Impacts of strategic orientations on new product development and firm performances

Insights from Saudi industrial firms

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Received 11 May 2018
Revised 26 July 2018
Accepted 3 August 2018

Abstract

Purpose – The purpose of this paper is to investigate the relationships between strategic orientations as well as the role played by them to impact the performance of industrial firms.
Design/methodology/approach – The paper formulates some hypotheses from the literature review. These hypotheses are tested using structural equation modeling with data collected from 292 randomly selected firms operating in several industrial sectors in the Kingdom of Saudi Arabia.
Findings – The findings of this study showed the importance of these strategic orientations in enhancing the performance of Saudi industrial firms and emphasized the mediating role of entrepreneurial orientation in the relationships of market orientation and technology orientation to new product development performance and firm performance.
Research limitations/implications – The study discusses the findings and advances certain limitations and research and managerial implications for future research avenues. It proposes some recommendations to help Saudi firms to choose more than one orientation simultaneously and adopt an appropriate configuration of orientations. Future research has to consider the interplay between these strategic orientations and the impacts of environmental turbulence in terms of market and technology turbulence on strategic orientations – performance relationship.
Practical implications – The study suggests that managers of Saudi industrial firms should utilize a mix of aspects from several strategic orientations such as market and technology through entrepreneurial capabilities and resources that enhance higher levels of performance.
Originality/value – This study contributes to the literature on entrepreneurship and strategic management by showing the reliability of scales used and the confirmatory of the factor structure. It also contributes to business practices by showing the importance for Saudi firms to combine different strategic orientations and provide more attention to the interplay of these orientations in order to perform better in such a transitional context.

Keywords New product development, Firm performance, Entrepreneurial orientation, Market orientation, Strategic orientations, Technology orientation

Paper type Research paper

1. Introduction

The concept of strategic orientation is gaining more attention in the literature of strategic management, marketing and entrepreneurship as a core concept determining the performance of organizations and an important way to many organizations to maintain competitive advantage and gain revitalization (Aloulou and Fayolle, 2005).

The importance of this study resides in the need for examining the influence of multiple strategic orientations simultaneously on organization's performance. In fact, there is a limited knowledge on the extent to which multiple strategic orientations may simultaneously drive business and performance (Hakala, 2011; Grinstein, 2008). Thus, there have been incessant calls from empirical studies for this matter (Hakala, 2010, 2011) and there is a further need to investigate the potential effects of different strategic orientations on new product development performance (hereafter NPDP) and firm performance (hereafter FP).

This research was funded from the Deanship of Scientific Research at Al Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh, Saudi Arabia (Research Project No 361101/1436).

European Journal of Innovation Management
Vol. 22 No. 2, 2019
pp. 257-280

1460-1060
DOI 10.1108/EJIM-05-2018-0092

In this study, three dominant strategic orientations were chosen: market orientation (hereafter MO), entrepreneurial orientation (hereafter EO) and technology orientation (hereafter TO). They are investigated simultaneously in order to address the knowledge gaps on multiple strategic orientations and performance. Previous studies suggested that these strategic orientations, taken individually, are central to the success of the firm. But, they are rarely examined together in the literature. Recently, only some studies attempt to do it (Hakala, 2010, 2011; Lee, 2011; Lee and Dedahanov, 2014; Lee *et al.*, 2014). The relationship between strategic orientation(s) and performance is likely to be shaped by different other orientations as mediators or moderators.

This research aims to contribute to the development in theory and business practices regarding the role of strategic orientations in enhancing performance. By following a quantitative approach, this research has twofold objectives. First, in theory, it aims to contribute to the development of knowledge regarding a specific context: the Saudi context. Till now, little knowledge is gained and little number of studies are conducted in such context (Bhuian, 1997 and Bhuian *et al.*, 2005). More knowledge will be gained for the study of the simultaneous influences of these strategic orientations on performance in Saudi firms by applying structural equation modeling (SEM). Second, it may offer some practical recommendations to top managers of industrial firms involved in strategic decisions-making processes. These managers would make difficult decisions regarding which configuration(s) of strategic orientations to choose in order to impact on FP to achieve an optimal level. But, they will be aware about the non-synergetic and non-complementary effects of these orientations on performance.

The nature of the relationship between different strategic orientations is not clear. To fill these research voids, we examine their impacts on NPDP and FP of industrial firms operating in a transitional economy such as Saudi economy. A review of literature on strategic orientations suggests that only few studies did examine the relationships between main strategic orientations. Such research should shift its focus, moving from the study of direct effect on business performance to the study of various combinations of strategic orientations that can be pursued by firms in different situations to gain higher performance (Grinstein, 2008). Research focusing on investigating a single orientation has led to a lack of more complex and multi-dimensional approaches to strategic orientation that adopt a holistic perspective (Hakala, 2010).

This research attempts to respond to the following questions: what are the influences of strategic orientations on NPDP and FP? Which are, finally, the significant factors in main relationships contributing to higher level of performance?

2. Theoretical background, research framework and hypotheses development

2.1 Theoretical background

2.1.1 Strategic orientation. Strategic orientations are defined as principles, processes, practices and decision-making styles that influence firms' activities and generate the intended behaviors to ensure their viability and performance (Hakala, 2011). They reflect their philosophy of how to conduct business through a deeply rooted set of values and beliefs that guides the firm's attempt to achieve superior performance (Gatignon and Xuereb, 1997; Zhou, Yim and Tse, 2005; Lumpkin and Dess, 1996; Noble *et al.*, 2002; Wiklund and Shepherd, 2005). They are also refereed as the way an organization responds to changeable external factors and interacts with its environments in order to maintain their competitive advantage (Aloulou and Fayolle, 2005; Gao *et al.*, 2007; Gatignon and Xuereb, 1997).

In our study, we focus on three viable strategic orientations including: MO (Kohli and Jaworski, 1990; Narver and Slater, 1990), TO (Gatignon and Xuereb, 1997) and EO (Covin and Slevin, 1989; Lumpkin and Dess, 1996) following several studies (Gao *et al.*, 2007; Hakala, 2010, 2011; Hakala and Kohtamäki, 2010, 2011; Kaya and Seyrek, 2005; Lee and

Choi, 2013; Lee and Dedahanov, 2014; Zhou, Gao, Yang and Zhou, 2005; Zhou, Yim and Tse, 2005). The role of such orientations is shown as important in achieving higher product innovation or FP and enhancing a sustainable competitive advantage (Gatignon and Xuereb, 1997; Hsu *et al.*, 2014; Jeong *et al.*, 2006; Kaya and Seyrek, 2005; Lee, 2011; Lee *et al.*, 2014; Lee and Dedahanov, 2014; Liu and Su, 2014; Mu and Di Benedetto, 2011; Paladino, 2007; Zhou, Yim and Tse 2005). For example, literature review on MO has shown that MO is not the only viable strategic orientation (Noble *et al.*, 2002), and not only it contributes to FP as a superior orientation more than other alternative strategic orientations, but also these "alternative" strategic orientations can also substantially affect the performance of firms when combined with MO (Grinstein, 2008; Li *et al.*, 2008). Consequently, several studies have argued that firms should develop and use multiple strategic orientations, and scholars have launched a call for adopting an holistic perspective of strategic orientation and investigating their strategic fit better than investigating single orientations (Gatignon and Xuereb, 1997; Hakala, 2010, 2011; Gao *et al.*, 2007; Lee, 2011; Kaya and Seyrek, 2005; Shirokova *et al.*, 2016). The synergy of complementary orientations is potentially more efficient and effective than that of any single orientation operating independently in commercializing new products (Mu and Di Benedetto, 2011). The interplay between strategic orientation can help obtain better performance (Hakala and Kohtamäki, 2010, 2011). Thus, it is feasible that the recognition of entrepreneurial opportunities and acting on such opportunities may enable firms to combine both technology and market focus.

