EG Estudios Gerenciales
Journal of Management and Economics for Iberoamerica

Research article

Do Market and Entrepreneurial Orientations Really Improve Firm Performance in SMEs from Developing Economies?

Gonzalo Maldonado-Guzmán*
Profesor investigador, Departamento de Mercadotecnia, Universidad Autónoma de Aguascalientes, Aguascalientes, México.
gonzalo.maldonado@edu.uaa.mx

Abstract

Market and entrepreneurial orientations appear in the literature as two concepts that improve firm performance in SMEs from developing countries. However, there is a debate whether both orientations should be implemented simultaneously or individually to achieve a higher firm performance. Thus, this study, using a sample of 368 SMEs from Mexico, aims to identify the link between market orientation and entrepreneurial orientation, and their relationship with firm performance through and empirical study. Data were estimated by Partial Least Squares Structural Equation Modeling with the SmartPLS 4.0 software. Results show that both market orientation and entrepreneurial orientation have a positive influence on firm performance, particularly when the second one acts as a mediating variable.

Keywords: market orientation; entrepreneurial orientation; firm performance; SMEs.

¿Las orientaciones al mercado y emprendedora realmente mejoran el rendimiento empresarial en las Pymes de las economías en desarrollo?

Resumen

Las orientaciones al mercado y emprendedora aparecen en la literatura como dos conceptos que mejoran el rendimiento empresarial en las SMEs de los países en vías de desarrollo. Sin embargo, existe un debate sobre si ambas debieran implementarse simultáneamente o individualmente para lograr un mayor nivel de rendimiento empresarial. Así, este estudio utilizando una muestra de 368 SMEs de México, tiene como objetivo identificar el vínculo existente entre la orientación al mercado y orientación emprendedora, y la relación de ambas con el rendimiento empresarial a través de un estudio empírico. Los datos fueron estimados mediante Modelos de Ecuaciones Estructurales con Mínimos Cuadrados Parciales usando el software SmartPLS 4.0. Los resultados muestran que, tanto la orientación al mercado como la orientación emprendedora, tienen una influencia positiva en el rendimiento empresarial, particularmente cuando la segunda actúa como variable mediadora.

Palabras clave: orientación al mercado; orientación emprendedora; rendimiento empresarial; Pymes.

As orientações para o mercado e para o empreendedorismo realmente melhoram o desempenho empresarial nas PMEs de economias em desenvolvimento?

Resumo

As orientações para o mercado e para o empreendedorismo são apresentadas na literatura como dois conceitos que melhoram o desempenho empresarial nas PMEs dos países em desenvolvimento. No entanto, existe um debate sobre se ambas devem ser implementadas simultaneamente ou individualmente para alcançar um maior nível de desempenho. Assim, este estudo, utilizando uma amostra de 368 PMEs do México, tem como objetivo identificar o vínculo existente entre a orientação para o mercado e a orientação empreendedora, bem como a relação de ambas com o desempenho empresarial por meio de um estudo empírico. Os dados foram estimados por Modelos de Equações Estruturais com Mínimos Quadrados Parciais, utilizando o software SmartPLS 4.0. Os resultados mostram que tanto a orientação para o mercado quanto a orientação empreendedora exercem uma influência positiva sobre o desempenho empresarial, especialmente quando a segunda atua como variável mediadora.

Palavras-chave: orientação para o mercado; orientação empreendedora; desempenho empresarial; PMEs.

*** Corresponding author.**

Classificações JEL: M31.

How to cite: Maldonado-Guzmán, G. (2025). Do Market and Entrepreneurial Orientations Really Improve Firm Performance in SMEs from Developing Economies? *Estudios Gerenciales, 41*(174), 3-12. https://doi.org/10.18046/j.estger.2025.174.6817

DOI: https://doi.org/10.18046/j.estger.2025.174.6817

Received: 04-04-2024
Accepted: 19-03-2025
Available on line: 15-05-2025

UNIVERSIDAD ICESI

1. Introduction

The concepts of market orientation (MO) and entrepreneurial orientation (EO) have been analyzed and discussed in the literature for more than four decades as a strategic posture of companies (Kim & Hur, 2024). These are two essential concepts in the analysis of internal and external factors that generate a higher firm performance (FP) (Boitumelo & Msimango-Galawe, 2023), especially in small and medium-sized enterprises (SMEs) (Mamo, 2017). Particularly, because MO generates an organizational culture focused on processes and products innovations articulated with the needs of consumers, competitive information, and coordinated internal responses to market information (Kim & Hur, 2024), while EO generates a proactive and innovative risk-taking company (Kim & Hur, 2024) to explore untapped needs in current or emerging markets (Covin & Slevin, 1989).

In fact, literature establishes, on one hand, that MO and EO are essential for achieving a higher FP in SMEs with limited capital and resources (Eisenmann, 2021; CB Insights, 2021); on other hand, that both MO and EO individually are insufficient to maintain the competitive advantage and FP of SMEs (Baker & Sinkula, 2009; Nassani & Aldakhil, 2023). However, although the relationship between MO, EO, and FP has been analyzed and discussed for more than four decades (e.g. Jawosrki & Kohli, 1993; Ramadani et al., 2017; Octavia & Ali, 2017; Wardi et al., 2018), the inconsistency in the results of published studies reinforces the need to apply empirical studies that provide robust evidence on the possible conflicts between these two strategic orientations and their relationship with FP (González- Benito et al., 2009; Mamo, 2017; Kim & Hur, 2024).

Additionally, the relationship between MO, EO, and FP in SMEs in developed countries has received significant attention from scientific and academic communities (e.g., Brouthers et al., 2014; Rodríguez-Gutiérrez & Tejada, 2015). Nevertheless, the relationship between these concepts in SMEs in developing countries has received little attention (Mamo, 2017; Kim & Hur, 2024), which is why researchers and academics call for future studies are oriented towards providing empirical evidence of the influence of MO, EO, and FP on SMEs in different environments and specific cultures (Raju et al., 2011; Soininen et al., 2013), and in the SMEs of developing countries (Mamo, 2017; Kim & Hur, 2024); especially, the simultaneous analysis of the three concepts and when EO acts as a mediating variable between MO and FP (Boitumelo & Msimango-Galawe, 2023; Kim & Hur, 2024).

