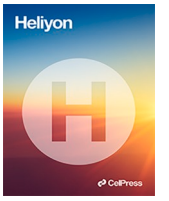
Heliyon 10 (2024) e35497

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.cell.com/heliyon



Research article

The contingent effects of strategic orientations and strategic capabilities on competitive performance: Evidence from Ethiopian manufacturing enterprises

Henock Semaw Melesse *, Dmitrii Mikhailovich Knatko

Higher School of Economics University, Department of Strategic and International Management, Russia

ARTICLE INFO

Keywords:
Market orientation
Technology orientation
Strategic capabilities
Environmental dynamism
Performance

ABSTRACT

While there are several studies that examine the performance implications of different strategic orientations, little is known regarding the complex interplay between the two prominent strategic orientations and strategic capabilities in impacting firm performance. Notably, it is ambiguous how a firm's strategic orientations are aligned with different strategic capabilities to maintain competitive performance. To address this gap, the study employs a moderated mediation analysis to investigate the mediating role of strategic capabilities in the relationship between market, technology orientations, and firm performance. It also examines the moderating effect of environmental dynamism in shaping the mediated association between strategic orientations and performance. Based on the survey results of 205 large Ethiopian manufacturing firms, our findings confirm that market orientation exerts a positive and significant influence on both marketing and market-linking capabilities, while only marketing capabilities mediate the relationship between market orientation and firm performance. Likewise, there is a strong association between technology orientation and strategic capabilities (i.e., technology and information technology capabilities), mediating the relationship with firm performance. Meanwhile, environmental dynamism influences the indirect relationship that exists between market, technology, and firm performance through their corresponding strategic capabilities. Our study sheds light on strategic management literature by showing the unique relationship and interdependency between strategic orientations and capabilities in attaining superior performance. This study also forwarded some practical implications of the findings.

1. Introduction

The manufacturing industry is the fastest-growing sector of the Ethiopian economy [1] as a result of huge investments in economic infrastructure like industrial parks and investment promotion. Ethiopia's ambition to become a low-middle-income economy by 2029/30 demands the focus of economic activities to the manufacturing sector [2]. Further, with its ongoing economic transformation and structural changes into a market-led economy, domestic firms are required to be more competitive as the country opens up its economy to international competition by joining the BRICS alliance and aiming to be a member of the World Trade Organization (WTO). In response to these changes in the competitive environment, firms should not only rely on procuring physical assets but also

* Corresponding author.
E-mail addresses: henock.semaw@gmail.com, hmelesse@hse.ru (H.S. Melesse), dknatko@hse.ru (D.M. Knatko).

https://doi.org/10.1016/j.heliyon.2024.e35497
Received 8 March 2024; Received in revised form 27 July 2024; Accepted 30 July 2024
Available online 31 July 2024

need to build and align their internal resources and capabilities to improve their competitiveness [3,4].

Firms make durable strategic decisions based on their values and principles, which often determine their long-term strategic behaviors and success [5]. Strategic behaviors are the result of strategic choices and are reflected in different strategic orientations. In most cases, firms with strategic clarity employ individuals or combinations of strategic orientations, namely, market, technology, entrepreneurial, and learning orientations [6,7]. Of these, market and technology orientations are the most prominent strategic orientations that are distinctively engrained with strategic capabilities. Strategic orientations are the antecedent of firm performance while intertwined with the strategic capabilities of a firm. Since emphasizing on specific strategic orientation/s per se barely produces intended performance outcomes, firms need to deploy complementary capabilities to effectively exploit the crucial corporate resources and external environmental opportunities. Therefore, creating economic value and attaining superior performance requires a wide range of strategic capabilities [4]. Although it is impossible to exhaustively list all, core categories of capabilities that are common to many organizations have been identified and used in prior studies [8,9].

Despite lacking a universal definition [7], stated that strategic orientations are "principles that direct and influence the activities of a firm and generate the behaviors intended to ensure its viability and performance." Correspondingly [10], described “strategic capabilities as unique combinations of skills and accumulated knowledge that leverage organizations to deploy assets and coordinate activities successfully” [8]. Further [11], noted that to be strategic, a capability must be honed to user needs, distinctive, and difficult to imitate [4]. However, strategic management studies have provided a heterogeneous understanding regarding those topics. While some studies conceptualized strategic orientations (i.e., entrepreneurial, market, and learning orientations) as strategic capabilities [12–14], others presented mixed results regarding the effect of different strategic orientations on firm performance [15–18]. This inconsistency in the literature creates confusion in our understanding of strategic orientations and capabilities. In light of this discussion, the joint influence of strategic orientations and strategic capabilities on firm performance remains a conceptual and empirical research gap in the field of management in general. Little is known on how firms can translate market orientation (MO) and technology orientation (TO) into better performance outcomes through deployment of the essential strategic capabilities [4].

On the other hand, studies have also argued that, instead of exerting a direct effect on firm performance, strategic orientation may act through intervening variables [19–23]. A significant portion of such intervening variables include strategic capabilities and environmental contingencies [24–26]. To this end, limited studies investigated the interrelations between MO and marketing capabilities (MC) [21,27–29], technology-driven strategy, technology capabilities (TC), and their influence on performance in fragmented manner [30]. Moreover, the contingent effects of prominent strategic orientations have not been fully explored in relation to firm performance [19,31–34]. Thus, the study seeks to fill the existing knowledge gaps by investigating the mechanisms through which different strategic orientations influence strategic capabilities and firm performance [22,35]. Accordingly, we are guided by two research questions: To what extent do MO and TO facilitate the development of strategic capabilities? To what extent do strategic orientations influence firm performance through strategic capabilities under a given environmental context?

Drawing upon the resource-based view (RBV) and contingency theories, the study proposed a conceptual framework that explicates how strategic capabilities facilitate the relationship between different strategic orientations and firm performance under the moderating role of environmental dynamism. This study is based on a sample of 205 large manufacturing enterprises drawn from Africa’s fastest-growing economy, Ethiopia. The study employed a moderated meditation analysis with the aid of SPSS PROCESS regression-based model number 7 [36] to examine the indirect associations that exist between strategic orientations, and firm performance with the mediation role strategic capabilities. By investigating the moderated mediation effect of both market and technology orientations on firm performance via associated capabilities in a relatively stable environment, the study sheds light on the joint impact of strategic orientations and strategic capabilities in achieving better organizational performance.

This study presents two relevant contributions to the extant literature in the field of strategic management. Firstly, the empirical study identified the distinctive role of strategic orientations in the development of specific strategic capabilities and in shaping the performance outcomes of organizations. Most previous studies discussed the direct impact of strategic orientations on firm performance without considering their intersectional phenomenon with strategic capabilities and the contingent factors influencing performance [37–40]. Secondly, the study ascertained the complementarity nature of both strategic resources and their interdependence in achieving superior performance.

This paper is structured as follows: In the subsequent section, we present the theoretical background and the proposed conceptual framework, introducing the notion of strategic orientations and strategic capabilities in driving firm performance, including the tested hypotheses. Following the detailed description of the methodology employed in this article, we present the results and discussion of the findings. The paper concludes with a presentation of the implications of the study as well as its potential limitations.

2. Theoretical background and hypothesis development

2.1. Strategic orientations

Strategic orientation reflects a behavioral or cultural predisposition and intrinsic behavior that mold business processes to realize competitive performance [41]. Focusing on particular strategic behavior enables a firm to execute specific business domains and boost performance. The choice of specific strategic orientation itself has its performance implications [42]. Literally, strategic orientations encompass the efforts and actions to create and implement the necessary organizational behaviors to attain superior firm performance [43]. Notably, there are four widely recognized strategic orientations: market, technology, entrepreneurial, and learning orientations in strategic and marketing management literature [6,7,32]. Each strategic orientation has unique features and roles in organizations. This study emphasizes on the two prominent strategic orientations: market and technology, since the majority of firms behave and

position themselves in certain outside-in or inside-out approach to maintain customer-centric strategies or drive innovation and efficiency that enable them to successfully position themselves in today's competitive environment [35,37].

The RBV provides elucidation about the role of strategic orientations in influencing organizational performance. According to this notion, new knowledge characterized as crucial, rare, and barely imitable is a valuable resource that drives businesses into sustainable competitive advantage [44]. Strategic orientation reflects decisions on a firm's knowledge resources that must be preserved, evaluated, and capitalized to gain a competitive advantage [22]. Consequently, strategic orientations are one source of competitive advantage that facilitates the idiosyncratic deployment of strategic capabilities needed for better performance. A firm's business model design has significant performance effects and demands significant strategic alignments. Thus, enhancing internal decision-making ability requires a strategic orientation that determines how firms should engage in intelligence data-gathering tasks [45]. Yet, studies have presented mixed findings regarding the outcomes of different strategic orientations. One group of studies considered strategic orientations as the main antecedent of firm performance [5] while others argued the need for deployment of complementary capabilities [21,46,47].

