However, several studies have not found evidence that quality management practices have any impact on innovation (Prajogo & Sohal, 2004; Santos-Vijande & Alvarez-Gonzalez, 2007; Singh & Smith, 2004). The inconsistent results have led to further investigation and Kim et al. (2012) have suggested to analyse quality management practices and innovation by splitting the different areas where

a firm can innovate: product, process, administrative and organisational. The study conducted by Kim et al. (2012) reinforced previous findings (D. I. Prajogo & Hong, 2008) that quality management practices are interrelated and promote innovation. In this study only data from certified ISO 9001 firms was collected. Still quality management practices appear to contribute either directly or indirectly to the general performance of the firm, as sections of the quality management practices, such as training, impact other practices. As quality management practices may influence the results on product innovation, we propose to understand whether ISO 9001 norms adoption may also amplify the effect of product innovation on customer performance.

H6: ISO 9001 adoption has a moderating effect between incremental product innovation and customer performance.

H7: ISO 9001 adoption has a moderating effect between radical product innovation and customer performance.

3.2.7. The combined moderating effect between ISO 9001 norms and management leadership on customer performance

Several authors have realised that the management plays a fundamental role in the process of implementing quality management in the firms (Beer, 2003; Bhat & Rajashekhar, 2009; Talib et al., 2011), which is line with the fact that the top management engagement is also crucial in achieving strategic changes within the firms (Arendt, Priem, & Ndofor, 2005; Boone & Hendriks, 2009; Bourgeois & Eisenhardt, 1988; Carmeli & Halevi, 2009; Ling, Simsek, Lubatkin, & Veiga, 2008). This means that the leadership is also responsible to create a mindset towards quality in the firm, setting goals related to customer satisfaction and organization performance (Albacete-Sáez et al., 2011). However, literature on strategy has provided insight on the differences between intended strategy and realized strategy (Mintzberg & Waters, 1985). Intended strategy entails the plans, missions and the vision and expectations for the future of the firm, while realised strategy refers to the actual actions that are being taken in order to achieve the goals set (Albacete-Sáez et al., 2011).

Within the scope of quality management literature, it is argued that the top management may have different approaches to the use of quality management in the firm: managers that use quality management alongside an orientation on the growth of the firm for the future and to have a closer relationship with the customers; managers that seek to satisfy the needs of the

customers in short-term and, finally, managers may have a defensive approach if they find themselves in a mindset of survival in a market that is perceived as hostile (Albacete-Sáez et al., 2011). The different approaches by management towards quality management leads to different engagement in the implementation of quality management process: when management is favourable towards the quality management, firms seem to be more active in the use of quality management; on the other hand, if managers are defensive towards quality management, such programs tend not to be encouraged (Albacete-Sáez et al., 2011). When quality management programs are integrated in the firm strategy, firms seem to achieve better results (Reed, Lemak, & Mero, 2000) and some empirical evidence shows that the implementation of quality management can lead to better results if the top management is personally engaged (Taylor, 1997; Taylor & Wright, 2003). Still, despite findings that when the top management is involved, the implementation of the quality management is stronger, this may not always lead to a greater result in financial performance in contrast to the implementation of quality management without having the top management personally involved (Albacete-Sáez et al., 2011).

When implementing quality management systems, studies that analysed the motivations and benefits of the adoption of ISO 9001 found generally a link between the type of motivation and the benefits experienced by the firms: when the motivation that drives the implementation of ISO 9001 is external, such as satisfying customers, firms experience better results in that dimension (Brown et al., 1998; Corbett et al., 2003; Gotzamani & Tsiotras, 2002; Jones et al., 1997; Llopis & Tarí, 2003; Poksinska, Dahlgaard, & Antoni, 2002; Williams, 2004). If the motivations behind the implementation are internal, such as improvement of internal processes and cost reduction, firms tend to have better results in these fields and the improvements are better perceived by the managers (Brown et al., 1998). This can be better understood when considering the studies that refer the motivations of the top management regarding the implementation of quality management systems: in the studies by Taylor (1997) and Taylor & Wright (2003), top managers presented internal motivations, e.g., improvement of organizational processes and cost reduction for the adoption of quality management as being their main motivations, while less than half of top managers presented motivations regarding customers.

The impact of the commitment of the top management, namely when it is lacking, has also been studied and the results have led to the conclusion that without the engagement and participation of the top management in the adoption and use of the ISO 9001 norms would lead to a higher resistance to implement changes by the employers of the firm (Poksinska et

al., 2002; Poksinska, Eklund, & Dahlgaard, 2006). Studies even show that the lack of commitment from the top management becomes the most critical barrier to the adoption of ISO 9001, thus increasing the risk of having a higher level of ineffectiveness in the implementation of the ISO 9001 in the firm (Sun et al., 2019).

In the context of the present study, the focus of the analysis is the impact of the adoption of ISO 9001 norms on customer performance, which can be considered as an external motivation. Literature on the impacts of ISO 9001 norms and quality management in general has shown benefits to customer satisfaction but the overall performance with the customer related performance is not mentioned. Even though the ISO 9001 norms have a dimension of customer orientation and customer orientation can be part of the strategy defined by the leaders of the firm, the quality management literature usually does not analyse the possible positive interaction between leadership and the adoption of ISO 9001 norms in achieving better results with customer-related performance items. Therefore, we propose to analyse the following:

H8: The adoption of ISO 9001 norms presents a moderating effect when combined with management leadership on customer performance.

The intention of the current study was to test a conceptual model that targeted the impact of ISO 9001 norms on customer performance, as much of the existing literature does not address this item often, despite being one of items that is referred be considered when analysing the impact of quality management systems in firm performance when analysing the existing literature on this subject that shows the intention to measure customer performance too, but usually only customer satisfaction is measured (Kumar, Maiti, & Gunasekaran, 2018). Thus, for this study, the proposal is to focus on customer performance. The conceptual model is represented by Fig. 1.

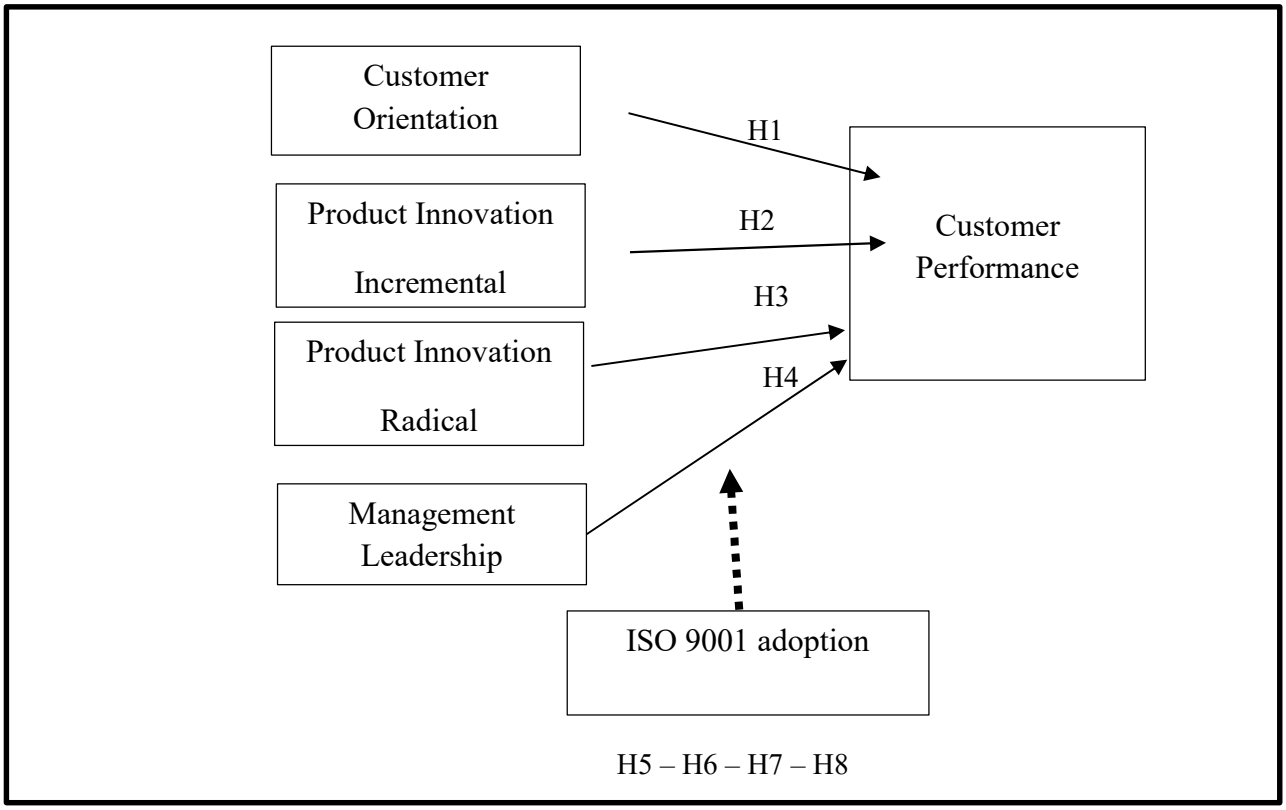

Figure 1 - Conceptual model

4. Method

For this study, we have used two approaches in order to obtain more data to the research: we performed a qualitive analysis using as source material interviews and we also have collected data via survey in order to analyse data quantitively. The aim is to counterpoint results that can be analysed statistically and the perspective shared by managers of firms.

4.1.Qualitive approach

In order to complement the data collected via survey, interviews were also conducted with managers of firms that use the norms ISO 9001 with the purpose of obtaining deeper understanding how managers view and evaluate the use of quality management norms in the firm organization.

4.1.1 Qualitative analysis: sample and data

Regarding the interviews, managers of four different firms were interviewed. The firm A is small-sized firm with 20 employees in the sector of production of injection moulding tools. The firm B is a medium-sized firm with 80 employees in the textile industry. The firm C is a medium-sized firm with 60 employees and produces construction materials. The firm D is a medium-sized firm with 120 employees and produces injection moulding tools.

4.2. Quantitative approach

For the empirical statistical research, data was collected via survey. The survey is based on previous studies that also used this methodology (Briscoe, Fawcett, & Todd, 2005; Kim et al., 2012). The survey was made using a questionnaire with questions that refer to measures used in previous studies regarding customer performance, product innovation, customer orientation, management leadership in the QM context and ISO 9001 adoption (Babu, 2018; Briscoe et al., 2005; Kim et al., 2012; Rapp et al., 2010). This study is based on the frameworks for research that analyses the impact of QM systems on firm performance. The typical frameworks used in the research on QM practices and its impact on firm performance published from 1993 to 2017 were reviewed and analysed by Kumar et al. (2018). The review of the literature made by Kumar et al. (2018) reveals that, among many other factors, the adoption of ISO 9001 norms is analysed as a moderating factor. In the current study, the

analysis of the data uses hierarchical linear regression models in order to identify moderating effects as used also by other authors (Sun et al., 2019; Blind, Mangelsdorf, et al., 2018; Prajogo, 2011). The dependent variable of the model is *customer performance*, and the independent variables are *customer orientation*, *product innovation incremental*, *product innovation radical*, *leadership* and *ISO 9001 adoption* and to evaluate whether the variable *ISO 9001 adoption* has a further impact in the model, it will be inserted as a moderating effect.

The moderating effect is when the relationship between two quantitative variables *X* and *Y* can be changed by the value of a third variable *Z* (Aguinis, 2004). The moderating effect can also be described as an interaction between *X* and *Z* (Aguinis, 2004). It is also important to note the remark by (Aguinis, 2004, pp. 2–3) on the symmetric nature of the interactive relationships between variables: "because interactive relationships are symmetrical, one could refer to the moderating effect of *Z* on the *X*-*Y* relationship, or to the moderating effect of *X* on the *Z*-*Y* relationships. Which variable is chosen as the moderator depends on the substantive research question." The analysis of moderator variables reveals in which context the relationship between two variables can be stronger (Aguinis, 2004).

4.2.1. Sample and data

In order to test the proposed conceptual model of the current study, a sample made of exporting Portuguese firms was collected. The sample is made of only exporting firms that have adopted quality norms. Among these firms some have not only adopted quality norms but have also got their ISO 9001 certification. The firms in the sample operate in wide range of industries. The data consists of primary data collected by a questionnaire that was mailed to 1900 firms. A total of 176 of questionnaires were fully completed and returned, corresponding to a return rate of 9.2% from the target population. The quantity of questionnaires fully completed are in line with the results from previous studies on quality management systems, in which the return rates from the target population also vary around 10% and sizes of the sample based on data collected via survey is not smaller than 160 but it is not usually larger than 300 (Briscoe et al., 2005; Chatzoglou et al., 2015; Kim et al., 2012). The respondents were top managers, financial directors, marketing directors and quality managers and it was assumed that the respondents were well-informed about the questions presented on the questionnaire. The largest portion of the firms in the sample are small sized firms and second largest portion are medium sized firms. The firms in average have reported that they export at least 50% of their production in the previous year (2020).

The export averages for each group size of firms are: micro-sized firms 51%, the small-sized firms 60%, the medium-sized firms 67% and the large-sized firms 66%. Most of the firms operate in manufacturing activities. The details of the sample are presented in table 4. The percentage of that have not only adopted but have also the certification of ISO 9001 in the sample is 67%. All large firms, which are 11% of the sample, this is, the firms that have 250 or more employees and/or have an annual turnover over 50 million euros, are certified and 75% of the medium-sized firms are also ISO 9001 certified. The ISO 9001 certification is also predominant among the small-sized firms: 59% of them are also ISO 9001 certified. Only among micro-sized firms we see the majority not having this ISO 9001 certification. The average number of years of having the ISO certification is 14 years, 60% of the certified firms have the certification less than 10 years or up to 10 years, while the remaining certified firms use have received the ISO 9001 certification for more than 10 years.

Table 4 - Sample characteristics

Sample Characteristics	**N=176**	
Firms with ISO 9001 certification	118	67%
Firms without ISO 9001 certification	58	33%
Firm size		
Micro	13	7%
Small	85	46%
Medium	63	36%
Large	19	11%
Activity Sector		
Agriculture, forestry, livestock, hunting and fishing;	4	2%
Base metallurgical industry and metal products;	27	15%
Construction;	4	2%
Extractive industries; Manufacturing;	1	1%
Food, beverage and tobacco industries;	11	6%
Information and information technology;	2	1%
Manufacture of chemicals and synthetic or artificial fibers (expect pharmaceutical products);	8	5%
Manufacture of electrical and optical equipment;	2	1%
Manufacture of materials and equipment;	16	9%
Manufacture of other non-metallic mineral products (except cement, lime, and concrete products);	6	3%

Manufacture of pharmaceutical products;	2	1%
Manufacture of rubber articles and raw materials; plastic articles;	11	6%
Manufacturing industries;	28	16%
Manufacturing industries; Printing, printing-related services;	1	1%
Other industries;	18	10%
Printing, printing-related services;	2	1%
Research and development; architecture, engineering and techniques and the like;	2	1%
Textile industry;	23	13%
Wholesale and retail;	7	4%
Wood and cork industry;	1	1%

4.2.2. Measurements

The measures used in the present study are based on existing measurement items referred in the literature on QM practices, ISO 9001 adoption and customer orientation. The measure for *customer performance* is built with the items regarding customer-related performance outcomes as customer satisfaction, customer retention, customer loyalty, new customer acquisition and customer feedback, items used by several authors (Babu, 2018; Fang et al., 2014b; Herhausen & Schögel, 2013; Ngo & O'Cass, 2012). For the questionnaire the questions for each item of the measure *customer performance (CP)* were taken from Babu (2018). The measure *customer orientation (CO)* is based on the work by Rapp et al. (2010) and the questions for each item were taken from the same author. The measures for *product innovation incremental (PII)* and *product innovation radical (PIR)* and the respective items and questions were taken from Kim et al. (2012). The measure *management leadership (ML)* was built with the items proposed by Kim et al. (2012). The measure *ISO 9001 adoption (ISO)* was built with the items proposed by Briscoe et al. (2005) regarding the routine use of the ISO 9001 procedures in the firm. For each item, the respondents had to present their answer using a seven-point Likert type scale, where 1 is equal to "strongly disagree" and 7 is equal to "strongly agree". The questionnaire presented to the respondents is included in the Appendix A. The constructs and their items are as presented in the appendix B.

