

The relationship between strategic orientations and firm performance and the role of innovation: a meta-analytic assessment of theoretical models

Orientations,
innovation and
firm
performance

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Abstract

Purpose – The purpose of this paper is to assess the validity and utility of two theoretical approaches to understanding the relationship between strategic orientations, innovation and firm performance and to examine the role of innovation in the relationship while avoiding circular arguments. The universalistic approach suggests that strategic orientations have independent and parallel effects on firms' performance, and that innovation does not influence this relationship. The holistic approach proposes that strategic orientations in a complementary and interrelated view have both direct and indirect effects on firms' performance through innovation.

Design/methodology/approach – A meta-analytic path analysis applying two-stage structural equation modeling (TSSEM) was conducted on data from 132 primary studies and 33,063 observations.

Findings – The holistic approach was demonstrated to be superior due to its more explanatory power in linking more complex relationships through simultaneous direct and indirect effects and its capacity for including the interrelatedness and complementarity of strategic orientations. It was found that innovation has a full mediating role in the relationship between entrepreneurial orientation (EO) and firm performance, and a partial mediating role in the relationship between market orientation (MO) and learning orientation (LO) and firm performance.

Research limitations/implications – The study used observed variables instead of latent variables for meta-analytic path analysis, which may reduce some sources of endogeneity. However, causal inference is not possible due to the nature of meta-analysis. The scope of the final sample was limited by some studies not reporting the estimates of correlations between constructs.

Practical implications – Managers can improve an organization's chances of success in the marketplace by adopting a holistic view of strategic orientations focusing on customer satisfaction, learning from the external environment and pursuing new market opportunities. Furthermore, an organization can gain a competitive advantage through innovation by creating products and services that are different from what is currently available in the market. To be successful, an organization must not only create innovative products and services but also market them effectively to consumers.

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Originality/value – This study is the first to meta-analytically assess the explanatory value of two theorized models linking strategic orientations, innovation and firm performance. It also clarifies the role of innovation in the relationship between strategic orientations and firm performance.

Keywords Marketing, Innovation, Entrepreneurial orientation

Paper type Research paper

Introduction

Strategic orientation is a key concept in the resource-based theory (RBT) of the firm, which asserts that it is a combination of intangible market-based resources and capabilities embedded in an organizational culture (Hult and Ketchen, 2001; Kozlenkova *et al.*, 2014, p. 10; Lonial and Carter, 2015). It reflects “the strategic directions implemented by a firm to create the proper behaviors for the continuous superior performance of the business” (Gatignon and Xuereb, 1997, p. 78) and “the means by which firms choose to attempt to create a sustainable presence in the markets in which they compete” (Gnizy *et al.*, 2014, p. 478).

Among various types of strategic orientations, three have received considerable attention from researchers and practitioners in marketing, management and entrepreneurship: market orientation (MO), entrepreneurial orientation (EO) and learning orientation (LO) (Deshpandé *et al.*, 2012, p. 629; Hakala, 2011, p. 199; Schweiger *et al.*, 2019). MO entails a culture and behaviors in which customers, competitors and markets are the center of a firm’s activity (Deshpande and Webster, 1989, p. 3; Gnizy *et al.*, 2014, p. 480); EO involves the propensity to pursue new market opportunities (Covin and Slevin, 1991, p. 8; Lumpkin and Dess, 1996, p. 143); and LO is about organizational values driving explorative learning processes and the inclination to create and use knowledge (Alerasoul *et al.*, 2022a, b; Baker *et al.*, 2022; Sinkula *et al.*, 1997, p. 309).

By definition, strategic orientations are linked to firm performance as its antecedents and important drivers (Hult *et al.*, 2004). It has been established that strategic orientations have a strong relationship, both conceptually and empirically, with firm performance (Hult *et al.*, 2004; Schweiger *et al.*, 2019). Most of the studies on strategic orientation focused on the individual direct effects, combinations of two orientations only or the complementarity of the orientations on firm performance (Pett *et al.*, 2019; Deutscher *et al.*, 2016), finding MO, EO and LO to positively influence performance separately.

Alternatively, several studies captured the strategic orientation and firm performance relationship through mediating mechanisms (Hakala, 2011). The influence of strategic orientations on firm performance may have been underestimated, as the effects could be indirect. Several studies have addressed this issue. For example, Al Mamun *et al.* (2022), Arunachalam *et al.* (2018), Baker and Sinkula (2009), Bamfo and Kraa (2019), Han *et al.* (1998), Langerak (2003), Leal-Rodríguez and Albort-Morant (2016), Matear *et al.* (2002), Ramírez-Solis *et al.* (2022), Tran *et al.* (2018), Zhou *et al.* (2009), among others, all explored the relationship between strategic orientation and firms’ performance using mediating constructs, such as innovation.

The role of innovation as a linking factor between strategic orientations and firm performance is well known due to the first-mover advantage (Arunachalam *et al.*, 2018; Poudel *et al.*, 2012). Research shows that innovation is a critical factor for firm value, market and financial position as well as long-term viability and competitive advantage (Baker and Sinkula, 2005; Geroski, 1995; Rubera and Kirca, 2012).

Additionally, it has been argued that the combination of different orientations can be more efficient and effective in creating sustainable competitive advantages than that of any single orientation operating independently (Grinstein, 2008; Hakala, 2011; Montiel-Campos, 2018; Mu and Di Benedetto, 2011; Ho *et al.*, 2015). The interrelatedness of orientations has been

explored and a theoretical foundation for complementarity between orientations has been provided (Schweiger *et al.*, 2019).

Since innovation is both a process and an outcome, the former clearly precedes the latter and should be separated to avoid circular arguments. In general, primary studies connect innovation as a process with firms' performance and bypass innovation outcomes altogether (Crossan and Apaydin, 2010). Most of the studies treated innovation as an outcome, but not as a mediator to performance (e.g. Grinstein, 2008; Kraft and Bausch, 2016). In this sense, researchers have focused on comparing the relative effects of market-based resources on radical or incremental innovation performance or new product success, rather than on firms' performance (Kozlenkova *et al.*, 2014, p. 10).

Scholars studying entrepreneurship, marketing and management claim that there is a need for more quantitative research to integrate the current state of knowledge. This involves identifying and assessing different theoretical approaches linking strategic orientations and firm performance (Hakala, 2011). Little attention in meta-analytic or systematic review studies has been paid to the role of innovation as a mediating mechanism.

To fill this gap, a meta-analytic path analysis framework is proposed to quantitatively synthesize the literature. Two theoretical approaches can be identified: universalistic approach versus holistic approach. The universalistic approach suggests that strategic orientations have independent and parallel effects on firms' performance. Each strategic orientation contributes separately to firm performance without interacting with other orientations or mediating mechanisms, such as innovation. According to this view, strategic orientations are additive rather than synergistic. The holistic approach proposes that strategic orientations, in a complementary and interrelated view, have both direct and indirect effects on firms' performance through innovation. According to this view, strategic orientations are multiplicative rather than additive. The main difference between these two approaches lies in how they treat innovation as a linking factor between strategic orientations and firm performance.

This research aims to assess the usefulness and validity of two theoretical approaches, determining which one is more effective in explaining the relationship between strategic orientations and firms' performance as well as the role that innovation plays in this relationship. The following questions will be addressed: Which theoretical model from the literature on the relationship between strategic orientations and firm performance is most supported by meta-analytical data? Does innovation mediate the relationship between strategic orientations and firms' performance, either partially, fully or not at all?

Meta-analytic structural equation modeling (MASEM) approach has been used to evaluate associations among a group of variables based on the theoretical models and empirical findings (Bergh *et al.*, 2016; Cheung, 2015a, b; Jak, 2015; Landis, 2013). This approach offers the ability to data integrate and analyze within a single framework while also testing the explanatory value of a theorized model in comparison to other models as well as examining the links between antecedents and outcomes (Bergh *et al.*, 2016; Grewal *et al.*, 2018). The two-stage structural equation modeling (TSSEM) approach, proposed by Cheung and Chan (2005) offers several advantages, such as the use of full sample size, handling of missing data and testing of hypotheses about the relationships between observed variables. The TSSEM approach is thus considered suitable for responding to research questions.

To the best of the authors' knowledge, this paper is the first to meta-analytically assess the explanatory value of two theorized models and to investigate the role of innovation in the relationship between strategic orientations and firms' performance. Thus, it makes a valuable contribution to the existing literature by providing a meta-analytic path analysis to assess the validity and utility of two theoretical approaches to understanding the relationship between strategic orientations and firm performance and to examine the role of innovation in the relationship while avoiding circular arguments. The research design and methodology also

addresses the causal inference challenges in observational result, as suggested by [Aguinis et al. \(2017\)](#) and [Anderson et al. \(2022\)](#).

The results of this analysis could be used to inform the development of future research and the formulation of effective strategies for organizations to improve their performance. Furthermore, the results of this study provide a more nuanced understanding of the relationships between strategic orientations, innovation and firms' performance.

Theory and hypotheses development

Universalistic approach: direct effects of strategic orientations on firm performance

The literature of the resource-based theory (RBT) of the firm suggests that strategic orientations are important organizational resources that contribute to a sustainable competitive advantage and superior firm performance. Strategic orientations are market-based resources or capabilities that are essential for marketing activities such as building relationships and developing new products ([Kozlenkova et al., 2014](#), p. 10). They are intangible resources that cover an enhanced set of skills that are deeply ingrained into the everyday routines of an organization ([Zhou et al., 2005](#)).