In this sense, the objective of this study is to analyze and discuss the effects of MO, EO, and FP in the context of SMEs in a developing country. To do so, an empirical study was carried out in Mexican SMEs using a sample of 368 companies, the research model was estimated by *Partial Least Square Structural Equation Modeling* (PLS-SEM) with the SmartPLS software 4.0 (Ringle et al., 2022). It is essential to analyze SMEs for two basic reasons: first, because they are the largest number of existing companies in Mexico; second, because they contribute more than 50% of GDP and employment at the national level (INEGI, 2023).

Furthermore, the literature review reveals that the relationship among MO, EO, and FP remains unanalyzed and discussed in various strategically important countries such as Brazil, India, and Russia, and in regions of Middle East, Africa, and Latin America (Wales et al., 2011; Mamo, 2017). This indicates the lack of empirical knowledge on the potential contribution and integral value of simultaneous relationships among MO and EO and their relationship with FP in SMEs from developing economies, which is still not clearly and completely understood (Mamo, 2017; Kim & Hur, 2024).

Under this context, the main contribution of this study is the provision of robust empirical evidence of the existing relationship between MO, EO, and FP, as well as the role of EO as a mediating variable in the link between MO and FP in SMEs of an emerging economy. Particularly, due to the entrepreneurial spirit that SMEs must make the changes and improvements required by customers and the business environment in the shortest possible time, which generates a proactive environment in the innovation of products more oriented to the needs of consumers, which will facilitate the adoption and implementation of MO and EO, as well as significantly improving their FP level.

2. Literature review

2.1 Market Orientation and Firm Performance

In the literature, there are various definitions of MO; however, the definition made by Narver and Slater (1990) is not only the most used in the literature by scientific and academic community, but also marked a milestone in the conceptualization of MO (Kim & Hur, 2024). These authors define MO as *"the organizational culture that most effectively creates the necessary behaviors for the creation of superior value for buyers and thus continuous superior performance for the business"* (Narver & Slater, 1990: 21), and proposed three behavioral aspects for measuring it: *customer orientation*, *competitor orientation*, and *inter-functional coordination*. These allow companies, particularly SMEs, to substantially improve their FP through by increasing market share and delivery of products to customers more effectively and efficiently (Boitumelo & Msimango-Galawe, 2023).

Customer orientation helps SMEs to reduce risks in product innovation (Kim & Hur, 2024) through accurate and relevant information about current customers, which will allow SMEs to evaluate products more accurately, identify the most required ones, and obtain a higher FP (Aydin, 2021). Competitor orientation helps SMEs to learn indirectly from the trials and errors of their main competitors, which can reduce the number and cost of their own failures (De Luca et al., 2010), and to identify the most important aspects

and competitiveness of a product instead of investing in multiple projects, thereby improving FP (Kim & Hur, 2024). Inter-functional coordination helps SMEs to promote the exchange of market intelligence, objectives, and visions in product innovation between the functional areas of the organization (De Luca et al., 2010), and to eliminate delays in knowledge exchange and decision making thus improving their FP (Kim & Hur, 2024).

In this line, MO helps SMEs to improve the creation of superior value for customers, which is directly associated with obtaining superior performance (Becherer et al., 2001), and is considered in the literature as a prerequisite for improving competitive advantages (Gruber-Muecke & Hofer, 2015) and obtaining greater FP in SMEs (Veidal & Korneliussen, 2013). However, even though the positive relationship between MO and FP in SMEs has been demonstrated in the literature (e.g. Zhou et al., 2005; Li et al., 2006; Li et al., 2008), Raju et al. (2011) considered that more studies are required to analyze the degree of influence of MO on FP and the apparent differences in the adoption of MO in SMEs in different environments.

Thus, Octavia and Ali (2017) maintain that MO is essential for SMEs to achieve a higher FP, even though there are researchers who have different points of view on this relationship. Babu (2018) found a positive relationship between MO and FP, while Chaudhary and Batra (2018), and Masadeh et al. (2018) highlighted the positive implications of MO on FP, as market-oriented SMEs are driven by a business culture that prioritizes and keeps customers at the center (Boitumelo & Msimango-Galawe, 2023). Recently published studies (e.g., Boitumelo & Msimango-Galawe, 2023; Kim & Hur, 2024) demonstrated the existence of a positive relationship between MO and PF in SMEs. Thus, according to the previous information, the following hypothesis can be proposed:

H1: The greater the market orientation, the greater the firm's performance.

2.2 Market Orientation and Entrepreneurial Orientation

For two decades, various efforts have been made in the literature to empirically demonstrate the relationship between MO and EO (e.g. Li et al., 2008; Mamo, 2017; Kim & Hur, 2024), and the effects that these two have with FP (e.g. Jaworski & Kohli, 1993; Wiklund & Shepherd, 2005; Laukkanen et al., 2013; Raza & Fátima, 2022; Crick & Crick, 2023), particularly because MO emphasizes the degree to which companies establish satisfying customer needs as one of their essential principles (Jaworski & Kohli, 1993; Kohli et al., 1993), while EO generates in firms a greater propensity to make organizational decisions that favor entrepreneurial activities (Lumpkin & Dess, 1996).

Therefore, it is not surprising that in the literature MO and EO are considered the two most important strategic orientations, which can significantly improve both the competitive market position of companies and FP (Atuahene-Gima & Ko, 2001; Montiel-Campos, 2018; Nassani & Aldakhil, 2023) and give them a greater survival capacity than its main competition (Slater & Narver, 1995; Atuahene-Gima & Ko, 2001). Furthermore, Atuahene-Gima and Ko (2001) found that SMEs that adopted only an MO had a lower level of FP than those companies that also adopted an EO. Thus, the maximum possible effect on FP is obtained precisely when SMEs have adopted and implemented both MO and EO (Hamel & Prahalad, 1994; Atuahene-Gima & Ko, 2001).