In order to evaluate the validity of each construct measurement, an exploratory factor analysis was performed using the software SPSS 27 (Statistical Package for Social Sciences).

Each factor was evaluated for its unidimensionality and reliability. The unidimensionality of each factor was tested using extraction factor method with principal component analysis. The Cronbach α was used to test the reliability (internal consistency) of each factor. The items included in the same factor should be highly interrelated in order to assure effective measuring of the construct.

The test concluded that all the scales used in the present research are valid and reliable, after minor adjustments. The adjustments consisted in the extraction of two items in the construct *customer performance (CP)*, which were the items no. 2 and 3 to assure the unidimensionality of the factor. All other factors did not have to be adjusted. The Cronbach α values are all higher than 0.85 for all factors. The values for the factor loadings (this is, the variables that make the composition of the factor) are all significant as they are all greater than 0.5 as recommended (Pestana & Gageiro, 2020).

The factors were then also examined in terms of correlations of the entry table, the Bartlett's test of sphericity and the statistical test of Kaiser-Mayer-Olkin (KMO) as well the total variance for each factor was measured.

The results of the factor analysis for each construct are presented in table 5.

Table 5 - Factor analysis results

Construct/ Factor	**KMO**	**Bartlett's test of sphericity**	**Eigenvalue**	**Variance%**	**Cronbach α**
CP	0.813	449.883*	3.455	57.579	0.850
CO	0.815	600.827*	3.829	63.813	0.877
PII	0.864	854.727*	3.966	79.317	0.933
PIR	0.894	1316.901*	4.512	90.249	0.973
ML	0.924	1180.671*	4.954	82.575	0.955
ISO	0.931	2226.536*	5.692	94.862	0.989
Note: *p<0.001;					

The normal distribution of the factors is described in the table 6.

Table 6 - Factors: normal distribution

Construct/ Factor	**Interval minimum**	**Interval maximum**	**Mean**	**Standard deviation**	**Skewness**	**Kurtosis**
CP	3.833	7.000	6.021	0.647	-0.723	0.529
CO	2.833	7.000	6.086	0.799	-1.044	1.432
PII	1.000	7.000	4.673	1.385	-0.714	0.298

PIR	1.000	7.000	3.910	1.624	-0.220	-0.642
ML	1.000	7.000	6.005	1.051	-1.641	3.899
ISO	1.000	7.000	6,021	0.647	-0.723	0.529

4.2.3. Summary of factor analysis and scale purification

The analysis of the factors led to the scale purification in terms of dimensionality and reliability. After the verification, we ended up with scales that are statistically adequate for the independent and dependent variables. In the appendix C the final scales used in this study are presented.

5. Model: multiple linear regression analysis

To test the proposed hypotheses, the model is analysed using multiple linear regressions. But before presenting the results of the model, we performed tests on linearity, normality, homoscedasticity, and multicollinearity of variables to evaluate the assumptions violation for the overall relationships of the variables in the multiple regression analysis.

5.1. Linearity

The linearity of the is analysed using residual plots that indicate the combined effects of all independent variables in the model (Hair, Black, Babin, Anderson, & Tatham, 2006). The linearity was examined by plotting the standardized residuals against the dependent variable *customer performance* (CP). The results can be observed in Fig. 2, which shows a linear tendency.

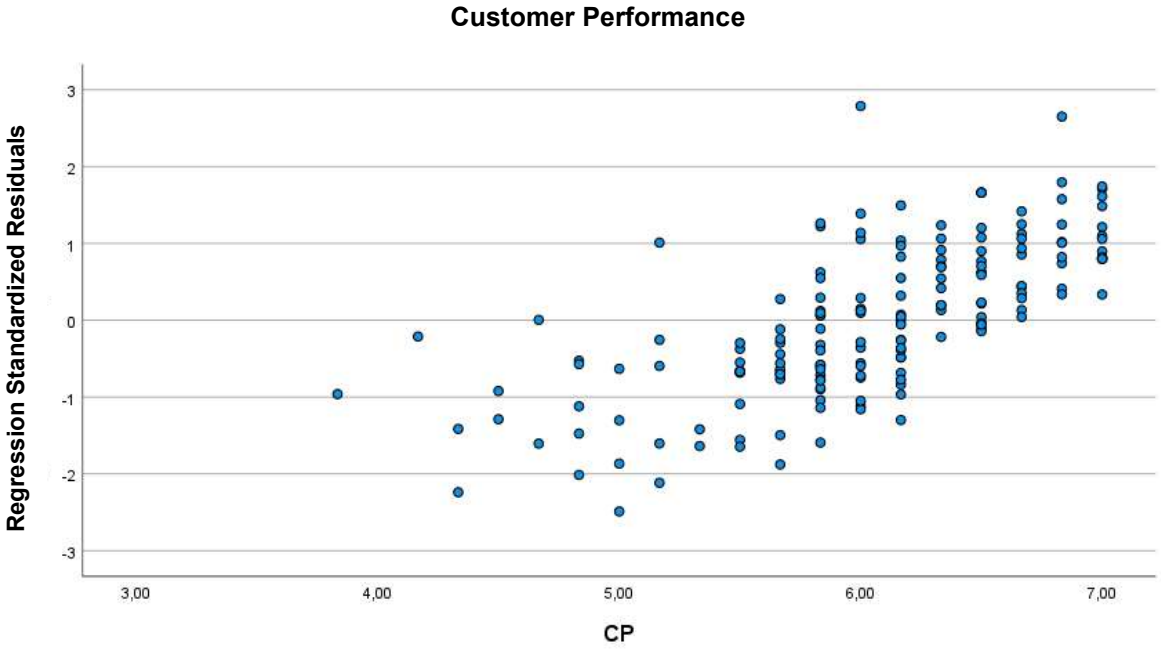

Figure 2 - Regression standardized residuals

5.2. Normality

Normality observes the shape of the data distribution for each individual variables in order to evaluate that whether the normal distribution for the model is to be expected or not (Pestana & Gageiro, 2020). Normality can be checked by observing the histogram of residuals (see Fig. 2) and normal probability plot (see Fig. 4), which compares the

cumulative distribution of the specific data values with the cumulative distribution of normal distribution (Hair et al., 2006).

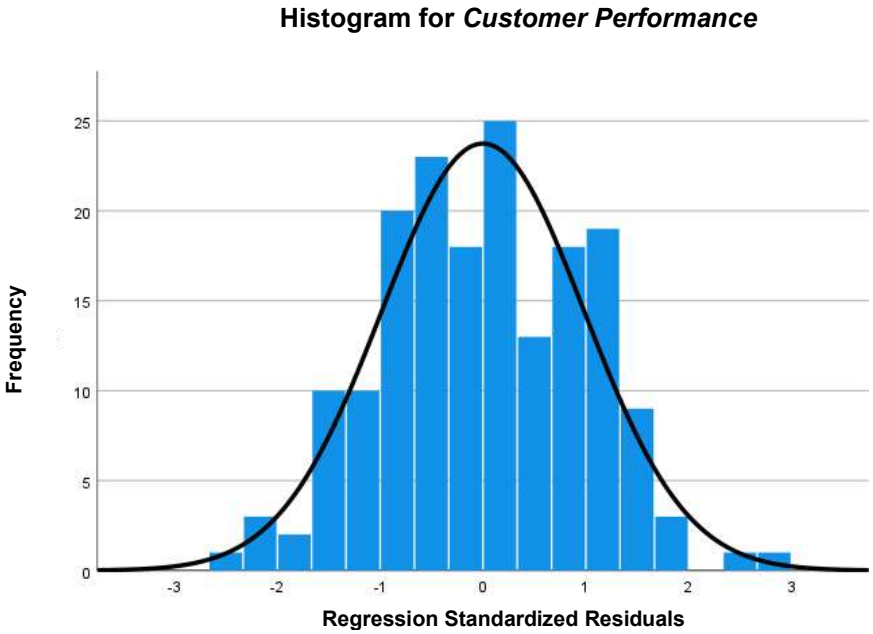

Figure 3 - Histogram regression standardized residuals

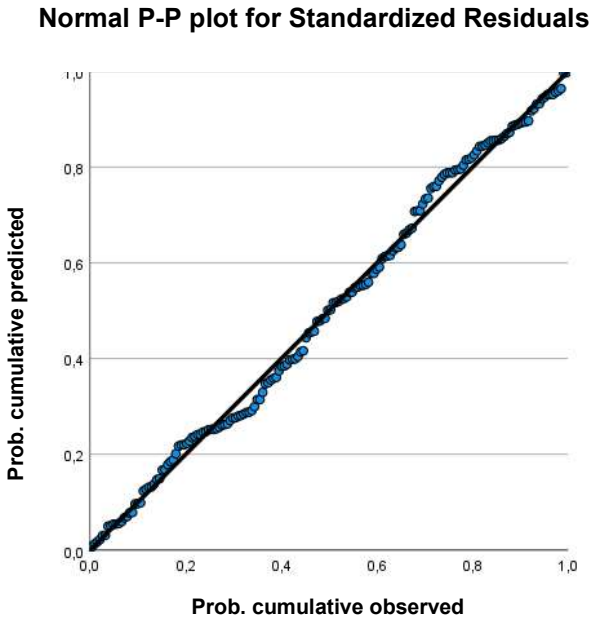

Figure 4 - Normal P-P plot for standardized Residuals

Fig. 3 and Fig. 4 show that the evidence of normality as in both graphs residual values are close to the predicted values for normal distributions. This translates into that there is no violation of normality in the variate of the multiple regression model.

Regarding the observations of the skewness and kurtosis of the standardized residuals, these are presented in table 8 which shows that the values for skewness and kurtosis are within the recommended range: +-1.96 for skewness, at a significant level of .01; and +-2.58 for kurtosis values, at a significant level of .05 (Hair et al., 2006). This means that the symmetry of the variate and the variables distributions are close to the normal distribution.

Table 7 - Skewness and Kurtosis

	Skewness		**Kurtosis**	
	Statistic	Std. Error	Statistic	Std. Error
Standardized Residual	0.036	0.183	-0.268	0.364

5.3.Homoscedasticity

In order to assume that homoscedasticity is assured, the variance levels of the dependent variable must be equal to the variance levels across the independent variables. This can be tested by plotting the studentized residuals against the regression standardized predicted values in comparison to the dependent variable *customer performance* (Pestana and Gageiro, 2020). The results are as seen on the Fig. 5 which shows no consistent plot in the residuals data.

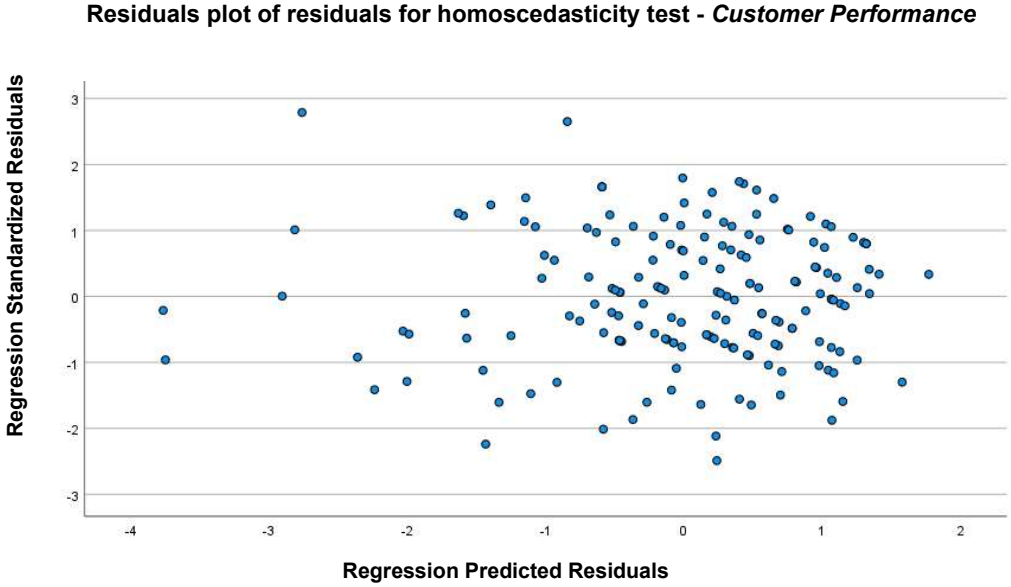

Figure 5 - Residuals plot for homoscedasticity

5.4.Multicollinearity

To evaluate if the independent variables have high correlations between them in the regression model, this is, multicollinearity between three or more independent variables, we

analysed the tolerance and the variance inflation factor (VIF). If multicollinearity between independent variables is high, this can indicate that some of the independent variables may be redundant, which can affect the interpretation the results of the regression model (S. Sharma, 1996). The tolerance indicates the amount of variability of an independent variable explained without the influence of the other independent variables. The tolerance can be defined as the $1-R^2$, where R^2 is the coefficient of determination for the multiple regression equation entailing the independent variables. If the values of tolerance are lower than 0.20, collinearity may exist. VIF is the inverse of tolerance and for this metric, values should not be above 5 (Hair et al., 2006). The results of multicollinearity are presented in table 8 which shows that the presence of multicollinearity between independent variables may be very low or inexistent as all tolerance values are above 0.459 and the highest VIF value is 2.179.

Table 8 - Independent variables correlations

Independent variables	Tolerance	VIF
CO	0.620	1.612
PII	0.459	2.179
PIR	0.484	2.066
ML	0.532	1.878
ISO	0.731	1.367

5.5.Summary of the assumptions for the multiple linear regressions

After the analysis on linearity, homoscedasticity, normality and multicollinearity, we can conclude that none of the assumptions made were violated, which could have affected the interpretation and statistical significance of the model.

6. Results

In this chapter the results of the interviews and analysis of the proposed model will be presented. First, we will look at the input obtained with the interviews, then we will present the results obtained by analysing the data collected via survey with the multiple linear regression model.