2.1.2 Market orientation. MO is a known term in marketing field as an indicator of the extent to which a firm implements the marketing concept and philosophy (Agarwal *et al.*, 2003). Narver and Slater (1990) developed a valid measure of MO and empirically assessed its influence on performance. They used MO as a one-dimensional construct consisting of three behavioral components (customer orientation; competitor orientation; and inter-functional co-ordination).

The concept of MO has attracted a large community of researchers to study its consistency, theoretical robustness and empirical evidence in different sectors (Appiah-Adu and Ranchhod, 1998; Bhuian, 1997, 1998; Berthon *et al.*, 2004; Ellis, 2006; Liao *et al.*, 2011; Raju *et al.*, 2011). The relationship of MO with NPDP and FP was tested for different samples, and in different contexts of developed and developing countries (Agarwal *et al.*, 2003; Appiah-Adu, 1998; Atuahene-Gima, 1995; Ellis, 2006; Kam Sing Wong and Tong, 2012; Kara *et al.*, 2005; Kirca *et al.*, 2005; Lonial *et al.*, 2008; Reid and Brady, 2012; Slater and Narver, 2000).

2.1.3 Technology orientation. TO refers to the tendency to utilize and develop new technologies or products (Gatignon and Xuereb, 1997). It is closely related to innovation and product orientation (Grinstein, 2008), and refers to a firm's inclination to introduce or utilize new technologies, products or innovations (Gatignon and Xuereb, 1997; Hult *et al.*, 2004; Noble *et al.*, 2002; Atuahene-Gima and Ko, 2001).

Several studies have been conducted on the contribution of TO in FP (Gao *et al.*, 2007; Gatignon and Xuereb, 1997; Hakala and Kohtamäki, 2010). In this regard, Gatignon and Xuereb (1997) found a significant relationship between TO and firm innovation performance. Similarly, Gao *et al.* (2007) showed that TO positively affects FP and product profitability. Mu and Di Benedetto (2011) found that TO has a significant effect on product commercialization performance. Similar results found that TO has a significant positive influence on product performance, particularly in terms of newness of the product to customers (Salavou, 2005). In line with this argument, Hakala and Kohtamäki (2011) concluded that a high level of TO is required to maintain superior performance.

2.1.4 Entrepreneurial orientation. The concept of EO is becoming increasingly important for firms. It is used to refer to the processes and endeavors of organizations that engage in entrepreneurial activities and behaviors and capture specifically entrepreneurial aspects of

firms' strategies and strategy-making process (Bhuian *et al.*, 2005; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Hult *et al.*, 2004; Rauch *et al.*, 2009; Wiklund, 1999; Wiklund and Shepherd, 2005).

Originally developed by Miller (1983) and later refined by Covin and Slevin (1989), EO refers to the managerial attributes of risk taking, innovativeness and proactiveness (Covin and Slevin, 1989). First, innovativeness is defined as the firm's ability and attempt to engage in new ideas, creativity and experimentation in innovating and introducing new products, services or processes, thereby passing established practices and technologies (Rauch *et al.*, 2009). Second, risk taking is the willingness of an entrepreneurial firm to take bold actions such as venturing into new markets and to invest in or commit resources to a venture or project where the outcome may be highly uncertain or unknown (Wiklund and Shepherd, 2003). This is meant that this firm is not afraid to break away from routine, safe, well-known core business and venture into unknown. Third, proactiveness is defined as acting in anticipation of future problems, needs or changes. It represents firm's posture of constant seeking for new opportunities by anticipating and acting on future wants and needs in the marketplace involving the introduction of new products or services ahead of competitors (Lumpkin and Dess, 1996). The role of EO is emphasized as a firm-level process, practice and decision-making style, and entrepreneurial behavior as a natural extension of individuals, who are in charge of the organization (Lumpkin and Dess, 1996). Similar to them and based on Wiklund (1999), Aloulou and Fayolle (2005) defined the EO as the top management's strategic orientation, reflecting the willingness of a firm to engage in entrepreneurial behaviors.

2.1.5 New product development performance and firm performance. The concept of performance is a broad concept that includes different dimensions of the operational, management and competitive excellence of a firm and its activities. Subjective measures are seen as the only option in the case of small- and medium-sized firms, whose accounting figures may not be available. Subjective assessments of FP have been considered appropriate when objective data are unavailable (Dess and Robinson, 1984; Dawes, 1999). Here, this research focuses on NPDP and FP as to be reflected in the top management's satisfaction with the results of their organizations (Hakala, 2010; Lyon *et al.*, 2000), and to be impacted by strategic orientations (Atuahene-Gima, 1995; Gao *et al.*, 2007; Hakala and Kohtamäki, 2010, 2011; Jaworski and Kohli, 1993; Kaya and Seyrek, 2005; Kohli and Jaworski, 1990; Lee, 2011; Lee and Choi, 2013; Lee and Dedahanov, 2014; Paladino, 2007; Zhou, Yim and Tse, 2005).

2.2 Research framework and hypotheses development

Within existing literature, authors have defined and studied several sub-categories of strategic orientation. Of these sub-categories, EO, TO and MO are purported to be particularly influential on firm's performance (Covin and Slevin, 1989; Cano *et al.*, 2004; Narver and Slater, 1990; Gatignon and Xuereb, 1997; Lumpkin and Dess, 1996; Wiklund, 1999). Accordingly, authors writing on the subject of MO suggest that firms will be able to understand and satisfy their needs when they observe customer behavior. Then, authors, studying the perspective of TO, suggest that organizations will be able to offer superior products to their competitors and, in turn, gain competitive advantage by continually developing new and improved products and investing heavily in R&D. Also, authors writing on the subject of EO argue that many organizations will experience improved performance by following a proactive, innovative and risk-taking approach to business.

Literature on strategic orientations has proven the predominance of studies of MO, while EO is the second most popular, followed by TO (Hakala, 2011). Literature showed that EO and MO are strategic tools to face an unstable and dynamic market trend itself. However,

little research producing empirical data studying the combined use of MO, TO and EO in conjunction with one another has been produced (Aloulou and Fayolle, 2005; Hakala, 2010; Kaya and Seyrek, 2005; Srivastava *et al.*, 2013; Mu and Di Benedetto, 2011). Previous studies have tended to focus on a specific orientation with the aim of reporting the benefits of each respective orientation, but failed to consider orientations as potential reciprocal partners. This research will study the relationship between strategic orientations and their effects on business performance.