Strategic orientations have the potential to enable firms to create and sustain competitive advantages, leading to superior firm performance. The competitive advantages are developed through the firm's utilization of its resources and capabilities in a manner that increases its performance in comparison to its competitors ([Barney, 1991](#)). Strategic orientations have a direct impact on firm's performance by shaping the way a firm thinks about, plans for and executes its strategies. Each orientation provides a different perspective and approach to strategy development and implementation, which can lead to different levels of success.

The assumption that a relationship exists between strategic resources and performance implies that a competitive advantage may be present. As [Crook et al. \(2008\)](#) have pointed out, measuring competitive advantages can be challenging. Consequently, many researchers have endeavored to empirically link strategic resources and performance as a means of quantifying and assessing competitive advantages.

Methodologically, strategic orientation is a higher order construct in nature, multidimensional and indicative of a culturally determined focus, specified by the adjective used ([Cadogan, 2012](#); [Ozkaya et al., 2015a](#)).

Market orientation and firm performance

MO is the extent to which a firm puts the customer at the center of its business ([Gatignon et al., 2016](#); [Gnizy et al., 2014](#)). MO entails a culture and behaviors that prioritize the customer as the central focus of the organization. This customer-centric approach is what sets market-oriented firms apart from their competitors, ultimately leading to a greater success ([Ellis, 2006](#)). Market-oriented firms achieve superior performance by orienting themselves toward the needs of their customers, either by providing a customer-oriented focus or by shaping their organizational culture to prioritize the development of superior customer value ([Liao et al., 2011](#)).

Most of the empirical research and meta-analytic studies has consistently demonstrated the strong association between market orientation and performance, indicating its universal nature (e.g. [Chang et al., 2014](#); [Doyle and Armenakyan, 2014](#); [Ellis, 2006](#); [Kirca et al., 2005](#); [Liao et al., 2011](#); [Rodríguez-Cano et al., 2004](#); [Shoham et al., 2005](#); [Verhoef et al., 2011](#)). The evidence indicates that the positive effect of MO on performance is no longer in doubt ([Grinstein, 2008](#)), as the main effect of MO on firm performance is positive across the research field ([Rokkan, 2022](#)).

Entrepreneurial orientation and firm performance

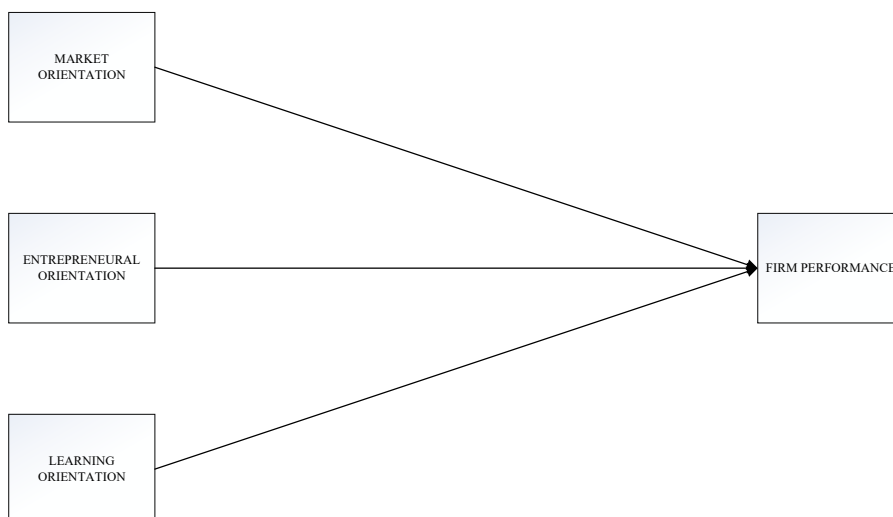
EO captures the focus of a firm on pursuing new opportunities (Covin and Slevin, 1991; Lumpkin and Dess, 1996, p. 136). It is widely accepted that firms with an entrepreneurial orientation usually perform better than conservatively oriented firms (Anderson *et al.*, 2022; Rauch *et al.*, 2009; Rosenbusch *et al.*, 2013). Entrepreneurial-oriented firms are more successful in the long run, because they are better able to adapt to changing market conditions. Entrepreneurship changes an organization's relationship with its environment by creating new products and markets. This is likely since firms with a more EO tend to be more innovative and are more likely to take risks, which can lead to increased profitability and market share.

EO was largely confirmed to have a positive relationship with firm performance in empirical and meta-analytical studies (e.g. Anderson *et al.*, 2022; Covin and Wales, 2019; Rauch *et al.*, 2009; Wang, 2008; Wiklund and Shepherd, 2005; Zahra and Covin, 1995).

Learning orientation and firm performance

LO is the set of organizational key values that influence the propensity of the firm to learn (Calantone *et al.*, 2002; Sinkula *et al.*, 1997). Learning-oriented firms achieve superior performance by better tailoring their operational capabilities with the demands of the external environment beyond only a market focus. They are able to foresee environmental and market changes and make adjustments, which implies systematically challenging the fundamental operating philosophies, mental models and theories in use throughout a generative learning mindset (Baker and Sinkula, 1999a, p. 412; Calantone *et al.*, 2002; Gnizy *et al.*, 2014). It also has the ability to rapidly assimilate and apply new knowledge, which is essential for firms seeking to stay ahead of the competition. Learning-oriented firms are also highly adaptive, quickly adjusting their strategies and operations in response to changes in the environment. They can build on their past experiences to create a foundation for future success.

Empirical findings support that LO has a significant positive impact on performance (e.g. Baker *et al.*, 2022; Baker and Sinkula, 1999a, b; Calantone *et al.*, 2002; Farrell *et al.*, 2008; Liu *et al.*, 2002; Slater and Narver, 1995; Wang, 2008).



Source(s): Author's own creation

Figure 1.
Universalistic
approach model: direct
effects of strategic
orientations on overall
firm performance

Previous relationships between strategic orientations and firm performance have allowed the labeling of the universalistic approach, which implies independent and parallel direct effects of strategic orientations on firms' performance. This approach assumes that strategic orientations are "best practices prescription" valid for every firm in a given situation (Deshpandé *et al.*, 2012, p. 630). This theoretical approach is depicted as a model (see Figure 1).

Strategic orientations are important resources that can lead to sustainable competitive advantages and superior performance if they are effectively exploited. Understanding the relationship between strategic orientations and firm performance can help firms to develop effective strategies and create an environment that enables them to achieve superior performance.

Holistic approach: simultaneous direct and indirect effects of joint interrelated strategic orientations on firm performance through innovation as a mediator

While the RBT view has been useful in explaining how firms create and capture value through their resources and capabilities, it may not fully account for the complex path sequence involved in achieving superior and sustainable firm performance. To address this limitation, the first-mover advantage (FMA) perspective has been proposed as a complementary theoretical framework (Finney *et al.*, 2008) that sheds light on how strategic orientations translate into innovation, particularly product and service innovations that enable firms to achieve and maintain superior performance. The FMA perspective emphasizes the importance of being the first to introduce innovative products or services to the market, which can create a significant advantage over competitors and result in long-term profitability. By combining the RBT and FMA perspectives, firms can better understand how their strategic orientations can be leveraged to create and capture value through innovation, leading to sustained competitive advantage and superior firm performance (Arunachalam *et al.*, 2018; Lonial and Carter, 2015; Poudel *et al.*, 2012).

Following Arunachalam *et al.* (2018), there are two ways in which first-movers can gain a competitive advantage: by generating abnormal positive profits due to monopoly rents and by defining consumer attitudes and expectations. They do this by introducing new products or services earlier than competitors, which allows them to enjoy higher pricing power until competitors enter the market. First-movers also have the advantage of shaping customer expectations since they can introduce innovations earlier than competitors. This gives them a head start in consolidating or gaining a longer-term edge over late mover rivals. The mediated impact of innovation will be positive as long as (a) value is created and (b) the firm captures most of the created value.

Innovation linking strategic orientations and firm performance

Innovation is a crucial component of creating new value that is then leveraged for economic and social gain from a managerial perspective. It involves the creation or adoption of a novelty that can renew and expand products, services and markets, develop new production methods or establish new management systems (Crossan and Apaydin, 2010, p. 1155). As such, innovation is essential to a firm's value, market and financial position (Rubera and Kirca, 2012) as well as its long-term viability and competitive advantage (Baker and Sinkula, 2005; Geroski, 1995). It is often said that the impact of strategic orientations on firms' performance may be indirect, with innovation mediating the relationship. Innovation plays a key role in explaining the causal chain-of-effects that underlies the relationship between strategic orientations and firms' performance, although it is not the only factor involved (*e.g.* Arunachalam *et al.*, 2018; Baker and Sinkula, 2009; Leal-Rodríguez and Albort-Morant, 2016).