Additionally, diverse authors have provided empirical evidence that demonstrates the existence of a strong synergy between MO and EO, as determining variables of FP (e.g., Slater & Narver, 1995; Frishammar & Hörte, 2007; Kim & Hur, 2024). Particularly, Atuahene-Gima and Ko (2001) considered that MO and EO can be analyzed simultaneously to achieve a maximum effect on FP. However, these authors suggest that making a change in either of the two orientations affects the relationship between those and FP, since both orientations are essential for achieving organizational success (Atuahene-Gima & Ko, 2001). Moreover, Miles and Arnold (1991) suggested that the three dimensions of EO (innovativeness, risk-taking, and proactivity) respond more quickly to the changes demanded by the market when SMEs have an MO.

However, empirical results of all these studies are contradictory, leading to further confusion on how to implement MO and EO simultaneously (Kim & Hur, 2024). Furthermore, it is difficult to find a satisfactory answer in the published studies on the complementary effects of MO and EO, or whether the implementation of MO and EO will always benefit SMEs' FP (Kim & Hur, 2024). Based on MO and EO characteristics, most of the published studies have tried to explain the effects of both strategic orientations on SMEs (Kim & Hur, 2024), several have advocated for an additive link between MO and EO (e.g. Baker & Sinkula, 2009; Nassani & Aldakhil, 2023), while others have advocated for a synergistic relationship (González-Benito et al., 2009; Mamo, 2017). However, in the literature, the simultaneous application of MO and EO has been suggested to achieve better results in SMEs (Kim & Hur, 2024), essentially because Slater and Narver (1995: 65) argued that MO and EO complement each other, generating *"appropriate organizational structures and processes for higher-order learning."* Thus, according to the previous information, it is possible to propose the following hypothesis.

H2: The greater the market orientation, the greater the entrepreneurial orientation.

2.3 Entrepreneurial Orientation and Firm Performance

In the literature, it is established that EO can be defined as *"an organizational culture that engages in product marketing innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovation"* (Miller, 1983: 772). It is possible to measure the effects on SMEs

through three essential aspects: *innovativeness*, *risk-taking*, and *proactiveness* (Covin & Slevin, 1989). Kollmann et al. (2020) considered that EO allows companies to adopt processes, practices, and decision-making that encompass innovativeness, risk-taking, and proactiveness, while Wardi et al. (2018) found that entrepreneurship can be explained in terms of innovativeness, risk-taking, and proactiveness, since it is precisely through these three dimensions that SMEs have greater possibilities of achieving a higher FP (Miller, 1983).

In this sense, innovativeness helps SMEs to substantially improve products and process innovation (Frishammar & Hörte, 2007), as well as to develop new creative ideas, novelties, and processes that could result in the improvement or new products and processes (Kozubícuvá et al., 2017), and at a higher FP (Boitumelo & Msimango-Galawe, 2023). Risk-taking helps SMEs reduce the possibility of failure in project investment (Li et al., 2008), through exhaustive investigation of various opportunities and rigorous modeling of scenarios of likely outcomes (Oosthuizen, 2015). Finally, proactiveness helps SMEs take advantage of new opportunities generated by the market to obtain competitive advantages of being the first to act (Zhou et al., 2005), which can generate greater FP level (Boitumelo & Msimango-Galawe, 2023).

However, even though the link between EO and FP has received considerable attention in the literature (e.g. Lumpkin & Dess, 1996; Rauch et al., 2009; Raza & Fatima, 2022), Lumpkin and Dess (1996) considered the existence of a complexity of this relationship in various situations and contexts, particularly because the relationship between both concepts has generally focused on financial performance (Rauch et al., 2009), and on non-financial aspects, the direct effects are usually very small (Mamo, 2017). Therefore, Karami and Tang (2019), and Galbreath et al. (2020) identified the need that researchers and academics focus their future studies on the relationship between MO and non-financial aspects, since the adoption of EO in companies can increase the probability of improving FP.

Thus, the adoption of EO in SMEs not only provides greater competitive advantages (Li et al., 2008), but also increase FP (Crick & Crick, 2023). Additionally, Miller (1983) considered that when EO is measured through innovativeness, risk-taking, and proactiveness, SMEs have greater possibilities of increasing their FP. Therefore, SMEs that have adopted an EO not only focus on satisfying the needs of their customers and the opportunities provided by the development of new products (Mamo, 2017; Crick & Crick, 2023), but also in the proactivity of its innovations and the articulation of the needs of its consumers (Boitumelo & Msimango-Galawe, 2023; Kim & Hur, 2024). Therefore, according to the information presented above, it is possible to propose the following hypothesis.

H3: The greater the entrepreneurial orientation, the greater the business performance.

2.4 Entrepreneurial Orientation Mediating Effect

Slater and Narver (1995) argued that the simultaneous adoption and implementation of MO and EO can minimize risks and maximize firm results, including FP. However, Atuahene-Gima and Ko (2001) found that firms that have a high level of MO and EO adoption achieved a dominant position in innovation performance, but not in FP. Bhuian et al. (2005) indicated that the synergistic effect of MO and EO on FP can be visualized as an inverted U shape, which means that the mediating effect of EO on the relationship between MO and FP can be greater than that obtained when MO has a direct link with FP. Therefore, in EO –measured through innovativeness, risk-taking, and proactiveness– it is much more important to achieve a higher FP when MO and EO are directly related to FP (Li et al., 2008).

Baker and Sinkula (2009) empirically confirmed a complementary effect between MO and EO, in which MO has a positive effect on the profitability of companies but not on FP, while EO does not have a positive effect on profitability but it does in FP. Renko *et al.* (2009) did not find a significant positive relationship between MO, EO, and FP, while González-Benito et al. (2009), and Nasution et al. (2011) found similar results. Morgan et al. (2015) found that EO acts as a negative mediating variable in the relationship between MO and FP. Even with these results, studies published in the literature suggest that SMEs that adopt and implement MO and EO posture in terms of strategic orientation, have greater possibilities of achieving a higher FP than those that do not do so (Kim & Hur, 2024).