2.2.1 Direct correlative relationships between strategic orientations. The relationship between MO and other orientations such as TO and EO was tested (Atuahene-Gima and Ko, 2001; Kwak *et al.*, 2013; Noble *et al.*, 2002; Pérez-Luño *et al.*, 2016; Sciascia *et al.*, 2006; Lee and Dedahanov, 2014). Several studies focused on the relationship between MO and TO (Hortinha *et al.*, 2011; Jeong *et al.* 2006). Some authors believed that there is a correlation between MO and EO (Atuahene-Gima and Ko, 2001; Baker and Sinkula, 2009). Some others show that MO affects EO (Liu *et al.*, 2003; Sciascia *et al.*, 2006). Therefore, previous studies showed that there is a positive correlative relationship between TO and EO, and particularly through its key dimensions: innovativeness, proactiveness and risk taking (Atuahene-Gima and Ko, 2001; Hakala and Kohtamäki, 2010; Hakala, 2011; Wiklund and Shepherd, 2005; Urban and Barreria, 2010; Urban, 2010). Thus, the first set of hypotheses is as follows:

H1a. A positive correlative relationship exists between MO and TO.

H1b. MO is positively related to EO.

H1c. TO is positively related to EO.

2.2.2 Direct relationship of MO with NPDP and FP. The MO is the one of the major strategic orientations that give sustainable competitive advantage to the firm and create superior values to costumers (Slater and Narver, 2000). Its relationship with NPD performance and FP was tested (Agarwal *et al.*, 2003; Appiah-Adu, 1998; Atuahene-Gima, 1995; Ellis, 2006; Frishammar and Åke Hörte, 2007; Kam Sing Wong and Tong, 2012; Kara *et al.*, 2005; Kirca *et al.*, 2005; Lonial *et al.*, 2008; Reid and Brady, 2012; Slater and Narver, 2000). For example, Narver and Slater (1990) developed a valid measure of MO and empirically assessed its influence on performance. Agarwal *et al.* (2003) also found that MO is positively related to both objective measures (market share, gross operating profit and performance-occupancy rate) and judgmental measures (customer and employee satisfaction and performance–service quality). With Cano *et al.* (2004), the concept of MO becomes more universal by finding evidence from five continents on the relationship between MO and business performance. With Frishammar and Åke Hörte (2007), it has been shown that MO has a favorable effect on NPD performance. Thus, the following is proposed:

H2. MO is positively related to performance.

H2a. MO is positively related to NPDP.

H2b. MO is positively related to FP.

2.2.3 Direct relationship of TO with NPDP and FP. Several studies have been conducted in this area (Gao *et al.*, 2007; Gatignon and Xuereb, 1997; Hakala and Kohtamäki, 2010, 2011; Salavou, 2005). Gatignon and Xuereb (1997) seek to understand which of three different strategic orientations of the firm (customer, competitive, and technological) is more appropriate, when, and why it is so in the context of developing product innovations. They verified that if firms want to perform better than competitors in terms of new product development, they need to have a strong TO. In previous research, a positive relationship between TO and SMEs performance (overall success) was found. TO is purported to

positively contribute to FP and to be seen as potential antecedent to it (Gao *et al.*, 2007; Lee and Dedahanov, 2014). Thus, the following is proposed:

H3. TO is positively related to performance.

H3a. TO is positively related to NPDP.

H3b. TO is positively related to FP.

2.2.4 Direct relationship of EO with NPDP and FP. According to Wiklund (1999), EO is a new approach to conceptualize entrepreneurship. Therefore, it received a substantial amount of theoretical and empirical attention. Based on the review and integration of the strategy-making process and entrepreneurship literatures (Covin and Slevin, 1989) and on Miller's (1983) conceptualization, three dimensions of EO have been identified and used consistently in the literature – innovativeness, risk taking and proactiveness.

A number of literatures have recognized the relevance of EO to FP (Lumpkin and Dess, 1996; Wiklund and Shepherd, 2005). The results of prior research have indicated the relationship between EO and FP (Covin and Slevin, 1989; Gupta and Batra, 2016; Lee and Lim, 2009; Wiklund, 1999), and new product performance and development (Atuahene-Gima and Ko, 2001; Li *et al.*, 2006). In fact, Wiklund and Shepherd (2005) found that EO has a positive influence on small business performance. Previous research suggests that individual dimensions of EO can have a positive influence on performance (Avlonitis and Salavou, 2007). Thus, the following is proposed:

H4. EO is positively related to performance.

H4a. EO is positively related to NPDP.

H4b. EO is positively related to FP.

2.2.5 Other linkages between NPDP and FP and with control variables. NPD is considered a critical determinant of FP and has a positive relationship with it (Langerak *et al.*, 2007; Zhou, Yim and Tse, 2005). Therefore, control variables such as firm size, firm age and type of ownership (family vs non-family business) have been studied in several research studies as having relationships with NPDP and FP (Mu and Di Benedetto, 2011). Firm size and age may affect the firm's strategic behavior and decisions making and performance (Laforet, 2009). Thus, the following is proposed:

H5a. NPDP is positively related to FP.

H5b. Firm size, age and family type (family vs non-family business) are related to NPDP.

H5c. Firm size, age and family type (family vs non-family business) are related to FP.

2.2.6 Indirect linkages between strategic orientations and NPDP and FP: mediating roles of EO. The effects of MO, TO and EO on NPDP and FP have attracted several researchers' attention. In fact, several studies focused on the effects of other strategic orientation on the relationship between MO and product or FP (Baker and Sinkula, 2009; Bhuian and Habib, 2004; Bhuian *et al.*, 2005; Boso *et al.*, 2013; Cano *et al.*, 2004; Grinstein, 2008; Frishammar and Åke Hörte, 2007; Gonzalez-Benito *et al.*, 2009; Kajalo and Lindblom, 2015; Kaya and Seyrek, 2005; Lee and Dedahanov, 2014; Li *et al.*, 2006, 2008; Liu and Su, 2014; Morgan *et al.*, 2015; Nasution *et al.*, 2011; Veidal and Korneliussen, 2013; Zhang and Duan, 2010).

The combined strategic orientations were investigated in previous studies. In fact, MO and TO were believed to aid and increase business performance (Gatignon and Xuereb, 1997; Jeong *et al.*, 2006; Hsu *et al.*, 2014; Liu and Su, 2014; Tseng *et al.*, 2006). Moreover, the interaction between MO and EO and their effect on performance have been studied (Atuahene-Gima and Ko, 2001; Baker and Sinkula, 2009; Bhuian *et al.*, 2005;

Frishammar and Åke Hörte, 2007; Dutta *et al.*, 2016; Slater and Narver, 2000). Both orientations have a positive effect on profitability (Slater and Narver, 2000). Thus, their complementary effect on performance was showed (Baker and Sinkula, 2009). Both have been suggested to influence NPD (Frishammar and Åke Hörte, 2007; Li *et al.*, 2006, 2008). Therefore, the interaction between the TO and EO and their effect on performance have attracted several researchers (Hakala, 2010, 2011; Hakala and Kohtamäki, 2010, 2011; Salavou, 2005; Zhou, Yim and Tse, 2005; Zahra, 2008). For example, Hakala and Kohtamäki (2010, 2011) provided evidence that firms combining several strategic orientations perform better than those focusing solely on customer orientation. They found that Finnish software companies can be divided into three groups featuring different configurations of customer, MO, TO and EO. In their study, Zhou, Yim and Tse (2005) also used strategic orientation, as provided by Gatignon and Xuereb (1997). They divided strategic orientation into three sub-constructs, namely MO, EO and TO, and all of these have an effect on breakthrough innovation. According to them, the impact of strategic orientations (MO, EO and TO) of firms on technology-based and market-based innovations was investigated. The authors focused on examining the interrelationships and linkages between these orientations and innovations (technology and market based). In their work, Lee and Dedahanov (2014) found that EO directly affects MO and TO and suggested that to achieve high levels of FP, Korean companies need to balance the elements of EO, TO and MO.