					Orientations, innovation and firm performance
Study	Strategic orientation	Innovation construct	Performance	Findings	
Agarwal <i>et al.</i> (2003)	MO	Innovation	Objective performance; judgmental performance	Innovation partially mediates the relationship between market orientation and judgmental performance. MO is insignificantly related to objective performance in the presence of innovation. MO is positively and significantly related to judgmental performance in the presence of innovation, which is also positively and significantly related to judgmental performance	Table 1. Summary of findings of primary studies relating to the mediating role of innovation between strategic orientations and performance
Alarcón del Amo <i>et al.</i> (2014)	MO, EO, LO	Innovation success	Business performance	Innovation success fully mediates the relationship between EO and business performance. MO is positively and significantly related to business performance	
Alegre and Chiva (2013)	EO	INNOVATION PERFORMANCE	Firm performance	Innovation performance fully mediates the relationship between EO and business performance	
Baker and Sinkula (2009)	MO, EO	Innovation success	Profitability	Innovation success fully mediates the relationship between EO and profitability. MO is positively and significantly related to profitability	
Baker and Sinkula (1999) a,b	MO, LO	Product innovation	Organizational performance	Product innovation fully mediates the relationship between MO and organizational performance and partially mediates the relationship between LO and organizational performance	
Chang <i>et al.</i> (2014)	MO	Radical innovation; incremental innovation	Firm performance	Radical and incremental innovation partially mediate the relationship between MO and firm performance	
Han <i>et al.</i> (1998)	MO	Organizational innovation	Organizational performance	Organizational innovation fully mediates the relationship between MO and organizational performance	
Jiménez-Jimenez <i>et al.</i> (2008)	MO	Innovation	Firm performance	Organizational innovation fully mediates the relationship between MO and firm performance	
Kocak <i>et al.</i> (2017)	MO, EO	Radical innovation	Firm performance	Radical innovation partially mediates the relationship between proactive MO and firm performance; radical innovation mediates the relationship between EO and firm performance	
Lages <i>et al.</i> (2009)	LO	Product innovation	Economic performance	Product innovation fully mediates the relationship between PMO and firm performance	
<i>(continued)</i>					

Study	Strategic orientation	Innovation construct	Performance	Findings
Langerak <i>et al.</i> (2007)	MO	New product performance	Organizational performance	New product performance fully mediates the relationship between MO and organizational performance
Leal-Rodríguez and Albort-Morant, 2016	MO	Innovation outcomes	Business performance	Innovation outcomes fully mediate the relationship between MO and business performance
Ledwith and O'Dwyer (2009)	MO	New product performance	Organizational performance	New product performance fully mediates the relationship between MO and organizational performance
Martínez Serna <i>et al.</i> , 2016	LO	Innovation	Firm performance	Innovation fully mediates the relationship between LO and firm performance
Matear <i>et al.</i> (2002)	MO	Innovation	Firm performance	Organizational innovation partially mediates the relationship between MO and organizational performance
Mavondo <i>et al.</i> (2005)	MO, LO	Innovation	Organizational performance	Innovation mediates the relationship between market orientation and a) marketing effectiveness and b) operating efficiency. For financial performance there is not a significant direct effect from innovation. MO fully mediate the relationship between LO and Innovation
Maydeu-Olivares and Lado (2003)	MO	Innovation degree; innovation performance	Economic performance	Innovation degree and innovation performance each taken separately fully mediate the relationship between MO and economic performance
Medina and Rufin (2009)	MO	Innovation	Firm performance	Innovation does not mediate (null mediation) the relationship between MO and firm performance. MO has no effect on innovation
Noble <i>et al.</i> (2002)	MO	Innovativeness	ROS; ROA	Innovativeness weakly and negatively mediate the relationship between private label brand and ROS
Nguyen <i>et al.</i> (2016)	MO, LO	Brand innovation	Market performance	Brand innovation fully mediates the relationship between LO and market performance; brand innovation fully mediates the relationship between MO and market performance
Nybakk (2012)	LO	Firm innovativeness	Financial performance	Firm innovativeness fully mediates the relationship between LO and financial performance

Table 1.

(continued)

					Orientations, innovation and firm performance
Study	Strategic orientation	Innovation construct	Performance	Findings	
O'Cass and Weerawardena (2009)	EO	Innovation intensity	Firm performance	Innovation intensity partially mediates the relationship between International EO and firm performance	
Olavarrieta and Friedmann (2008)	MO	Organizational innovativeness	New product performance; firm performance	Organizational innovativeness partially mediates the relationship between MO and a) new product performance and b) firm performance	
Ozkaya <i>et al.</i> (2015a)	MO	Market-based innovations	Firm performance	Market-based innovations partially mediates the relationship between customer knowledge competence and firm performance; Market-based innovations fully mediates the relationship between competitor knowledge competence and firm performance. Customer and competitor orientations have direct effects on customer and competitor knowledge competences, therefore, both customer and competitor orientations enhanced market- based innovations indirectly, but only competitor orientation affected market-based innovations directly	
Prifti and Alimehmeti (2017)	MO	Innovation	Firm performance	Innovation partially mediates the relationship between MO and firm performance. MO is developed as a chain of effects from intelligence generation to intelligence dissemination and to responsiveness	
Reid and Brady (2012)	MO	NPD program success	Firm performance	NPD program success fully mediates the relationship between MO and firm performance. The indirect influence of MO is weak but significant	
Sandvik and Sandvik (2003)	MO	Product innovativeness	Business performance	Product innovativeness fully mediates the relationship between MO and business performance. Relating to product innovativeness, only use of new-to- the-market products has a positive effect on business performance	
Tajeddini (2011)	MO, LO	NSD performance	Business performance	NSD performance partially mediates the relationship between MO and LO with business performance	

(continued)

Table 1.

Study	Strategic orientation	Innovation construct	Performance	Findings
Thoumrungroje and Racela (2013)	MO, EO	Product innovation	New product performance; business performance	Product innovation partially mediates the relationship between the interaction effect of customer orientation and EO and a) new product performance and b) business performance. Product innovation fully mediates the relationship between EO and a) new product performance and b) business performance
Vázquez et al. (2001)	MO	Innovation rate; new product innovativeness	Company performance	Innovation rate fully mediates the relationship between MO and company performance. New product innovativeness partially mediates the relationship between MO and company performance
Zehir and Wujiabudula (2016)	LO	Product innovation	Firm performance	Product innovation partially mediates the relationship between LO and firm performance
Zhou et al. (2005)	MO, EO	Breakthrough innovation	Product performance; firm performance	Breakthrough innovation fully mediates the relationship of MO and EO with a) product performance and b) firm performance

Table 1. Source(s): Authors’ own creation

The role of innovation as a mediator in the relationship between strategic orientations and firms’ performance has been widely studied in the literature. MO has been frequently linked to innovation as a mediator ([Gupta et al., 2017](#)), while EO has been linked to performance through innovation ([Wales et al., 2013](#)); however, most of the research have been conducted using performance as a direct outcome variable, which is the accepted convention ([Arunachalam et al., 2018](#)). LO has also been found to have a mediating effect on performance through innovation, although the literature is inconsistent about the type of mediation, in term of whether innovation plays a partial or full mediation role (e.g. [Baker and Sinkula, 1999b](#); [Nybakk, 2012](#)) (See [Table 1](#)).

Innovation and firm performance

According to [Crossan and Apaydin \(2010\)](#), innovation is considered the most crucial factor that determines firm performance as it enables firms to gain competitive advantages and extract profits in a temporary quasi-monopoly position, resulting in “above-the-normal” rents ([Rubera and Kirca, 2012](#)). Meta-analytic studies have consistently shown a positive correlation between innovation and firm performance (e.g. [Abdullah saeed and Aimin, 2015](#); [Bowen et al., 2010](#); [Calantone et al., 2010](#); [Chang et al., 2014](#); [Damanpour, 1991](#); [Evanschitzky et al., 2012](#); [de Jong et al., 2003](#); [Kock, 2007](#); [Montoya-Weiss and Calantone, 1994](#); [Rubera and Kirca, 2012](#); [Sattler, 2011](#); [Szymanski et al., 2007](#); [Vincent et al., 2005](#)).

MO and innovation

[Baker and Sinkula \(2009\)](#) found that “market-oriented firms are more likely to be first to market with new generations of products and services, and they are more likely to engage in brand and line extensions to new target markets.” (p. 449). This can lead to a competitive advantage, particularly for early adopters in the industry who can benefit from increased sales and profits resulting from innovation ([Kumar et al., 2011](#)).

However, the link between MO and innovation might be ambiguous. As [Chang et al. \(2014, p. 237\)](#) suggested, MO hinders the firms’ ability to develop radical innovation by causing firms to prioritize the needs of their current customers instead of pursuing new opportunities for innovation, which is known as “the tyranny of the served market.” On the other hand, MO seeks to understand and satisfy customers’ latent needs, not just their expressed needs ([Kohli and Jaworski, 1990](#); [Slater and Narver, 1995](#)). Therefore, MO can provide firms with opportunities to detect problems that customers are not typically able to articulate but that could be addressed by radical innovation. Nevertheless, MO might not be sufficient to identify latent customer needs that are necessary to develop radical innovations ([Kraft and Bausch, 2016](#); [Zhou et al., 2005](#)). Nonetheless, MO can still facilitate incremental innovation.