2.2. Strategic capabilities

The RBV further proffers a broad understanding of the role of resources and capabilities that are valuable firm competences in strategy design rather than industry membership [4,48]. The theory advocates the value of resource endowments as a means of building a sustainable competitive advantage [44,49]. Accordingly, sustainable competitive advantage is a function of a firm owing valuable, rare, inimitable, and non-replaceable (VIRN) resources and capabilities [11,44,49,50]. The notion of sustained competitive advantage is based on the idiosyncratic deployment of firm resources linked to the heterogeneous nature of resource distribution and the inability of competitors to easily replicate the benefits of a strategy and resource configurations that engender the competitive edge [44,51]. As [44] posited that internal resources grant a sustained competitive advantage which includes all tangible and intangible assets, organizational processes, information, and knowledge enabling a firm to devise and effectuate strategies that fundamentally enhance its efficiency and effectiveness. Nevertheless, it is the effective utilization not mere possession of resources that creates a competitive advantage leading to superior performance [51]. Though it has been a widely used theory in strategic management, it has also drawn criticism due to its static nature and its failure to provide specific resource configurations that lead to the creation of competitive advantage [52].

The capabilities view of the firm emanated from the discipline of strategic management [53] and its theoretical foundation the RBV [4]. The perspective focuses on building distinctive core competences that cannot be easily mimicked by competitors. Capabilities are a firm's competences built on internal resources and intertwined with organizational processes [54] and distinctive-to-firm specific managerial, organizational, functional, and technological endowments that proffer competitive rents [11]. Strategic capabilities have been defined as "complex bundles of skills and accumulated knowledge that enable firms [or SBUs] to coordinate activities and make use of their assets" [8,10] required to create economic value and sustain competitive advantage. It is the product of a firm's ability to organize its resources and strategic business processes in a unique and value-adding system [8]. The concept of strategic capabilities underlines the distinctive nature of organizations [11]. Seeking an optimal mix of resources builds the basis of strategic capabilities and achieving the required mix becomes an unceasing struggle in the process of capability reconfiguration.

Based on studies conducted using survey data across several industries from three countries [10], developed major categories of strategic capabilities of strategic business units (SBUs): marketing, market-linking, technology, information technology (IT), and management capabilities [4]. Marketing capabilities include skills in the effective deployment of distribution outlets, pricing, promotion, and advertising strategies relative to competitors that help to exploit market sensing and technological capabilities and execute marketing strategies [9,10,55]. Market-linking capabilities (MLC) comprise market sensing, networking and customer linking, and tracking competences, including creating and maintaining long-term bonds with customers, suppliers, and channel members that enable a firm to respond to real-time customer preferences and allow the firm to harness marketplace rents [9,10]. Technology capabilities encompass innovations, product development, operation, and materials management process capabilities that grant a firm to minimize costs of production as well as increase operational efficiencies and competitive performances [56]. Information technology capabilities (ITC) imply a system that permits the firm to successfully disseminate market information to the entire functional units thereby buttressing new product development activities. Lastly, management capabilities include skills related to coordinated planning, forecasting as well as human, and financial management capacities [9,10,56]. Overall, this strategic capabilities framework of [10] has been extensively used and supported in strategic management literature. They have developed 11 scaled items to measure the strategic capabilities of different SBUs relative to their rivals and their ability to sustain competitive performance.

2.3. The research gap

Most of the prior studies focus on discussing how specific strategic orientations impact organizational performance without taking into account the external environmental factors [21,35,57]. These studies were primarily interested in answering whether market or technology orientation can lead to superior performance mainly in small and medium-sized enterprises (SMEs). Studies assessing the unique relationship that exists between strategic orientations and strategic capabilities are rarer [30,58,59]. Moreover, few studies investigated the joint impact of different strategic orientations on firm performance [35,37]. The majority of empirical studies used different mediators such as marketing capabilities [46,57,58,60] and technology capabilities [30], innovativeness [23] learning orientation [38], pricing capability [25], and moderators like competitive intensity [58,61], marketing management [43] in the relationship between market, technology orientations and firm performance. While those studies provide some insights regarding the

Table 1
Overview of key studies on strategic orientations and capabilities.

Authors	Research questions	Methods and sample	Key findings
Our study	What is the joint impact of strategic orientations and strategic capabilities on firm performance?	Moderated mediation n = 205 manufactures	Strategic orientations and capabilities are interdependent and jointly influence firm performance. Environmental dynamism strengthens the association.
[58]	Does MO influence performance in export markets?	Structural education modeling (SEM) n = 491 export ventures based in China	Marketing capabilities mediate the MO–performance relationship. competitive intensity strengthens the relationship
[46]	How deployment of MO and marketing capabilities affect performance?	SEM n = 230 U S. firms	MO and marketing capabilities are complementary assets contributing to improved firm performance.
[21]	How MO and capabilities can enhance the performance of a firm?	Qualitative	Combination of MO and marketing capabilities enhance a competitive advantage and firm performance
[57]	Does MO facilitates the development of external market capabilities, before influencing organizational performance?	Moderated hierarchical regression n = 159	MO facilitates the development of both market capabilities and in turn enhances organizational performance.
[61]	How much the interplay between MO, strategic flexibility affect firm performance?	Ordinary least squares regression n = 272 firms from India	Interaction among MO, strategic flexibility and competition intensity explain variance in small firm performance
[59]	Does collaborative communication affect market related capabilities and performance?	Partial least squares structural model n = 167 electronics industry in Taiwan	Market-relating capabilities (i.e., market-linking and marketing capabilities) completely mediate the collaborative communication–financial performance
[25]	Does MO leads to the development of pricing capability and improve business performance?	Partial least squares structural equation modeling n = 298 Indian SMEs	MO significantly contributes to development of pricing capability, which in turn improves performance
[15]	Can there be too much of MO a good thing?	Regression techniques Longitudinal dataset drawn from the S&P 500 n = 449	There is curvilinear relationship between MO and firm performance.
[60]	To what extent MO and social media use impact market sensing capabilities and performance?	Partial least squares path modeling method n = 143 UK B2B SMEs	MO stimulates social media use to enhance market-sensing capability thereby facilitating two customer-linking capabilities, which collectively contribute to greater marketing performance and financial performance
[38]	Does learning orientation mediates the relationship between MO and business performance?	SEM n = 309 Brazilian SMEs in the metal-mechanic and wine sectors	There is a positive and significant relationship between MO, learning orientation and business performance
[62]	To what extent does strategic orientations promote firms' digital capabilities and new product development performance in the context of digital transformation?	SEM n = 174 Chinese manufacturing firms	TO and customer orientation play a critical role in driving firms' digital capabilities. TO plays a more significant role than customer orientation in contributing to performance
[35]	Do having different combinations of strategic orientation leads to sustainable innovation performance?	Non-hierarchical cluster analysis n = 373 Italian manufacturing firms	Co-alignment of TO with MO can help firms enhance their performance
[23]	Does technology orientation predict firm performance through firm innovativeness?	Regression analysis. n = 478 Software houses in Pakistan	TO predicts firm performance and innovativeness mediates the relationship between TO and performance
[40]	Does the role of strategic orientation, strategic audacity and focal goals differ in driving firm performance depending on the company type?	Regression analysis (n = 282) companies in developing European Union countries	TO focusing on efficiencies and markets drive firm performance to nonfamily
[43]	To what extent does the relationship between a firm's strategic orientations, marketing management affect innovation performance?	Hierarchical.regression n = 1603 French manufacturing firms	Firms combining customer/TO outperform. Marketing management positively moderates the relationship between orientation and performance
[30]	Are strategic capabilities the missing links in the relationship between technology-driven strategy and firm performance?	Hierarchical regression n = 146 U S. new ventures	Technology-driven strategy is positively associated with firm performance through technology capabilities and IT capabilities
[37]	What is the joint effect of entrepreneurial orientation (EO), MO, and TO on firm performance?	Partial least squares structural equation modeling n = 206 SMEs in Saudi Arabia	EO, MO, and TO have a positive and significant effect on financial performance.

association between strategic orientations and capabilities, they failed to assess the joint effects of both market, technology orientations and strategic capabilities such as market-linking and IT capabilities on firm performance by incorporating important environmental factors in the equation. Our study aims to explore the complex interaction between the two prominent strategic orientations and capabilities in impacting firm performance under given environmental contingencies and to test the hypotheses in a developing market settings. Table 1 briefs relevant research upon which we have built our study, and further highlights the uniqueness of the paper.

2.4. Market orientation, marketing-related capabilities, and firm performance: the moderating role of environmental dynamism

The concept of market orientation was introduced by [63], referring to the actions of an organization related to the production, spread, and readiness to meet the information needs of customers and the intelligence required to outsmart rivals. MO has been assumed to be organizational culture [64], firm resource [58], and capability [65,66]. It is a means of building distinctive market-based strategic capabilities that enable a firm to harness market information and upgrade its competitive advantage [46,58]. These capabilities include marketing capabilities and market-linking capabilities.

MCs are useful resources that enable a firm to better position itself in the market [67]. Complementing MO with marketing capabilities strengthens firms' competitive advantage which in turn improves organizational performance [21]. Similarly, a firm can deploy its market-linking capabilities to scan market opportunities ahead of its rivals and to interconnect its other capabilities to the external environment [8]. By linking upstream and downstream, firms ensure access to information, guarantee the quality of raw materials, lower transaction costs and secure important resources [68]. A firm pursuing MO can efficiently utilize its market-linking capabilities to enter into new markets and to outperform competitors [60,69]. Thus, MO accelerates the advancement of customer-linking capability before impacting firm performance [57].