However, due to the contradictory results of previously published studies, it is difficult to establish that the simultaneous adoption and implementation of MO and EO will always allow SMEs to obtain a higher FP (González-Benito et al., 2009; Nasution et al., 2011; Montiel-Campos, 2018). Furthermore, the adoption and simultaneous application of MO and EO may or may not be a burden for SMEs, which evidently has not been confirmed, which is why research that provides robust empirical evidence on the role of EO as a mediating variable in the relationship between MO and FP is needed (Kim & Hur, 2024). Therefore, according to the information presented above, it is possible to propose the following hypothesis.

H4: Entrepreneurial orientation acts as a mediating variable in the relationship between market orientation and business performance.

Figure 1, presented below, shows the formulation of the four hypotheses in the research model.

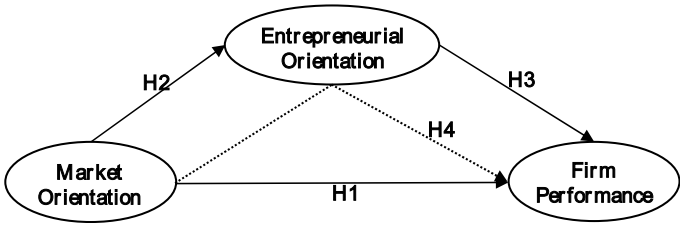

Figure 1. Research model
Source: own elaboration.

3. Methodology

To validate the hypotheses of the research model, an empirical study was carried out in SMEs in Mexico. The procedure used to obtain the data consisted of the 2021 Business Directory of the Mexican Business Information System (SIEM), which had 34,500 SMEs (INEGI, 2021) and employing simple random sampling with a maximum error of ±5% and a reliability of 95%, the sample required was 300 SMEs. However, 500 surveys were sent to obtain at least the number of surveys required to conduct the study, finally obtaining 368 surveys with a response rate of 73.6%, which allowed the sample to be representative of the population under study. In addition, the survey was applied from February to May 2022 and was delivered to company managers, who identified the people in the SMEs with the appropriate knowledge to answer the different groups of questions asked in the survey. The characteristics of the sample are presented in Table 1.

To measure MO, Narver and Slater (1990) scale was considered. It considers three dimensions: customer orientation with 6 items, competence orientation with 4 items, and interfunctional coordination with 5 items. EO was measured using the scale proposed by Miller (1983) with adaptations from Covin and Slevin (1991), Lumpkin and Dess (2001), and Dess and Lumpkin (2005), who stated that this orientation can be measured through three dimensions: innovativeness with 6 items, risk-taking with 6 items, and proactivity with 6 items. Finally, FP was measured through Tan and Litschert (1994) scale with 3 items. All items of the scales used in this study were measured using a five-point Likert-type scale with 1 = total disagreement to 5 = total agreement as limits.

Furthermore, to avoid biased responses in the survey and reduce the possibility of obtaining lenient responses that were socialized between companies, the bias of the common method variance (CMV) was analyzed using Harman's single factor (Podsakoff et al., 2003), which suggests the application of an exploratory factor analysis with a common factor that explains at least 40% of the total variance. Results show that the Kaiser-Meyer-Olkin coefficients (KMO = 0.899), and Bartlett's sphericity test [X^2 (630) = 13,720.203, $p < 0.000$] are significant, and the common factor extracted from data is 35.76%, which is lower than the recommended value. This suggests that CMV is not a threat to sample data of this study and does not seem to significantly affect the relationships between variables of the research model (Podsakoff et al., 2012).

The reliability of MO, EO, and FP scales was evaluated using Cronbach's Alpha, Dijkstra-Henseler rho, Composite Reliability Index (CRI), and Average Variance Extracted (AVE), while the discriminant validity was evaluated through Fornell and Larcker Criterion and Heterotrait-Monotrait ratio (HTMT) (Henseler, 2018). The results obtained from PLS-SEM application in the evaluation of MO, EO, and FP reliability measurement scales are presented in Table 2. It can be observed that Cronbach's Alpha, Dijkstra- Henseler rho, and CRI values are higher than the recommended of 0.70, while AVE is higher than the recommended value of 0.50, which gives indications that the research model has a good fit data (Hair et al., 2020).

Table 1. Sample characteristics

Variable	Frequency	Percentage
Firm's Age		
Young Companies (less than or equal to 10 years)	117	31.0
Mature Companies (more than 10 years)	261	69.0
Total	**368**	**100.0%**
Company Size		
Small (10 to 50 employees)	127	33.6
Medium (51 to 250 employees)	153	40.5
Large (more than 250 employees)	98	25.9
Total	**368**	**100.0%**
Family Character		
Family Business	106	28.0
Non-Family Business	272	72.0
Total	**368**	**100.0%**

Source: own elaboration.

4. Results

To respond the hypotheses raised in the research model, a PLS-SEM was applied with SmartPLS 4.0 software (Ringle et al., 2022), since PLS-SEM is generally used in the analysis of theories in development phase (Hair et al., 2019) and in various knowledge disciplines (Cepeda-Carrión et al., 2019; Ringle et al., 2020). Furthermore, PLS-SEM is essential when the study aims at predicting and explaining the constructs of the research model (Sarstedt et al., 2019). Additionally, the use composites in PLS-SEM, as a weighted combination of its indicators, facilitates explaining the measurement error of the constructs, which makes this method more powerful than multiple regression (Hair et al., 2019).

Table 3 shows the results obtained by applying PLS-SEM, and indicates that the estimated data from the research model have an acceptable statistical level with adjusted R^2 values of the endogenous variables (EO = 0.277; FP = 0.275) greater than the recommended value of 0.10 (Hair et al., 2020), an SRMR value less than 0.08, and the HI99 value (0.048; 0.065), lower than unweighted least squares discrepancy (dULS), and geodetic discrepancy (dG) values to HI99 values (1.69–1.716; 0.214–0.309) recommended by Sarstedt et al. (2019). The magnitude of the effects of independent variables (f^2) on R^2 values of independent variables (MO) suggests small medium variations (values between 0.15-0.34) (Hair et al., 2017).