EO and innovation

According to [Crossan and Apaydin \(2010, p. 1177\)](#) entrepreneurship and innovation are closely intertwined, as both involve identifying and capitalizing on opportunities and introducing new ideas to the market. EO and innovation can be connected because EO often leads to the creation of new businesses, the introduction of new products, or the expansion into new markets, which can increase a firm’s competitive advantage through innovative offerings ([Lumpkin and Dess, 1996](#); [Zhou et al., 2005](#)). [Wernerfelt \(1984\)](#) supports this idea, stating that the more innovative products a firm introduces, the greater its competitive advantage will be. [Arunachalam et al. \(2018\)](#) suggest that EO provides the impetus and direction for entrepreneurial activities, while innovation provides the tangible value that allows a firm to generate profit from its customers. They draw on evidence from [Baker and Sinkula \(2009\)](#), who argued that “a strong EO leads to the pursuit of new opportunity, which can lead to profitability, but only if it is realized through innovation success.” (p. 750).

LO and innovation

LO is closely related to innovation and is thought to be as an important antecedent (e.g. [Calantone et al., 2002](#); [Nybak, 2012](#)). LO defines the innovation process itself by scanning the external environment for new technological paradigms, in terms of “think outside the box” ([Baker and Sinkula, 1999a](#); [Keskin, 2006](#)). Learning-oriented firms are more likely to leverage technology effectively and seize opportunities, resulting in the development of breakthrough products, services and technologies as well as the exploration of new markets ([Calantone et al., 2002](#); [Farrell, 2000](#); [Slater and Narver, 1995](#)). This means that they must continually generate new insights and knowledge in order to stay ahead of the competition.

Interrelatedness and complementarity

Strategic orientations can exist and support each other at the same time in one organization ([Leenders et al., 2016](#)). Given that strategic orientations are correlated, but distinct constructs ([Baker and Sinkula, 2009](#)), the association between them and performance might be stronger when they are considered collectively rather than in isolation (e.g. [Cambra-Fierro et al., 2012](#); [Garcia and Calantone, 2002](#); [İpek et al., 2023](#); [Mu and Di Benedetto, 2011](#)). According to [Schweiger et al. \(2019\)](#), MO, EO and LO are highly interrelated and naturally interconnected when a firm is focused on creating value for customers through innovation and

experimentation, and improving its processes and systems. This idea is consistent with the logic of inherent property. Organizations combining several orientations perform better than those focusing on a single orientation (Hakala, 2011; Ho *et al.*, 2015).

The three orientations to strategy are not mutually exclusive, and no single orientation is guaranteed to lead to superior performance. When the orientations are considered together, they are more likely to lead to better results. This is because the orientations are correlated but distinct constructs (Baker and Sinkula, 2009). The association between them and performance might be stronger when they are considered collectively rather than in isolation (Gnizy *et al.*, 2014).

When different strategic orientations are operating together, it can create a synergy that can help improve innovation and firm performance. However, if the different orientations overlap too much, it can dissipate each other out (Baker and Sinkula, 2009). The empirical research demonstrates that the synergistic effects of MO (*e.g.* Baker and Sinkula, 1999b), EO (*e.g.* Hong *et al.*, 2013; Li *et al.*, 2008) and LO (*e.g.* Baker and Sinkula, 1999a) on innovation and firms' performance are consistent.

According to the previous arguments, the effects of EO, MO and LO on firms' performance are as follows: EO affects performance through innovation and MO, MO affects performance through the achievement of customer satisfaction and LO affects performance through the fitting of operational capabilities with external environment demands through generative learning.

However, in relation to the direct effect of EO on firms' performance, the link is only indirect since most empirical research found a direct effect of EO on performance only when EO is studied separately, but not in the presence of innovation and MO (Baker and Sinkula, 2009). It is well established in the literature that the strategic activities implied by an EO, such as developing new products, have firms' performance consequences (Rauch *et al.*, 2009).

Therefore, it is reasonable to establish that the effect of EO on firm performance is fully mediated by innovation, from a first-mover rationale and as stipulated in the holistic approach. Innovation captures the interplay effects of strategic orientations from the FMA rationale, although strategic orientations still impact directly on firms' performance simultaneously. Here, innovation plays a partial mediating role due to the simultaneous

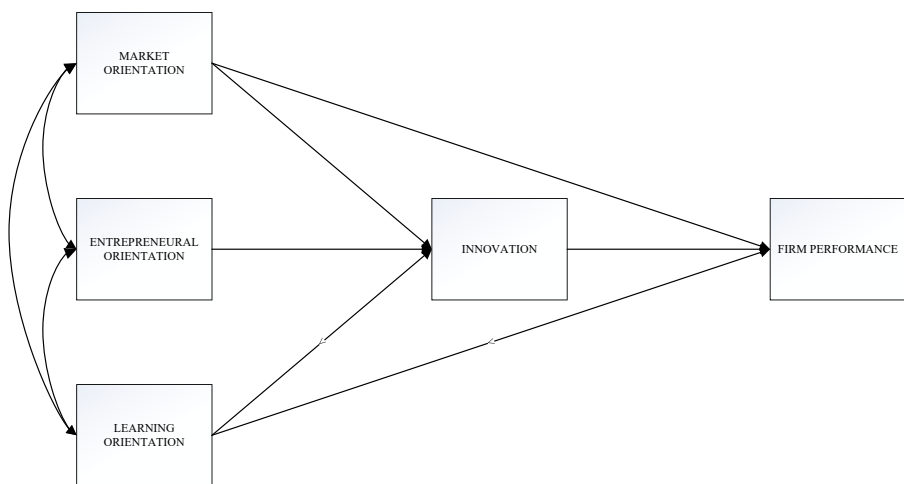


Figure 2.
Holistic approach
model: joint direct and
indirect effects of
strategic orientations
on innovation and on
firm performance

Source(s): Author's own creation

direct effects from MO and LO on firm performance and indirect effects through innovation for EO on firms' performance.

These relationships between strategic orientations and firms' performance have allowed the labeling of the holistic approach, which assumes that innovation, as a source of competitive advantage and better explain how a firm's strategic orientations lead to superior firm performance.

The holistic approach proposed here considers the simultaneous direct and indirect effects of joint interrelated strategic orientations on firm performance through innovation as a mediator. This approach allows for a better understanding of the complex path sequence through which a firm creates and captures value. It also allows for a better understanding of the effect of FMA on firm performance. Ultimately, this approach provides a comprehensive view of how innovative strategies are translated into superior and sustainable firm performance. This approach is depicted as a model (see [Figure 2](#)).

These arguments allow to formulate the following research hypothesis:

- H1.* The holistic approach to the relationship between strategic orientations, innovation and firms' performance is more effective than the universalistic approach in explaining how strategic orientations influence firms' performance.

Method

MASEM, a technique that combines meta-analysis (MA) and structural equation modeling (SEM), is used to investigate the associations among a group of variables suggested by a theoretical model on accumulated empirical findings ([Bergh *et al.*, 2016](#); [Cheung, 2015a, b](#); [Jak, 2015](#); [Landis, 2013](#)). MASEM enables researchers to assess the explanatory value of a hypothesized model in comparison to one or more competing models, a task that cannot be accomplished through MA alone ([Bergh *et al.*, 2016](#); [Tarka, 2018](#)). This approach can reveal the superiority of one particular process or mechanism model over others ([Grewal *et al.*, 2018](#)).

Path analysis, as a potent analytical tool, permits the evaluation of hypotheses concerning relationships among observed variables. It proves especially valuable for investigating the underlying mechanisms and processes that link antecedents and outcomes ([Boyd *et al.*, 2012](#); [Cheung, 2019](#)). The analysis of mediation is critical for advancing the strategic management theory and practice ([Aguinis *et al.*, 2017](#)).

This study employs a meta-analytic path analysis approach to quantitatively synthesize the aggregated literature. It adopts a correlation-based TSSEM approach as introduced by [Cheung and Chan \(2005\)](#). This method surpasses traditional univariate approaches in several ways: (a) it utilizes the overall sample size, rather than the arithmetic or harmonic mean, across all studies; (b) it appropriately addresses missing data and (c) it integrates both MA and SEM techniques into a unified framework ([Hong *et al.*, 2017](#)).

Within this dichotomy of competing approaches, namely universalistic and holistic, one of the two can be considered superior to the other and should be retained for further research. The superior approach must fit adequately the cumulated empirical research data and delve into the "true" role of innovation as a mediator in the strategic orientations and firm performance relationship.

Meta-analytic path analyses were conducted using R package meta-SEM ([Cheung, 2015a, b](#)). This followed [Bergh *et al.*'s \(2016\)](#) and [Grewal *et al.*'s \(2018\)](#) steps and recommendations.