According to Ref. [5], MO represents the demand-pull philosophy involved in satisfying explicit and latent demands. This market-driven view indicates the firm's outside-in strategy centered on maintaining the loyalty of clients by offering distinguishable value to customers. In contrast, marketing and market-linking capabilities are internal resources required to build core competences needed to create superior value and satisfy customers [8]. The strategic alignment of the external market environment with a strong internal resource base strengthens firm performance. In this regard, MO is a key antecedent for the development of marketing capabilities [21,70] and market-linking capabilities which serve as a missing link towards competitive performance [60]. This complementarity between market orientation and marketing capabilities led to greater customer value creation and improved firm performance [21,46,70,71]. Therefore, both marketing and market-linking capabilities significantly affect customer-focused performance and financial performance [59,60,70].

Moreover, since MO reflects an outside-in approach, it is also highly impacted by the dynamics in the external environment. Environmental dynamism denotes the frequency of change in the external environment in connection to demand, competitors, technology, and regulations [72]. These variations create opportunities and have significant implications in determining firms' strategic responses, including strategy formulation and configurations of capabilities and organizational outcomes [73]. MO enables firms to sense the changing needs of customers and effectively respond via marketing capabilities that are needed to succeed in a dynamic environment. High degree of environmental dynamism offers better opportunities to market-oriented firms [74,75]. MO seek to understand the environmental changes to proactively respond to customers' needs. This process demands marketing capabilities that can enhance firm performance [25]. High level of environmental dynamism requires the integration of MO, marketing and market-linking capabilities to improve firm performance [76]. Despite environmental changes involve risks, market driven firms unveiling effective marketing capabilities will outperform their rivals in dynamic environment than in stable environment. We also assume that, depending on levels of firms' capabilities, the environmental dynamics strengthens the relationship between market orientation and firm performance [25]. Thus.

H1. Competitive firms emphasizing on market orientation exhibit strong marketing (H1a) and market-linking capabilities (H1b), mediating the association between market orientation and firm performance.

H2. Environmental dynamism moderates the indirect relationship between market orientation and firm performance through both marketing (H2a) and market-linking capabilities (H2b).

2.5. Technology orientation, technology-related capabilities, and firm performance: the moderating role of environmental dynamism

TO represents the propensity of both a firm and the belief of management towards the production and utilization of the latest technologies with intention to lead and interlink the market [7,77]. This disposition also fosters innovative mechanisms in the deployment of digital and renovating products [41,62]. Firms pursuing a technology-driven strategy focus on improving technology applications in their processes to achieve organazional growth [78]. These type of firms chose to compete in the market through providing new solutions and deploying leading technology in their production processes or by launching a series of new products.

Research has found that firms emphasizing on TO allotted huge amounts of finance to exploit the benefits of innovations that may contribute to the introduction of new techniques, products, and services [23,35]. The allocated budget is devoted to regularly be involved in proactive research and development projects that can improve organizational performance [79]. In such a way, TO drives a

firm to manufacture high-quality products that exceed customers' expectations, through high degree of innovativeness that ultimately enhance performance [23].

On the other hand, technology capabilities build competitive advantage through reducing relative cost positions or creating differentiation which lower transaction and operational costs, supporting product development, optimal inventory management, and improving system efficiencies [10,80]. Technology capabilities are considered as core competences that build and maintain competitiveness. Competences encompass skill sets and know-how that are vital to innovate and develop new products as well as reinforce key corporate resources. These resources make possible the use of a firm's assets, including managerial knowledge and capabilities [81].

Technology-oriented firms follow an inside-out approach that focuses on developing internal capabilities to produce high-value products, which in turn influence firm performance [40]. The alignment between TO and technology capabilities exhibit detrimental impacts on firm performance [43]. Extant literature has found a strong association between technology capabilities and firm performance [19,23,30]. In essence, effective technology capabilities enable firms to flourish and attain superior performance [80] through the exploitation of innovations [35,82].

Technology-oriented firm also focuses on configuring advanced technology and maintaining strong relations with key stakeholders like customers and suppliers, research firms [23], and deploying digital technologies across all functional domains [83]. To this end, the ability to efficiently manage information and communication technologies for the entire organization is indispensable. Thus, TO facilitates the deployment of IT resources and the development of digital capabilities [62]. IT capabilities encompass a firm's technical, managerial, and IT system competences [84]. Innovative usage of resources creates IT capability, which is linked to higher strategic flexibility that reinforces organizational growth and competitive performance [10,62,85]. A more creative utilization of IT capabilities leads to superior firm performance by advancing the speed of decision-making and degree of responsiveness to changes in the market environment [8,85].

Few studies showcased the presence of indirect and contingent effect between IT capabilities and business performance [30,86,87]. There are reasons to posit that the link between technology orientation and performance is indirect. First, TO creates a conducive climate for the development of technology-related capabilities before impacting performance. Secondly, TO leads to different types of innovation, thereby strongly influencing performance through increased firm innovativeness and efficiency [19,23,35]. Thus, a technology-driven strategy improves firm performance through technology and IT capabilities [30,62].

TO reflects firm's inside-out approach in relation to the external environment. To technology-oriented firms which possess strong technology-related capabilities, changes in the external environment create better opportunities [75]. The velocity of change in the market needs technology capabilities to seize the prevailing opportunities. According to RBV, valuable, rare, and non-imitable resources allow a firm to gain competitive advantages in highly competitive environment [11,88]. To this effect, environmental dynamism solidify the synergy between TO and technology-related capabilities in driving firm performance. Firms with a strong TO boost their performance under the condition of high degree of environmental dynamism since they develop core competences required to meet the changing demands of the market with the introduction of new processes or products [62,78]. Therefore, we assume that environmental dynamism reinforce the mediated link between TO and firm performance by technology-related capabilities, since possessing these resources enables firms to excel under highly dynamic environment. Accordingly, we propose the following hypotheses (Fig. 1).

H3. Competitive firms emphasizing on technology orientation exhibit strong technology (H3a) and IT capabilities (H3b), mediating the association between technology orientation and firm performance.

H4. Environmental dynamism moderates the indirect relationship between technology orientation and firm performance through both technology (H4a) and IT capabilities (H4b).

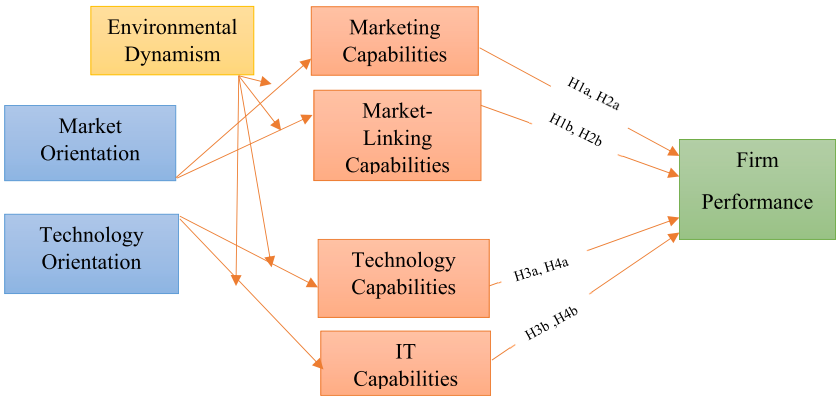


Fig. 1. Conceptual model.

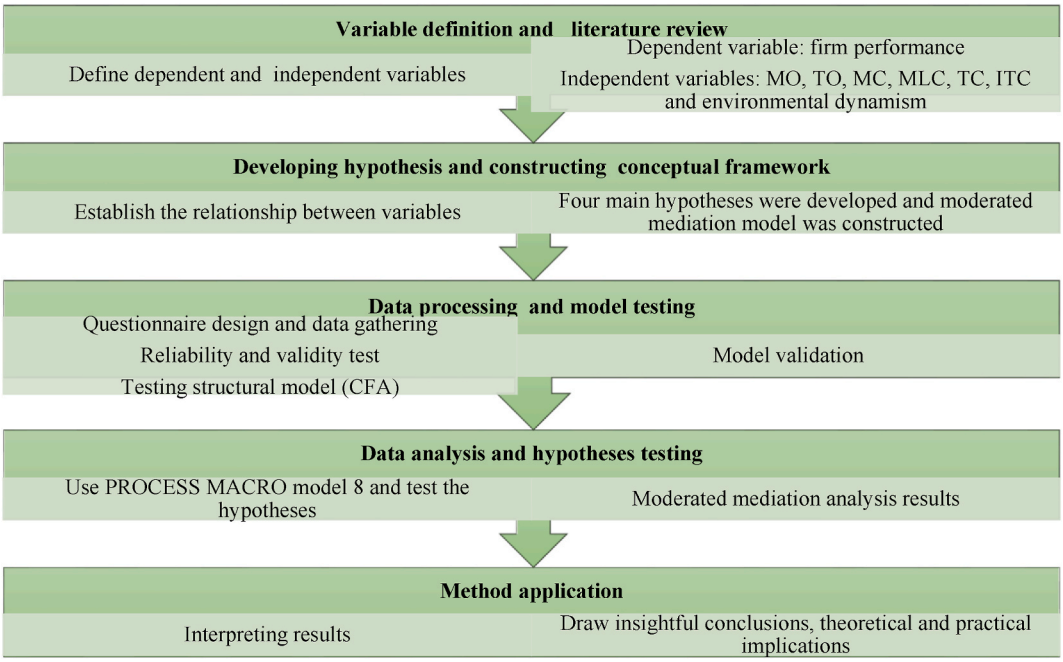


Fig. 2. Methodology flowchart of the study.