Additionally, the estimated data confirm our argument that MO has significant positive effects on FP (0.217; p-value 0.000) and EO (0.418; p-value 0.000). These results provide robust empirical evidence in favor of hypotheses H1 and H2, which indicate that the adoption and implementation of MO favor a higher FP and EO in SMEs. Moreover, results also confirm our argument that EO has significant positive effects on FP (0.272; p-value 0.000), thereby providing robust empirical evidence in favor of hypothesis H3, which indicates that the adoption of EO also generates an increase in FP in SMEs.

Finally, the estimated data also confirm our argument that EO can act as a mediating variable in the relationship between MO and PF (0.314; p-value 0.000), thereby providing robust empirical evidence in favor of hypothesis H4, which indicates that an essential part of the positive effects of MO on SMEs' FP is transferred by EO. Therefore, the adoption and implementation of EO activities in SMEs not only increases their FP but also can act as a mediating variable that helps SMEs to further increase their FP, if applied simultaneously with MO activities.

Table 2. Measurement model. Reliability, validity, and discriminant validity

PANEL A. Reliability and Validity						
Variables	**Cronbach's Alpha**		**Dijkstra-Henseler rho**		**CRI**	**AVE**
Market Orientation	0.911		0.912		0.937	0.789
Entrepreneurial Orientation	0.943		0.945		0.955	0.779
Firm Performance	0.877		0.892		0.923	0.801
PANEL B. Fornell-Larcker Criterion				**Heterotrait–Monotrait ratio (HTMT)**		
Variables	1	2	3	1	2	3
1. Market Orientation	**0.848**					
2. Entrepreneurial Orientation	0.416	**0.886**		0.416		
3. Firm Performance	0.328	0.360	**0.895**	0.340	0.383	

Note: PANEL B: Fornell-Larcker Criterion: Diagonal elements (bold) are the square root of the variance shared between the constructs and their measures (AVE). For discriminant validity, diagonal elements should be larger than off-diagonal elements.
Source: own elaboration.

Table 3. Structural model

Paths	**Path (*t-value; p-value*)**	**95% Confidence Interval**	**f^2**	**Support**
MO → FP (H1)	0.217 (3.571; 0.000)	[0.093 – 0.333]	0.151	Yes
MO → EO (H2)	0.418 (8.822; 0.000)	[0.326 – 0.511]	0.318	Yes
EO → FP (H3)	0.272 (5.025; 0.000)	[0.167 – 0.377]	0.177	Yes
Indirect Effects				
MO → EO → FP (H4)	0.314 (5.157; 0.000)	[0.165 – 0.272]	0.136	Yes

Endogenous Variable	**Adjusted R^2**	**Model Fit**	**Value**	**HI99**
		SRMR	0.048	0.065
EO	0.277	dULS	1.694	1.716
FP	0.275	dG	0.214	0.309

Note: MO: Market Orientation; EO: Entrepreneurial Orientation; FP: Firm Performance. One-tailed t-values and p-values in parentheses; bootstrapping 95% confidence intervals (based on n=5,000 subsamples); SRMR: standardized root mean squared residual; dULS: unweighted least squares discrepancy; dG: geodesic discrepancy; HI99: bootstrap-based 99% percentiles.
Source: own elaboration.

5. Discussion

Results obtained in this study support our argument that MO has significant positive effects on SMEs' FP. These results are similar to those obtained by Chaudhary and Batra (2018), and Masadeh et al. (2018). It could be explained by the idiosyncrasy of SMEs, since they generally are close with their customers and consider them as part of the family, which allows them to have a clear knowledge of their tastes and choices, thereby generating a preference for their products and, with it, an increase their FP. In this sense, despite the scarcity of resources for SMEs in emerging economy countries, they should to try to adopt MO so that they have greater possibilities of achieving competitive advantages and a higher FP.

Results also support our argument that MO has positive effects on the EO of SMEs, in line with those found by Montiel-Campos (2018), and Nassani and Aldakhil (2023). This positive effect could be explained by SME manager's fast decision-making for adapting the products to the tastes and needs of their clients, particularly because they are the owners of the companies and consider their employees as part of their own family; therefore, they join efforts to make changes in the production processes in the shortest possible time, thereby achieving not only client satisfaction but also the possibility of significantly increasing their FP.

These results also support our argument that EO has significant positive effects on FP of SMEs, these results being similar to those obtained by Wardi et al. (2018), and Raza and Fatima (2022). This positive result might be due to the ease of SMEs adaptation to the changes and requirements of both the market and the supply chain by generating a family-type work environment in companies that motivates the participation of all employees in the development of the organization's projects. This generates proactivity towards innovation that allow the resources and efforts of the SMEs to be directed at improving the articulation of the needs and satisfaction of their clients, which could improve their level of FP.

Finally, results support our argument that EO can play a mediating role in the existing link between SMEs' MO and FP; these results being in line with those found by Li et al. (2008), and Kim and Hur (2024). This positive result could be explained by the entrepreneurial spirit of SMEs to integrate changes into production processes, products and services in the shortest possible time, and adapt to the changing conditions of the business environment, despite the limitations they commonly have regarding access to financial resources, specialized personnel, and little support from the public administration of emerging economy countries, which could help them improve their FP.

5.1 Practical Implications

The data estimated in this paper have different practical implications for managers, firms, policymakers, and public administration. First of all, SMEs from emerging economies like Mexico make greater efforts to adopt and implement MO and EO strategic orientations to exploit its competitive advantage by deepening the relationship with its group of clients and using its flexibility and closeness with its consumers. This could help them improve business results. In this sense, the positive effects of MO and EO on FP support the idea that SMEs in developing countries adopt and implement new business strategies that put clients and consumers at the center of the organization, as well as the production of more customized products.

Likewise, despite the innumerable challenges that SMEs currently face in developing countries, they can be successful in the adoption and application of MO and EO strategic orientations because, if we consider that one of the basic goals of SMEs, particularly in developing economies, as is the case of Mexico, where economic development is fundamental, then policymakers should develop and promote business policies that foster adoption and implementation of all those activities related to MO and EO in all SMEs of all sectors, not only to significantly improve organizations' FP, but also to substantially reduce negative impacts on the environment through product innovation.