Identification of eligible studies and inclusion criteria

The identification of eligible studies and the establishment of inclusion criteria began by constructing a sampling frame composed of empirical, non-theoretical firm-level studies

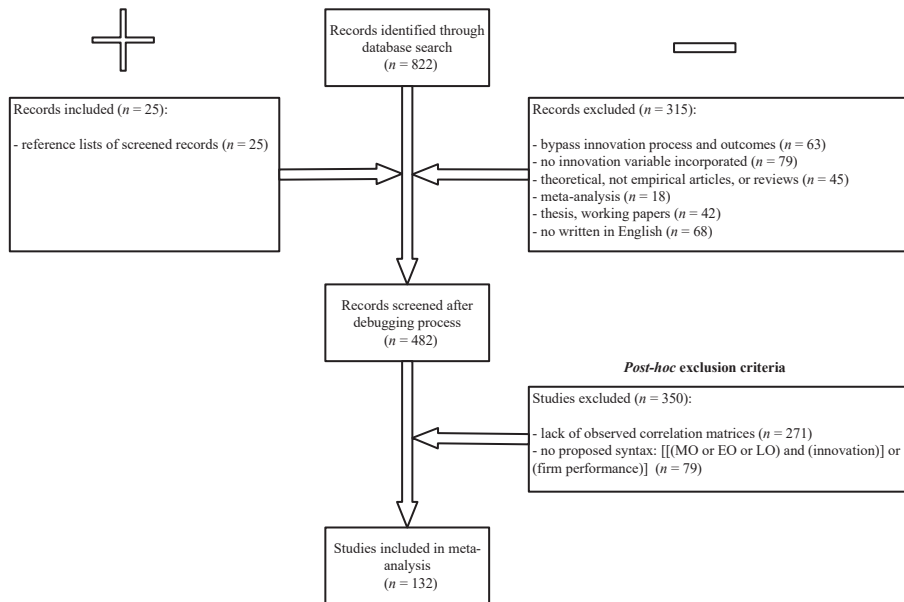


Figure 3. PRISMA flow diagram describing the procedures of report selection for inclusion in the meta-analysis

Source(s): Author's own creation, Adapted from Moher *et al.* (2015)

available in marketing, entrepreneurial and management journals spanning the period from 1990 to 2018. Several meta-analyses related to the concept of strategic orientation had already been published in this period. As an illustrative example, [Schweiger et al. \(2019\)](#) conducted a well-recognized MA that closely aligns with this research, utilized data up to 2016. This confirms the relevance and maturity of the literature corpus base up to that point.

Primary studies were sourced through a search across three major bibliometric databases: Web of Science, Scopus and Google Scholar. In addition, various search engines such as ResearchGate, [Academia.edu](#) and Mendeley were utilized. Supplementary to these sources, electronic abstracting services including ABI Inform, Business Premier and JSTOR were incorporated. The selection of these databases is grounded in their wide recognition within the realms of entrepreneurship and management, contributing to the credibility and reliability of the literature selection process, as noted by [Harzing and Alakangas \(2016\)](#).

The initial search process commenced with the utilization of keywords such as “market* orientation,” “entrepreneur* orientation,” “learn* orientation,” “innovation*” and “performance.” The choice of keywords was deliberate and grounded in the core constructs of strategic orientation and its associations with innovation and firms’ performance. These keywords have been consistently used and recognized in the literature as fundamental to the investigation of strategic orientation and its impact on organizational outcomes. Each term aligns with the research’s theoretical underpinnings and objectives, ensuring a focused and conceptually coherent body of literature. A preliminary search using Google Scholar’s academic search engine yielded approximately 1,115 results (see [Figure 3](#)).

The exclusion criteria of primary studies were applied to meta-analyses and empirical research studies solely examining direct effects from strategic orientation to performance while omitting innovation as a mediator. Similarly, studies linking innovation as a capability

Construct	Definition and operationalization	Coding scheme
Market orientation	The culture that effectively and efficiently creates value for customers (Narver and Slater, 1990) and the set of activities, processes and behaviors derived from the implementation of the marketing concept (Kohli and Jaworski, 1990). MO is operationalized on Kohli and Jaworski's (1990) 'MARKOR', and Narver and Slater's (1990) "MKTOR" scales, exemplifying both conceptual and empirical distinctiveness (Slater and Narver, 1995; Hult <i>et al.</i> , 2005) but closely related (Gonzalez-Benito and Gonzalez-Benito, 2005). Several derivations of the original scales were included	<ul style="list-style-type: none"> • MKTOR (Narver and Slater, 1990) • MARKOR (Kohli <i>et al.</i>, 1993) • MORTN (Deshpandé and Farley's, 1998) • Proactive MO (Narver <i>et al.</i>, 2004; Atuahene-Gima <i>et al.</i>, 2005) • Internal MO (Gounaris, 2006; Sanchez-Hernandez and Miranda, 2011; Fang <i>et al.</i>, 2014) • Market orientation (Matsumo <i>et al.</i>, 2002)
Entrepreneurial orientation	The specifically entrepreneurial aspects of firms' strategies to enact their organizational purpose, sustain its vision and create competitive advantage involving the intentions, actions, processes, practices and decision-making activities that lead to new entry (Rauch <i>et al.</i> , 2009; Lumpkin and Dess, 1996; Hakala, 2011; Covin and Slevin, 1989; Hult <i>et al.</i> , 2004; Wiklund, 1999; Wiklund and Shepherd, 2005). EO is operationalized on Lumpkin and Dess' (1996) five components scale and more domain-focused, that is, it specifies where to look for and Miller's (1983) and Covin and Slevin's (1989) three components scale and more phenomenon-focused, that is, it specifies what EO looks like (Covin and Wales, 2012, p. 5)	<ul style="list-style-type: none"> • Entrepreneurial posture (Covin and Slevin, 1989) • Entrepreneurial proclivity (Matsumo <i>et al.</i>, 2002) • Entrepreneurship (Naman and Slevin, 1993) • Entrepreneurship orientation (Hong <i>et al.</i>, 2013) • Corporate entrepreneurship (Zahra and Covin, 1995; Chen <i>et al.</i>, 2014) • Entrepreneurial orientation (Lumpkin and Dess, 1996; Nasution and Mavondo, 2008; Alegre and Chiva, 2013)
Learning orientation	The key values that influence the propensity of the firm to learn by generating, processing and using market information and new knowledge in order to gain competitive advantage (Sinkula <i>et al.</i> , 1997; Calantone <i>et al.</i> , 2002). LO is operationalized on Sinkula's <i>et al.</i> (1997) and Calantone <i>et al.</i> 's. (2002) scales and a more managerial view of learning organization (Bell <i>et al.</i> , 2002, p. 77) ¹	<ul style="list-style-type: none"> • Learning orientation (Sinkula <i>et al.</i>, 1997; Baker and Sinkula, 1999a; Calantone <i>et al.</i>, 2002; Liu <i>et al.</i>, 2002; Atuahene-Gima <i>et al.</i>, 2005) • Organizational learning orientation (Nguyen <i>et al.</i>, 2016; Paladino, 2007; Mu and Di Benedetto, 2011)
Innovation ²	Innovation (as an outcome) refers to the consequences of innovation activities or the outputs of innovation process including the aspect of exploitation, answering questions about "what" or "what kind" of innovation (Crossan and Apauyin, 2010). Innovation outcomes represent the (1) revenue generation potential of firm's innovativeness because they refer to actual new products that are available in the marketplace (Rubera and Kirca, 2012) and (2) the degree of success or fulfillment attained by firms in achieving goals related to new products or services (<i>e.g.</i> Henard and Szymanski, 2001; Montoya-Weiss and Calantone, 1994; Baker and Sinkula, 2009; Gatignon and Xuereb, 1997; Im and Workman, 2004). Innovation as an outcome includes dimensions such as: <i>reference</i> which is related to the newness of innovation – new to the firm, to the market it serves or to the industry –; the magnitude of innovation whether it is radical or incremental; <i>form</i> of innovation whether it is a product, service, process, or business model innovation; and <i>type</i> of innovation including administrative and technical (Crossan and Apaydin, 2010). Number, rate and speed of innovations are also considered as innovation outcomes because both represent the quantity and cycle time of innovations (Damanpour <i>et al.</i> , 2009)	<ul style="list-style-type: none"> • Breakthrough innovation (Atuahene-Gima, 2005; Chandy and Tellis, 1998) • Organizational innovation (Hurley and Hult, 1998; Mavondo <i>et al.</i>, 2005; Song and Xie, 2000; Zahra, 1996) • Innovation rate (Vázquez <i>et al.</i>, 2001) • New product novelty (Im and Workman, 2004) • New To The World Products (Lukas and Ferrell, 2000) • Number of New Services (Mu and Di Benedetto, 2011; Storey and Hughes, 2013) • Radical innovation (Avlonitis, 2001; Cheng and Krumwiede, 2012) • Tech-based innovation (Zhou <i>et al.</i>, 2005) • Innovation Success (Baker and Sinkula (1999a, 2009; Akman and Yilmaz, 2008) • Innovation Performance (Pelham and Wilson, 1996; Wang and Ahmed, 2004; Zhou <i>et al.</i>, 2008; Bharadwaj and Menon, 2000) • New product performance (Atuahene-Gima and Ko, 2001) • New product program performance (Narver and Slater, 1990; Griffin and Page, 1993; Calantone <i>et al.</i>, 2003) • Product effectiveness (Alegre and Chiva, 2013)

(continued)