6.1. Qualitative analysis

As referred previously, managers of four firms were interviewed in order to obtain more personal insight in how firms use and look at the application of ISO norms in the organization and how managers see their own role in the implementation and use of ISO norms and if the adoption of ISO norms has brought benefits to the firm performance. In order to do so, the managers were asked about their firm strategy regarding acquisition and retention of customers, about the role of ISO norms in the firm performance, about the role of the leadership in the quality management, about the role of customer feedback in product development and about the growth strategy defined for their firms.

Regarding the topic on the strategy for acquisition and retention of customers, the managers have emphasized the need for having close relationships with the customers, observing the customer feedback in product development and proving quality after sales services. Considering the role of use of ISO norms, all managers indicated that these are important for the oversight and improvement of internal processes. Only one manager mentioned that in order to expand their activities into a particular market segment, they had to obtain the ISO 9100 certification requested by customers in the aeronautical sector. All managers indicated that the leadership of the firm, in these cases the top management, participated actively in the promotion, implementation and definition of the quality management processes and quality goals. When it comes to the product development, three managers indicated that their firms developed products and referred that the customer feedback plays a fundamental role in the development of products. When asked about the growth strategy, managers presented different strategic focuses: two managers referred the importance of growing the niche market segments, one manager referred that their strategy was based on building trust among the customers.

6.2. Quantitative analysis

For the calculation of the multiple linear regression results, the stepwise estimation was used, which consists in using a sequential search method that selects the independent variables according to their contribution to the model. The stepwise estimation also places the independent variables into the model by order of contribution. The stepwise estimation method is recommended in order to search and select the variables that will maximize the prediction level of the model, using the smallest number of relevant variables (Hair et al., 2006).

The tests of the model follow a sequence in order to evaluate the statistical relevance of the model, to determine the contribution of each relevant independent variable and lastly the introduction of the moderator variable and its interaction effect on the model in order to test the hypothesis (summary of hypotheses in table 9).

Table 9 - Summary of hypotheses

	Summary of hypotheses
H1	Customer orientation is positively linked with customer performance.
H2	Incremental product innovation has a positive relation to customer performance.
H3	Radical product innovation has a positive relation to customer performance.
H4	Management leadership is positively related to customer performance.
H5	ISO 9001 adoption presents a moderating effect between customer orientation and customer performance.
H6	ISO 9001 adoption has a moderating effect between incremental product innovation and customer performance.
H7	ISO 9001 adoption has a moderating effect between radical product innovation and customer performance.
H8	The adoption of ISO 9001 norms presents moderating effect when combined with management leadership on customer performance.

6.2.1. Model summary

The coefficient of determination (R^2) measures the proportion of variance that affects the dependent variable and that is explained by the insertion of the independent variables. For the analysis of results using in relatively small samples, it is recommended to consider the adjusted coefficient of determination (adjusted R^2), which provides a more objective

measure that takes into account the number of independent variables and sample size (Hair et al., 2006).

In order to understand the complete model and the variance around the dependent variable, assembled a linear regression with all independent variables indicated in the model. The results of this regression model are shown in table 10. When considering the model with the independent variables *customer orientation*, *management leadership*, *product innovation radical* and *product innovation incremental*, the R^2 is 0.507, which indicates that 50.7% of the variance of the customer performance with reference to its mean is explained by the independent variables in the model. The adjusted R^2 is 0.495, this is, 49.5% of the variance is explained by the independent variables in the model. Both coefficients have close results and are both considerably high for studies in the social-economic sciences.

The *F* ratio is 43.938 with significance level inferior to 0.001 which indicates that the hypothesis that the amount of variation explained by the model is significantly greater than zero and as the *F* ratio is greater than the statistic of F distribution (Pestana & Gageiro, 2020). In the current model the F ratio is greater that the tabled statistic value with 171 degrees of freedom, which indicates that the hypothesis of having the variation of the dependent variable *customer performance* not explained by the independent variables present in the model is rejected.

The significance test of regression coefficients that resulted from the estimated regression model indicates which independent variables are statistically significant for the variance of the dependent variable. The results from the t-test indicate that the independent variable product innovation radical is not statistically significant in this model while the remaining independent variables are significant (see table 10).

Table 10 - Results of estimated regression model

Model 1				**Collinearity statistics**	
	Beta	T	Sig.	Tolerance	VIF
(Constant)	6.021	173.712	0.000		
	B standardized				
CO	0.431	6.358	0.000	0.626	1.596
ML	0.279	4.048	0.000	0.631	1.584
PIR	-0.010	-0.131	0.896	0.487	2.053
PII	0.183	2.346	0.020	0.475	2.103

R^2: 0.507; R^2 Adjusted: 0.495 F: 43.938; DF: 171 Sigma: 0.000

The *Pearson* correlation between all variables is shown in table 11. The correlation results that can be used to observe the linear relationship between the dependent variable and the independent variables. The *Pearson* correlation results will be complementary to the analysis of multiple linear regressions and the results of the hypotheses tests.

Table 11 - Pearson correlations between variables

	CP	**CO**	**ML**	**PIR**	**PII**
CP	1				
CO	0.648 (***)	1			
ML	0.581 (***)	0.594 (***)	1		
PIR	0.314 (***)	0.274 (***)	0.276 (***)	1	
PII	0.391 (***)	0.312 (***)	0.296 (***)	0.713 (***)	1
***Correlation is significant at the 0.001 level					

Using the stepwise estimation, we obtain the following results for the regression model (table 12) and the coefficients for the Model 2, which is the model that contains all independent variables except for *product innovation radical* as it was excluded due to the results (see table 10) are presented in table 13.

Table 12 - Models 1, 2 and 3

Model 2	**R^2**	**R^2 adjusted**	**R^2 change**	**F change**	**DF**	**DF2**	**Sig. F change**
1	0.420	0.417	0.420	126.034	1	174	0.000
2	0.479	0.473	0.059	19.753	1	173	0.000
3	0.507	0.498	0.027	9.523	1	172	0.002
1: (Constant), CO							
2: (Constant), CO, ML							
3: (Constant), CO, ML, PII							

Table 13 - Model 3 Coefficients

Model 2				**Collinearity statistics**	
	Beta	T	Sig.	Tolerance	VIF
(Constant)	6.023	161.640	0.000		
	B standardized				
CO	0.431	6.375	0.000	0.627	1.596
ML	0.273	4.060	0.000	0.634	1.577
PII	0.176	3.086	0.002	0.884	1.132

6.2.2. Analysis of the hypotheses tests based on regression results

The results from the regression made with the stepwise method show support for the hypotheses H1, H2 and H4, while H3 is not supported (see Model 1, section 6.1.).

The H1 suggests that there is a positive relation between *customer orientation* (CO) and *customer performance* (CP). In the regression model, CO makes up 42% of the variance of CP with reference to its mean at a significance level of $p<0.001$. The *Pearson* correlation between CO and CP is 0.648 at a significance level of $p<0.001$. This confirms that in the current sample CO has a positive and very significant effect on CP.

The H2 assumes that incremental product innovation has a positive impact on customer performance. The independent variable *product innovation incremental* (PII) is statistically significant in the regression model at $p <0.05$ level, increasing 2,7% of the variance in the global model. However, PII also as a correlation of 0.391 with CP, which can be indicated as an existing but low correlation to the dependent variable. This indicates that incremental product innovation has still a significant effect on customer performance.

On the other hand, H3 is related to the impact of radical product innovation on customer performance. The results from the model show that the independent variable *product innovation radical* (PIR) is not statistically relevant as the *p* value is 0.896. The Pearson correlation shows a relatively low relation to the dependent variable. These results that in the context of the current study, PIR is not relevant to the outcomes of customer performance.

The H4 hypothesis is related to the relationship between *management leadership* and *customer performance*, and it was expected to find a positive relation. The model indeed

confirms that the independent variable *management leadership* (ML) has a positive and significant on the variance of the CP in reference to its mean. ML has contributed to an increase of 5,6% of the variance explained by the independent variables in the model, with a $p<0.001$. The Pearson correlation between ML and CP is 0.581 which represents a moderate relationship between both variables. This indicates that ML is statistically relevant in the model and has a positive effect on CP.

6.2.3. ISO 9001 adoption moderating effect based on hierarchical regression results.

The literature on the topic surrounding the adoption of ISO 9001 norms suggests investigating the moderating effect of the adoption of these norms in firm performance measures. Thus, to evaluate and measure the moderating effect of ISO 9001 adoption (ISO), this variable will be introduced and interact with the existing independent variables of the model: *customer orientation*, *management leadership* and *product innovation incremental*. Thus, a hierarchical multiple regression model was used to evaluate the relationships and the moderating effect was measured using a basis of three stage linear regression for the interaction effect. The independent variables were introduced in a first stage (see section 6.1, Model 2), the moderator ISO was included in a second stage and the interaction terms were included in the third stage (Joshi, 2016; Ndubisi & Richardson, 2002). The presence of the interaction by the moderator variable ISO is assessed by two major indicators:

a. The increase of the R^2 when including a new term in the regression and;
b. The statistical significant change in the coefficients of the independent values, which would translate to changes in the dependent variable via the independent terms in the regression (Ndubisi & Moi, 2005).

The regression mathematical expression that illustrates the regression model with the interaction to detect and analyse the moderating effect is as follows:

(1) $Y = b0+\beta1X1$

(2) $Y = b0+ \beta1X1+ \beta2X2+ E$

(3) $Y = b0+ \beta1X1+ \beta2X2+ \beta3X1X2+ E$

Where,

Y – Dependent variable;

b0 – Constant;

β1 – Coefficient of independent variable;

X1 – Independent variable;

β2 – Coefficient of the moderator variable;

X2 – Moderator variables;

β3 – Coefficient of the interaction term;

X1X2 – Interaction term;

E – Error term.

Table 14 - Hierachical Regression Analysis

Hierarchical Regression Analysis: Regression Coefficients								
	Model 1		Model 2					
			Step 1		*Step 2*		*Step 3*	
	Beta	Sig.	Beta	Sig.	Beta	Sig.	Beta	Sig.
CP	6.023	0.000	6.023	0.000	6.021	0.000	6.021	0.000
CO	0.431	0.000	0.431	0.000	0.446	0.000	0.336	0.000
ML	0.273	0.000	0.273	0.000	0.337	0.000	0.210	0.000
PII	0.176	0.002	0.176	0.002	0.153	0.008	0.071	0.009
PIR	0.003	0.965						
Main effect								
ISO					-0.035	0.029	-0.034	0.036*
Interaction terms								
ISO x CO							-0.035	0.071*
ISO x ML							-0.004	0.803
ISO x PII							-0.010	0.315
ISO x PIR								
R^2 Adjusted	0.506		0.498		0.509		0.529	
Sig. F	0.000		0.002		0.029		0.000	

The results of the hierarchical regression show that variable ISO is significant when inserted in the model 2, with a $p<0.05$ and the interaction between ISO and CO is significant at $p<0.1$ in the last step of the regression. The insertion of the variable ISO changes the R^2 from 0.498 to 0.509 in step 2 and moderating interaction changes the R^2 adjusted from 0.529 in step 3. The adoption of ISO 9001 norms present a significant moderating effect, however the effect is negative, which can be interpreted as ISO 9001 adoption impact on customer performance decreases when customer orientation is high. However, the interaction between ISO and ML and then with PII has no statistical significance, thus the model 2 with the interactions in step 3 shows no support for H6, H7 and H8. Adding to the results shown in the hierarchical

regression, a scatter plot for the dispersion between CP and CO by ISO is also presented (Fig. 6).

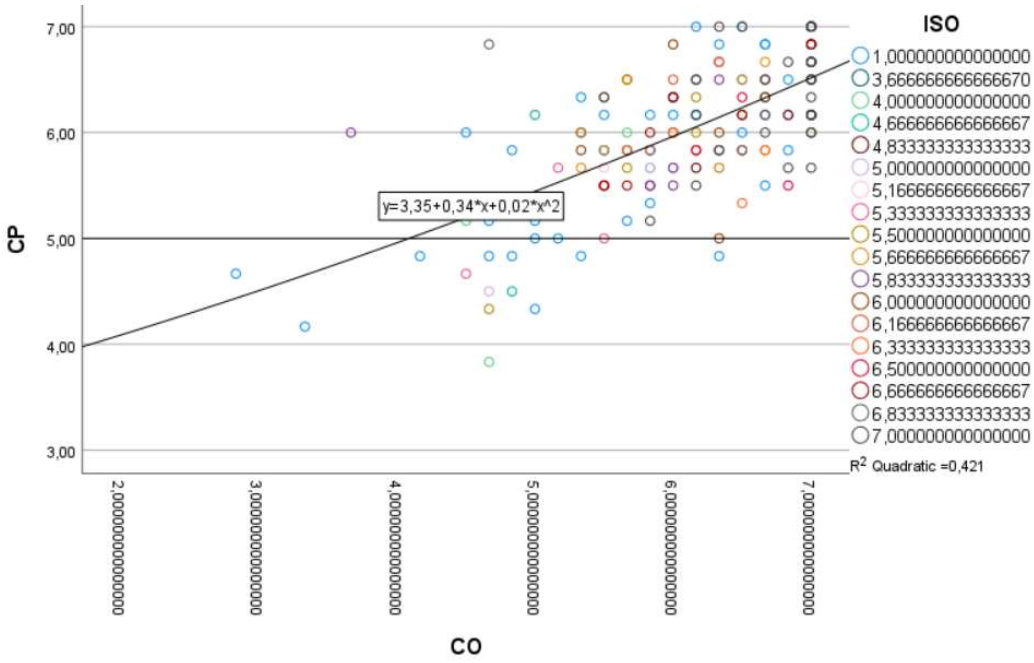

Figure 6 - Dispersion CP-CO by ISO

The independent variable ISO and moderating interaction however present a negative beta value: -0.034 and -0.035 respectively, thus supporting H5. In order to understand the results of the moderating effect with more detail, the conditional process analysis was carried out. The conditional process analysis is "an analytical strategy focused on quantifying the boundary conditions of mechanisms and testing hypotheses about the contingent nature of processes" (Hayes, 2018b, p. 2). This analysis is useful when the moderator is continuous. Therefore an investigation on the conditional effects of the focal predictor CO at values of the moderator at the 16th, 50th and 84th percentiles was carried out in order to assess the rate of change in the moderation by ISO of the indirect effect of CO, as recommended by Hayes (2018a). The results of the conditional effect of CO on ISO are presented in table 16. The percentile 16th represents the lowest degree of adoption of ISO norms, the percentile 50th the medium degree of adoption of ISO norms and the 84th percentile the highest level of adoption of ISO norms among the sample. The independent variable CO has significant effects on the moderating role of ISO on all percentiles, showing a higher effect of 0.445 on the 16th percentile and a lower effect in the rest of the sample.