In this study, we investigate the mediating role of EO in the relationships between MO and performance and between TO and performance. Thus, the following is proposed:

H6a. EO will mediate the relationship between MO and NPDP.

H6b. EO will mediate the relationship between MO and FP.

H7a. EO will mediate the relationship between TO and NPDP.

H7b. EO will mediate the relationship between TO and FP.

Figure 1 presents the hypothesized research model with direct and mediation linkages between independent, control and dependent variables.

3. Methodology

This research is based on a quantitative approach studying the effects of strategic orientations (MO, TO and EO) on performance (NPDP and FP) by testing a hypothesized

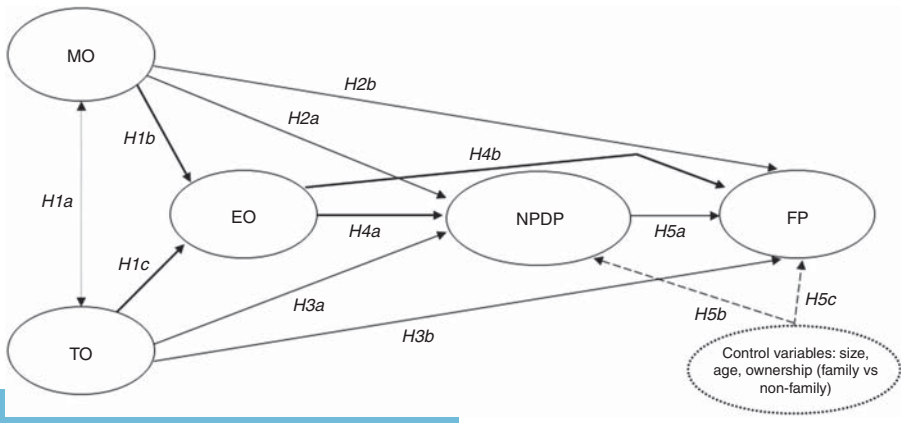


Figure 1. Hypothesized research model

model built from the literature review and previous studies. Empirically, this research targets a population of increasing number of firms more than 9,000 firms by 2020 in several industry sectors in the Saudi context.

3.1 Saudi context: challenges facing the country

In the Saudi context, the industrial sector continues to play a vital role in accelerating economic development of the country. Although industrialization is relatively recent, in Saudi Arabia, the industrial sector has witnessed a solid development with remarkable achievements. The country has supported the industrial development to reach 7,036 firms in 2016 employing more than 980,000 workers with a volume of investments reaching about SAR 1.100bn in 2015 (source: https://mci.gov.sa).

It appears clearly that Saudi Arabia is entering in the huge transformation era when deciding through 2030 vision (Saudi Council of Economic and Development Affairs, 2016) to reduce its traditional dependence on oil and hydrocarbon revenues and rely on alternatives diverse economy beyond oil and the development of other industrial and service industries sectors (Burton, 2016; McKinsey & Company, 2015; Porter, 2012; Schwab and Sala-I-Martin, 2016). Therefore, the National Transformation Program 2020 has been developed to help fulfill Saudi Vision 2030 by establishing strategic objectives and identifying the initiatives necessary for achieving specific interim targets in 2020 (National Strategy for Industry, National Industrial Clusters Development Programs, etc., see Burton, 2016). However, Saudi industries are facing daunting challenges such as improving national products' competitiveness; expediting technology transfer and adoption; developing Saudi manpower capabilities; and improving industrial management in the face of growing to international competition. To face such challenges, top management of Saudi industrial firms has to choose the right combination of strategic orientations to increase the competitiveness and performance of their firms.

3.2 Population and sampling

There are 7,036 Saudi manufacturing firms in 2016[1]. We use the same codification of the class of manufacturing sectors adopted by the Saudi Ministry of Commerce and Investment. The targeted sample for such population is about 364. An online sample size calculator is used for estimating our sample[2]. Then, a list of Saudi industrial firms operating in the Saudi market was prepared from websites of official sources (e.g. Chambers of Commerce and Industry, Ministry of Industry, Ministry of Commerce and Investment, Saudi Industrial Property Authority and Saudi Exports). The completed list of more than 2,500 Saudi firms included firm name, address, contacts, and names and contacts of its key managers. With the available information, it was possible to send the survey via emails containing a cover letter about the survey and the research and targeting the concerned respondents to fill in the survey. About 335 questionnaires were filled in, and 43 questionnaires were excluded from the study due to a non-completion of the survey or to the non-belonging of the firm to the industrial sector (Table I).

	Number of firms
Listed population	2,500
Targeted sample	364
Effective sample	335
Validated questionnaires	292
Excluded questionnaires	43
Response rate (%)	80.22

Table I.
Targeted sample and validated questionnaires

3.3 Data collection and analysis strategy

3.3.1 Data collection. This study employed the survey method. To collect data, we build a questionnaire that includes all aspects of the research framework based on the items that were developed for each variable and contained general information about the firm. Each item was measured using a five-point Likert scale.

The data were gathered from April 2016 to December 2016. A questionnaire was developed in two languages: Arabic and English. Originally, it was designed in English and then translated into Arabic and back-translated to ensure the accuracy and appropriateness of language (Brislin, 1980; Kreiser *et al.*, 2002). A first Arabic version of the questionnaire was drafted, and then reviewed by two academics and pilot tested on ten firms (not included in the final sample). Some changes in questionnaire were made on the wording of measurement items to improve the readability, format and relevance of its instruments. The survey was implemented through a specialized online inquiry tool (two Arabic- and English-enabled online Google Form questionnaires). The use of such a tool helps the researcher to easily approach the respondents when filling in the survey instrument and the required statements, and to reduce the probability of having missing data. Furthermore, an equivalent traditional inquiry (paper-and-pencil survey) was also used as a complementary tool to bring other observations with the help of well-trained graduate students in data collection (Weigold *et al.*, 2013).

Members of Top Management were approached in this study. They included members of the board of directors, CEO, Vice President, directors of department, managers of districts, branches who are involved in strategy formulation and planning of their firms.

3.3.2 Sample characteristics. This study used a sample of 292 Saudi firms located in several industrial cities in main regions in KSA. Table II presents the sample characteristics in number and percent. These 292 firms were from a range of manufacturing (57.2 percent), service (30.1 percent) and construction (12.7 percent) industries. In all, 67.4 percent of the Saudi firms are SMEs (size between 10 and up to 500 employees). Of them, 43.2 percent are operating for more than 20 years. In all, 50.3 percent are family businesses. The firms are managed by top managers who have experience of more than 15 years in the industry sector. In the survey, 74.6 percent of the respondents were members of the top management in their firms. The majority of them were males (97.3 percent) and having an experience of more than five years in their respective firms (79.5 percent).