Table 2.
Codification of the
meta-analysis
variables

Construct	Definition and operationalization	Coding scheme
Firm Performance	Firm performance refers to “the economic outcomes resulting from the interplay among an organization’s attributes, actions and environment” (Combs <i>et al.</i> , 2005, p. 262) capturing the underlying manifestations of how well a firm is effectively satisfying its stated goals (Bergh <i>et al.</i> , 2016; Combs <i>et al.</i> , 2005). At a broad-level, firm performance can be differentiated as operational performance and organizational performance. The latter relates to the firm as a whole, whereas the former is associated with specific functional areas within the firm – i.e. product-market performance – (Venkatraman and Ramanujam, 1986; Combs <i>et al.</i> , 2005; Katsikeas <i>et al.</i> , 2016)	<ul style="list-style-type: none">• Profitability (Alegre and Chiva, 2013; Baker and Sinkula, 2009)• Financial performance (Chen <i>et al.</i>, (2012), Cheng and Huizingh (2014), Cheng and Krumwiede (2012)• Firm performance (Ozkaya <i>et al.</i>, 2015b; Paladino, 2008; Zhou <i>et al.</i>, 2005)• Market effectiveness• Economic performance (Lages <i>et al.</i>, 2009)• Organizational performance (Baker and Sinkula, 1999a; Langerak <i>et al.</i>, 2007)• Business performance (Leal-Rodríguez and Alborn-Morant, 2016; Alarcón del Amo <i>et al.</i>, 2014)• Sales growth (Sandvik and Sandvik, 2003)

Note(s): ¹ Although commonly research on organizational learning has conceptualized LO in a process-view – knowledge acquisition, information distribution and information interpretation and organizational memory – (Slater and Narver, 1995; Zhou *et al.*, 2005), LO is not operationalized as a process in this dissertation, but as a firm propensity to learn

² Some cautions about this construct must be advised. Given that innovation is both a process and an outcome, the former clearly precedes the latter and should be separated to avoid circular arguments (Crossan and Apaydin, 2010). In one hand, both innovativeness and innovation are two closely related but different concepts (Woodside, 2005; Menguc, 2006). More specifically, firm innovativeness is understood as the cultural organization’s inclination to engage in innovative behavior and captures the firm-level orientation toward innovation (Hurley and Hult, 1998; Hult and Ketchen, 2001; Calantone *et al.*, 2002; Rubera and Kirca, 2012). It is important to note that innovativeness to some degree is similar to entrepreneurial orientation but it does not require new market entry and it does not reflect an innovation output (Hult *et al.*, 2004; Lumpkin and Dess, 1996; Liao *et al.*, 2011). Innovation outcomes are also different from innovation capacity (*e.g.* Hurley and Hult, 1998; Prajogo and Ahmed, 2006) or innovation capability (*e.g.* Akman and Yilmaz, 2008). Ultimately, innovation is an ex post facto construct that reflect firm’s innovation capacity/capability

Source(s): Authors’ own creation

Table 2.

or process with firm performance while disregarding innovation outcomes were omitted. A total of 840 identified studies met the initial search criteria. Subsequently, a fundamental post hoc exclusion criterion was employed, pertaining to the reporting of observed correlation coefficient matrices in the primary studies. Several studies were excluded due to either the absence of reported correlation matrices or the provision of only partial correlation matrices, an issue previously highlighted by Boyd *et al.* (2012) and Shook *et al.* (2004). Online Appendix presents the outcomes of the inclusion process.

Coding process

A coding form was developed including basic information from primary studies such as title, authors, year, journal, operationalization of the variables and samples used in each study. The coding process was developed by a single author, which guaranteed the same search terms and inclusion criteria, following Landis’ (2013) and Sheng *et al.’s* (2016) suggestions. The selection criteria mentioned above were implemented to accomplish appropriateness and relevance to this research. Table 2 summarizes the definitions, operationalization and coding scheme of variables used in the MA.

The final dataset consisted of 135 independent samples from 132 selected primary studies with 289 unique effect sizes, meticulously chosen to directly align with the research objectives surrounding strategic orientations, innovation and firm performance. This extensive dataset is sourced from a wide range of academic journals and scholarly references in the fields of marketing, entrepreneurship and management. This diversity enriches the research by incorporating a multitude of perspectives and contextual insights, effectively mitigating the

risk of publication bias, as emphasized by Rothstein *et al.* (2006). Notably, the final dataset boasts a substantial sample size, comprising 33,063 observations, which enhances the statistical power for meaningful analysis and strengthens result reliability (see Online Appendix).

Orientations,
innovation and
firm
performance

Meta-analytic and structural equation modeling fitting procedure for path analysis

The path analysis in this research employed a fitting procedure combining MA and SEM, specifically utilizing a correlation-based random-effects model within the TSSEM framework, as proposed by Cheung and Chan (2005).

In the first stage (Stage 1), a random-effects model was employed to perform a traditional bivariate MA of correlation matrices. This stage aimed to consolidate and analyze the correlation data from the primary studies.

The second stage (Stage 2) involved the fitting of structural equation models to the pooled correlation matrix. This step aimed to assess whether the theoretical models were consistent with the meta-analytic data or not.

To evaluate the fit of the models, widely accepted fit indices were employed. These fit indices followed established criteria to determine the adequacy of a model's fit.

By analyzing the direct and indirect effects of strategic orientations on firms' performance, it became feasible to ascertain the mediating role of innovation. The significance of these mediating

		MO	EO	LO	INNO	PERF
r	MO	1				
CI95						
k						
N						
I ²						
r	EO	0.44	1			
CI95		0.37: 0.52				
k		30				
N		9,541				
I ²		0.90				
r	LO	0.52	0.44	1		
CI95		0.44: 0.61	0.36: 0.53			
k		21	11			
N		6,346	4,189			
I ²		0.89	0.80			
R	INNO	0.36	0.42	0.42	1	
CI95		0.32: 0.39	0.38: 0.48	0.36: 0.48		
k		99	53	35		
N		25,390	14,181	10,025		
I ²		0.86	0.89	0.85		
r	PERF	0.33	0.34	0.37	0.38	1
CI95		0.28: 0.38	0.27: 0.40	0.30: 0.44	0.32: 0.44	
k		38	18	17	38	
N		10,081	4,507	4,712	9,805	
I ²		0.83	0.78	0.82	0.88	

Source(s): Authors' own creation derived from meta-SEM Rpackage outputs, TSSEM Stage 1 output. MO = Market orientation; EO = Entrepreneurial orientation; LO = Learning orientation; INNO = Innovation – as an outcome; PERF: Firm performance. r = Observed correlations; k: Number of studies; N: Sample size; CI95: 95% confidence interval. All correlations are significant ($p < 0.01$)

Table 3.
Meta-analytic pooled
correlation matrix

Table 4.
Summary of TSSEM
Stage 2 results on the
analyzed models with
their respective path
coefficients, explained
variance, chi-squared
test, goodness-of-fit
indices and model fit
assessment

Theoretical approach	Effect	Path coefficients β	Explained variance			χ^2 test		Value	p	Goodness of fit indices			Model fit Support
			R^2	LBCI95	LBCI95	d.f	N			CFI	RMSEA	SRMR	
Universalistic	Direct effects	MO→PERF EO→PERF LO→PERF	0.33 0.33 0.37	0.26; 0.37 0.27; 0.43 0.26; 0.44	0.28; 0.45	3	33,063	365.81	***	0.4868	0.0605	0.3307	NO
	Direct effects	MO→INNO EO→INNO LO→INNO	0.11 0.28 0.22	0.03; 0.18 0.20; 0.36 0.13; 0.32	0.22; 0.31	1	33,063	4.89	***	0.9977	0.0109	0.0235	YES
		MO→PERF LO→PERF INNO→PERF	0.14 0.21 0.25	0.05; 0.23 0.09; 0.32 0.17; 0.34	0.19; 0.28								
Covariances (*)		MO→EO MO→LO EO→LO	$\Psi = 0.45$ $\Psi = 0.51$ $\Psi = 0.47$	0.38; 0.52 0.43; 0.60 0.38; 0.55	N.A.								
	Indirect effects	MO→INN→PERF EO→INN→PERF LO→INN→PERF	0.03 0.07 0.06	0.01; 0.06 0.02; 0.11 0.02; 0.10									

Note(s): *** = $p < 0.001$
Source(s): Authors' own creation derived from meta-SEM Rpackage, TSSEM Stage 2 output. MO = Market orientation; EO = Entrepreneurial orientation; LO = Learning orientation; INNO = Innovation – as an outcome; PERF = Firm performance and N.A. = Not applicable
In a path model, covariances are represented by Ψ

effects was tested to determine whether they were null, full or partial. In cases where the direct effects were found to lack statistical significance, the relationships were classified as fully mediated. Conversely, when the direct effects were statistically significant, the relationships were considered at least partially mediated, following the approach outlined by [Jak \(2015\)](#).

Orientations,
innovation and
firm
performance

Results

TSSEM Stage 1 outcomes: pooled correlation matrix of meta-analytic bivariate correlations

[Table 3](#) summarizes the traditional meta-analytic bivariate correlation matrix encompassing the three strategic orientations (MO, EO and LO), innovation and performance. The table includes estimates of average correlation coefficients or effect sizes, 95% confidence intervals, the number of studies and sample sizes derived from TSSEM Stage 1.

The findings reveal statistically significant associations between the three strategic orientations (MO, EO and LO), innovation and firm performance.