Table 15 - Conditional effects of CO on the moderator ISO

Percentile	ISO	Effect	se	T	Sig.	LLCI	ULCI
16th	-3.460	0.445	0.071	6.260	0.000	0.3048	0.5855
50th	1.207	0.298	0.064	4.623	0.000	0.1706	0.4250
86th	2.540	0.256	0.794	3.220	0.002	0.0989	0.4125

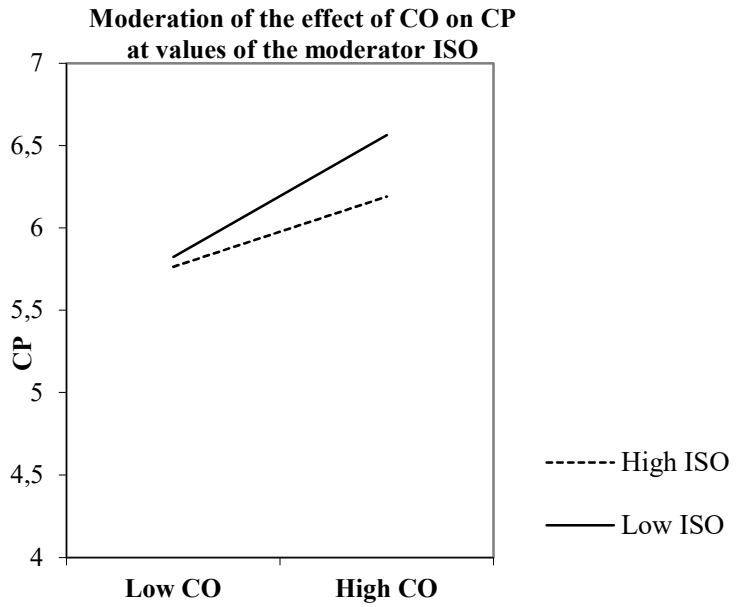

Figure 7 - Moderation of the effect of CO on CP at values of the moderator ISO

7. Discussion of results

7.1. Theoretical implications

The results from this study indicate that customer orientation plays a pivotal role in the improvement of customer performance, alongside management leadership and product innovation when incremental. On the other hand, the adoption of ISO norms resulted in a negative impact on customer-related performance when inserted in the model. This can be interpreted in a similar way to the findings of the study conducted by Prajogo (2011) in which external motivations also presented a negative moderation between implementation and organizational performance. Thus, as firms presented higher levels of customer orientation, the contribution of ISO 9001 norms to the customer performance decreases, presenting in the end a negative moderating effect. The higher the customer orientation is, the weaker the role of ISO 9001 in customer performance becomes.

Customer orientation, as a key factor that leads firms to improve their performance with customer related items (Macintosh, 2007; Zhu & Nakata, 2007; Ziggers & Henseler, 2015) is also crucial in an exporting context as it drives the focus of firms towards customers that are physically and culturally distant from the firm and the competition where the customers are may operate differently from the national market of the firms (Alteren & Tudoran, 2015). Previous literature had found that customer orientation impacted positively firm performance in an exporting context (Cadogan et al., 2002; Rose & Shoham, 2002) but negative relationships had also been found (Solberg & Olsson, 2010). With the present study, there is a confirmation of the positive impact of customer orientation in customer-related performance among exporting companies. This might indicate that the firms in the sample are aiming at long-term relationships (Dwyer et al., 1987; Leonidou et al., 2014; Morgan & Hunt, 1994) and the building of high quality relationships based on satisfaction, trust, commitment, complying of norms and cooperation (Bigné, Blesa, Küster, & Andreu, 2004; Blesa & Bigné, 2005; Racela, Chaikittisilpa, & Thoumrungroje, 2007; Siguaw, Simpson, & Baker, 1998), which may potentiate the overall performance of the firms (Alteren & Tudoran, 2016).

As customer orientation plays the major role on customer performance output, high levels of customer orientation were expressed among the sample and in this context incremental product innovation might be favoured as it can be promoted and developed by customer

feedback, information and knowledge (Menguc et al., 2014), while customer feedback does not improve and can even hinder the development of radical new products (Callahan & Lasry, 2004; Menguc et al., 2014). In previous studies, positive relations between customer orientation and product innovation had been found (Fang et al., 2014a; Salojärvi & Sainio, 2014; Zhou et al., 2005). Additionally, the current study brings data that indicates that product innovation incremental has also a positive effect on customer performance, which includes not only satisfaction but also the acquisition and retention of customers. As incremental product innovation is associated with lower levels of risk (Gatignon et al., 2002; Koberg et al., 2003), it can be more useful in strategies that seek to consolidate the customer base and may obtain new customers gradually while radical product innovation creates and places completely new products in the market where the customer base did not exist until the release of the product itself (Jansen et al., 2006).

When analysing the moderating interaction of ISO norms with product innovation incremental, unlike previous studies that had found positive relationship between adoption of ISO norms and product innovation (Kim et al., 2012; Prajogo & Hong, 2008), our current study shows no effect of ISO adoption on product innovation incremental that leads to higher customer performance outcomes.

Leadership and the commitment of management play a key role in the successful implementation of quality management (Anderson, Rungtusanatham, Schroeder, & Devarajaj, 1995; Flynn & Saladin, 2001; Flynn, Schroeder, & Sakakibara, 1994; Kaynak, 2003), by orienting firms towards quality (Pannirselvam & Ferguson, 2001; Wilson & Collier, 2000), by creating the values, goals and processes to satisfy customers' expectations and by targeting the overall improvement of the firm performance (Ebrahimpour, 1988; Kaluarachchi, 2010). As the results of this study indicate, an engaged management in leading and supervising the quality performance in the firm has a positive impact in customer-related performance, which means that not only achieving better customer satisfaction as previous studies had indicated (Kaynak, 2003; Kim et al., 2012) but also affecting positively customer retention, loyalty and acquisition. However, the interaction with the adoption of ISO norms does not affect the role of the leadership in its relationship with the customer performance outcomes. Authors in quality management refer the importance of the role of the leadership in implementation and use of quality management systems and that the engagement of the management is essential for a successful use of quality management systems (Albacete-Sáez, Fuentes-Fuentes, & Bojica, 2011; Kim et al., 2012). This might indicate that the engagement of the management plays such an important role rather than the adoption of the ISO norms.

The adoption of ISO norms in the firms of the sample resulted in a negative impact on customer performance. Despite the findings of previous studies where a positive impact of ISO adoption had on customer satisfaction (Casadesus & Gimenez, 2000; Sharma, 2005; Terziovski et al., 2003), the results in the present study may be explained by some previous studies that explore the symbolic adoption of ISO norms, where it is pointed out the heterogeneity of how the firms adopt ISO 9001, lack of internalisation of the use of ISO 9001 procedures and the contrast between the motivations for adopting ISO 9001 and the practices within the firm (Heras-Saizarbitoria & Boiral, 2015). This can indicate that there is a gap between the intent of the adoption, which can be only symbolic, and the results on performance related items, in the case of the current study customer performance, which also includes customer acquisition, retention and loyalty, end up being negative. This is reinforced by the interaction effect with customer orientation, as the adoption of ISO norms among the sample has a negative relationship on the customer performance, when customer orientation is higher, then the negative moderating effect of ISO will be enhanced. This indicates that the adoption of ISO norms and the customer orientation act counter wise.

Considering the possibility that these results can be explained by an effectiveness gap as proposed by Sun et al. (2019), it is worth mention the discussion around the barriers that may cause a lack of effectiveness as investigated by Sun et al. (2019), where despite the engagement of the top management in implementing ISO 9001 norms in the firm, issues related to employee engagement and training, or factors around the employees such as organizational conditions and human and financial resources allocated for the implementation of ISO norms, could result in the increase of the effectiveness gap of ISO 9001 adoption. Moreover, following the line of the contrast between the motivations for adoption ISO 9001 and the practices within the firm, Sun et al. (2019) also exposes that this contributes to the increase of effective use of ISO 9001 within the firm, namely when the motivations are external, such as market pressure or customer's requirement.

7.2.Managerial implications

The findings of this study reinforce the importance of customer orientation in order to obtain improved customer performance. Therefore, managers should consider in their strategy the focus on customer orientation. The role of quality management systems should be reviewed under a customer-oriented strategy within the firm, this means, quality management systems

goals should consider the customer-oriented aspects and to be aligned to a customer-oriented strategy as quality management practices seem to complement goals and procedures that might already be considered in global strategy of the firm. Nevertheless, managers should also consider that in more mature markets the use of quality management systems is more widespread and therefore the factor of differentiation for competitive advantage might be attenuated. However, in specific market niches, specific quality management certifications are required or recommended to gain access, expand or consolidate the presence in those market segments.

Managers should consider having a practical approach when implementing quality management systems: to consider the real reasons why they choose to implement such systems and to set the focus of quality management systems according to the focus chosen by the firm for their general performance goals in order to avoid the issues of effectiveness in the implementation and use of quality management systems.

8. Conclusions

With the present study, we have added to the discussion on the impact of ISO 9001 adoption in firm performance by focusing on customer-related performance, an indicator that included not only customer satisfaction, but also acquisition of new customers, customer loyalty and retention. This indicator, despite its role in the overall firm performance, was usually not investigated throughout the literature that analyses adoption of quality management systems. In our study we can observe that the adoption of ISO norms may not lead to an improved customer performance. Previous literature had indicated the role of the adoption of ISO 9001 in increasing customer satisfaction but data regarding customer performance, this is, including customer acquisition, retention, and loyalty, was missing. As previously mentioned, customer satisfaction alone may not be a good predictor of customer performance and the adoption of ISO norms that focus nowadays on customer satisfaction and requirements seem to follow a similar line. The customer orientation plays among exporting firms the role as main predictor for customer performance, being followed by the leadership management and product innovation incremental.

In this current study the adoption of ISO norms shows no moderating effect on product innovation and leadership towards customer performance. However, the adoption of ISO norms showed a negative moderating effect when combined with customer orientation, which reveals that despite the tendency to be customer-focused, the adoption of quality management systems based on ISO 9000 family may not lead to an improved customer performance. This can be explained by the possible existence of implementation issues or motivations for adopting ISO 9001 that may lead to a lack of effectiveness in the adoption and internalization of ISO 9001 quality management systems. When considering the insights provided in the interviews, the ISO 9001 were more impactful in the management of internal processes and were seen to complement actions and strategies that were already in place in the firm. This means that the use of ISO 9001 norms was seen as important in the oversight of internal procedures and improvement at the organizational level, however the adoption of ISO 9001 norms did not add new aspects, procedures, strategies: it contributed for the improvement of already existing procedures, processes and complemented strategies already in place. Only one manager specified the need of obtaining a specific certification, ISO 9100, in order to expand the activities in aeronautical sector.

In order to investigate whether the negative impact of the adoption of ISO 9001 on customer performance is a possible result that derives from lack of effective implementation or motivational barriers that lead to a misalignment between intent and practice, the role of internal barriers that lead to the effectiveness gap should be considered and also it should be gathered data regarding the motivations behind adoption of ISO 9001 and such could be extended to other quality management systems. For future research, it should be considered in how far the presence of an effectiveness gap can affect customer performance or any other indicators of firm performance.

Bibliography

Abrunhosa, A., Moura, E., & Sa, P. (2008). Are TQM principles supporting innovation in the Portuguese footwear industry? *Technovation*, *28*(4), 208–221.

Adam, E. J., Corbett, L., Flores, B., Harrison, N., Lee, T., Rho, B., … Westbrook, R. (1997). An international study of quality improvement approach and firm performance. *International Journal of Quality & Reliability Management*, *17*(9), 842–873.

Aguinis, H. (2004). *Regression analysis for categorical moderators*. New York: Guilford Press.

Ahire, S. L., & Ravichandran, T. (2001). An innovation diffusion model of TQM implementation. *IEEE Transactions on Engineering Management*, *48*(4), 445–464.

Akerlof, G. (1970). The market for "lemons": quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, *84*(3), 488–500.

Albacete-Sáez, C. A., Fuentes-Fuentes, M. M., & Bojica, A. M. (2011). Quality management, strategic priorities and performance: The role of quality leadership. *Industrial Management and Data Systems*, *111*(8), 1173–1193. https://doi.org/10.1108/02635571111170758

Albacete-Sáez, C. A., Fuentes-Fuentes, M. M., & Bojica, A. M. (2011). Quality management, strategic priorities and performance: the role of quality leadership. *Industrial Management and Data Systems*, *111*(8), 1173–1193.

Alteren, G., & Tudoran, A. A. (2015). Enhancing export performance: Betting on customer orientation, behavioral commitment, and communication. *International Business Review*. Retrieved from http://dx.doi.org/10.1016/j.ibusrev.2015.07.004

Alteren, G., & Tudoran, A. A. (2016). Enhancing export performance: Betting on customer orientation, behavioral commitment, and communication. *International Business Review*, *25*(1), 370–381. https://doi.org/10.1016/j.ibusrev.2015.07.004

Amiti, M., & Weinstein, D. E. (2011). Exports and financial shocks. *Quarterly Journal of Economics*, *126*(4), 1841–1877. Retrieved from https://doi.org/10.1093/qje/qjr033

Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability:findings from Sweden. *Journal of Marketing*, *57*(2), 53–66.

Anderson, E. W., & Mittal, V. (2000). Strengthening the satisfaction-profit chain. *Journal of Service Research*, *3*(2), 107–120.

Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing Science*, *12*(2), 125–143.

Anderson, E. W., & Weinstein, D. E. (1997). Customer satisfaction, productivity and profitability: differences between goods and services. *Marketing Science*, *16*(2), 129–145.

Anderson, J. C., Rungstusanatham, M., & Schroeder, R. (1994). A theory of quality management underlying the Deming management method. *Academy of Management Review*, *19*, 472–509.

Anderson, J. C., Rungtusanatham, M., Schroeder, R. G., & Devarajaj, S. (1995). A path analytic model of a theory of quality management underlying the Deming management method: preliminary findings. *Decisions Science*, *26*(5), 637–657.

Anderson, S. W., Daly, J. D., & Johnson, M. F. (1999). Why firms seek ISO 9000 certification: Regulatory compliance or competitive advantage? *Production and Operations Management*, *8*(1), 28–43. https://doi.org/10.1111/j.1937-5956.1999.tb00059.x

Andersson, M., Lindgren, R., & Henfridsson, O. (2008). Architectural knowledge in interorganizational IT innovation. *Journal of Strategic Information Systems*, *17*(1), 19–38.

Arendt, L. A., Priem, R. L., & Ndofor, H. A. (2005). A CEO-adviser model of strategic decision making. *Journal of Management*, *31*, 680–699.

Ateş, N. Y., Tarakci, M., Porck, J. P., van Knippenberg, D., & Groenen, P. J. F. (2015). The dark side of visionary leadership in strategy implementation: Strategic alignment, strategic consensus, and commitment. *Journal of Management*.

Babu, M. M. (2018). Impact of firm's customer orientation on performance: the moderating role of interfunctional coordination and employee commitment. *Journal of Strategic Marketing*, *26*(8), 702–722.

Baker, W. E., & Sinkula, J. M. (2005). Market orientation and the new product paradox. *Journal of Product Innovation Management*, *22*(November), 483–502.

Barkema, H. G., Shenkar, O., Vermeulen, F., & Bell, J. H. J. (1997). Working abroad, working with others: how firms learn to operate international joint ventures. *Academy of Management Journal*, *40*, 426–442.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *40*(1), 99–120.

Barney, J., & Arikan, A. (2001). The resource-based view: Origins and implications. In M. Hitt, R. Freeman, & J. Harrison (Eds.), *Handbook of strategic management* (pp. 124–185). Oxford,UK: Blackwell.