3. Methodology

This study employed five research methodology process (as illustrated in Fig. 2). **Stage 1** involved definition and identification of variables through comprehensive literature review. S**tage 2** comprised of the formulation of research hypotheses and conceptual framework of the study. In **stage 3,** we tested the reliability and validity of data. Further, we run confirmatory factor analysis **(**CFA) to test the structural model and assess the model fitness**.** In **stage 4**, PROCESS MACRO was utilized to investigate environmental dynamism moderated mediation effect of strategic orientations, capabilities and firm performance. Lastly, in **stage 5**, we interpreted the results and relevant conclusions were drawn.

3.1. Data

The survey was conducted on Ethiopian large manufacturing industries between the month of July and October in the year 2023. Manufacturers with more than 100 permanent employees and a total asset worth more than birr 90,000,000 ($1,587,460.50) are categorized as large manufacturing enterprises [89]. Based on the information obtained from the Ministry of Industry, there are round 1135 registered large manufacturing enterprises in Ethiopia. Using a cluster sampling technique, wide range of local manufacturers that have operated for more than 5 years were surveyed. The clusters include chemicals, pharmaceuticals, food and beverage, footwear and clothing, construction materials, textiles, plastic and leather products. A total of 400 questionnaires were distributed to senior managers with in the selected clusters. The survey was undertaken in highly industrialized regions of Ethiopia, namely Amhara, Oromia, Sidama regional states, and Addis Ababa and Dire Dawa city administrations. By sampling only large manufacturing-based firms, the study effectively controlled the macro-industry effects through the elimination of other industry sectors (e.g. agriculture and mining) from the sample.

The survey was conducted in two stages. In the first phase, the physical delivery of questionnaires and support letters were distributed to selected executives drawn from sample manufacturing firms. In the second stage, a collection of response was made one week after the initial reminder calls to the participants. Accordingly, 156 responses were received in the beginning stage of stage two. At the end of this stage, the remaining 49 responses were collected. Consequently, a total of 205 useable questionnaires were gathered, with a response rate of 51.25 %.

Nonresponse bias was assessed by a comparison of [1] sample statistics to known values of the population, such as number of employees, and [2] first-round and second-round data. Both procedures revealed insignificant differences between both samples (Armstrong & Overton, 1977).

Reliance on data collected through self-reported questionnaire from a single source entail data collection biases. To this end, the study employed both procedural and statistical techniques to control and detect those biases [90,91]. The Harman's single factor test

Table 2
Reliability and convergent validity.

Items	Constructs/Description	Standardized Factor Loadings
Market Orientation ($\alpha = 0.887$, CR = 0.874, AVE = 0.585, MSV = 0.513)		
Mo1	Our business objectives is driven by customer satisfaction	0.631
Mo2	We monitor our level of commitment to serving customers' needs	0.692
Mo3	Our strategy for competitive advantage is based on our understanding of customers' needs	0.812
Mo4	Our business strategies are driven by our beliefs about how we can create greater value for customers	0.851
Mo5	Our company understands how everyone in our company can contribute to creating customer value	0.814
Technology orientation ($\alpha = 0.8868$, CR = 0.888, AVE = 0.666, MSV = 0.555)		
To1	We use sophisticated technologies in our new product development	0.739
To2	Our new products are always at the state of the art of the technology	0.826
To3	Technological innovation, based on research results, is readily accepted in our organization	0.854
To4	Technological innovation is readily accepted in our program/project management	0.840
Marketing capabilities ($\alpha = 0.896$, CR = 0.887, AVE = 0.567, MSV = 0.493)		
Mc1	Knowledge of customers.	0.743
Mc2	Knowledge of competitors	0.690
Mc3	Integration of marketing activities	0.766
Mc4	Skill to segment and target markets.	0.753
Mc5	Effectiveness of pricing programs	0.759
Mc6	Effectiveness of advertising programs.	0.802
Market linking($\alpha = 0.907$, CR = 0.907, AVE = 0.619, MSV = 0.437)		
ML1	Market sensing capabilities.	0.809
ML2	Customer-linking (i.e. creating and managing durable customer relationships) capabilities.	0.799
ML3	Capabilities of creating durable relationship with our suppliers.	0.787
ML4	Ability to retain customers.	0.784
ML5	Channel-bonding capabilities (creating durable relationship with channel members such as whole sellers, retailers, etc.).	0.805
ML6	Relationships with channel members.	0.734
Technology capabilities($\alpha = 0.899$, CR = 0.897, AVE = 0.593, MSV = 0.493)		
Tc1	New product development capabilities.	0.654
Tc2	Manufacturing processes	0.749
Tc3	Technology development capabilities.	0.820
Tc4	Ability of predicting technological changes in the industry	0.807
Tc5	Production facilities.	0.808
Tc6	Quality control skills	0.769
IT capabilities($\alpha = 0.847$, CR = 0.848, AVE = 0.529, MSV = 0.401)		
Ic1	IT systems for new product development projects	Deleted
Ic2	IT systems for facilitating cross-functional integration	0.644
Ic3	IT systems for facilitating technology knowledge creation	0.747
Ic4	IT systems for facilitating market knowledge creation	0.801
Ic5	IT systems for internal communication (e.g., across different departments, across different levels of the organization, etc.)	0.732
Ic6	IT systems for external communication (e.g., suppliers, customers, channel members, etc.)	0.703
Environmental dynamism($\alpha = 0.859$, CR = 0.863, AVE = 0.560, MSV = 0.513)		
Ed1	In our market, customers' preferences change very quickly over time	0.773
Ed2	For our market, market demand and consumer tastes have been unpredictable	0.784
Ed3	Actions of local and foreign competitors have been highly unpredictable	0.789
Ed4	The competition of our business is changing very rapidly	0.744
Ed5	In our environment, new business models evolve frequently.	0.641
Performance($\alpha = 0.844$, CR = 0.844, AVE = 0.577, MSV = 0.555)		
P1	Average sales volume growth for the last three years	0.693
P2	Average profit over the past three years	0.741
P3	Average market share growth in three years	0.792
P4	Average return on investment in three years	0.806
Model Fitness: X2 = 1071.548, df = 747, X2/df = 1.434, RMSEA = 0 0.046,RMR = 0.084, TLI = 0.933, GFI = 0.817, CFI = 0.939		

was used to assess the common method bias for the variables and the result indicated that the explained variance was less than 50 % (29.80 %), referring absence of the common method bias [91]. We also examine the correlation matrix (see, Table 3), to check the presence of high correlations (>0.9) as potential indicators of common method bias [92]. The results of the analysis show that common method bias is not a concern. Further, to control social desirability bias, we have informed the respondents regarding the confidentiality and anonymity of responses. Moreover, we have designed the questionnaire without including respondent's personal profiles to enable them genuinely rate the status of each variable [90].

Table 3
Descriptive statistics and pairwise correlations.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1-No. Employees	628.737	387.6219	1									
2-Age	7.551	2.8325	0.060	1								
3-Market Orientation	4.893	1.174	−0.110	0.053	1							
4-Technology orientation	4.795	1.087	−0.093	0.126	0.532**	1						
5-Marketing capabilities	5.320	1.143	−0.173*	0.114	0.538**	0.468**	1					
6-Market linking	5.078	1.053	−0.033	0.023	0.558**	0.398**	0.590**	1				
7-Technology capabilities	5.077	1.312	−0.083	−0.135	0.253**	0.330**	0.166*	0.169*	1			
8-IT capabilities	5.182	0.865	−0.041	0.096	0.319**	0.437**	0.481**	0.328**	0.277**	1		
9-Environmental dynamism	3.162	1.122	0.157*	−0.019	−0.612**	−0.626**	−0.600**	−0.564**	−0.242**	−0.409**	1	
10-Performance	5.148	1.050	−0.165*	0.066	0.438**	0.647**	0.560**	0.409**	0.447**	0.535**	−0.552**	1

Note: * Significant at $p < 0.05$; **$p < 0.01$; SD, standard deviation.

3.2. Measures

Each respondent was requested to provide his/her level of agreement in 7-point Linkert scale items for strategic orientations on a series of 7-point Linkert scale items (1-strongly disagree and 7-strongly agree) and further asked to rate their SBU's strategic capabilities relative to their major competitors (modified scale, 1-much worse than our competitors and 7-much better than our competitors) and performance (1-well below industry average and 7-above industry average). Well-established measures of different strategic orientations: market orientation [82,93], technology orientation [94], and firm performance [95,96] were used. Similarly, the four major categories of strategic capabilities, namely marketing, market-linking, technology, and information technology capabilities, were explicitly measured using validated scales adapted from previous works [9,10,55,92].