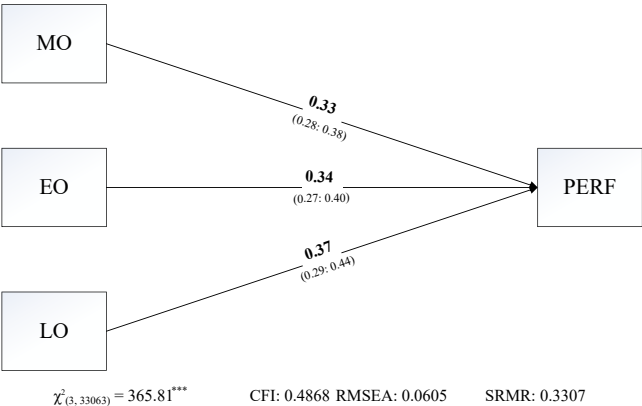
The assessment of the homogeneity of the correlation matrix yielded a Q statistic of $Q_{(279)} = 2154.08$, with $p < 0.01$, indicating the rejection of the null hypothesis regarding the homogeneity of correlation matrices. This suggests substantial between-study variation in correlations. The I^2 statistic, ranging from 0.81 to 0.92, further underscores this variability, supporting the appropriateness of employing a random-effects approach over a fixed-effects one.

TSSEM Stage 2 outcomes: path analysis

To provide a more comprehensive understanding of the relationships beyond bivariate correlations, the results obtained from fitting the analyzed models, using the TSSEM Stage 2 are presented in [Table 4](#). This table summarizes the overall model fit indices, coefficient estimations for structural paths and their corresponding 95% confidence intervals.

The universalistic approach assumed that the relationship between strategic orientations and firm performance is not mediated by innovation. This implies independent and parallel direct effects of strategic orientations on firm performance (see [Figure 1](#)).

The findings reveal a direct and positive impact of each of the three independent strategic orientations on firm performance. These direct effects are statistically significant and



Source(s): Author's own creation

Figure 4.
Universalistic
approach path model
with standardized
parameter estimates
(path coefficients) and
95% confidence
intervals

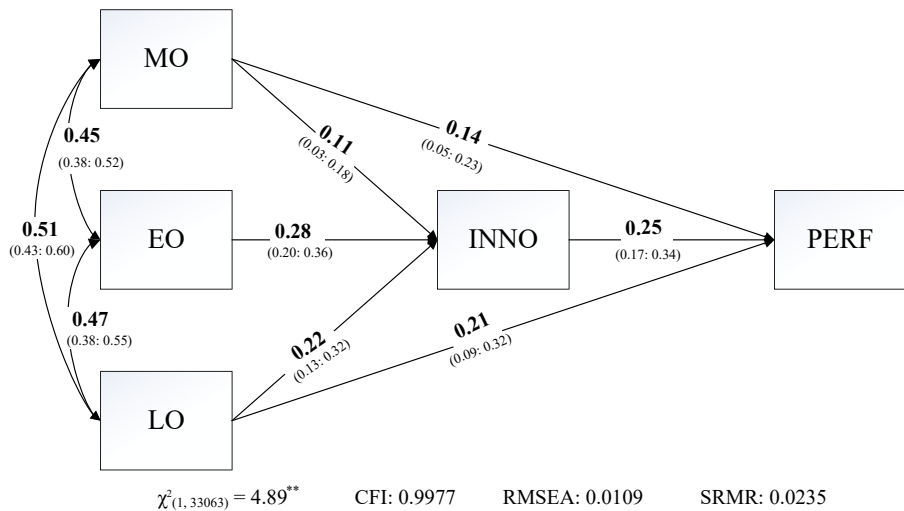


Figure 5.
Holistic approach path
model with
standardized
parameter estimates
(path coefficients) and
95% confidence
intervals

Source(s): Author's own creation

collectively explain 34% of the variance in firm performance. However, the assessed model does not align well with the data, as indicated by the standard model fitness criteria (see Table 4).

The results of the χ^2 test demonstrate that the fitted model, i.e. the universalistic approach, inadequately explains the data ($\chi^2 = 365.81$, d.f. = 3, $p < 0.001$). The goodness-of-fit indices, including a CFI of 0.4868, an RMSEA of 0.0605 and an SRMR of 0.3307, suggest that the model does not adequately capture the complexity of the data. This suggests that the direct effects of the three orientations on performance may not be as robust as initially assumed and there might be unaccounted factors influencing firm performance. Figure 4 illustrates the path diagram.

In contrast, the holistic approach posited that the relationship between MO and LO as well as firm performance, is partially mediated by innovation and the link between EO and firm performance is fully mediated by innovation. Additionally, this approach proposed joint and complementary direct effects of strategic orientations on innovation, with innovation playing a significant role as a partial mediator in the relationship (see Figure 5). The study estimated direct effects of strategic orientations on firm performance and examined the mediating role of innovation by considering both direct and indirect effects.

The results indicate statistically significant direct effects from MO and LO to firm performance as well as from EO to innovation. However, the effect of EO on firms' performance is fully mediated by innovation, signifying that the impact of MO and LO on firm performance is partially mediated by innovation. Moreover, the indirect effects from each orientation to firms' performance are statistically significant. Figure 5 illustrates the path diagram.

The TSSEM Stage 2 analysis results demonstrate a strong fit between the fitted model (holistic approach) and the data, as evidenced by a χ^2 value of 4.89 (d.f. = 3, $p < 0.001$), a CFI of 0.9977, an RMSEA of 0.0109 and an SRMR of 0.0235. These findings indicate that the proposed model is highly compatible with the data, affirming the consistency of the relationships among the variables as previously proposed.

The holistic approach exhibits a superior fit to the data compared to the universalistic approach. Furthermore, the study reveals a significant positive relationship between

strategic orientations (MO and LO) and firm performance, with the strongest association observed between learning orientation and firm performance ($\beta = 0.37$). Additionally, there is a significant positive relationship between strategic orientations and innovation, with the strongest association found between entrepreneurial orientation and innovation ($\beta = 0.28$). The results also demonstrate significant positive covariances among the strategic orientations, indicating that these orientations are not mutually exclusive.

Furthermore, the analysis uncovers significant indirect effects from the strategic orientations to firm performance, with the most pronounced indirect effect being between entrepreneurial orientation and firm performance ($\beta = 0.07$). The findings also confirm a significant positive relationship between innovation and firm performance ($\beta = 0.25$).

Overall, the conventional goodness-of-fit criteria suggest that the holistic approach is the superior theoretical framework among those assessed. Thus, H1 is supported.

Robustness checks

To further examine the robustness of the results, a test was conducted using only half of the total number of studies (66) randomly selected. The model for the robustness test was the same as the one used in the holistic approach assessment (see [Online Appendix](#)). The outcomes of the robustness test closely mirrored the results obtained from the assessment of the holistic approach. Although some minor variations were observed in the path coefficients and likelihood-based intervals, the overall conclusions remained consistent. These results provide further confirmation of the robustness of the model specification.

Discussion and conclusion

The purpose of this study was to compare the universalistic approach and the holistic approach in their ability to explain the complex relationships between strategic orientations, innovation and firm performance. The findings of the study suggest that the holistic approach is superior to the universalistic approach in its ability to link more complex relationships, including the interrelatedness and complementarity of strategic orientations.

The results of the study indicate that strategic orientations have both direct and indirect effects on firm performance through innovation. Specifically, innovation has a full mediating role in the relationship between EO and firm performance and a partial mediating role in the relationship between MO and LO and firm performance. This highlights the importance of innovation in creating and capturing value for a firm.

On the other hand, the universalistic approach was found to be inferior to the holistic approach in explaining the relationships between strategic orientations and firm performance. The universalistic approach suggests that strategic orientations have independent and parallel effects on firm performance and that innovation does not influence this relationship. This finding is significant, as it shows that the universalistic approach is not sufficient to explain complex relationships.

Overall, the study contributes to the understanding of the relationships between strategic orientations, innovation and firm performance. The findings suggest that the holistic approach is more effective in explaining these relationships, as it accounts for the interrelatedness and complementarity of strategic orientations and the mediating role of innovation. These insights can inform strategic decision-making in organizations and provide guidance for future research in this area.

Theoretical implications

This paper makes a significant contribution to the literature by introducing a holistic approach to understanding the relationship between strategic orientations, innovation and firm performance. This approach considers the simultaneous direct and indirect effects of joint interrelated strategic orientations on firm performance through innovation as a mediator. The study found that the holistic approach is superior due to its power for linking more complex relationships.

The findings also provide evidence that innovation plays a partial mediating role in the relationship between MO and LO and firm performance and a full mediating role in the relationship between EO and firm performance. This paper contributes to the literature by introducing a more comprehensive theory modeling and testing approach to understanding the relationship between strategic orientations, innovation and firm performance.

The results demonstrated that the universalistic approach, widely implemented in a large body of literature, is not adequate for theory modeling and testing purposes to examine the strategic orientations and firm performance relationship. Such relationship specified in this extremely parsimonious approach reached the worst goodness of fit indices.