Barney, J., & Clark, D. (2007). *Resource-based theory: Creating and sustaining competitive advantage*. New York: Oxford University Press.

Barney, J., & Hesterly, W. (2012). *Strategic management and competitive advantage: Concepts and cases* (4th ed.). New Jersey: Pearson.

Barney, J., Ketchen, D., & Wright, M. (2011). The future of resource-based theory: Revitalization or decline? *Journal of Management*, *37*(5), 1299–1315.

Bedeian, A. G., & Hunt, J. G. (2006). Academic amnesia and vestigial assumptions of our forefathers. *The Leadership Quarterly*, *17*, 190–205.

Beer, M. (2003). Why total quality management programs do not persist: the role of management quality and implications for leading a TQM transformation. *Decision Sciences*, *34*(4), 623–642.

Bernhardt, K., Donthu, N., & Kennett, P. A. (2000). A longitudinal analysis of satisfaction and profitability. *Journal of Business Research*, *47*(2), 161–171.

Berraies, S., & Hamouda, M. (2018). Customer empowerment and firms' performance:The mediating effects of innovation and customer satisfaction. *International Journal of Bank Marketing*, *36*(2), 336–356. Retrieved from https://doi.org/10.1108/IJBM-10-2016-0150

Berson, Y., Nemanich, L. A., Waldman, D. A., Galvin, B. M., & Keller, R. T. (2006). Leadership and organizational learning: A multiple levels perspective. *Leadership Quarterly*, *17*(6), 577–594. https://doi.org/10.1016/j.leaqua.2006.10.003

Beverland, M., Farrelly, F., & Woodhatch, Z. (2004). The role of value change management in relationship dissolution: hygiene and motivational factors. *Journal of Marketing Management*, *20*(9/10), 927–939.

Beverland, M., Farrelly, F., & Woodhatch, Z. (2007). Exploring the dimensions of proactivity within advertising agency-client relationships. *Journal of Advertising*, *36*(4), 49–60.

Bhat, K. S., & Rajashekhar, J. (2009). An empirical study of barriers to TQM implementation in Indian industries. *The TQM Magazine*, *21*(3), 261–272.

Bigné, E., Blesa, A., Küster, I., & Andreu, L. (2004). Market orientation: An antecedent to the industrial manufacturer's power. *European Journal of Marketing*, *38*(1/2), 175–193.

Blesa, A., & Bigné, E. (2005). The effect of market orientation on dependence and satisfaction in dyadic relationships. *Marketing Intelligence and Planning*, *23*(3), 249–265.

Blind, K., Mangelsdorf, A., & Pohlisch, J. (2018). The effects of cooperation in accreditation on international trade: Empirical evidence on ISO 9000 certifications. *International Journal of Production Economics*, *198*(June 2016), 50–59. https://doi.org/10.1016/j.ijpe.2018.01.033

Blind, K., Mangelsdort, A., & Pohlisch, J. (2018). The effects of cooperation in accreditation on international trade: Empirical evidence on ISO 9000 certifications. *International Journal of Production*, *198*, 50–59.

Blocker, C. P., Flint, D. J., Myers, M. B., & Slater, S. F. (2011). Proactive customer orientation and its role for creating customer value in global markets. *Journal of the Academy of Marketing Science*, *39*(2), 216–233. https://doi.org/10.1007/s11747-010-0202-9

Boiral, O. (2003). ISO 9000: outside the iron cage. *Organisational Sciences*, *14*(6), 720–737.

Bolton, P. K., Kannan, P., & Bramlett, M. D. (2000). Implications of loyalty program membership and service experiences for customer retention and value. *Journal of the*

Academy of Marketing Science, *28*(1), 95–108.

Bolton, R. N. (1998). A dynamic model of the duration of the customer's relationship with a continuous service provider: the role of satisfaction. *Marketing Science*, *17*(Winter), 45–65.

Boone, C., & Hendriks, W. (2009). Top management team diversity and firm performance: moderators of functional-background and locus-of-control diversity. *Management Science*, *55*, 165–180.

Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. (1993). A dynamic process model of service quality: from expectations to behavioral intentions. *Journal of Marketing Research*, *30*(February), 7–27.

Boulding, W., Staelin, R., Ehret, M., & Johnston, W. J. (2005). A customer relationship management roadmap: what is known, potential pitfalls, and where to go. *Journal of Marketing*, *69*(4), 155–166.

Boulter, L., & Bendell, T. (2002). How can ISO 9000:2000 help companies achieve excellence? *Measuring Business Excellence*, *6*(2), 37–41.

Bourgeois, L., & Eisenhardt, K. (1988). Strategic decision processes in high velocity environments. *Management Science*, *34*(7), 816–835.

Brady, M. K., & Cronin, J. J., J. (2001a). Customer orientation: Effects on customer service perceptions and outcome behaviors. *Journal of Service Research*, *3*, 241–251.

Brady, M. K., & Cronin, J. J., J. (2001b). No Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, *65*, 34–49.

Briscoe, J. A., Fawcett, S. E., & Todd, R. H. (2005). The implementation and impact of ISO 9000 among small manufacturing enterprises. *Journal of Small Business Management*, *43*(3), 309–330. https://doi.org/10.1111/j.1540-627X.2005.00139.x

Brown, A., van der Wiele, T., & Loughton, K. (1998). Smaller enterprises' experiences with ISO 9000. *International Journal of Quality & Reliability Management*, *15*(39), 273–285.

Bruhn, M., & Grund, M. A. (2000). Theory, development and implementation of national customer satisfaction indices: The Swiss Index of Customer Satisfaction (SWICS). *Total Quality Management*, *11*(7), 1017–1028. https://doi.org/10.1080/09544120050135542

Bryde, D., & Slocock, B. (1998). Quality management systems certification: a survey. *International Journal of Quality & Reliability Management*, *15*(5), 467–480.

Buttle, F. (1997). ISO 9000: marketing motivations and benefits. *International Journal of Quality & Reliability Management*, *14*(9), 936–947.

Cadogan, J. W., Diamantopoulos, A., & Siguaw, J. A. (2002). Export market-oriented activities: Their antecedents and performance consequences. *Journal of International Business Studies*, *33*(3), 615–626.

Callahan, J., & Lasry, E. (2004). The importance of customer input in the development of

very new products. *R&D Management*, *34*(2), 107–120.

Cao, X., & Prakash, A. (2011). Growing export by signalling product quality: trade competition and the cross-national diffusion of ISO 9000 Quality standards. *Journal of Policy Analysis and Management*, *30*(1), 111–135.

Carmeli, A., & Halevi, M. Y. (2009). How top management team behavioral integration and behavioural complexity enable organizational ambidexterity: the moderating role of contextual ambidexterity. *The Leadership Quarterly*, *20*, 207–218.

Carr, J. C., Haggard, K. S., Hmieleski, K. M., & Zahra, S. A. (2010). A study of the moderating effects of firm age at internationalization on firm survival and short-term growth. *Strategic Entrepreneurship Journal*, *4*, 183–192. Retrieved from https://doi.org/10.1002/sej.90

Casadesus, M., & Gimenez, G. (2000). The benefits of the implementation of the ISO 9000 standard: empirical research in 288 Spanish companies. *The TQM Magazine*, *2*(6), 432–441.

Casillas, J. C., Acedo, F. J., & Rodríguez-Serrano, M. Á. (2020). How does internationalization begin? The role of age at entry and export experience in the early stages of the process. *BRQ Business Research Quarterly*, *23*(2), 107–119. https://doi.org/10.1177/2340944420916333

Chadwick, C., Super, J. F., & Kwon, K. (2015). Resource orchestration in practice: CEO emphasis on SHRM, commitment-based HR systems, and firm performance. *Strategic Management Journal*, *36*, 360–376.

Chandy, R. K., & Tellis, G. (1998). Organizing for radical product innovation: The overlooked role of willingness to cannibalize. *Journal of Marketing Research*, *35*(4), 474–487.

Chandy, R. K., & Tellis, G. (2000). The incumbent's curse?: Incumbency, size, and radical product innovation. *Journal of Marketing*, *64*(3), 1–17.

Chatzoglou, P., Chatzoudes, D., & Kipraios, N. (2015). The impact of ISO 9000 certification on firms' financial performance. *International Journal of Operations and Production Management*, *35*(1), 145–174.

Chiao, Y. C., Yang, K. P., & Yu, C. M. J. (2006). Performance, internationalization, and firm-specific advantages of SMEs in a newly-industrialized economy. *Small Business Economics*, *26*(5), 475–492. Retrieved from https://doi.org/10.1007/s11187-005-5604-6

Chih, W. H., Huang, L. C., & Yang, T. J. (2016). Prior knowledge, transformative learning and performance. *Industrial Management and Data Systems*, *116*(1), 103–121. https://doi.org/10.1108/IMDS-09-2014-0273

Chin, K. S., Tummala, V. M. R., & Chan, K. M. (2003). Quality management practices in Hong Kong industries: a comparison between electronics and toy manufacturing industries. *The International Journal of Quality & Reliability Management*, *20*(8/9), 1051–1083.

Clougherty, J. A., & Grajek, M. (2008). The impact of ISO 9000 diffusion on trade and

FDI: A new institutional analysis. *Journal of International Business Studies*, *39*(4), 613–633. https://doi.org/10.1057/palgrave.jibs.8400368

Clougherty, J. A., & Grajek, M. (2014). International standards and international trade: Empirical evidence from ISO 9000 diffusion. *International Journal of Industrial Organization*, *36*, 70–82. https://doi.org/10.1016/j.ijindorg.2013.07.005

Conca, F., Llopis, F., & Tarí, J. (2004). Development of a measure to assess quality management in certified firms. *European Journal of Operational Research*, *156*(3), 683–697.

Cooil, B., Keiningham, T. L., Aksoy, L., & Hsu, M. (2007). A longitudinal analysis of customer satisfaction and share of wallet: investigating the moderating effect of customer characteristics. *Journal of Marketing*, *71*(January), 67–83.

Corbett, C. J., Luca, A. M., & Pan, J.-N. (2003). Global perspectives on global standards a 15-economy survey of. *ISO Management Systems,* (January-February), 32–40. Retrieved from http://www.stat.ncku.edu.tw/faculty_private/jnpan/publication/2003_ISOMS.pdf

Crosby, P. B. (1979). *Quality is Free: The Art of Making Quality Certain*. New York: Hodder and Stoughton.

Cross, M. E., Brashear, T. G., Rigdon, E. E., & Bellenger, D. N. (2007). Customer orientation and salesperson performance. *European Journal of Marketing*, *41*(7/8), 821–835.

Curkovic, S., & Pagell, M. (1999). A critical examination of the ability of ISO 9000 certification to lead to a competitive advantage. *Journal of Quality Management*, *4*(1), 51–67.

Das, S., Roberts, M. J., & Tybout, J. R. (2007). Market entry costs, producer heterogeneity, and export dynamics. *Econometrica*, *75*, 837–873.

Day, G. S. (1994). The Capabilities of Market-Driven Organizations. *Journal of Marketing*, *58*(4), 37–52. https://doi.org/10.1177/002224299405800404

Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science*, *28*(1), 24–30.

Day, G. S., & Nedungadi, P. (1994). Managerial representations of competitive advantage. *Journal of Marketing*, *58*(1), 31–44.

Day, G. S., & Wensley, R. (1988). Assessing advantage: a framework for diagnosing competitive superiority. *Journal of Marketing*, *52*(2), 1–20.

Dean, J. W. J., & Bowen, D. E. (1994). Management theory and total quality: improving research and practice through theory development. *Academy of Management Review*, *19*(3), 392–418.

Deshpand, R., Farley, J., & Webster Jr., F. E. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. *Journal of Marketing*, *57*(1), 23–27.

Dick, G., Gallimore, K., & Brown, J. (2002). Does ISO 9000 accreditation make a profound difference to the way service quality is perceived and measured? *Managing Service Quality*, *12*(1), 30–42.

DiMaggio, P., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*(2), 147–160.

Dongmo, C., Onojaefe, D., Briscoe, J. A., Fawcett, S. E., Todd, R. H., Heras-Saizarbitoria, I., … Nagase, K. (2005). The implementation and impact of ISO 9000 among small manufacturing enterprises. *Journal of Small Business Management*, *43*(3), 1–9. https://doi.org/10.1016/j.ijhm.2015.08.006

Douglas, A., Coleman, S., & Oddy, R. (2003). The case for ISO 9000. *The TQM Magazine*, *15*(5), 316–324.

Douglas, T. J., & Judge, W. Q. (2001). Total quality management implementation and competitive advantage: the role of structural control and exploration. *Academy of Management Journal*, *44*(1), 158–169.

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer–seller relationships. *Journal of Marketing*, *5*(April), 11–27.

Dwyer, G. (2002). Business excellence versus ISO 9000 in an Irish context-which delivers? *Managerial Auditing Journal*, *17*(7), 404–411.

Easton, G., & Jarrell, S. (1998). The effects of total quality management on corporate performance: an empirical investigation. *Journal of Business*, *71*, 253–307.

Ebrahimpour, M. (1988). An empirical study of American and Japanese approaches to quality management in the Unites States. *International Journal of Quality & Reliability Management*, *5*(5), 5–24.

Eggert, A., Ulaga, W., & Schultz, F. (2006). Value creation in the relationship life cycle: a quasi-longitudinal analysis. *Industrial Marketing Management*, *35*(1), 20–27.

Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D. (1997). Experiential knowledge and cost in internationalization process. *Journal of International Business Studies*, *28*, 337–360.

Eriksson, K., Johanson, J., Majkgård, A., & Sharma, D. (2000). Effect of variation on knowledge accumulation in the internationalization process. *International Studies of Management and Organization*, *30*(1), 26–44.

Escanciano, C., Fernández, E., & Vasquez, C. (2001a). Influence of ISO 9000 certification on the progress of Spanish industry towards TQM. *International Journal of Quality & Reliability Management*, *18*(5), 481–494.

Escanciano, C., Fernández, E., & Vasquez, C. (2001b). ISO 9000 certification and quality management in Spain: results of a national survey. *The TQM Magazine*, *13*(3), 192–200.

Fang, S.-R., Chang, E., Ou, C.-C., & Chou, C.-H. (2014a). Internal market orientation, market capabilities and learning orientation. *European Journal of Marketing*, *48*(1/2),

170–192.

Fang, S.-R., Chang, E., Ou, C.-C., & Chou, C.-H. (2014b). Internal market orientation, market capabilities and learning orientation. *European Journal of Marketing*, *48*(1), 170–192. https://doi.org/10.1108/EJM-06-2010-0353

Feigenbaum, A. (1991). *Total Quality Control*. New York: McGraw-Hill.

Feng, J., Prajogo, D. I., Tan, K. C., & Sohal, A. S. (2006). The impact of TQM practices on performance: A comparative study between Australian and Singaporean organizations. *European Journal of Innovation Management*, *9*(3), 269–278.

Flint, D., Woodruff, R., & Gardial, S. (2002). Exploring the phenomenon of customers' desired value change in a business-to-business context. *Journal of Marketing*, *66*(4), 102–117.