3.3. Measurement models

The SPSS PROCESS regression-based model number 7, the moderated meditation model [36] was employed to test the hypotheses of the study. Compared to other competing methods, PROCESS allows for testing complex mediation models and is less sensitive to violations of assumptions, including small sample size [97]. Table 2 presents the confirmatory factor analysis (CFA) within AMOS which was assessed before testing the structural model to establish the measurement model's validity [98]. Each item was assessed and allowed to load into its proposed indicator. All item's standardized factor loading was above the required threshold of 0.6 [99], which ranges between 0.52 and 0.90. Similarly, the average variance extracted (AVE) surpassed the recommended threshold (i.e., AVE >0.5) ranging from 0.54 to 0.63 as it is evidence of good convergent validity. Additionally, the Maximum Shared Variance is less than the respective AVE for all variables which is another indication of convergent validity. The Cronbach alpha and composite reliability scores for all variables are above 0.70, which is evidence of good reliability. Further, using [100] criteria, good discriminant validity was established. The topmost values are the square root of AVE and other values are inter-construct correlations. These values should be higher than other values in their corresponding rows and columns (see Table 6, appendix).

Further, the result of CFA for relative chi-square (x2/df), root mean square error of approximation (RMSEA), standardized root mean residual (RMR), Tucker-Lewis index (TLI), and comparative fit index (CFI) show all threshold values for a reasonable fit statistics, including (x2/df = 1.434, RMSEA = 0.046, TLI = 0.933, CFI = 0.939) were used to evaluate the fit between the hypothetical model and the sample data. All values meet the recommended thresholds set by [101]]. Additionally, Table 3 depicts descriptive statistics and inter-correlation matrix, with values less than 0.70, indicating the absence of multi-collinearity problem [102].

4. Results

The study employed a moderated mediation analysis using SPSS PROCESS regression-based model number 7 (Hayes, 2012). As it is presented in Table 4, the results revealed that both MO and MC are directly related to firm performance (MO: **b** = 0. 0.1501, $p < 0.05$, 95 % bootstrap CI [0.0218, 0.2785]; MC: **b** = 0.3818, $p < 0.001$, 95 % bootstrap CI [0.2436, 0.5199]). Nevertheless, the direct effect of market-linking capabilities on performance (MLC: **b** = 0.0673, $p < 0.05$, 95 % bootstrap CI [−0.0828, 0.2175) resulted in an insignificant outcome.

On the other hand, the relationship between MO and both marketing, as well as market-linking capabilities (b = 0.1647, $p < 0.05$, 95 % bootstrap CI [0.0283, 0.3012]; b = 0.2334, $p < 0.05$, CI [0.1036, 0.3632]), is higher, indicating a strong association between the two groups of complementary strategic resources. The analysis further confirms the indirect effect of MO on the performance of large manufacturing firms through marketing capabilities (b = 0.0629, $p < 0.05$), supporting H1a, while market-linking capabilities were found to be insignificant in mediating the relationship (b = 0.0157, ns), rejecting H1b.

Moreover, we analyzed the moderating effect of environmental dynamism on the indirect relationship between market orientation and firm performance via marketing and mark-linking capabilities. Accordingly, the result indicated that environmental dynamism significantly influence the indirect relationship that exists between MO and firm performance through marketing capabilities (**b** = 0.0457, 95 % bootstrap CI [0176, 0.0800]). Meanwhile, this indirect effect becomes stronger when environmental dynamism turns out to be higher (b = 0.1141, 95 % bootstrap CI [0.0418, 0.2004]), supporting H2a. However, moderated mediation through market-linking capabilities (**b** = 0.0064, 95 % bootstrap CI [−0.0103, 0.0313]) is insignificant, rejecting H2b.

As it is shown in Table 5, the results indicated that TO, TC, and ITC are directly associated with firm performance (TO: **b** = 0.4283, $p < 0.001$, 95 % bootstrap CI [0.2000, 0.4322]; TC: **b** = 0.1759, $p < 0.001$, 95 % bootstrap CI [0.0936, 0.2581]; ITC: **b** = 0.3321, $p < 0.001$, 95 % bootstrap CI [0.2035, 0.4607]), respectively. This finding revealed that both resources impact firm-level performance significantly. On the other hand, there is a strong relationship between TO and technology-related strategic capabilities. Specifically, TO has a positive and significant effect on technology (TC: **b** = 0.3945, $p > 0.05$, 95 % bootstrap CI [0.1804, 0.6086]) and IT capabilities (ITC: **b** = 0.2324, $p > 0.05$, 95 % bootstrap CI [0.0980, 0.3667]). Additionally, the analysis showed that both technology (TC: **b** = 0.0694, $p > 0.05$, 95 % bootstrap CI [0.0253, 0.1259]) and IT capabilities (ITC: **b** = 0.0772, $p > 0.05$, 95 % bootstrap CI [0.0265, 0.1357]) mediate the relationship between TO and firm performance, supporting H2a and H2b.

Furthermore, we have tested the moderating role of environmental dynamism on the indirect interaction between TO and performance. Although the overall conditional effect was found to be insignificant, the study shows that under the conditions of both low and high environmental dynamism, the moderated indirect association between TO and performance through technology capabilities (b = 0.0693, 95 % bootstrap CI [0.0236, 0.1335]) and information technology capabilities (b = 0.0752, 95 % bootstrap CI [0.0273,

Table 4
Market orientation, market-related capabilities, and performance.

Relationship/Variable	b	SE	CI
Constant	2.8621	0.4470	1.9806 3.7437
Direct Relationships			
MO– > Performance	0.1501	0.0651	[0.0218, 0.2785]
MO — > MC	0.1647	0.0692	[0.0283 0.3012]
MO—— > MLC	0.2334	0.0658	[0.1036 0.3632]
MC– > Performance	0.3818	0.0700	[0.2436, 0.5199]
MLC– > Performance	0.0673	0.0761	[-0.0828, 0.2175]
Indirect Relationships			
MO— > MC– > Performance	0.0629	0.0347	[0.0004 0.1359]
MO— > MLC– > Performance	0.0157	0.0220	[-0.0281 0.0618]
Moderated Indirect Relationships (*via* MC)	Effects	SE	
Low Level of Environmental Dynamism	0.0085	0.0149	[-0.0661 0.0894]
High Level of Environmental Dynamism	0.1141	0.0403	[0.0418 0.2004]
Index of moderated mediation	0.0457	0.0160	[0.0176 0.0800]
Conditional Indirect Relationships (*via* MLC)			
Low Level of Environmental Dynamism	0.0396	0.0555	[-0.0210, 0 0.0419]
High Level of Environmental Dynamism	0.0229	0.0319	[-0.0516, 0.0874]
Index of moderated mediation	0.0064	0.0103	[-0.0103, 0.0313]
Controls;			
Age	−0.0002	0.0002	[-0.0375 0.0472]
Size	−0.0002	0.0002	[-0.0005 0.0001]
F	21.1481**	0.7374	

Note: **p < 0.01, *p < 0.05, †p < 0.1 (two-tailed test, n = 205) R-sq = 0.3470.

Table 5
Technology orientation, technology-related capabilities, and performance.

Relationship/Variable	b	SE	CI
Constant	5.7665	0.2792	[5.2158 6.3171]
Direct Relationships			
TO– > Performance	0.4283	0.0534	[0.2000 0.4322]
TO — > TC	0.3945	0.1086	[0.1804 0.6086]
TO—— > ITC	0.2324	0.0681	[0.0980 0.3667]
TC– > Performance	0.1759	0.0417	[0.0936 0.2581]
ITC– > Performance	0.3321	0.0652	[0.2035 0.4607]
Indirect Relationships			
TO— > TC– > Performance	0.0694	0.0262	[0.0253 0.1259]
TO— > ITC– > Performance	0.0772	0.0282	[0.0265 0.1357]
Moderated Indirect Relationships (*via* TC)			
Low Level of Environmental Dynamism	0.0694	0.0318	[0.0148 0.1360]
High Level of Environmental Dynamism	0.0693	0.0273	[0.0236 0.1335]
Index of moderated mediation	−0.0001	0.0124	[-0.0227 0.0271]
Conditional Indirect Relationships (*via* ITC)			
Low Level of Environmental Dynamism	0.0792	0.0363	[0.0127 0.1551]
High Level of Environmental Dynamism	0.0752	0.0269	[0.0273 0.1320]
Index of moderated mediation	−0.0018	0.0134	[-0.0277 0.0261]
Controls;			
Age	0.0072	00.0182	[-0.0287 0.0431]
Size	−0.0003	00.0001	[-0.0005 0.0000]
F	48.4462**	0.5093	

Note: **p < 0.01, *p < 0.05, †p < 0.1 (two-tailed test, n = 205) R-sq = 0.5490.

0.1320]) is significant. This result infers that environmental dynamism significantly strengthens the indirect relationship between TO and firm performance through technology-related capabilities. Moreover, control variables such as age and firm size are insignificant in affecting firm performance.

5. Discussion

The direct effect of MO on firm performance is widely studied topic, yet lacking conclusive findings. Several studies failed to prove any significant effect. This scenario push us to believe that the influence of MO is better explained in association with other complementary resources of a firm. Translating MO into superior performance needs distinctive mechanisms. As [103] noted building a customer-focused culture requires strategic capability and the deployment of MO. To this end, this study confirmed that MO is the key driver for both MC and market-linking capabilities with strong direct effects on the performance than through the mediating mechanisms of strategic capabilities. Our findings supported the strong direct association between MO and marketing, and market-linking

capabilities as well as firm performance. The results are consistent with and [21] who confirmed that both MO and MC enhance social and economic performance. Moreover, this finding is also aligned with the conclusion by (32).