Furthermore, for SMEs to have a greater chance of improving their FP, they must not only put their clients and consumers at the center of the organization, but also have to be aware of their degree of proactivity; that is, what resources they can dedicate to product innovation, and what they intend to achieve with it, particularly because MO generates a business culture that improves decision making. Therefore, public administration should implement fiscal policies and programs that promote the adoption and implementation of business strategies such as MO and EO, since this would undoubtedly improve organizations' FP, which is substantial for the growth and development of the economy and society, especially in emerging economies such as Mexico.

Finally, in this context, SMEs commonly face resource and capacity limitations, and a hostile, turbulent, and uncertain business environment (Boitumelo & Msimago-Galawe, 2023) that slow down their growth and development. Therefore, it is important that SMEs make the most of their limited resources and capabilities for adopting and implementing MO and EO. It will allow them to improve their FP; however, SMEs should not adopt short-term innovation objectives and goals, but rather long-term, since if they manage to expand their market, it could prevent them from

achieving sustainable growth. Hence, we suggest that SMEs focus on strategic MO and EO simultaneously, because this will allow them to significantly improve their FP.

6. Conclusions

The results obtained in this paper lead to several conclusions, for instance, even though SMEs in emerging economies frequently face the lack of technology and adequate technical skills in its use, market access, poor quality of their products, and productivity problems, the adoption and implementation of MO and EO increase SMEs probability of significantly improving their FP. However, it could be difficult to adopt MO and EO in SMEs from developing countries, which are generally characterized by having a turbulent business environment; therefore, SMEs will have to make a series of changes both in its structure and culture. Those changes require a commitment on the part of managers and their main business partners.

In these hostile environments, the adoption of strategic MO and EO should be a priority, as they can be used as a mechanism to compensate for the various limitations that SMEs face in a business environment that gives opportunities for proactive and innovative SMEs. This is demonstrated by the results of this study, which provide robust empirical evidence that MO and EO are excellent indicators to significantly improve SMEs' FP, particularly when EO acts as a mediating variable.

Finally, robust empirical evidence in favor of the existing relationship between MO, EO, and FP allows us to conclude that the benefits associated with the simultaneous adoption and application of the two strategic orientations are greater than the costs associated with it. In this sense, SMEs' FP does not depend only on the adoption and application of MO and EO guidelines, but also on the extent to which the link between MO and FP is associated with EO. This study also contributes to the ongoing debate in the current literature on whether the results of the simultaneous adoption and implementation of MO and EO substantially improve FP, and how these two can improve business activities by motivating staff, particularly in SMEs from emerging economies.

This study has limitations that should be considered before interpreting the results; the first one is related to the sample, since only manufacturing firms in Mexico with more than 10 employees were included, so the results could be different if a sample of firms with less than 10 employees. A second limitation is that the survey was applied to large companies, so the data may vary if only SMEs are considered. A third limitation is that, in this study, an analysis was carried out with the data obtained by applying a questionnaire to the managers of manufacturing firms, so the results can vary whether quantitative data or the opinions of key stakeholders are considered. Finally, this study only carried out an analysis with cross-sectional data, leaving aside the possible temporal effects of MO, EO, and FP, which is why it would be important to conduct longitudinal studies.

Conflict of interest

The authors declare no conflict of interest.

References

Atuahene-Gima, K., & Ko, A. (2001). An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation. *Organizational Science, 12*(1), 54-74. https://doi.org/10.1287/orsc.12.1.54.10121

Aydin, H. (2021). Market orientation and product innovation: The moderating role of technological capability. *European Journal of Innovation Management*, *24*(4), 1233-1267. https://doi.org/10.1108/EJIM-10-2019-0274

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. https://doi.org/10.1080/0965254X.2017.1384037

Baker, W.E., & Sinkula, J.M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small business. *Journal of Small Business Management*, *47*(4), 443-464. https://doi.org/10.1111/j.1540-627X.2009.00278.x

Becherer, R.C., Halstead, D., & Haynes, P. (2001). Marketing orientation in SMEs: Effects of the internal environment. *Journal of Research in Marketing and Entrepreneurship*, *3*(1), 1-17. https://doi.org/10.1108/14715200180001474

Bhuian, S., Menguc, N.B., & Bell, S.J. (2005). Just entrepreneurial enough: The moderating effect of entrepreneurship on the relationship between market orientation and performance. *Journal of Business Research*, *58*, 9-17. https://doi.org/10.1016/S0148-2963(03)00074-2

Boitumelo, M.R., & Msimango-Galawe, J. (2023). Entrepreneurial orientation, market orientation and opportunity exploitation in driving business performance: Moderating effect of interfunctional coordination. *Journal of Entrepreneurship in Emerging Economies*, *15*(3), 538-565. https://doi.org/10.1108/JEEE-03-2021-0114

Brouthers, K.D., Nakos, G., & Dimitratos, P. (2014). SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances. *Entrepreneurship Theory and Practice*, *39*(5), 1161-1187. https://doi.org/10.1111/etap.12101

CB insights (2021). The top 12 reasons startups fail. Available et: https://www.cbinsights.com/research/startups-failure-reasons-top/. Accessed 18 January 2024.

Cepeda-Carrión, G., Cegarra, J.G., & Cillo, V. (2019). Tips to use partial least squares structural equation modelling (PLS-SEM) in knowledge management. *Journal of Knowledge Management, 23*(1), 67-89. https://doi.org/10.1108/JKM-05-2018-0322

Chaudhary, S., & Batra, S. (2018). Absorptive capacity and small family firm performance: Exploring the mediation processes. *Journal of Knowledge Management*, *22*(6), 1201-1216. https://doi.org/10.1108/JKM-01-2017-0047

Covin, J.G., & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, *10*(1), 75-88. https://doi.org/10.1002/smj.4250100107

Covin, J.G., & Slevin, D.P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory & Practice*, *16*(1), 7-26. https://doi.org/10.1177/104225879101600102

Crick, M.J., & Crick, D. (2023). With a little help from my friends: The interaction between coopetition, and entrepreneurial orientation and firm performance. *International Journal of Entrepreneurial Behavior & Research*, *29*(4), 965-985. https://doi.org/10.1108/IJEBR-12-2022-1159

De Luca, L.M., Verona, G., & Vicari, S. (2010). Market orientation and R&D effectiveness in high-technology firms: An empirical investigation in the biotechnology industry. *Journal of Product Innovation Management*, *27*(1), 299-320. https://doi.org/10.1111/j.1540-5885.2010.00718.x

Dess, G.G., & Lumpkin, G.T. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Executive*, *19*(1), 147-156. https://doi.org/10.5465/ame.2005.15841975

Eisenmann, T. (2021). Why start-ups fail? It´s not always the horse or the jockey. *Harvard Business Review*, May-June, 78-85.