3.3.3 Measures of variables. 3.3.3.1 Market orientation. We use the MKTOR scale (Narver and Slater, 1990) because of its suitability with our sample in dealing with the collection of data concerning the industry sectors. According to the MO literature, the MKTOR increases the incidence of having a meaningful relationship with the organizational performance. Also, MKTOR is valid measure of MO and of its influence on performance. It included three conceptually related components: customer orientation as the sufficient understanding of one's target buyers to be able to create superior value for them continuously; competitor orientation as the understanding of the short-term strengths and weaknesses and long-term capabilities and strategies of both the key current and potential competitors; and inter-functional co-ordination as the coordinated utilization of company resources in creating superior value for target customers at any and all points in the buyer's value chain.

3.3.3.2 Entrepreneurial orientation. EO was measured using the widely used eight-item scale and five-point scale proposed by Covin and Slevin (1989) for parsimony and credibility, respectively (Runyan *et al.*, 2012), and utilized on three different dimensions, namely, the company's proactivity, innovativeness and risk taking (as first-order indicators of the EO). It has been found to be highly valid and reliable at cross-cultural levels (Knight, 1997; Runyan *et al.*, 2012).

Characteristic	Number	Percent[a]
Localization		
Central region (Riyadh)	183	62.7
Western region (Jeddah)	43	14.7
Eastern region (Sharqiya)	42	14.4
Southern region	24	8.2
Activity sector[b]		
Manufacturing (23 subsectors)	167	57.2
Service industry (maintenance, energy, consulting, etc.)	88	30.1
Construction industry	37	12.7
Size		
Less than 9	11	3.8
Between 10 and 49	65	22.3
Between 50 and 249	85	29.1
Between 250 and 499	47	16.1
More than 500	84	28.8
Age		
Less than 2	8	2.7
Between 2 and 5	31	10.6
Between 5 and 10	61	20.9
Between 10 and 20	66	22.6
More than 20	126	43.2
Nationality		
Saudi	231	79.1
Bi-national	38	13
Multinational	11	3.8
Other	10	3.4
Family firm		
Yes	147	50.3
No	145	49.7
Legal form		
Sole proprietorship	86	29.5
General partnership company	31	10.6
Private limited company	102	34.9
Limited partnership	2	0.7
Joint-stock company	50	17.1
Other	16	5.5
Top manager tenure: Min. = 1; Max. = 55, Mean = 16.53; SD = 10.48	$n = 268$	
Top manager industry tenure: Min. = 1; Max. = 48, Mean = 15.29; SD = 10.41	$n = 263$	
Respondent position		
President/Member of board of directors	17	5.8
CEO/Firm manager	69	23.6
CXO (CPO, CTO, CIO, etc.)	132	45.2
Firm consultant	11	3.8
Other management members	63	21.6

Table II.
Sample characteristics and distribution by the class of industry sector

Notes: $n = 292$. [a]Sum may be less than 100 percent due to missing data; [b]the sample distribution by class of industry sector was done accordingly to the classification provided by the Saudi MCI. The most represented sectors were the construction (12.7 percent), then, manufacturing metallic and non-metallic products (10 percent), and the Telecommunications, IT and smart solutions services (8.6 percent)
Source: Author elaboration

3.3.3.3 Technology orientation. Unlike the customer-pull philosophy of MO, TO reflects the philosophy of "technological push," which posits that consumers prefer technologically superior products and services (Gatignon and Xuereb, 1997). TO is measured by Derozier (2003, in Hakala and Kohtamäki, 2011) using a five-point scale with five items.

3.3.3.4 Performance variables (NPDP and FP). We opt for the subjective way to measure performance (Dawes, 1999; Dess and Robinson, 1984). The NPDP is measured with five items five-point scale which is proposed by Atuahene-Gima (1995) and used by Paladino (2007) and in which the relative success of the new product, the revenues and profitability from new products are compared to competitors. On the other hand, the FP is measured by five items five-point scale which measures the owners' satisfaction with their company's performance, profitability and growth in comparison to its competitors, the status of the overall performance in the firm, and relative to competition in the last year. The measures for this construct were adapted from previous studies (Aloulou, 2018a, b; Hakala and Kohtamäki, 2011; Jaworski and Kohli, 1993; Keskin, 2006; Kohli and Jaworski, 1990; Srivastava *et al.*, 2013).

3.3.3.5 Control variables. Firm size and age have implications for organizational performance (Mu and Di Benedetto, 2011), but are used as a control variable in the study to account for their effects on dependent variables. Firm size was measured by the number of full-time employees and firm age was measured by the number of years a firm has been operating in the market since its establishment. And finally, the type of ownership (family vs non-family) is used for the aim of potential clustering of firms.

3.3.4 Data analysis strategy, reliability and data analysis. 3.3.4.1 Data analysis strategy. We conducted an exploratory factor analysis (EFA) with SPSS software (21.0 version) to show that measurement items were loaded on their theoretically prescribed factors, and then a confirmatory factor analysis (CFA) with AMOS software (21.0 version) to purify and validate empirically the measures in our research context. Then, we conducted an explanatory analysis using maximum likelihood estimation (MLE) method with AMOS software to test the hypotheses. MLE was chosen because it is proven to be fairly robust to the violation of normality and produce reliable results in comparison to other techniques (Hair *et al.*, 2014).

Two steps were undertaken: first, the collected data were screened, the data set using SPSS was optimized and the scales were purified for unidimensionality, reliability, convergent and discriminant validity. Second, the research model was tested using SPSS software with the computation of bivariate correlation table and regression analysis. We decide to choose the SEM as a suitable method to make analysis of both direct and indirect effects (Arbuckle, 2012; Byrne, 2010). SEM allows for simultaneously estimating all the relationships proposed in the conceptual model and testing its hypotheses. A sample of 292 observations is sufficient to use SEM.

3.3.4.2 EFA: unidimensionality, reliability, convergent and discriminant validity. An EFA using SPSS software was first conducted on all items. The factor analysis is used to assess the validity of concepts: principal components analysis was adopted and varimax has been used in the analysis. The resulting factors have an eigenvalue higher than 1, a factor loading significantly higher than 0.5 (50 percent) and a KMO index higher than 0.6 (0.5 if the factor is composed of two items). The reliability analysis is used to analyze whether the measurement tool has internal consistency. Cronbach's α is used as the reliability measure and a value of more than 0.7 is considered as reliable. Table III presents the factor loadings, validity and reliability of variables.

3.3.4.3 Correlation analysis and multicollinearity assessment. A correlation analysis was conducted between variables (Table IV). The analysis showed significant correlations between the constructs of the study (strategic orientation and performance) and the significant positive relationship of firm size with main strategic orientations and FP.