Flynn, B. B., & Saladin, B. (2001). Further evidence on the validity of the theoretical models underlying the Baldridge criteria. *Journal of Operations Management*, *19*(6), 617–652.

Flynn, B. B., Schroeder, R. G., & Sakakibara, S. (1994). A framework for quality management research and associated measurement instrument. *Journal of Operations Management*, *11*(4), 339–366.

Flynn, B. B., Schroeder, R. G., & Sakakibara, S. (1995). The impact of quality management practices on performance and competitive advantage. *Decision Sciences*, *26*(5), 659–691.

Foley, A., & Fahy, J. (2009). Seeing market orientation through a capabilities-lens. *European Journal of Marketing*, *43*(1/2), 13–20.

Fonseca, L. M., Domingues, J. P., Machado, P. B., & Calderón, M. (2017). Management system certification benefits: Where do we stand? *Journal of Industrial Engineering and Management*, *10*(3), 476–494.

Fonseca, L. M., Domingues, J. P., Machado, P. B., & Harder, D. (2019). ISO 9001:2015 adoption: A multi-country empirical research. *Journal of Industrial Engineering Management*, *12*(1), 27–50.

Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience. *Journal of Marketing*, *56*(January), 6–21.

Fornell, C., Mithas, S., Morgeson, F. V. I., & Krishnan, M. S. (2006). Customer satisfaction and stock prices: high returns, low risk. *Journal of Marketing*, *70*(1), 1–15.

Forsgren, M. (2002). The concept of learning in the Uppsala internationalization process model: a critical review. *International Business Review*, *11*(3), 257–277.

Franceschini, F., Galetto, M., Maisano, D., & Mastrogiacomo, L. (2010). Clustering of European countries based on ISO 9000 certification diffusion. *International Journal of Quality and Reliability Management*, *27*(5), 558–575. https://doi.org/10.1108/02656711011043535

Franke, N., von Hippel, E., & Schreier, M. (2006). Finding Commercially Attractive User Innovations: A Test of Lead-User Theory. *Journal of Product Innovation Management*, *23*(4), 301–315.

Gainer, B., & Padanyi, P. (2005). The relationship between market-oriented activities and market-oriented culture: implications for the development of market orientation in non-profit service organizations. *Journal of Business Research*, *58*(6), 854–862.

Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: A literature review. *Journal of Product Innovation Management*, *19*(2), 110–132. https://doi.org/10.1016/S0737-6782(01)00132-1

Gatignon, H., Tushman, M. L., Smith, W., & Anderson, P. (2002). A structural approach to assessing innovation: construct development of innovation locus, type, and characteristics. *Management Science*, *48*(9), 1103–1122.

Gatignon, H., & Xuereb, J. (1997). Strategic orientation of the firm and new product performance. *Journal of Marketing Research*, *34*(1), 77–90.

Goldman, H. H. (2005). The origins and development of quality initiatives in American business. *The TQM Magazine*, *17*(3), 217–225.

Gotzamani, K., & Tsiotras, G. (2002). The true motives behind ISO 9000 certification: their effect on the overall certification benefits and long-term contribution towards TQM. *International Journal of Quality & Reliability Management*, *19*(2), 151–169.

Govindarajan, V., Kopalle, P. K., & Danneels, E. (2011). The effects of mainstream and emerging customer orientations on radical and disruptive innovations. *Journal of Product Innovation Management*, *28*(S1), 121–132.

Grönroos, C. (1989). Defining marketing: A market-oriented approach. *European Journal of Marketing*, *23*(1), 52–60.

Gruca, T. S., & Rego, L. L. (2005). Customer satisfaction, cash flow, and shareholder value. *Journal of Marketing*, *69*(July), 115–130.

Guo, C., & Wang, Y. (2015). How manufacturer market orientation influences B2B customer satisfaction and retention: empirical investigation of the three market orientation components. *Journal of Business and Industrial Marketing*, *30*(2), 182–193.

Gupta, A. (2000). Quality management practices of ISO vs non-ISO companies: a case of Indian industry. *Industrial Management and Data Systems*, *100*(9), 451–455.

Gustafsson, R., Klefsjo, B., Berggren, E., & Granfors-Wellemets, U. (2001). No TitleExperiences from implementing ISO 9000 in small enterprises - a study of Swedish organizations. *The TQM Magazine*, *13*(4), 232–246.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Pearson Prentice Hall.

Hauser, J., Tellis, G. J., & Griffin, A. (2006). Research on Innovation: A Review and Agenda for Marketing Science. *Marketing Science*, *25*(6), 686–717.

Hayes, A. F. (2018a). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). New York: Guilford Press.

Hayes, A. F. (2018b). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, *85*(1), 4–40. https://doi.org/10.1080/03637751.2017.1352100

Hendricks, K. B., & Singhal, V. R. (1997). Does implementing an effective TQM program actually improve operating performance? Evidence from firms that have won quality awards. *Management Science*, *43*(9), 1258–1274.

Hennig-Thurau, T., & Thurau, C. (2003). Customer orientation of service employees. *Journal of Relationship Marketing*, *2*, 1–32.

Heras-Saizarbitoria, I., & Boiral, O. (2015). Symbolic adoption of ISO 9000 in small and medium-sized enterprises: The role of internal contingencies. *International Small Business Journal: Researching Entrepreneurship*, *33*(3), 299–320. https://doi.org/10.1177/0266242613495748

Heras-Saizarbitoria, I., Dick, G., & Casadesus, M. (2002). ISO 9000 registration's impact on sales and profitability: a longitudinal analysis of performance before and after accreditation. *International Journal of Quality & Reliability Management*, *19*(6), 774–791.

Herhausen, D., & Schögel, M. (2013). Profiting from customer relationship management: The overlooked role of generative learning orientation. *Management Decision*, *51*(8), 1678–1700. https://doi.org/10.1108/MD-08-2012-0582

Heskett, J. L., Sasser, W. E., & Schlesinger, L. A. (1994). *The Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction, and Value*. New York: Free Press.

Hoang, D. T., Igel, B., & Laosirihongthong, T. (2006). The impact of total quality management on innovation: Findings from a developing country. *International Journal of Quality & Reliability Management*, *23*(8–9), 1092–1117.

Hollender, L., Zapkau, F. B., & Schwens, C. (2017). SME foreign market entry mode choice and foreign venture performance: the moderating effect of international experience and product adaptation. *International Business Review*, *26*(2), 250–263. Retrieved from https://doi.org/10.1016/j.ibusrev.2016.07.003

Homburg, C., Kuester, S., Beutin, N., & Menon, A. (2005). Determinants of customer benefits in business-to-business markets: a cross-cultural comparison. *Journal of International Marketing*, *13*(3), 1–31.

Homburg, C., Müller, M., & Klarmann, M. (2011). When should the customer really be king? On the optimum level of salesperson customer orientation in sales encounters. *Journal of Marketing*, *75*(2), 55–74.

Hooley, G. J., Greenley, G. E., Cadogan, J. W., & Fahy, J. (2005). The performance impact of marketing resources. *Journal of Business Research*, *58*(1 SPEC.ISS), 18–27. https://doi.org/10.1016/S0148-2963(03)00109-7

Huarng, K. H., & Yu, M. F. (2019). Customer satisfaction and repurchase intention theory

for the online sharing economy. *Review of Managerial Science*, *13*(3), 635–647. https://doi.org/10.1007/s11846-018-0321-0

Hult, G. T. M., & Ketchen, D. J., J. (2001). Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic Management Journal*, *22*(9), 899–906.

Idris, M., McEwan, W., & Belavendram, N. (1996). The adoption of ISO 9000 and total quality management in Malaysia. *The TQM Magazine*, *8*(5), 65–68.

International Organization for Standarization [ISO]. (2015). ISO 9000:2015. Quality management systems - Fundamentals and vocabulary. Retrieved from https://www.iso.org

International Organization for Standarization [ISO]. (2018). ISO Survey. Retrieved from https://www.iso.org/the-iso-survey.html

International Organization for Standarization [ISO]. (2020). The ISO Survey of Management System Standard Certifications – 2019 - Explanatory Note. *Iso*, (September), 1–2. Retrieved from http://www.iso.org/iso/iso_survey_executive-summary.pdf

Ishikawa, K. (1976). *Guide to Quality Control*. Tokyo: Asian Productivity Organization.

Ishikawa, K. (1985). *What is Total Quality Control? The Japanese Way*. London: Prentice-Hall.

Jang, S., & Chung, J. (2015). No How Do Interaction Activities among Customers and between Customers and Firms Influence Market Performance and Continuous Product Innovation? An Empirical Investigation of the Mobile Application Market. *Journal of Product Innovation Management*, *32*(2), 183–191.

Jansen, J., Van Den Bosch, F. A. J., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators. *Management Science*, *52*(11), 1661–1674.

Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, *57*(3), 53–70.

Jensen, R., & Szulanski, G. (2004). Stickiness and the Adaptation of Organizational Practices in Cross-Border Knowledge Transfers. *Journal of International Business Studies*, *35*(6), 508–523.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, *8*(1), 23–32.

Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalisation of the firm: Four Swedish cases. *Journal of Management Studies*, *12*(3), 305–322.

Jones, R., Arndt, G., & Kustin, R. (1997). ISO 9000 among Australian companies: impact of time and reasons for seeking certification on perceptions of benefits received. *International Journal of Quality & Reliability Management*, *14*(7), 650–660.

Joshi, A. W. (2016). When Does Customer Orientation Hinder (Help) Radical Product Innovation? The Role of Organizational Rewards. *Journal of Production Innovation Management*, *33*(4), 435–454.

Juran, M. J. (1986). The quality trilogy. *Quality Progress*, *19*(8), 19–24.

Kaluarachchi, K. (2010). Organizational culture and total quality management practices: a Sri Lankan case. *The TQM Magazine*, *22*(1), 41–55.

Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of Operations Management*, *21*(4), 405–435. https://doi.org/10.1016/S0272-6963(03)00004-4

Keiningham, T. L., & Perkins-Munn, T. (2003). The impact of customer satisfaction on share-of-wallet in a business-to-business environment. *Journal of Service Research*, *6*(1), 37–50.

Kelley, S. W. (1992). Developing customer orientation among service employees. *Journal of the Academy of Marketing Science*, *20*, 37–36.

Kerin, R. A., Mahajan, V., & Varadarajan, P. R. (1990). *Contemporary Perspectives on Strategic Market Planning*. New Jersey: Prentice-Hall, Englewood Cliffs.

Kim, D.-Y., Kumar, V., & Kumar, U. (2012). Relationship between quality management practices and innovation. *Journal of Operations Management*, *30*(4), 295–315. https://doi.org/10.1016/j.jom.2012.02.003

Kim, K., & Frazier, G. (1997). On distributor commitment in industrial channels of distribution: A multicomponent approach. *Psychology & Marketing*, *14*(8), 847–877.

Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). No Market orientation: a meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, *69*(2), 24–41.

Kivipõld, K., & Vadi, M. (2013). Market orientation in the context of the impact of leadership capability on performance. *International Journal of Bank Marketing*, *31*(5), 368–387. https://doi.org/10.1108/IJBM-09-2012-0092

Koberg, C. S., Detienne, D. R., & Heppard, K. A. (2003). An empirical test of environmental, organizational, and process factors affecting incremental and radical innovation. *Journal of High Technology Management Research*, *14*(1), 21–45.

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of Marketing*, *54*, 1–18.

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: the case of the multinational enterprise. *Academy of Management Review*, *29*(1), 64–81.

Kotler, P. (1980). *Marketing management: Analysis, planning and control* (4th ed.). New Jersey: Prentice-Hall, Englewood Cliffs.

Kozlenkova, I. V., Samaha, S. A., & Palmatier, R. W. (2014). Resource-based theory in marketing. *Journal of the Academy of Marketing Science*, *42*(1), 1–21.

https://doi.org/10.1007/s11747-013-0336-7

Kumar, K., Subramanian, R., & Yauger, C. (1998). Examining the market orientation-performance relationship: a context-specific study. *Journal of Management*, *24*(2), 201–233.

Kumar, P., Maiti, J., & Gunasekaran, A. (2018). Impact of quality management systems on firm performance. *International Journal of Quality and Reliability Management*, *35*(5), 1034–1059. https://doi.org/10.1108/IJQRM-02-2017-0030

Kumar, E. J. V., Venkatesan, R., & Leone, R. P. (2011). Is market orientation a source of sustainable competitive advantage or simply the cost of competing? *Journal of Marketing*, *75*(January), 16–30.

Lafuente, E., Stoian, C., & Rialp, J. (2015). From export entry to de-internationalisation through entrepreneurial attributes. *Journal of Small Business and Enterprise Development*, *22*(1), 21–37. Retrieved from https://doi.org/10.1108/JSBED-09-2012-0101

Lapierre, J. (2000). Customer-perceived value in industrial contexts. *Journal of Business and Industrial Marketing*, *15*(2/3), 122–143.

Lee, C., Lee, T., & Chang, C. (2001). Quality/productivity practices and company performance in China. *International Journal of Quality & Reliability Management*, *18*(6), 604–625.

Lee, K., & Palmer, E. (1999). An empirical examination of ISO 9000 registered companies in New Zealand. *Total Quality Management*, *10*(6), 887–899.

Leonidou, L. C., Samiee, S., Aykol, B., & Talias, M. A. (2014). Antecedents and outcomes of exporter-importer relationship quality: Synthesis, meta-analysis, and directions. *Journal of International Marketing*, *2*(22), 21–46.

Levitt, T. (1983). After the sale is over... *Harvard Business Review*, (September-October).

Li, T., & Calantone, R. J. (1998). The impact of market knowledge competence on new product advantage: conceptualization and empirical examination. *Journal of Marketing*, *62*(4), 13–29.

Lianto, B., Dachyar, M., & Soemardi, T. P. (2018). Continuous innovation: a literature review and future perspective. *International Journal on Advanced Science, Engineering and Information Technology*, *8*(3), 771–779.

Liaw, Y. J., Chi, N. W., & Chuang, A. (2010). Examining the mechanisms linking transformational leadership, employee customer orientation, and service performance: The mediating roles of perceived supervisor and coworker support. *Journal of Business and Psychology*, *25*(3), 477–492. https://doi.org/10.1007/s10869-009-9145-x

Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: examining the CEO-TMT interface. *Academy of Management Journal*, *51*, 557–576.

Lings, I. N., & Greenley, G. E. (2009). The impact of internal and external market orientations on firm performance. *Journal of Strategic Marketing*, *17*(1), 41–53.

Lipovatz, D., Stenos, F., & Vaka, A. (1999). Implementation of ISO 9000 quality systems in Greek enterprises. *International Journal of Quality & Reliability Management*, *16*(6), 534–551.

Llopis, J., & Tarí, J. (2003). The importance of internal aspects in quality improvement. *International Journal of Quality & Reliability Management*, *20*(3), 304–324.

Lo, C. K. Y., & Yeung, A. C. L. (2018). Quality management standards, institutionalization and organizational implications: A longitudinal analysis. *International Journal of Production Economics*, *200*(March), 231–239. https://doi.org/10.1016/j.ijpe.2018.03.028

Loveman, G. W. (1998). Employee satisfaction, customer loyalty, and financial performance: an empirical examination of the service profit chain in retail banking. *Journal of Service Research*, *1*(August), 18–31.