Linking market orientation, entrepreneurial orientation and learning orientation with firm performance is consistent with the RBT of the firm, which suggests that the internal resources and capabilities of a firm can contribute to its competitive advantage and ultimately, its performance (Barney, 1991). However, there are some reasons why the relationship between strategic orientation and firm performance may not always include innovation. As noted by some scholars, the relationship may be spurious, as there may be other factors that influence both innovation and firm performance (Anderson, 2022; González-Benito *et al.*, 2015; Zaefarian *et al.*, 2017). For instance, a firm that has a strong marketing or operations function may also have a higher likelihood of being successful in innovation. Additionally, the relationship between innovation and firm performance may depend on other external factors, such as external pressures concerning environmental and social issues (Alerasoul *et al.*, 2022a, b). Therefore, while strategic orientations like market, entrepreneurial and learning orientations are important for firms to achieve a competitive advantage, the impact of innovation on firm performance may be influenced by a range of internal and external factors beyond just strategic orientation.

Other reason is that innovation is a process that can take time to yield results, and it may be difficult to accurately assess a firm's level of innovation and its impact on performance. Furthermore, firms may pursue different strategies with respect to innovation and there is no guarantee that a firm's innovation efforts will result in improved performance. Finally, it is possible for a firm to perform well despite having a low level of innovation, and it is also possible for a firm to perform poorly despite having a high level of innovation.

Nevertheless, within the universalistic approach, the effect of strategic orientation on firm performance can only be considered as potential. Ketchen *et al.* (2007) stated that "strategic resources only have potential value, and that realizing this potential requires alignment with other important organizational elements" (p. 962). This potential nature of the effect of strategic orientation on firm performance is also discussed by Doyle and Armenakyan (2014, p. 196) and Hult *et al.* (2005, p. 1174) in the sense that it is not expected that the culture of an organization shapes performance directly, since "customers do not purchase a firm's goods and services simply because the firm has a particular type of culture." Zhou *et al.* (2005, p. 55) remarked this argument as well, affirming that strategic orientation as culture-level values and norms do not automatically lead to superior performance.

Conceiving strategic orientations as best practices prescriptions, raised in terms of extreme parsimony in theory modeling, can be detrimental and may need to be abandoned for the advancement of knowledge in the field. To disclose this main idea, Atuahene-Gima (2005, p. 79) and Mu *et al.* (2017, p. 3) among others, pointed out the idea of orientation being

universally beneficial is overly simplistic. In this line, [Hakala \(2011, p. 207\)](#) considers that “universal ‘truths’ are valuable, but incapable of explaining the whole range of situations.”

Introducing innovation as a mediator in the relationship between strategic orientations and firm performance as in the holistic approach is reasonable. By acknowledging that innovation is a key driver of firm performance, and that strategic orientations can influence innovation, this approach allows for a more comprehensive understanding of how these variables are interrelated. As [Rubera and Kirca \(2012, p. 135\)](#) note, “in the end, it is a specific product or service introduction that generates revenues and not the firm’s general commitment to innovation.” In this sense, innovation acts as a mediator that capitalizes on a positional advantage based on innovative offerings or superior services, which in turn, allows firms to enjoy superior performance ([Hult and Ketchen, 2001](#)).

This approach provides a more nuanced understanding of the intricate relationship between these variables. It highlights the significance of not only having a strong strategic orientation but also utilizing innovation as a means to capitalize on positional advantages and achieve superior performance.

The results are consistent with the notion that MO and LO are important factors in driving superior performance, both directly and indirectly through innovation. The findings also suggest that innovation serves as a partial mediator between the relationship of MO and LO with firm performance, highlighting the critical role of innovation in this relationship. Moreover, the study found that innovation plays a full mediating role in the relationship between EO and firm performance, highlighting the importance of EO in promoting innovation and its subsequent impact on firm performance.

In the context of MO, a firm’s focus on understanding and meeting the needs of its customers can enable it to develop superior customer knowledge and create value for customers, which can result in improved firm performance ([Jaworski and Kohli, 1993](#); [Rokkan, 2022](#)). Similarly, in the context of LO, a firm’s focus on continuous learning and knowledge acquisition can enable it to develop valuable and unique resources that contribute to its competitive advantage and improved performance ([Baker et al., 2022](#); [Sinkula et al., 1997](#)).

The significant positive relationship between strategic orientations and innovation is also consistent with the RBT and the FMA frameworks. In these frameworks, the innovation is recognized as a valuable resource capable of enhancing a firm’s competitive advantage and overall performance, as highlighted by [Arunachalam et al., \(2018\)](#). The finding of the strongest relationship between entrepreneurial orientation and innovation is consistent with prior research, which has suggested that firms that are entrepreneurial in nature tend to be more innovative ([Covin and Slevin, 1991](#); [Covin and Wales, 2019](#)).

Furthermore, the significant positive covariances observed among the strategic orientations imply that these orientations are not mutually exclusive. This suggests that firms have the capacity to pursue multiple strategic orientations concurrently in their pursuit of superior performance. This finding is consistent with previous research that has suggested that a combination of strategic orientations may enable firms to achieve a FMA, which can lead to sustained competitive advantage and improved performance in an entire innovation pathway, as suggested by [Arunachalam et al. \(2018\)](#).

Overall, while MO and LO may help conceive superior products, processes and ideas, it is likely that EO provides the stimulus for driving such activities, as noted by [Hult et al. \(2004\)](#). Therefore, their impact on firm performance is more operative through successful introduction of products and services into markets simultaneously with the effect of achieving customer satisfaction and in-depth generative learning from external environment. In this sense, it is feasible that innovations addressing the needs of new and emerging markets and the development of new products and services could fully capture the effect of EO on firm performance. FMA rationale is more notorious in this chain-of-effects.

The findings of this paper have also important implications for theoretical debates. It provides evidence for the holistic approach to understanding the relationship between strategic orientations, innovation and firm performance. This approach is more comprehensive than the universalistic approach and allows firms to gain a better understanding of how their strategies and resources can be used to create and capture value.

Managerial implications

The results of this study have significant implications for firms in terms of understanding how strategic orientations and innovation interact to create superior performance. The study shows that combining different strategic orientations and leveraging innovation is critical for gaining a competitive advantage, creating value for customers and improving performance. Therefore, managers must understand the benefits of each orientation and how they can be synergized within the organization (Gnizy *et al.*, 2014, p. 496). Additionally, managers should be able to create a strong impetus for each orientation in order to produce high-performing innovations (Gatignon *et al.*, 2016).

It is crucial for managers to actively prioritize and focus on certain areas to enhance their firm's competitive advantage. Specifically, managers should place emphasis on aspects such as improving customer satisfaction, continuously learning from the external environment and actively seeking out and pursuing new market opportunities. By doing so, firms can better align their strategic orientation with the resources they possess (as per the RBV) and the attractiveness of the markets they operate in (as per FMA), thereby increasing their chances of success and superior performance. It is important to note that this process should not be left to chance and proactive management is necessary for sustained competitive advantage.

For example, by focusing on customer satisfaction, a manager can ensure that the organization is meeting the needs of its customers and that its products and services are of the highest quality. Furthermore, by learning from the external environment, a manager can gain insights into the latest industry trends and technologies, which can help the organization to stay ahead of the competition. Finally, by pursuing new market opportunities, a manager can help the organization expand its reach into new markets and grow its business.

This can be accomplished by identifying new market segments that are attractive to the organization, developing products and services that meet the needs of these new market segments and deploying an effective marketing strategy to reach these consumers. In order to identify new market opportunities, a manager must first understand the external environment and the trends that are shaping it. By staying ahead of the competition, an organization can gain a competitive advantage and improve its chances of success in the marketplace.

Limitations and future research directions

Meta-analytic path analysis is considered a powerful and in-depth basis for quantitative synthesis of research findings (Bergh *et al.*, 2016). However, certain aspects of the results presented in this research should be interpreted with caution. For example, the reported results do not provide direct and unequivocal evidence regarding causality because no primary research studies were set in experimental designs. The term "effect" is used only as a matter of convenience (Aguinis *et al.*, 2017). The nature of the meta-analytic path analysis does not allow for strict inference of causal relationships. The analysis only provides high-level assessment for the theory testing and for retaining a structure that empirically fits the cumulated data well.

It is necessary to acknowledge the possible threat of endogeneity on the reported results. However, as this study conducted a meta-analytic path analysis on observed variables, not latent, the sources and threat of endogeneity is significantly lower (Cheung, 2015a, b). Also, dependent effect sizes problem was treated by selecting one of multiple effect sizes based on a priori decision rule related to the theoretical background, as suggested by Hunter and Schmidt (2004).

It is important to note that several studies were excluded from the analysis because they did not report the estimates of the correlations between the constructs being analyzed. Additionally, several primary studies connected innovation as a capability with firm performance but did not consider innovation outcomes. For these reasons, the scope of the final sample was reduced, which in turn, resulted in fewer enriched findings.

The study did not include in-depth examinations of the constructs involved in the primary studies. This was due to the “apples and oranges” problem, which is inherent in meta-analysis (Card, 2012). However, because the analyses were based on the higher-level concept of strategic orientation, it was considered appropriate to average aggregate diverse levels of analysis. This improved the generalizability of the conclusions.

Future meta-analytic path analysis research efforts may include the implementation of a priori contextual moderators, such as firm size and industry type, by assuming a contingency approach. Random-effects subgroup analysis may be used to handle heterogeneity among primary studies in order to improve understanding of strategic orientations.

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Further reading

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Online Appendix

The supplementary material for this article can be found online.

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