2nd order variable	1st order variable	Initial number of items	Variance explained %	KMO	Cronbach's α
MO	Customer orientation	6 items: CSO1, CSO2, CSO3, CSO4, CSO5, CSO6	56.455	0.868	0.841
	Competitor orientation	4 items: CMO1, CMO2, CMO3, CMO4	57.300	0.752	0.748
	Inter-functional co-ordination	5 items: INFC1 (deleted), INFC2, INFC3, INFC4, INFC5	59.239	0.767	0.769
–	TO	5 items: TO1, TO2, TO3, TO4, TO5	58.341	0.824	0.821
EO	Innovativeness	3 items: Innov1, Innov2, Innov3	58.598	0.625	0.645
	Proactiveness	3 items: Proact1, Proact2, Proact3	64.157	0.662	0.720
	Risk Taking	2 items: Risk1, Risk2	74.936	0.5	0.664
–	NPDP	4 items: NPDP1, NPDP2, NPDP3, NPDP4	64.023	0.783	0.811
–	FP	5 items: FP1, FP2, FP3, FP4, FP5	66.036	0.834	0.868

Table III. Validity and reliability analyses

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. MO	3.866	0.627	1.000							
2. TO	3.699	0.799	0.601**	1.000						
3. EO	3.508	0.671	0.516**	0.539**	1.000					
4. NPDP	3.741	0.675	0.455**	0.521**	0.438**	1.000				
5. FP	3.483	0.661	0.427**	0.410**	0.491**	0.401**	1.000			
6. SIZE	3.44	1.224	0.107*	0.130*	0.181**	0.084	0.313**	1.000		
7. AGE	3.93	1.145	0.043	0.066	0.126*	0.079	0.101	0.488**	1.000	
8. FAMOWN	1.5	0.501	0.097	0.027	0.046	0.005	0.100	0.149*	−0.083	1.000

Notes: $n = 292$. *$p<0.1$; **$p<0.05$

Table IV. Spearman's correlation between independent, dependent and control variables

The test result found tolerance < 0.1, variation inflation factor (VIF) > 10 and condition index > 30, and these can be interpreted as variables with multicollinearity (Hair *et al.*, 2014). In this study, it has been found that tolerance was at least 0.506 and VIF was between 1.556 and 1.974 and condition index = 22.118 (< 30). Hence, there was no multicollinearity amongst the variables. Table V shows that there is no multicollinearity among the variables of the research framework.

3.3.4.4 Common method bias. With regard to the common bias problem, following the recommendations of Podsakoff and Organ (1986) and Podsakoff *et al.* (2003), we proceeded to key in all the variables (independent, dependent and control) into a factor analysis and extracted ten factors with eigenvalues superior to 1.0, which accounted for 63.134 percent of the variance. The first factor accounted for 29.987 percent of the variance, while the remaining factors accounted for 33.147 percent of the variance. We concluded that common

Model	Standardized coefficients β	t	Sig.	Collinearity statistics Tolerance	VIF
(Constant)		3.731	0.000		
NPDP	0.190	3.262	0.001	0.643	1.556
MO	0.137	2.122	0.035	0.525	1.904
TO	0.124	1.890	0.060	0.506	1.974
EO	0.300	5.035	0.000	0.616	1.622

Table V. Multicollinearity assessment

method bias was not a problem since no single factor accounted for the majority of the variance and the individual factors separated cleanly (Podsakoff *et al.* 2003).

3.3.4.5 Confirmatory factor analysis. SEM tested the fit of the measurement, structural and fitting models and was carried out using a two-step approach (Anderson and Gerbing, 1988; Fornell and Larcker, 1981; Hair *et al.*, 2014):

(1) CFA and measurement model analysis conducted in order to see how well the theoretical specification of the constructs matches the actual data. We performed CFA to validate empirically the measures of our study since the strategic orientations are relatively new constructs in our research context, Saudi Arabia. The model fit is checked and a CFA for all factors is conducted. To establish convergent validity, we need to show that measures that should be related are in reality related. Measures were all purported to reflect the constructs. For that, we evaluate each construct separately, and then together. After that, we present the measurement model results for each CFA.

(2) Structural and fitting models tested to examine the relationships between constructs. Model fit was assessed using main indices (absolute, relative and parsimonious fit) (e.g. see Hair *et al.*, 2014; Hu and Bentler, 1999; Kenny, 2014; for cutoff criteria to accept the model fit) in order to (re)specify the model to get a better fit in accordance with the theory and the logic (Anderson and Gerbing, 1988). MO and EO were considered as formative second-order constructs with reflective dimensions, while TO, NPDP and FP are operationalized with reflective measurement models. Table VI presents the CFA of main constructs and measurement model.

4. Results

Many SEMs were conducted. All factor loadings were estimated as being significant and in the predicted direction ($p < 0.001$) and constructs were allowed to correlate. The measurement fit indexes were presented. After confirming the factor structure, we employed a SEM to test the hypotheses. Many SEMs were conducted for theses hypotheses. We included a control variable (firm size) in some SEMs and linked it to dependent variables. For each SEM, the fit indexes were checked and suggested acceptable level of goodness-of-fit with data.

4.1 Direct linkages between independent variables, control variables and dependent variables: H1a–H5c

We fit the full measurement model. The model was (re)specified utilizing the measures of MO and EO, then of MO and TO, then of EO and TO respectively in order to have a better fit.

2nd order variable	1st order variable	CFA (1st/2nd order)
MO	Customer orientation Competitor orientation Inter-functional co-ordination	χ^2 (df) = 72.036 (69); χ^2/df = 1.044; RMR = 0.034; GFI = 0.965; RMSEA = 0.012; IFI = 0.984; TLI = 0.977; CFI = 0.982
–	TO	χ^2 (df) = 2.029 (3); χ^2/df = 0.676; RMR = 0.012; GFI = 0.997; RMSEA = 0.000; IFI = 1.008; TLI = 1.030; CFI = 1.000
EO	Innovativeness Proactiveness Risk taking	χ^2 (df) = 16.129 (13); χ^2/df = 1.241; RMR = 0.034; GFI = 0.986; RMSEA = 0.029; IFI = 0.981; TLI = 0.954; CFI = 0.979
–	NPDP	χ^2 (df) = 6.162 (2); χ^2/df = 3.081; RMR = 0.018; GFI = 0.989; RMSEA = 0.085; IFI = 0.960; TLI = 0.875; CFI = 0.958
–	FP	χ^2 (df) = 3.729 (3); χ^2/df = 1.243; RMR = 0.009; GFI = 0.995; RMSEA = 0.029; IFI = 0.995; TLI = 0.981; CFI = 0.994

Table VI. CFA of main variables and measurement model

Main results of direct linkages between independent, control and dependent variables are presented in Table VII.

Given the results of CFA and attempts of model fits after (re)specifications, findings showed that there is a positive correlation (estimate = 0.779, significant at $p < 0.001$) between MO and TO; strategic orientations were positively correlated together: for MO and TO, there is a significant correlation of 0.799. Positive relationships were found between MO and EO (estimate = 0.75 significant at $p < 0.001$) and between TO and EO (estimate = 0.80 significant at $p < 0.001$). *H1a* stating a positive correlative relationship exists between MO and TO was supported. Then, *H1b* and *H1c* stating, respectively, that MO and TO are positively related to EO were also supported.

Therefore, regarding *H2a* and *H2b*, the findings showed positive relationships between MO and NPDP (estimate = 0.616 significant at $p < 0.001$) and between MO and FP (estimate = 0.557 significant at $p < 0.001$). *H2a* and *H2b* were supported. And regarding *H3a* and *H3b*, the findings revealed positive relationships between TO and NPDP (estimate = 0.714 significant at $p < 0.001$) and between TO and FP (estimate = 0.576 significant at $p < 0.001$). *H3a* and *H3b* were supported. With *H4a* and *H4b*, the findings showed positive relationships between EO and NPDP (estimate = 0.645 significant at $p < 0.001$) and between EO and FP (estimate = 0.655 significant at $p < 0.001$). *H4a* and *H4b* were supported.