The analysis also confirmed that marketing capabilities mediate the relationship between MO and firm performance. It has been widely acknowledged that marketing capabilities are one of the fundamental strategic capabilities that leads to superior performance through satisfying consumer needs and preferences. Our findings maintained the importance of building marketing capabilities in attaining the competitive performance of firms. This result aligns with the claim by (70) and (46) who posited that MO and marketing capabilities are complementary firm resources that boost competitive performance. In the same token [28], study on Finnish SMEs assessed the interplay among MO, marketing capabilities, and firm performance, the finding ascertained a strong mediating role of marketing capabilities in the relationship between MO and firm performance. Earlier [58], investigated export ventures based in China and validated the mediation effect of marketing capabilities in the relationship between MO and firm performance.

Even though some studies provide mixed evidence regarding the moderating role of environmental dynamism in the relationship between MO and firm performance [76], our finding support the commonly perceived phenomena [25]. While no prior study examined the moderating effect of environmental dynamism on the indirect relationship between MO and firm performance via marketing and mark-linking capabilities, this study offers important evidence in line with [74] that environmental dynamism positively moderating the indirect association between MO, marketing capabilities, and firm performance. In other words, the findings confirm that environmental dynamism significantly strengthens the indirect relationship that exists between MO and firm performance via marketing capabilities. The moderating effects of environmental dynamism should be understood in the context of the general sociocultural, economic, and political conditions of countries where firms are operating [76].

Previous studies emphasized examining the influence of TO on new product development performance [62] and innovation performance [35]. We argue that higher levels of optimal MO and TO lead to better innovation capabilities and could be reflected in other organizational performance indicators [35]. Accordingly, our findings revealed that TO is the antecedent for technology and ITC capabilities are strongly associated with firm performance which indicated that higher level of TO and possessing a wide range of technology capabilities entails greater firm performance [40,62]. These results are consistent with the findings by (23) that proved the association in the software industry. However, our finding is inconsistent with [104] who posited the absence of a direct link between IT capability and firm performance despite the earlier presumption is backed by numerous empirical findings e.g., Refs. [10,105,106].

Technology-oriented firms focus on building technology capabilities which in turn positively drives superior firm-level performance. Similar to our argument, the findings show that technology and IT capabilities mediate the link between TO and firm performance. This suggested that a high level of TO facilitates the effective deployment of technology capabilities that are associated to improved business performance. Notably [30], confirmed that technology-driven strategy has a greater impact on firm performance via information technology capabilities. Earlier [86], also found that technological capabilities mediating the relationship between TO and both market and financial performance using a sample of 121 information system projects.

Finally, although the overall conditional effect was found to be insignificant, the study shows that under the condition of high environmental dynamism, the moderated indirect association between TO and performance through information technology capabilities is significant. These findings revealed that environmental dynamism significantly strengthens the indirect relationship between TO and firm performance through information technology capabilities when environmental dynamism is high enough. TO plays a crucial role in building firms' digital capabilities that help to make effective decisions and contribute to performance by integrating all stakeholders [62]. This result is similar to Ref. [87] who underscored the existence of complex indirect and conditional interactions between IT capabilities and business performance. Yet, the conditional indirect effect of environmental dynamism on the relationship between TO and firm performance via technology capabilities is insignificant. Further, both technology capabilities and information technology mediate the relationship between TO and firm performance. Moreover, the control variables such as age and firm size are insignificant in affecting firm performance.

6. Conclusions

This study links strategic orientations, strategic capabilities, environmental factors and firm performance in the manufacturing industry in Ethiopia, and uniquely constructed and empirically examined the research problem using a moderated mediation model. The study offers several insightful findings. First, strategic orientations significantly and positively impact the development of strategic capabilities. Second, strategic capabilities, in turn, have a significant and positive effect on firm performance. They also serve as a mediator between market and technology orientations and organizational performance. Third, environmental dynamism plays a detrimental role in regulating the indirect impact of strategic orientations on firm performance via strategic capabilities. Overall, strategic orientations, organizational capabilities, and environmental dynamism are interconnected factors that influence firm performance positively and significantly.

The study contributes to RBV literature by adding the following implications. Although a number of prior studies investigated the link between different strategic orientations and performance in varying contexts [17,18,45], yet little is known about how each strategic orientation impact specific strategic capabilities development and the mediating role of strategic capabilities in the relationship between market, technology orientations, and firm performance. First, possessing market-based asset is a necessary but not sufficient condition to achieve superior performance. MC help to translate marketing strategies and market-based knowledge resources into better performance. MC enhance firm's knowledge and skills to effectuate marketing programs effectively including targeting and segmentation strategies. In the same vein, market-linking capabilities enable the implementation of durable customer relationship management and retention programs by maintaining strong partnership among other channel members. The deployment of marketing capabilities creates alignment and solid configuration of firm's resources and allow the effective exploitation of opportunities. By

effectively linking MO and firm performance, marketing-related capabilities offer economic of scope advantages and generate economic rents through improving operational efficiencies and building competitive advantages.

Correspondingly, technology capabilities act as a linking pin between a firm's TO and its performance. They leverage firms to transform technology resources into measurable outcomes such as improves efficiency of manufacturing process, new product development performance and quality management efforts and ultimately drive organizational performance. Similarly, IT capabilities create a system of digital competences that facilitate the integration of functional units through internal and external communications as well as support new product development projects and knowledge creations.

Second, our study overcomes the weakness of previous works by extending the link between strategic orientations, capabilities and firm performance by incorporating the moderating effects of environmental dynamism, which allows us to comprehend the mechanism of how environmental context affects the indirect association between strategic orientations, capabilities and firm performance. Accordingly, high level of environmental dynamism impact the synergy between strategic orientations and capabilities in driving firm performance through creating exploitable opportunities. Moreover, there was a lack of knowledge regarding the association that exists between strategic orientations and strategic capabilities in general. Thus, our findings also confirmed that strategic orientations are key antecedents to the development of specific capabilities and indirectly influence firm performance. Hence, this study sheds light on the unique and complementary interaction between each strategic orientation and capabilities and the need to integrate each other for improved performance.

This study also offers some managerial implications for enhancing the performance of large manufacturing firms. First, our findings revealed that an integrated approach to the deployment of strategic orientations and strategic capabilities likely to enhance firm performance. These results emphasize that performance implication of strategic orientations should not be viewed in isolation rather it should be understood with their distinctive interactions with specific strategic capabilities. Therefore, managers of large firms should make sure that each strategic orientation need to reflect and build certain types of strategic capabilities. To effectively exploit firm's resources and improve performance, MO should be complemented with marketing and market-linking capabilities. In the same vein, TO should be integrated with technology and IT capabilities.This alignment strengthens firm's resources base and increases organizational effectiveness.

Second, our findings indicated that the indirect effects of strategic orientations on performance through capabilities are observed under the condition of high environmental dynamism. Since environmental dynamism plays a detrimental role in shaping this relationship, firms should take special attention in monitoring trends in the external environment to leverage their capabilities. Thus, to make use of market opportunities, managers need to understand the long-term impact of different strategic orientations on the development of distinctive capabilities that are required to maximize performance.

Although this study offers valuable insights, it has some limitations that may provide opportunities for future research. First, since the conceptual model was developed and assessed based on data from certain manufacturing sectors, it may reduce its generalizability in terms of results. So, to improve the generalizability of the findings, it is worth noting to undertake a more comprehensive analysis across different industries and geographic settings. Second, we have only employed a subjective performance measure due to difficulties of accessing objective performance data in developing economies. Although the use of subjective performance measures is strongly supported in previous studies, future researchers may consider the possibility of using objective performance data to enhance the validity of the findings. Third, this paper consider the linearity of relationships between strategic orientations, strategic capabilities and performance. Yet, future studies could explore the interplay between different strategic orientations including entrepreneurial orientation, strategic capabilities, and other environmental contingencies in impacting firm performance by employing a configurational model. Lastly, since we accounted for a few control variables (firm age and size), future research should consider including other exogenous and endogenous variables such as export participation and access to finance due to their potential impact on firm performance in developing countries.

Consent to participate

Informed consent was obtained from all individual participants involved in the study.

Data availability statement

The authors declare to share the available data upon request.

Funding

This research did not receive funds from any source.

Authors' contributions

The authors write the proposal, collect and analyze the data as well as prepare the manuscript for publication.

CRediT authorship contribution statement

Henock Semaw Melesse: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software,

Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Dmitrii Mikhailovich Knatko:** Writing – review & editing, Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.heliyon.2024.e35497.

Appendix 1

Table 6
Discriminant validity

Constructs	1	2	3	4	5	6	7	8
1.Markeing capabilities	**0.753**							
2.Market linking	0.661**	**0.787**						
3.Technology Capabilities	0.702**	0.441**	**0.770**					
4.IT capabilities	0.562**	0.367**	0.396**	**0.728**				
5.Market Orientations	0.623**	0.619**	0.621**	0.398**	**0.764**			
6.Technology Orientation	0.539***	0.441***	0.604***	0.490***	0.593***	**0.816**		
7.Performance	0.663**	0.475**	0.502**	0.633**	0.518**	0.745**	**0.759**	
8.Environmental Dynamism	−0.688**	−0.621**	−0.696**	−0.470**	−0.716**	−0.698**	−0.646**	**0.748**

Note: Significance at * $p < 0.050$; **$p < 0.010$.