Lukas, B. A., & Ferrell, O. C. (2000). The effect of market orientation on product innovation. *Journal of the Academy of Marketing Science*, *28*(Spring), 239–347.

Macintosh, G. (2007). Customer orientation, relationship quality, and relational benefits to the firm. *Journal of Services Marketing*, *21*(3), 150–159. https://doi.org/10.1108/08876040710746516

Macneil, I. R. (1978). Contracts: Adjustments of long-term economic relations under classical, neoclassical, and relational contract law. *Northwestern University Law Review*, *76*(6), 854–905.

Magd, H., & Curry, A. (2003a). An empirical analysis of management attitudes towards ISO 9001:2000 in Egypt. *The TQM Magazine*, *15*(6), 381–390.

Magd, H., & Curry, A. (2003b). ISO 9000 and TQM: are they complementary or contradictory to each other. *The TQM Magazine*, *15*(4), 244–256.

Mahr, D., Lievens, A., & Blazevic, V. (2014). The Value of Customer Cocreated Knowledge during the Innovation Process. *Journal of Product Innovation Management*, *31*(3), 599–615.

Makadok, R. (2001). Toward a synthesis of the resource–based and dynamic–capability views of rent creation. *Strategic Management Journal*, *22*(5), 387–401.

Mann, R., & Kehoe, D. (1994). An evaluation of the effects of quality improvement activities on business performance. *International Journal of Quality & Reliability Management*, *11*(4), 71–87.

Manolova, T. S., Manev, I. M., & Gyoshev, B. S. (2010). In good company: the role of personal and inter-firm networks for new-venture internationalization in a transition economy. *Journal of World Business, 45*(3), 257–265.

March, J. G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, *2*(1), 71–87.

Martinez-Costa, M., & Martinez-Lorente, A. R. (2008). Does quality management foster or hinder innovation? An empirical study of Spanish companies. *Total Quality Management and Business Excellence*, *19*(3), 209–221.

Martínez-Lorente, A., & Martínez-Costa, M. (2004). ISO 9000 and TQM: substitutes or complementaries? An empirical study in industrial companies. *International Journal of Quality & Reliability Management*, *21*(3), 260–276.

Medina-Merodio, J. A., De-Pablos-Heredero, C., Jimenez-Rodriguez, L., Fernandez-Sanz, L., Robina-Ramirez, R., & Andres-Jimenez, J. (2020). A Framework to Support the Process of Measurement of Customer's Satisfaction According to ISO 9001. *IEEE Access*, *8*, 102554–102569. https://doi.org/10.1109/ACCESS.2020.2998434

Mehra, S., Hoffman, J. M., & Sirias, D. (2001). TQM as a management strategy for the next millennia. *International Journal of Operations and Production Management*, *21*(5/6), 855–876.

Mehra, S., & Ranganathan, S. (2008). Implementing total quality management with a focus on enhancing customer satisfaction. *International Journal of Quality and Reliability Management*, *25*(9), 913–927. https://doi.org/10.1108/02656710810908070

Menguc, B., Auh, S., & Yannopoulos, P. (2014). Customer and Supplier Involvement in Design: The Moderating Role of Incremental and Radical Innovation Capability. *Journal of Production Innovation Management*, *31*(2), 313–328.

Mintzberg, H., & Waters, J. A. (1985). Of strategies, deliberate and emergent. *Strategic Management Journal*, *6*, 257–272.

Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent and repurchase behavior: investigating the moderating effect of customer characteristics. *Journal of Marketing Research*, *38*(February), 131–142.

Mittal, V., Kumar, P., & Tsiros, M. (1999). Attribute-level performance, satisfaction, and behavioral intentions over time: a consumption-system approach. *Journal of Marketing*, *63*(April), 88–101.

Mo, J., & Chan, A. (1997). Strategic for the successful implementation of ISO 9000 in small and medium manufacturers. *The TQM Magazine*, *9*(2), 135–145.

Moguilnaia, N. A., Vershinin, K. V., Sweet, M. R., Spulber, O. I., De Souza, M. M., & Narayanan, E. M. S. (2005). Innovation in power semiconductor industry: past and future. *IEEE Transactions on Engineering Management*, *52*(4), 429–439.

Monroe, K. B. (1990). *Pricing: Making Profitable Decisions*. New York: McGraw-Hill.

Moorman, C., & Rust, R. T. (1999). The role of marketing. *Journal of Marketing*, *63*, 180–197.

Mora, J. (2015). *Export failure and its consequences: evidence from Colombian exporters*. Occidental College (California, USA).

Morgan, N. A., Katskieas, C. S., & Vrohies, D. W. (2012). Export marketing strategy implementation, export marketing capabilities, and export venture performance. *Journal of the Academy of Marketing Science*, *40*(2), 271–289.

Morgan, N., Slotegraaf, R., & Vorhies, D. (2009). Linking marketing capabilities with profit growth. *International Journal of Research in Marketing*, *26*(4), 284–293.

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(July), 20–38.

Narver, J., & Slater, S. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, *54*, 20–35.

Narver, J., Slater, S., & MacLachlan, D. (2004). Responsive and proactive market orientation and new-product success. *Journal of Product Innovation Management*, *21*(4), 334–347.

Ndubisi, N. O., & Moi, C. T. (2005). Customers behavioural responses to sales promotion: The role of fear of losing face. *Journal of Marketing and Logistics*, *17*(1), 32–49.

Ndubisi, N. O., & Richardson, S. (2002). Entrepreneurs' Technology Acceptance Model. *Academy of Entrepreneurship Journal*, *8*(2), 95–113.

Ngo, L. V., & O'Cass, A. (2012). In Search of Innovation and Customer-related Performance Superiority: The Role of Market Orientation, Marketing Capability, and Innovation Capability Interactions. *Journal of Product Innovation Management*, *29*(5), 861–877.

Nguyen, T. L. H., & Nagase, K. (2019). The influence of total quality management on customer satisfaction. *International Journal of Healthcare Management*, (July), 1–9. https://doi.org/10.1080/20479700.2019.1647378

Noble, C. H., Sinha, R. K., & Kumar, A. (2002). Market orientation and alternative strategic orientations: a longitudinal assessment of performance implications. *Journal of Marketing*, *66*(4), 25–39.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. Oxford,UK: Oxford University Press.

O'Connor, G. C. (1998). Market learning and radical innovation: Across case comparison of eight radical innovation projects. *Journal of Product Innovation Management*, *15*(2), 151–166.

Oliver, C. (1997). Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, *18*(9), 697–713. https://doi.org/10.1002/(SICI)1097-0266(199710)18:9<697::AID-SMJ909>3.0.CO;2-C

Oliver, R. (1980). A cognitive model of the antecedence and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*(September), 46–49.

Ozgur, C., Meek, G., & Toker, A. (2002). The impact of ISO certification on the levels of awareness and usage of quality tools and concepts: a survey of Turkish manufacturing companies. *Quality Management Journal*, *9*(2), 57–69.

Pangarkar, N. (2008). Internationalization and performance of small- and medium-sized enterprises. *Journal of World Business*, *43*(4), 475–485.

Pannirselvam, G. P., & Ferguson, L. A. (2001). A study of the relationships between the Baldridge categories. *International Journal of Quality & Reliability Management*, *18*(1), 14–34.

Parasuraman, A. (1997). Reflections on gaining competitive advantage through customer value. *Journal of the Academy of Marketing Science*, *25*(2), 154–161.

Paul, J., Parthasarathy, S., & Gupta, P. (2017). Exporting challenges of SMEs: a review and future research agenda. *Journal of World Business*, *52*(3), 327–342.

Pelham, A. M. (1999). Influence of environment, strategy, and market orientation on performance in small manufacturing firms. *Journal of Business Research*, *45*(3), 33–46.

Pelham, A. M. (2000). Market orientation and other potential influences on performance in small and medium-sized manufacturing firms. *Journal of Small Business Management*, *38*(1), 48–67.

Penrose, E. (1959). *The theory of the growth of the firm*. Oxford,UK: Blackwell.

Pestana, M. H., & Gageiro, J. N. (2020). *Análise de Dados para Ciências Sociais – A Complementaridade do SPSS* (6th ed.). Lisbon: Edições Sílabo.

Peteraf, M., & Barney, J. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics*, *24*(4), 309–323.

Poksinska, B., Dahlgaard, J., & Antoni, M. (2002). The state of ISO 9000 certification: a study of Swedish organizations. *The TQM Magazine*, *14*(5), 297–306.

Poksinska, B., Eklund, J. A. E., & Dahlgaard, J. J. (2006). ISO 9001:2000 in small organisations: Lost opportunities, benefits and influencing factors. *International Journal of Quality & Reliability Management*, *23*(5), 490–512.

Porter, M. (1979). How competitive forces shape strategy. *Harvard Business Review*, *57*(2), 137–145.

Porter, M. (1985). *Competitive advantage*. New York: The Free Press.

Potoski, M., & Prakash, A. (2009). Information asymmetries as trade barriers: ISO 9000 increases international commerce. *Journal of Policy Analysis and Management*, *28*(2), 221–238.

Prajogo, D. I., & Hong, S. W. (2008). The effect of TQM on performance in R&D environments: a perspective from South Korean firms. *Technovation*, *28*(12), 855–863.

Prajogo, D. I., & Sohal, A. S. (2004). The multidimensionality of TQM practices in determining quality and innovation performance – an empirical examination. *Technovation*, *24*(6), 443–453.

Prajogo, Daniel I. (2011). The roles of firms' motives in affecting the outcomes of ISO 9000 adoption. *International Journal of Operations and Production Management*, *31*(1), 78–100. https://doi.org/10.1108/01443571111098753

Psomas, E. L., Kafetzopoulos, D. P., & Fotopoulos, C. V. (2012). Developing and validating a measurement instrument of ISO 9001 effectiveness in food manufacturing SMEs. *Journal of Manufacturing Technology Management*, *24*(1), 52–77.

Puig, F., González-Loureiro, M., & Ghauri, P. N. (2014). Internationalisation for survival: the case of new ventures. *Management International Review*, *54*(5), 653–673.

Quazi, H., Hong, C., & Meng, C. (2002). Impact of ISO 9000 certification on quality management practices: a comparative study. *Total Quality Management*, *13*(1), 53–67.

Quazi, H., & Jacobs, R. (2004). Impact of ISO 9000 certification on training and development activities. *International Journal of Quality & Reliability Management*, *21*(5), 497–517.

Racela, O. C., Chaikittisilpa, C., & Thoumrungroje, A. (2007). Market orientation, international business relationships and perceived performance. *International Marketing Review*, *24*(2), 144–163.

Rahman, S. (2001). A comparative study of TQM practice and organizational performance of SMEs with and without ISO 9000 certification. *International Journal of Quality & Reliability Management*, *18*(1), 35–49.

Rapp, A., Trainor, K. J., & Agnihotri, R. (2010). Performance implications of customer-linking capabilities: Examining the complementary role of customer orientation and CRM technology. *Journal of Business Research*, *63*(11), 1229–1236. https://doi.org/10.1016/j.jbusres.2009.11.002

Rauch, J. E., & Watson, J. (2003). Starting small in an unfamiliar environment. *International Journal of Industrial Organization*, *21*, 1021–1042.

Reed, R., Lemak, D. J., & Mero, N. P. (2000). Total quality management and sustainable competitive advantage. *Journal of Quality Management*, *5*(1), 5–26.

Reichheld, F. F., & Sasser, W. E. J. (1990). Zero defections: quality comes to services. *Harvard Business Review*, *68*(September/October), 105–111.

Reichheld, F. F., & Teal, T. (1996). *The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value*. Boston, MA: Harvard Business School Press.

Repenning, N. P., & Sterman, J. D. (2002). Capability traps and self-confirming attribution errors in the dynamics of process improvement. *Administrative Science Quarterly*, *47*, 265–295.

Romano, P. (2000). ISO 9000: what is its impact on performance? *Quality Management Journal*, *7*(3), 38–56.

Rosa, J. A., & Spanjol, J. (2005). Micro-level product-market dynamics: Shared knowledge and its relationship to market development. *Journal of the Academy of Marketing Science*, *33*(2), 197–216.

Rose, G. M., & Shoham, A. (2002). Export performance and market orientation: Establishing an empirical link. *Journal of Business Research*, *55*(3), 217–225. https://doi.org/10.1016/S0148-2963(00)00139-9

Salojärvi, H., & Sainio, L.-M. (2014). Customer knowledge in radical innovation – Constraint or opportunity? *The ISPIM Americas Innovation Forum 2014*.

Sampaio, P., Saraiva, P., & Rodrigues, A. G. (2009). ISO 9001 certification research: Questions, answers and approaches. *International Journal of Quality and Reliability Management*, *26*(1), 38–58. https://doi.org/10.1108/02656710910924161

Santos-Vijande, M. L., & Alvarez-Gonzalez, L. (2007). Innovativeness and organizational innovation in total quality-oriented firms: the moderating role of market turbulence. *Technovation*, *27*(9), 514–532.

Sanzo, M. J., Santos, M. L., Vázquez, R., & Álvarez, L. I. (2003). The effect of market orientation on buyer-seller relationship satisfaction. *Industrial Marketing Management*, *32*(4), 327–345.

Sapienza, H., Autio, E., George, G., & Zahra, S. (2006). No A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, *31*(4), 914–933. Retrieved from https://doi.org/10.5465%0A/AMR.2006.22527465

Seiders, V., Grewal, D., & Godfrey, A. L. (2005). Do satisfied customers buy more? Examining moderating influences in a retailing context. *Journal of Marketing*, *69*(October), 36–43.

Sena, A. A. De, Levine, D. I., Toffel, M. W., Bakator, M., Ćoćkalo, D., Su, H. C., … Cheng, T. C. E. (2020). The relationship between total quality management practices and their effects on firm performance. *Total Quality Management and Business Excellence*, *25*(2), 64–82. https://doi.org/10.5937/ejae15-16145

Sharma, D. S. (2005). The association between ISO 9000 certification and financial performance. *The International Journal of Accounting*, *40*(2), 151–172.

Sharma, S. (1996). *Applied Multivariante Techniques*. New York: John Wiley & Sons, Inc.

Shoham, A., Brencic, M. M., Virant, V., & Ruvio, A. (2008). International standardization of channel management and its behavioral and performance outcomes. *Journal of International Marketing*, *16*(2), 120–151. https://doi.org/10.1509/jimk.16.2.120

Siguaw, J. A., Brown, G., & Widing, R. E., I. (1994). The influence of the market orientation of the firm on sales force behavior and attitudes. *Journal of Marketing Research*, *31*(February), 106–116.

Siguaw, J. A., Simpson, P. M., & Baker, T. L. (1998). Effects of supplier market orientation on distributor market orientation and the channel relationship: The distributor perspective. *Journal of Marketing*, *62*(3), 99–111.

Singels, J., Ruel, G., & van de Water, H. (2001). ISO 9000 series: certification and performance. *International Journal of Quality & Reliability Management*, *18*(1), 62–75.