About *H5a*, the findings showed a direct positive relationship between NPDP and FP (estimate = 0.547 significant at $p < 0.001$). *H5a* was supported. However, regarding *H5b*, the findings showed no significant direct positive relationship between control variables and NPDP. Thus, *H5b* was not supported. With *H5c*, the findings showed only one significant positive relationship between size and FP. No significant positive relationship exists between other control variables and FP. *H5c* was partially supported.

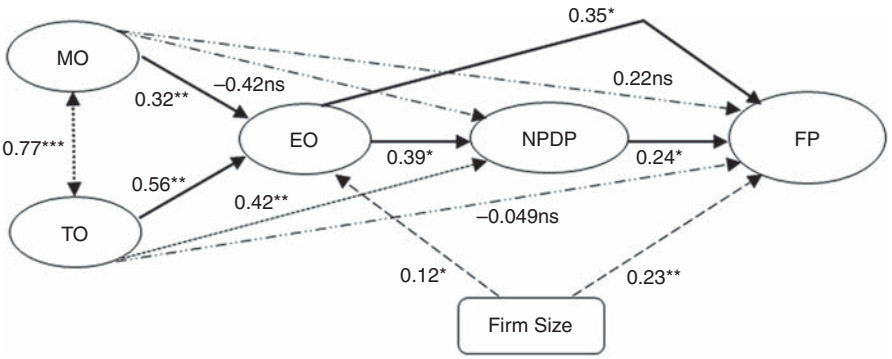
4.2 Interaction linkages between strategic orientations and NPDP and FP – mediating roles of EO: second set of hypotheses (H6a–H7b)

The structural model that was built to test the second set of hypotheses was assessed. The firm size was added into the model and used as a control variable. The fit indices suggest that the structural model is a quite good fit for the data (due to the higher complexity of the model, see notes, Figure 2). The second set of hypotheses stated a mediating role of EO in the relationship of the effects of MO and TO on NPDP and FP. Figure 2 presents the final model with significant and non-significant paths.

Hypothesis	Path coefficient	SE	CR	Correlation	Decision
H1a: MO ↔ TO	–	–	–	0.799***	Supported
H1b: EO ← MO	0.745***	0.13	7.212	–	Supported
H1c: EO ← TO	0.798***	0.095	7.631	–	Supported
H2a: NPDP ← MO	0.616***	0.101	6.770	–	Supported
H2b: FP ← MO	0.557***	0.079	5.701	–	Supported
H3a: NPDP ← TO	0.714***	0.081	7.631	–	Supported
H3b: FP ← TO	0.576***	0.059	6.601	–	Supported
H4a: NPDP ← EO	0.645***	0.095	6.763	–	Supported
H4b: FP ← EO	0.655***	0.079	6.445	–	Supported
H5a: FP ← NPDP	0.547***	0.071	6.477	–	Supported
H5b: NPDP ← Control variables	ns			–	Not supported
H5c: FP ← Control variables	Size: PC = 0.361***, SE = 0.029; CR = 4.857; Age: ns; FAMOWN: ns			–	Partially supported

Note: ***$p < 0.001$

Table VII.
Direct linkages between independent variables, control variables and dependent variables



Notes: Model fit χ^2 (df) = 672.558 (598); χ^2/df = 1.125; RMR = 0.069; GIF = 0.875; RMSEA = 0.021; IFI = 0.872; TLI = 0.838; CFI = 0.855. ns, non-significant. *p<0.05; **p<0.01; ***p<0.001

Figure 2.
Final structural model for the mediating role of EO

According to Baron and Kenny (1986), a variable functions as a mediator when it meets the following conditions: variations in levels of the independent variables significantly account for variation in the presumed mediator (path a); variations in the mediator significantly account for variations in the dependent variable (path b); and when paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when path c is zero.

To test for mediation, a series of regression models have been estimated: regressing the mediator to the independent, then the dependent variable on the independent variable, and regressing the dependent variable on both the independent variable and on the mediator.

From previous hypotheses' tests, the relationships of independent variables (MO and TO) with the mediator (EO) and with the dependent variables (NPDP and FP) and the relationship of mediator with the dependent variables were all significant (see *H1b–H4b*). However, in the presence of the mediator, the relationships of independent variables with the dependent variables became non-significant with the exception of the relationship of TO and NPDP (that is still significant).

4.2.1 EO as mediator to the relationship of MO to NPDP and to FP. *H6a* and *H6b* that EO is considered as mediator to the relationship of MO to NPDP and to FP were fully supported. The three conditions advanced by Baron and Kenny (1986) were respected. In the presence of EO as mediator, the relationship of MO with NPDP (estimate = −0.042, $p = 0.722$) and FP (estimate = 0.215, $p = 0.06$) becomes non-significant (Table VIII).

4.2.2 EO as mediator to the relationship of TO with NPDP and FP. *H7a* and *H7b* that EO is considered as mediator to the relationship of TO with NPDP and FP were supported. The three conditions advanced by Baron and Kenny (1986) were respected. In the presence of EO (mediator), the relationship of MO with NPDP (estimate = 0.42, $p = 0.007$) remains significant. EO partially mediates the relationship. However, the relationship of TO with FP (estimate = −0.049, $p = 0.752$) becomes non-significant. EO fully mediates the relationship of TO with FP (Table IX).

5. Discussion, implications, limitations and future research directions

5.1 Discussion

The objective of this study is to examine the effects of strategic orientations on NPDP and on FP. The results found that EO has a significant relationship with MO and TO. Then, it has been found separately that the strategic orientations have a significant relationship with

Research proposed path	Standard estimate	CR	*p*-value	Empirical evidence
H2a: NPDP ← MO (previous path)	0.616	6.770	Sig. at $p < 0.001$	Supported
H6a: NPDP ← EO ← MO	−0.042	−0.356	ns, $p = 0.722$	Full mediation
H2b: FP ← MO (previous path)	0.557	5.701	Sig. at $p < 0.001$	Supported
H6b: FP ← EO ← MO	0.215	1.883	ns, $p = 0.060$	Full mediation

Table VIII. Summary of results: mediation of EO on MO–performance relationship

Mediating effect of EO Hypothesis	From	Mediation	To	Direct effect	Indirect effect	Total effect
H6a	MO	EO	NPDP	−0.042	$0.321 \times 0.39 = 0.125$	0.083
H6b	MO	EO	FP	0.215	$0.321 \times 0.35 = 0.112$	0.327

Research proposed path	Standard estimate	CR	*p*-value	Empirical evidence
H2a: NPDP ← TO (Previous path)	0.714	6.601	Sig. at $p < 0.001$	Supported
H7a: NPDP ← EO ← TO	0.42	2.685	Sig. at $p = 0.007$	Partial mediation
H2b: FP ← TO (previous path)	0.576	0.601	Sig. at $p < 0.001$	Supported
H7b: FP ← EO ← TO	−0.049	−0.316	ns, $p = 0.752$	Full mediation

Table IX. Summary of results: mediation of EO on TO–performance relationship

Mediating effect of EO Hypothesis	From	Mediation	To	Direct effect	Indirect effect	Total effect
H7a	TO	EO	NPDP	0.42	$0.56 \times 0.39 = 0.218$	0.638
H7b	TO	EO	FP	−0.049	$0.56 \times 0.35 = 0.196$	0.147

NPDP and FP and positively affect them. These results supported previous research studies (Agarwal *et al.*, 2003; Amin *et al.*, 2016; Baker and Sinkula, 2009; Boso *et al.*, 2013; Frishammar and Åke Hörte, 2007; Gao *et al.*, 2007; Jaworski and Kohli, 1993; Narver and Slater, 1990).