References

[1] A. Shiferaw, M. Söderbom, The Ethiopian Manufacturing Sector Productivity, Export, and Competitiveness;The Oxford Handbook of the Ethiopian Economy, Oxford University Press, 2019.

[2] Ministry of Finance, A Homegrown Economic Reform Agenda: A Pathway to Prosperity, 2020.

[3] D.J. Ketchen, G.T.M. Hult, S.F. Slater, Toward greater understanding of market orientation and the resource-based view, Strat. Manag. J. 28 (9) (2007 Sep) 961–964, https://doi.org/10.1002/smj.620 [Internet].

[4] A. Alnoor, K.W. Khaw, X. Chew, S. Abbas, Z.Z. Khattak, The influence of the barriers of hybrid strategy on strategic competitive priorities: evidence from oil companies, Glob J Flex Syst Manag [Internet] 24 (2) (2023) 179–198. https://link.springer.com/10.1007/s40171-022-00335-8.

[5] K.Z. Zhou, C.K. Yim, D.K. Tse, The effects of strategic orientations on technology- and market-based breakthrough innovations, J. Market. 69 (2) (2005 Apr) 42–60, https://doi.org/10.1509/jmkg.69.2.42.60756 [Internet].

[6] F. Deutscher, F.B. Zapkau, C. Schwens, M. Baum, R. Kabst, Strategic orientations and performance: a configurational perspective, Journal of Business Research [Internet] 69 (2) (2016 Feb) 849–861, https://doi.org/10.1016/j.jbusres.2015.07.005 [cited 2024 May 6].

[7] H. Hakala, Strategic orientations in management literature: three approaches to understanding the interaction between market, technology, entrepreneurial and learning orientations: orientations in management literature, Int. J. Manag. Rev. 13 (2) (2011 Jun) 199–217, https://doi.org/10.1111/j.1468-2370.2010.00292.x [Internet].

[8] G.S. Day, The capabilities of market-driven organizations, J. Market. 58 (4) (1994 Oct) 37–52 [Internet], http://journals.sagepub.com/doi/10.1177/002224299405800404.

[9] W.S. DeSarbo, C.A. Di Benedetto, K. Jedidi, M. Song, Identifying sources of heterogeneity for empirically deriving strategic types: a constrained finite-mixture structural-equation methodology, Manag. Sci. 52 (6) (2006 Jun) 909–924 [Internet], https://pubsonline.informs.org/doi/10.1287/mnsc.1060.0529.

[10] W.S. DeSarbo, C. Anthony Di Benedetto, Song Michael, I. Sinha, Revisiting the Miles and Snow strategic framework: uncovering interrelationships between strategic types, capabilities, environmental uncertainty, and firm performance, Strat. Manag. J. 26 (1) (2005 Jan) 47–74, https://doi.org/10.1002/smj.431 [Internet].

[11] D.J. Teece, G. Pisano, A. Shuen, Dynamic capabilities and strategic management, Strat Mgmt J [Internet] 18 (7) (1997 Aug) 509–533. https://onlinelibrary.wiley.com/doi/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

[12] R.B. Mathafena, J. Msimango-Galawe, Entrepreneurial orientation, market orientation and opportunity exploitation in driving business performance: moderating effect of interfunctional coordination, Journal of Entrepreneurship in Emerging Economies [Internet] 15 (3) (2023) 538–565. https://www.emerald.com/insight/content/doi/10.1108/JEEE-03-2021-0114/full/html.

[13] M. Rodriguez C, A. Wise J, Martinez C. Ruy, Strategic capabilities in exporting: an examination of the performance of Mexican firms, in: P. Fernando Robles (Ed.), Manag. Decis. 51 (8) (2013 Jan 1) 1643–1663, https://doi.org/10.1108/MD-10-2012-0766 [Internet].

[14] K. Tajeddini, Analyzing the influence of learning orientation and innovativeness on performance of public organizations: the case of Iran, J. Manag. Dev. 35 (2) (2016 Mar) 134–153, https://doi.org/10.1108/jmd-03-2015-0033 [Internet].

[15] V. Jancenelle, S.F. Storrud-Barnes, D. Buccieri, Market orientation and firm performance: can there be too much of a good thing? Manag. Decis. 60 (6) (2022 Jun) 1683–1701, https://doi.org/10.1108/MD-01-2021-0004 [Internet].

[16] N. Khalid, L. Salykova, N. Capar, The contribution of environmental strategies, entrepreneurial innovation and entrepreneurial orientation in enhancing firm environmental performance and energy efficiency, Int. J. Energy Econ. Pol. 10 (3) (2020) 282–288.

[17] R. Kurniawan, D. Budiastuti, M. Hamsal, W. Kosasih, Networking capability and firm performance: the mediating role of market orientation and business process agility, Journal of Business & Industrial Marketing [Internet] 36 (9) (2021 Oct) 1646–1664, https://doi.org/10.1108/JBIM-01-2020-0023.

[18] E.S. Pusparini, B.W. Soetjipto, R. Rachmawati, L. Sudhartio, U. Nikmah, Managing eco-friendly strategy implementation and its impacts on business performance: the role of organizational strategic capabilities, International Journal of Business and Society 21 (3) (2020) 1258–1276 [Internet], https://publisher.unimas.my/ojs/index.php/IJBS/article/view/3348.

[19] A. Kocak, A. Carsrud, S. Oflazoglu, Market, entrepreneurial, and technology orientations: impact on innovation and firm performance, Manag. Decis. 55 (2) (2017) 248–270, https://doi.org/10.1108/MD-04-2015-0146 [Internet].

[20] D.H. Lee, A.T. Dedahanov, J. Rhee, Moderating role of external networks and mediating effect of innovation performance on the relationship between technology orientation and firm performance, Asian J. Technol. Innovat. 23 (3) (2015) 321–334, https://doi.org/10.1080/19761597.2015.1120498 [Internet].

[21] S. Narula, S. Rana, S. Srivastava, M. Kharub, Improving firm performance using market orientation and capabilities: a case study approach, South Asian Journal of Business Studies [Internet] 12 (3) (2023) 374–394, https://doi.org/10.1108/SAJBS-10-2021-0375.

[22] R. Prifti, G. Alimehmeti, Market orientation, innovation, and firm performance—an analysis of Albanian firms, J Innov Entrep [Internet] 6 (1) (2017) 8, https://doi.org/10.1186/s13731-017-0069-9.

[23] S. Yousaf, M.K. Anser, M. Tariq, S.U.R. Sahibzada Jawad, S. Naushad, Z. Yousaf, Does technology orientation predict firm performance through firm innovativeness? World Journal of Entrepreneurship, Management and Sustainable Development 17 (1) (2020) 140–151, https://doi.org/10.1108/WJEMSD-11-2019-0091 [Internet].

[24] B. Özgül, D. Karaca, C. Zehir, Impacts of Market Orientation on Firm Performance in SMEs of Turkey: A Serial Mediation Approach, J Info Know Mgmt, 2023 [Internet], https://www.worldscientific.com/doi/10.1142/S0219649223500132.

[25] P. Ranjan, J.K. Nayak, Market-based organizational learning, pricing capability and business performance: the moderating effects of coordination mechanism and environmental dynamism, J. Bus. Ind. Market. 38 (11) (2023), https://doi.org/10.1108/JBIM-03-2022-0119 [Internet].

[26] T. Lyu, X. Lyu, H. Chen, Q. Zhao, Breaking away from servitization paradox to improve manufacturing enterprises' service innovation performance: the roles of market orientation and service supply chain dynamic capability, J. Organ. Change Manag. 36 (6) (2023) 848–874, https://doi.org/10.1108/JOCM-04-2023-0131 [Internet].

[27] A.E. Akgün, V. Polat, Strategic orientations, marketing capabilities and innovativeness: an adaptive approach, Journal of Business & Industrial Marketing [Internet] 37 (4) (2022 Feb) 918–931, https://doi.org/10.1108/JBIM-09-2020-0435 [cited 2024 May 6].

[28] S. Joensuu-Salo, K. Sorama, A. Viljamaa, E. Varamäki, Firm performance among internationalized SMEs: the interplay of market orientation, marketing capability and digitalization, Adm. Sci. 8 (3) (2018) 31, https://doi.org/10.3390/admsci8030031 [Internet].

[29] H. Takata, Effects of industry forces, market orientation, and marketing capabilities on business performance: an empirical analysis of Japanese manufacturers from 2009 to 2011, J. Bus. Res. 69 (12) (2016), https://doi.org/10.1016/j.jbusres.2016.03.068 [Internet].

[30] S. Hao, M. Song, Technology-driven strategy and firm performance: are strategic capabilities missing links? Journal of Business Research [Internet] 69 (2) (2016) 751–759, https://doi.org/10.1016/j.jbusres.2015.07.043.

[31] M.C. Rodriguez, J. Wise, C. Ruy Martinez, Strategic capabilities in exporting: an examination of the performance of Mexican firms, Manag. Decis. 51 (8) (2013) 1643–1663, https://doi.org/10.1108/MD-10-2012-0766 [Internet].