Frishammar, J., & Hörte, S. (2007). The role of market orientation and entrepreneurial orientation for new product development performance in manufacturing firms. *Technology Analysis & Strategic Management*, *19*(6), 765-788. https://doi.org/10.1080/09537320701711231

Galbreath, J., Lucianetti, L., Thomas, B., & Tisch, D. (2020). Entrepreneurial orientation and firm performance in Italian firms: The moderating role of competitive strategy. *International Journal of Entrepreneurial Behavior & Research*, *26*(4), 629-646. https://doi.org/10.1108/IJEBR-07-2019-0457

Gonzalez-Benito, O., Gonzalez-Benito, J., & Muñoz-Gallego, P.A. (2009). Role of entrepreneurship and market orientation in firms' success. *European Journal of Marketing*, *43*(4), 500-522. https://doi.org/10.1108/03090560910935550

Gruber-Muecke, T., & Hofer, K.M. (2015). Market orientation, entrepreneurial orientation, and performance in emerging markets. *International Journal of Emerging Markets*, 10(3), 560-571. https://doi.org/10.1108/IJoEM-05-2013-0076

Hair, J.F., Howard, M.C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research, 109*(1), 101-110. https://doi.org/10.1016/j.jbusres.2019.11.069

Hair, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., & Thiele, K.O. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616-632. https://doi.org/10.1007/s11747-017-0517-x

Hair, J.F., Hult, T., Ringle, C., Sarstedt, M., Castillo, J., Cepeda, G., & Roldan, J. (2019). *Manual de Partial Least Squares PLS-SEM*. Madrid: OmniaScience. http://hdl.handle.net/11420/5279

Hamel, G., & Prahalad, C.K. (1994). *Competing for the Future*. Boston, MA: Harvard Business School Press.

Henseler, J. (2018). Partial least squares path modeling: Quo vadis? *Quality and Quantity, 52*(1), 1-8. https://doi.org/10.1007/s11135-018-0689-6

INEGI (2021). Directorio Estadístico Nacional de Unidades Económicas. https://www.inegi.org.mx/app/mapa/denue/default.aspx

INEGI (2023). *Indicadores Sociodemográficos y Económicos*. México: Instituto Nacional de Estadística y Geografía.

Jaworski, B.J., & Kohli, A.K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, *57*(3), 53-70. https://doi.org/10.1177/002224299305700304

Karami, M., & Tang, J. (2019). Entrepreneurial orientation and SME international performance: The mediating role of networking capability and experimental learning. *International Small Business Journal*, *37*(2), 105-124. https://doi.org/10.1177/0266242618807275

Kim, H., & Hur, D. (2024). Feeling torn? The conflicting effects of market and entrepreneurial orientations on manufacturing SMEs' innovation performance. *European Journal of Innovation Management*, *27*(1), 233-262. https://doi.org/10.1108/EJIM-12-2021-0623

Kohli, A.K., Jaworski, B.J., & Kumar, A. (1993). MARKOR: A measurement market orientation. *Journal of Marketing Research*, *30*(4), 467-477. https://doi.org/10.1177/002224379303000406

Kollmann, T., Stockmann, C., Niemand, T., Henseller, S., & de Cruppe, K. (2020). A configurational approach to entrepreneurial orientation and cooperation explaining product/service innovation in digital vs. non-digital startups. *Journal of Business Research*, *125*(3), 508-519. https://doi.org/10.1016/j.jbusres.2019.09.041

Kozubíková, L., Sopková, G., Krajcik, V., & Tyll, L. (2017). Differences in innovativeness, proactiveness and competitive aggressiveness in relation to entrepreneurial motives. *Journal of International Studies*, *10*(4), 207-218.

Laukkanen, T., Nagy, G., Hirvonen, S., Reijonen, H., & Pasanen, M. (2013). The effect of strategic orientations on business performance in SMEs. *International Marketing Review*, *30*(6), 510-535. https://doi.org/10.1108/IMR-09-2011-0230

Li, Y., Liu, Y., & Zhao, Y. (2006). The role of market and entrepreneurship orientation and internal control in the new product development activities of Chinese firms. *Industrial Marketing Management*, *35*(3), 336-347. https://doi.org/10.1016/j.indmarman.2005.05.016

Li, Y., Zhao, Y., Tan, J., & Liu, Y. (2008). Moderating effects of entrepreneurial orientation on market orientation-performance linkage: Evidence from Chinese small firms. *Journal of Small Business Management*, *46*(1), 113-133. https://doi.org/10.1111/j.1540-627X.2007.00235.x

Lumpkin, G.T., & Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management*, *21*(1), 135-173. https://doi.org/10.5465/amr.1996.9602161568

Lumpkin, G.T., & Dess, G.G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, *16*(5), 429-451. https://doi.org/10.1016/S0883-9026(00)00048-3

Mamo, B.B. (2017). Entrepreneurial orientation, market orientation and performance of SMEs in the manufacturing industry: Evidence from Ethiopian enterprises. *Management Research Review*, *40*(3), 292-309. https://doi.org/10.1108/MRR-07-2016-0173

Masadeh, R., Al-Henzab, J., Tarhini, A., & Obeidat, B.Y. (2018). The associations among market orientation, technology orientation, entrepreneurial orientation, and organizational performance. *Benchmarking: An International Journal*, *25*(8), 3117-3142. https://doi.org/10.1108/BIJ-02-2017-0024

Miles, M.P., & Arnold, D.R. (1991). The relationship between marketing orientation and entrepreneurial orientation. *Entrepreneurship Theory & Practice*, *15*(4), 49-66. https://doi.org/10.1177/104225879101500407