Taking all strategic orientations together in order to test their simultaneous effects, the findings showed that only EO still has a significant relationship with NPDP and FP, and no significant relationships were found between MO and TO with NPDP and FP. These results supported the hypothesis that EO is a mediator respectively in these relationships. It has been shown that MO and TO can be antecedents to EO and determinants of it. This result was supported by previous research (Sciascia *et al.*, 2006; Lee, 2011; Lee and Dedahanov, 2014; Lee *et al.*, 2014; Liu *et al.*, 2003). Here, EO was considered as a significant determinant of NPDP and FP. Empirical evidence was found to show that the higher are the MO and TO implemented in a business, the more willing a firm is to implement an EO. The analysis showed that highly market- and technology-oriented firms tend to be highly entrepreneurial and EO affects NPDP and FP. MO and TO can positively affect performance but only through EO. As result, EO with its characteristics such as innovativeness, proactiveness and risk taking was seen as essential to enhance FP.

To our knowledge, this study is one of the first studies to conduct an examination of the three main strategic orientations and their relationship to Saudi firms' performance in Saudi context after studies of Bhuian and his colleagues (Bhuian, 1997, 1998; Bhuian and Habib, 2004; Bhuian *et al.*, 2005). Moreover, the use of rigorous statistical tools (SPSS and AMOS) and analyses (SEM) was helpful to validate the constructs of the strategic orientations in such a context. Our findings may appear to be merely confirmatory for different reasons: the direct effects of strategic orientations and their effects on performance. Here, the impact of MO and TO on performance can be indirect and mediated by EO.

5.2 Research implications

5.2.1 Theoretical implications. Within the literature of strategic orientation, while there is some evidence of complementarity between market and EO, of mediation of one on the relationship of one another to performance (Baker and Sinkula, 2009; Boso *et al.*, 2013; Atuahene-Gima and Ko, 2001; Amin *et al.*, 2016), additional evidence exists on other pair of strategic orientations (TO and EO; LO and EO) (Urban, 2010; Urban and Barreria, 2010; Amin, 2015; Mu and Di Benedetto, 2011). The empirical evidence shows that the Saudi firms are adopting different strategic orientations such as MO, TO and EO which are to be necessary to achieve high performance through the mediation of EO. This can invite scholars to investigate more on how Saudi firms can successfully combine these three strategic orientation following Hakala and Kohtamäki (2011). Other roles of strategic orientations such as EO can be explored in the future using a moderated mediation analysis (Dutta *et al.*, 2016) or analyzing the complementary and interplay role of strategic orientations to produce synergistic effects on performance (Kwak *et al.*, 2013; Mu and Di Benedetto, 2011).

New research is also needed to understand what are the organizational capabilities (learning, innovation, networking, absorptive, technological […]) that can conciliate these strategic orientations in order to enhance FP (Aloulou, 2018a, b; Atuahene-Gima and Ko, 2001; Boso *et al.*, 2013; Hsu *et al.*, 2014; Keskin, 2006; Pérez-Luño *et al.*, 2016; Veidal and Korneliussen, 2013).

5.2.2 Managerial and practical implications. The findings demonstrate that a sophisticated use of strategic orientations such MO, TO and EO conduct to a better FP. Furthermore, the study demonstrates how EO can be a mediator in the relationships of strategic orientations to the performance. Elements of market and TOs can determine the adequate activities of innovation, proactiveness and risk taking for managers to perform well in their respective industrial sectors. Managers should understand how to develop and emphasize all the three orientations simultaneously, decide in which needed entrepreneurial resources and capabilities to invest in, and which management programs and systems to implement in their firms. They need also to know how to gain from EO activities in order to develop new technologies, products and processes and introduce them successfully to the respective markets.

5.3 Limitations and future research directions

Although the empirical findings contribute to the existing literature, this study has certain limitations that pave the way for potential avenues for future research. The findings of the study cannot be generalized. Future research should adopt the proposed framework among different types of firms.

Due to the difficulty to get objective financial performance measures of Saudi firms, this study chose to measure the indicators of (NPD and Firm) performance based on the perceptions of the Top Management members. The data this study uses are largely about their subjective perceptions when responding to the survey, and results have to be

interpreted with some caution. Thus, future research should also consider some indicators of the objective performance.

This study should help other researchers to investigate deeply the topic and over the time with a larger sample of industrial firms within similar industry sectors (high-tech vs low-tech) through a cross-sectional approach or longitudinal study in order to test the model, find potential shifting relationships between orientations and performance to be developed over time, and finally generalize the findings. Consequently, in relying on individual perceptions and self-reported data from single respondents, future research has to rely on other sources of information in order to reduce any measurement error or potential for common method bias.

Future research has to focus on the role of environment turbulence and take into account its dimensions (market, technology or competitive intensity) that matter for the strategic orientations – performance relationships. Therefore, whether and how environment turbulence moderates the effect of strategic orientations on performance remains an interesting issue (Gupta and Batra, 2016; Mu and Di Benedetto, 2011). Future research should choose at least two industrial sectors and make the comparison to find the correct mix of strategic orientations within sectors.

Finally, other strategic orientations may be considered in future research such as learning orientation. Investigating on it as an important construct and mediator orientation between EO and performance can be a fruitful avenue for research (Aloulou, 2018a; Dutta *et al.*, 2016; Hakala, 2011). The importance of this concept in addition to others (MO, TO and EO) resides in the fact, for example, that Saudi firms are preparing themselves to challenging issues announced by the National Transformation Plan and Saudi Vision 2030 and have to decide a successful mix of strategic orientations to face such challenges.

6. Conclusion

Guided in this study by main findings from previous studies on MO, TO and EO as three dominant strategic orientations of the firm, our findings support the novel idea that EO is seen as conciliating orientation of other strategic orientation and as playing a (fully vs partially) mediating role in the MO–performance and TO–performance relationships. These findings filled in the knowledge gap in this area when approaching a relatively emergent Saudi industrial context compared to other industrial economies. This could mean that EO including the concepts of innovativeness, proactiveness and risk taking allows top managers of Saudi firms to be adventurous in their ways of managing their activities, resources and capabilities in order to achieve higher performance. Furthermore, these findings demonstrated in the same time the need for more research in investigating other possible potential strategic factors that might explain better the relationship to performance.

This study was conducted in an emerging and transitional economy with a Middle-East culture, Saudi Arabia. The constructs used in this study demonstrated reliability and validity of their measures in such context. Our intention in future research is to investigate the effects of strategic orientations on business performance in SME context and their variations across emerging countries from a more larger perspective (Arab, MENA, etc.).

Notes

1. http://mci.gov.sa/MediaCenter/Reports/Statistics/Documents/1-2016/02.xlsx
2. http://www.surveysystem.com/sscalc.htm

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