Singh, P. J., & Smith, A. (2004). Relationship between TQM and innovation: an empirical study. *Journal of Manufacturing Technology Management*, *15*(5), 394–401.

Singh, S., & Ranchhod, A. (2004). Market orientation and customer satisfaction: evidence from British machine tool industry. *Industrial Marketing Management*, *33*(2), 135–144.

Slater, S., & Narver, J. (1998). Customer led and market-oriented: let's not confuse the two. *Strategic Management Journal*, *19*, 1001–1006.

Slotegraaf, R., Moorman, C., & Inman, J. (2003). The role of firm resources in returns to market deployment. *Journal of Marketing Research*, *40*(3), 295–309.

Solberg, C. A., & Olsson, U. H. (2010). Management orientation and export performance: The case of Norwegian ICT companies. *Baltic Journal of Management*, *5*(1), 28–50.

Sorescu, A. B., & Spanjol, J. (2008). Innovation's effect on firm value and risk: Insights from consumer-packaged goods. *Journal of Marketing*, *72*(March), 114–132.

Sosik, J. J., Gentry, W. A., & Chun, J. U. (2012). The value of virtue in the upper echelons: A multisource examination of executive character strengths and performance. *The Leadership Quarterly*, *23*, 367–382.

Sousa, C. M. P., Martinez-Lopez, F. J., & Coelho, F. (2008). The determinants of export performance: A review of the research in the literature between 1998 and 2005. *International Journal of Management Review*, *10*(4), 343–374.

Sousa, R., & Voss, C. (2002). Quality management re-visited: a reflective review and agenda for future research. *Journal of Operations Management*, *20*(1), 91–109.

Srivastava, R. K., Shervani, T. A., & Fahey, L. (1998). Market-based assets and shareholder value: a framework for analysis. *Journal of Marketing*, *62*(1), 2–18.

Stanton, P., Young, S., Bartram, T., & Leggat, S. G. (2010). Singing the same song: Translating HRM messages across management hierarchies in Australian hospitals. *International Journal of Human Resource Management*, *21*, 567–581.

Sun, S. (2000). Total quality management. ISO 9000 certification and performance improvement. *International Journal of Quality & Reliability Management*, *17*(2), 168–179.

Sun, X., Wen, D., Yan, D., & Li, Y. (2019). Developing and validating a model of ISO 9001 effectiveness gap: empirical evidence from China. *Total Quality Management and Business Excellence*, *30*(sup1), S274–S290. https://doi.org/10.1080/14783363.2019.1665867

Susskind, A. M., Kacmar, K. M., & Borchgrevink, C. P. (2003). Customer service providers' attitudes relating to customer service and customer satisfaction in the customer-server exchange. *Journal of Applied Psychology*, *88*, 179–187.

Talib, F., Rahman, Z., & Qureshi, M. N. (2011). Analysis of interaction among the barriers to total quality management implementation using interpretive structural modelling approach. *Benchmarking: An International Journal*, *18*(4 (in press)).

Tarí, J., & Molina, J. (2002). Quality management results in ISO 9000 certified Spanish firms. *The TQM Magazine*, *14*(4), 232–239.

Tarí, J., & Sabater, V. (2004). Quality tools and techniques: are they necessary for quality management? *International Journal of Production Economics*, *92*, 267–280.

Taylor, W. A. (1997). Leadership challenges for smaller organisations: self-perceptions of

TQM implementation. *Omega - International Journal Management Science*, *25*(5), 567–579.

Taylor, W. A., & Wright, G. H. (2003). A longitudinal study of TQM implementation: factors influencing success and failure. *Omega - International Journal of Management Science*, *31*, 97–111.

Teece, D. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.

Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533.

Terziovski, M., Power, D., & Sohal, A. S. (2003). The longitudinal effects of the ISO 9000 certification process on business performance. *European Journal of Operational Research*, *146*(3), 580–595. https://doi.org/10.1016/S0377-2217(02)00252-7

Terziovski, M., & Samson, D. (1999). The link between total quality management practice and organizational performance. *International Journal of Quality & Reliability Management*, *16*(3), 226–237.

Terziovski, M., Samson, D., & Dow, D. (1997). The business value of quality management systems certification: evidence from Australia and New Zealand. *Journal of Operations Management*, *15*(1), 1–18.

Trasorras, R., Weinstein, A., & Abratt, R. (2009). Value, satisfaction, loyalty and retention in professional services. *Marketing Intelligence and Planning*, *27*(5), 615–632. https://doi.org/10.1108/02634500910977854

Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking customer solutions: from product bundles to relational processes. *Journal of Marketing*, *71*, 1–17.

Vaillant, Y., Lafuente, E., & Bayon, M. C. (2019). Early internationalization patterns and export market persistence: a pseudo-panel data analysis. *Small Business Economics*, *53*(3), 669–686. https://doi.org/10.1007/s11187-018-0071-z

Visnjic, I., Wiengarten, F., & Neely, A. (2014). Only the Brave: Product Innovation, Service Business Model Innovation, and Their Impact on Performance. *Journal of Production Innovation Management*, *33*(1), 36–52.

Vorhies, D., & Morgan, N. (2005). Benchmarking marketing capabilities for sustainable competitive advantage. *Journal of Marketing*, *69*(1), 80–94.

Voss, G. B., & Voss, Z. G. (2000). Strategic orientation and firm performance in an artistic environment. *Journal of Marketing*, *64*(1), 67–83.

Webster Jr., F. E. (1988). The Rediscovery of the Marketing Concept. *Business Horizons*, *31*(May-June), 29–39.

Webster Jr., F. E. (1994). *Market-Driven Management*. New York: John Wiley & Sons.

Weller, I., Süß, J., Evanschitzky, H., & von Wangenheim, F. (2020). Transformational Leadership, High-Performance Work System Consensus, and Customer Satisfaction.

Journal of Management, *46*(8), 1469–1497. https://doi.org/10.1177/0149206318817605

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180.

Williams, J. (2004). The impact of motivating factors on implementation of ISO 9001:2000 registration process. *Management Research News*, *27*(1/2), 74–84.

Williams, P., & Naumann, E. (2011). Customer satisfaction and business performance: a firm-level analysis. *Journal of Services Marketing*, *25*(1), 20–32.

Wilson, D. D., & Collier, D. A. (2000). An empirical investigation of the Malcolm Baldridge National Quality Award causal model. *Decision Sciences*, *31*, 361–390.

Wisner, J., & Eakins, S. (1994). A performance assessment of the US Baldrige Quality Award winners. *International Journal of Quality & Reliability Management*, *11*(2), 8–25.

Withers, B., & Ebrahimpour, M. (2000). Does ISO 9000 certification affect the dimensions of quality used for competitive advantage? *European Management Journal*, *18*(4), 431–443.

Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: a global study of survival in financial services. *Strategic Management Journal*, *18*(6), 439–464.

Zeithaml, V. A. (2000). Service quality, profitability, and the economic worth of customers: what we know and what we need to learn. *Journal of the Academy of Marketing Science*, *28*(1), 67–85.

Zhou, K. Z., Brown, J. R., & Dev, C. S. (2009). Market orientation, competitive advantage, and performance: A demand-based perspective. *Journal of Business Research*, *62*(11), 1063–1070.

Zhou, K. Z., Brown, J. R., Dev, C. S., & Agarwal, S. (2007). The effects of customer and competitor orientations on performance in global markets: A contingency analysis. *Journal of International Business Studies*, *38*(2), 303–319. https://doi.org/10.1057/palgrave.jibs.8400259

Zhou, K. Z., Yim, C. K. B., & Tse, D. K. (2005). The effects of strategic orientations on technology-and market-based breakthrough innovations. *Journal of Marketing*, *69*(April), 42–60.

Zhou, L., & Wu, A. (2014). Earliness of internationalization and performance outcomes: exploring the moderating effects of venture age and international commitment. *Journal of World Business*, *49*(1), 132–142.

Zhu, Z., & Nakata, C. (2007). Reexamining the link between customer orientation and business performance: The role of information systems. *The Journal of Marketing Theory and Practice*, *15*(3), 187–203.

Ziggers, G. W., & Henseler, J. (2015). The reinforcing effect of a firm's customer orientation and supply-base orientation on performance. *Industrial Marketing*

Management, *52*, 18–26.

Appendices

Appendix A – Questionnaire

Please evaluate the use of ISO 9001 norms in your firm using a scale from 1 to 7: 1 = 'strongly disagree' and 7 = 'strongly agree Internalization (Routine)

1. ISO 9001 documents used in daily practice
2. ISO 9001 documents updated regularly
3. ISO 9001 drove improvement opportunities
4. ISO 9001 has become part of the regular routine
5. ISO 9001 is coordinated with quality programs
6. Managers value internal audits

Please evaluate your firm strategy towards the customers using a scale from 1 to 7: 1 = 'strongly disagree' and 7 = 'strongly agree

Customer orientation

1. Our business objectives are driven primarily by customer satisfaction.
2. We constantly monitor our level of commitment and orientation to serve customer's needs.
3. Our strategy for competitive advantage is based on our understanding of customer's needs.
4. Our strategies are driven by our beliefs about how we can create greater value for customers.
5. We frequently measure customer satisfaction in a systematic way.
6. We pay close attention to our after-sales service.

Customer performance

1. Our company often improves products and services, based on customers' comments.
2. Our customers think we are better than competitors in implementing new ideas.
3. Our company is generally better than competitors in developing new products and services.
4. Our company provides good service quality.
5. Our customers overall satisfaction with our products and services is high.
6. Our customers' loyalty is high.
7. Our company is good at attracting new customers.
8. Our company's customer retention rate is high.

Please evaluate the product and process innovation in your firm using a scale from 1 to 7: 1 = 'strongly disagree' and 7 = 'strongly agree

Product innovation:

1. Our new products differ slightly from our existing products
2. We introduce incremental product innovations into the market more frequently than our competitors
3. Our percentage of incremental product innovations in the product range is significantly higher compared to the competition
4. The percentage of total sales from incremental product innovations is up substantially
5. We are well known by our customers for incremental product innovations.

Product radical innovation:

1. Our new products differ substantially from our existing products.
2. We introduce radical product innovations into the market more frequently than our competitors.
3. Our percentage of radical product innovations in the product range is significantly higher compared to the competition.
4. The percentage of total sales from radical product innovations is up substantially.
5. We are well known by our customers for radical product innovations.

Please evaluate the management leadership in your firm using a scale from 1 to 7: 1 = 'strongly disagree' and 7 = 'strongly agree

Management leadership:

1. Our top management evaluates quality performance
2. Our department heads participate in the quality improvement process
3. Our top management has objectives for quality performance
4. Our top management has laid down a comprehensive goal-setting process for quality
5. Quality issues are reviewed in organizational top management meetings
6. Our top management considers quality improvement as a way to increase profits

Appendix B – Table of constructs and Items

Table of Constructs and Items
Customer performance

1	Our company often improves products and services, based on customers' comments.
2	Our customers think we are better than competitors in implementing new ideas.
3	Our company is generally better than competitors in developing new products and services.
4	Our company provides good service quality.
5	Our customers overall satisfaction with our products and services is high.
6	Our customers' loyalty is high.
7	Our company is good at attracting new customers.
8	Our company's customer retention rate is high.
Customer Orientation	
1	Our business objectives are driven primarily by customer satisfaction.
2	We constantly monitor our level of commitment and orientation to serve customer's needs.
3	Our strategy for competitive advantage is based on our understanding of customer's needs.
4	Our strategies are driven by our beliefs about how we can create greater value for customers.
5	We frequently measure customer satisfaction in a systematic way.
6	We pay close attention to our after-sales service.
Product Innovation Incremental	
1	Our new products differ slightly from our existing products.
2	We introduce incremental product innovations into the market more frequently than our competitors.
3	Our percentage of incremental product innovations in the product range is significantly higher compared to the competition.
4	The percentage of total sales from incremental product innovations is up substantially.
5	We are well known by our customers for incremental product innovations.
Product Innovation Radical	
1	Our new products differ substantially from our existing products.
2	We introduce radical product innovations into the market more frequently than our competitors.

3	Our percentage of radical product innovations in the product range is significantly higher compared to the competition.
4	The percentage of total sales from radical product innovations is up substantially.
5	We are well known by our customers for radical product innovations.
Management Leadership	
1	Our top management evaluates quality performance.
2	Our department heads participate in the quality improvement process.
3	Our top management has objectives for quality performance.
4	Our top management has laid down a comprehensive goal-setting process for quality.
5	Quality issues are reviewed in organizational top management meetings.
6	Our top management considers quality improvement as a way to increase profits.
ISO 9001 Adoption	
1	ISO 9001 documents used in daily practice.
2	ISO 9001 documents updated regularly.
3	ISO 9001 drove improvement opportunities.
4	ISO 9001 has become part of the regular routine.
5	ISO 9001 is coordinated with quality programs.
6	Managers value internal audits.

Appendix C – Constructs and Items after purification of scale

Table of constructs and items after scale purification		
Customer performance		
1	Our company often improves products and services, based on customers' comments.	0.640
4	Our company provides good service quality.	0.799
5	Our customers overall satisfaction with our products and services is high.	0.827
6	Our customers' loyalty is high.	0.776

7	Our company is good at attracting new customers.	0.661
8	Our company's customer retention rate is high.	0.828
Customer Orientation		
1	Our business objectives are driven primarily by customer satisfaction.	0.787
2	We constantly monitor our level of commitment and orientation to serve customer's needs.	0.819
3	Our strategy for competitive advantage is based on our understanding of customer's needs.	0.835
4	Our strategies are driven by our beliefs about how we can create greater value for customers.	0.854
5	We frequently measure customer satisfaction in a systematic way.	0.756
6	We pay close attention to our after-sales service.	0.735
Product Innovation Incremental		
1	Our new products differ slightly from our existing products.	0.727
2	We introduce incremental product innovations into the market more frequently than our competitors.	0.907
3	Our percentage of incremental product innovations in the product range is significantly higher compared to the competition.	0.948
4	The percentage of total sales from incremental product innovations is up substantially.	0.924
5	We are well known by our customers for incremental product innovations.	0.929
Product Innovation Radical		
1	Our new products differ substantially from our existing products.	0.897
2	We introduce radical product innovations into the market more frequently than our competitors.	0.969
3	Our percentage of radical product innovations in the product range is significantly higher compared to the competition.	0.971
4	The percentage of total sales from radical product innovations is up substantially.	0.954
5	We are well known by our customers for radical product innovations.	0.958
Management Leadership		

1	Our top management evaluates quality performance.	0.935
2	Our department heads participate in the quality improvement process.	0.914
3	Our top management has objectives for quality performance.	0.951
4	Our top management has laid down a comprehensive goal-setting process for quality.	0.907
5	Quality issues are reviewed in organizational top management meetings.	0.914
6	Our top management considers quality improvement as a way to increase profits.	0.825
ISO 9001 Adoption		
1	ISO 9001 documents used in daily practice.	0.971
2	ISO 9001 documents updated regularly.	0.958
3	ISO 9001 drove improvement opportunities.	0.985
4	ISO 9001 has become part of the regular routine.	0.985
5	ISO 9001 is coordinated with quality programs.	0.972
6	Managers value internal audits.	0.972