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, *29*(7), 770-792. https://doi.org/10.1287/mnsc.29.7.770

Montiel-Campos, H. (2018). Entrepreneurial orientation and market orientation. *Journal of Research in Marketing and Entrepreneurship*, *20*(2), 329-347. https://doi.org/10.1108/JRME-09-2017-0040

Morgan, T., Anokhin, S., Kretinin, A., & Frishammar, J. (2015). The dark side of entrepreneurial orientation and market orientation interplay: A new product development perspective. *International Small Business Journal*, *7*(1), 731-751. https://doi.org/10.1177/0266242614521054

Narver, J.C., & Slater, S.F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, *54*(4), 20-35. https://doi.org/10.1177/002224299005400403

Nassani, A.A., & Aldakhil, A.M. (2023). Tacking organizational innovativeness through strategic orientation: Strategic alignment and moderating role of strategic flexibility. *European Journal of Innovation Management*, *26*(3), 847-861. https://doi.org/10.1108/EJIM-04-2021-0198

Nasution, H.N., Mavondo, F.T., Matanda, M.K., & Ndubisi, N.O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial Marketing Management*, *40*(1), 336-345. https://doi.org/10.1016/j.indmarman.2010.08.002

Octavia, A., & Ali, H. (2017). The model of market orientation, entrepreneurial orientation, and business performance of small and medium enterprises. *International Review of Management and Marketing*, *7*(3), 331-337. http://www.econjournals.com

Oosthuizen, J.H. (2015). Corporate entrepreneurship. In Venter, R., and Urban, B. (Eds.), *Entrepreneurship Theory in Practice (3rd edition)*. Oxford Southern Africa: Cape Town.

Podsakoff, P.M., MacKenzie, S.B., & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*(1), 539-569. https://doi.org/10.1146/annurev-psych-120710-100452

Podsakoff, P.M., MacKenzie, S.B., Jeong-Yeong, L., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879-903. https://doi.org/10.1037/0021-9010.88.5.879

Raju, P.S., Lonial, S.C., & Crum, M.D. (2011). Market orientation in the context of SMEs: A conceptual framework. *International Business Research*, *64*(12), 1320-1326. https://doi.org/10.1016/j.jbusres.2010.12.002

Ramadani, V., Abazi-Alili, H., Dana, L.P., Rexhepi, G., & Ibraimi, S. (2017). The impact of knowledge spillovers and innovation on firm-performance: Findings from the Balkans countries. *International Entrepreneurship and Management Journal*, *13*(1), 299-325. https://doi.org/10.1007/s11365-016-0393-8

Rauch, A., Wiklund, J., Lumpkin, G.T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, *33*(3), 761-787. https://doi.org/10.1111/j.1540-6520.2009.00308.x

Raza, B.A., & Fatima, T. (2022). Disentangling the individual entrepreneurial orientation and SMEs success nexus: An action-based interplay of exploration activities and entrepreneurial alertness. *Journal of Entrepreneurship in Emerging Economies*, *14*(6), 976-1000. https://doi.org/10.1108/JEEE-09-2020-0323

Renko, M., Carsrud, A., & Brannback, M. (2009). The effect of a market orientation, entrepreneurial orientation, and technological capability on innovativeness: A study of young biotechnology ventures in the United States and in Scandinavia. *Journal of Small Business Management*, *47*(3), 331-369. https://doi.org/10.1111/j.1540-627X.2009.00274.x

Ringle, C.M., Sarstedt, M., Mitchell, R., & Gudergan, S.P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management, 31*(12), 1617-1643. https://doi.org/10.1080/09585192.2017.1416655

Ringle, C.M., Wende, S., & Becker, J.M. (2022). SmartPLS 4 (computer software). Retrieved from http://www.smartpls.com

Rodríguez-Gutiérrez, M.J., & Tejada, P. (2015). Entrepreneurial orientation and performance of SMEs in the service industry. *Journal of Organizational Change Management*, *28*(2), 194-212. https://doi.org/10.1108/JOCM-01-2015-0020

Sarstedt, M., Hair, J.F. Jr, Cheah, J.H., Becker, J.M., & Ringle, C.M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal (AMJ), 27*(3), 197-211, doi: 10.1016/j.ausmj.2019.05.003.

Slater, S.F., & Narver, J.C. (1995). Marketing orientation and the learning organization. *Journal of Marketing*, *59*(3), 63-75. https://doi.org/10.1177/002224299505900306

Soininen, J.S., Puumalainen, S.K., Sjögrén, H., Syrjä, P., & Durst, S. (2013). Entrepreneurial orientation in small firms: Values-attitudes-behavior approach. *International Journal of Entrepreneurial Behavior & Research*, *19*(6), 611-632. https://doi.org/10.1108/IJEBR-10-2012-0106

Tan, J., & Litschert, R.J. (1994). Environment-strategy relationship and its performance implications: An empirical study of Chinese electronics industry. *Strategic Management Journal*, *15*, 1-20. https://doi.org/10.1002/smj.4250150102

Veidal, A., & Korneliussen, T. (2013). Entrepreneurial orientation and market orientation as antecedents of organizational innovation and performance. *International Journal of Entrepreneurship and Small Business*, *19*(2), 234-250. https://doi.org/10.1504/IJESB.2013.054965

Wales, J.W., Gupta, K.V., & Mousa, F. (2011). Empirical research on entrepreneurial orientation. An assessment and suggestions for future research. *International Small Business Journal*, *31*(4), 357-383. https://doi.org/10.1177/0266242611418261

Wardi, Y., Susanto, P., Abror, A., & Abdullah, N.L. (2018). Impact of entrepreneurial proclivity on firm performance: The role of market and technology turbulence. *Journal of Social Science and Humanities*, *26*(5), 241-250.

Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, *20*(1), 71-91. https://doi.org/10.1016/j.jbusvent.2004.01.001

Zhou, K.Z., Yim, C.K., & Tse, D.K. (2005). The effects of strategic orientations on technology and market-based breakthrough innovations. *Journal of Marketing*, *69*(2), 42-60. https://doi.org/10.1509/jmkg.69.2.42.60756