[32] M.A. Ibarra-Cisneros, M.D.R. Demuner-Flores, F. Hernández-Perlines, Strategic orientations, firm performance and the moderating effect of absorptive capacity, JSMA [Internet] 14 (4) (2021) 582–611, https://doi.org/10.1108/JSMA-05-2020-0121.

[33] G. Liu, W. Wang, Strategic orientation for Chinese firms in the digital economy: a business model process formalization perspective, Asia Pac. Bus. Rev. (2023), https://doi.org/10.1080/13602381.2023.2249428 [Internet].

[34] A.A. Mahrous, M.A. Genedy, Connecting the dots: the relationship among intra-organizational environment, entrepreneurial orientation, market orientation and organizational performance, Journal of Entrepreneurship in Emerging Economies [Internet] 11 (1) (2018 Oct) 2–21. https://www.emerald.com/insight/content/doi/10.1108/JEEE-09-2016-0036/full/www.nagyresearch.com.

[35] S.A. Alerasoul, G. Afeltra, R.B. Bouncken, H. Hakala, The synergistic impact of market and technology orientations on sustainable innovation performance: evidence from manufacturing firms, Int. J. Entrepreneurial Behav. Res. 28 (6) (2022), https://doi.org/10.1108/IJEBR-10-2021-0799 [Internet].

[36] A.F. Hayes, PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling, University of Kansas, KS, 2012.

[37] M. Abdulrab, M.A. Alwaheeb, Y.H.S. Al-Mamary, N.G.M. Alshammari, H. Balhareth, H.B. Soltane, et al., Effect of entrepreneurial orientation and strategic orientations on financial and nonfinancial performance of small and medium enterprises in Saudi Arabia, J. Publ. Aff. (2020), https://doi.org/10.1002/pa.2305 [Internet].

[38] RM. de A. Guerra, M.E. Camargo, Mediation of learning orientation on market orientation and business performance: evidence from Brazilian Small and Medium Enterprises (SMEs), Benchmark Int. J. 31 (2) (2024) 590–610, https://doi.org/10.1108/BIJ-06-2022-0404 [Internet].

[39] Manuel Andrade Navia Juan, Claudia Parra, Juan Diego Cedeno, Digital market orientation and organizational economic performance of service SMEs, Problems and Perspectives in Management [Internet] 21 (2) (2023) 400–414, https://doi.org/10.21511/ppm.

[40] G. Vlasic, Comparative analysis of the role of strategic orientation, strategic performance metric focus and strategic audacity in driving firm performance: family businesses vs nonfamily businesses, JFBM [Internet] 13 (1) (2023) 7–25, https://doi.org/10.1108/JFBM-03-2022-0048.

[41] L. Ardito, R.M. Dangelico, Firm environmental performance under scrutiny: the role of strategic and organizational orientations, Corp Soc Responsibility Env [Internet] 25 (4) (2018 Jul) 426–440, https://doi.org/10.1002/csr.1470.

[42] T. Saebi, L. Lien, N.J. Foss, What drives business model adaptation? The impact of opportunities, threats and strategic orientation, Long. Range Plan. 50 (5) (2024) 567–581, https://doi.org/10.1016/j.lrp.2016.06.006 [Internet]. 2017 Oct.

[43] P. Adams, I.M.B. Freitas, R. Fontana, Strategic orientation, innovation performance and the moderating influence of marketing management, Journal of Business Research [Internet] 97 (2019) 129–140, https://doi.org/10.1016/j.jbusres.2018.12.071.

[44] J. Barney, Firm resources and sustained competitive advantage, J. Manag. 17 (1) (1991 Mar) 99–120 [Internet], http://journals.sagepub.com/doi/10.1177/014920639101700108.

[45] L.A. Cacciolatti, A. Fearne, Marketing intelligence in SMEs: implications for the industry and policy makers, Market. Intell. Plann. 31 (1) (2013 Jan) 4–26, https://doi.org/10.1108/02634501311292894 [Internet].

[46] N.A. Morgan, D.W. Vorhies, C.H. Mason, Market orientation, marketing capabilities, and firm performance, Strat. Manag. J. 30 (8) (2009 Aug) 909–920, https://doi.org/10.1002/smj.764 [Internet].

[47] L.V. Ngo, A. O'Cass, In search of innovation and customer-related performance superiority: the role of market orientation, marketing capability, and innovation capability interactions, J. Prod. Innovat. Manag. 29 (5) (2012 Sep) 861–877, https://doi.org/10.1111/j.1540-5885.2012.00939.x [Internet].

[48] M.A. Peteraf, The cornerstones of competitive advantage: a resource-based view, Strat. Manag. J. 14 (3) (1993 Mar) 179–191 [Internet], https://onlinelibrary.wiley.com/doi/10.1002/smj.4250140303.

[49] B. Wernerfelt, A resource-based view of the firm, Strat. Manag. J. 5 (2) (1984 Apr) 171–180 [Internet], https://onlinelibrary.wiley.com/doi/10.1002/smj.4250050207.

[50] D.J. Teece, Towards a capability theory of (innovating) firms: implications for management and policy, Camb. J. Econ. 41 (3) (2017 May 1) 693–720.

[51] E.T. Penrose, The Theory of the Growth of the Firm, Oxford University Press, 1959, p. 301.

[52] R. Makadok, Toward a synthesis of the resource-based and dynamic-capability views of rent creation, Strat. Manag. J. 22 (5) (2001 May) 387–401 [Internet], https://10.1002/smj.158.

[53] I. Barreto, Dynamic capabilities: a review of past research and an agenda for the future, J. Manag. 36 (1) (2010 Jan) 256–280.

[54] R.M. Grant, The resource-based theory of competitive advantage: implications for strategy formulation, Calif. Manag. Rev. 33 (3) (1991 Apr) 114–135 [Internet], http://journals.sagepub.com/doi/10.2307/41166664.

[55] M. Song, C.A. Di Benedetto, R.W. Nason, Capabilities and financial performance: the moderating effect of strategic type, J. Acad. Market. Sci. 35 (1) (2007 Mar) 18–34, https://doi.org/10.1007/s11747-006-0005-1 [Internet].

[56] W.S. DeSarbo, C.A. Di Benedetto, M. Song, A heterogeneous resource based view for exploring relationships between firm performance and capabilities, J. Model. Manag. 2 (2) (2007 Jul) 103–130, https://doi.org/10.1108/17465660710763407 [Internet].

[57] S.R. Fang, E. Chang, C.C. Ou, C.H. Chou, Internal market orientation, market capabilities and learning orientation, Eur. J. Market. 48 (1/2) (2014 Feb) 170–192, https://doi.org/10.1108/EJM-06-2010-0353 [Internet].

[58] J.Y. Murray, G.Y. Gao, M. Kotabe, Market orientation and performance of export ventures: the process through marketing capabilities and competitive advantages, J of the Acad Mark Sci [Internet] 39 (2) (2011 Apr) 252–269, https://doi.org/10.1007/s11747-010-0195-4.

[59] Y.C. Chen, P.C. Li, T.J. Arnold, Effects of collaborative communication on the development of market-relating capabilities and relational performance metrics in industrial markets, Ind. Market. Manag. 42 (8) (2013 Nov) 1181–1191, https://doi.org/10.1016/j.indmarman.2013.03.014 [Internet].

[60] G. Cao, J. Weerawardena, Strategic use of social media in marketing and financial performance: the B2B SME context, Industrial Marketing Management [Internet] 111 (2023) 41–54, https://doi.org/10.1016/j.indmarman.2023.03.007.

[61] S. Chaudhary, D. Sangroya, E. Arrigo, G. Cappiello, The impact of market orientation on small firm performance: a configurational approach, Int. J. Emerg. Mark. 18 (10) (2022 Jan 1), https://doi.org/10.1108/IJOEM-03-2021-0411 [Internet].

[62] X. Pan, K.S. Oh, M. Wang, Strategic orientation, digital capabilities, and new product development in emerging market firms: the moderating role of corporate social responsibility, Sustainability 13 (22) (2021) 12703, https://doi.org/10.3390/su132212703 [Internet].

[63] A.K. Kohli, B.J. Jaworski, Market orientation: the construct, research propositions, and managerial implications, J. Market. 54 (2) (1990 Apr) 1–18, https://doi.org/10.1177/002224299005400201 [Internet].

[64] G.T.M. Hult, D.J. Ketchen, Disruptive marketing strategy, AMS Rev [Internet] 7 (1–2) (2017 Jun) 20–25, https://doi.org/10.1007/s13162-017-0097-4.

[65] P.R. Lamore, D. Berkowitz, P.A. Farrington, Proactive/Responsive market orientation and marketing—research and development integration, J of Product Innov Manag [Internet] 30 (4) (2013) 695–711, https://doi.org/10.1111/jpim.12024.

[66] R. Voola, A. O'Cass, Implementing competitive strategies: the role of responsive and proactive market orientations, Eur. J. Market. 44 (1/2) (2010 Feb) 245–266, https://doi.org/10.1108/03090561011008691 [Internet].

[67] G.S. Day, Closing the marketing capabilities gap, J. Market. 75 (4) (2011 Jul) 183–195, https://doi.org/10.1509/jmkg.75.4.183 [Internet].

[68] M. Cao, Q. Zhang, Supply chain collaboration: impact on collaborative advantage and firm performance, J. Oper. Manag. 29 (3) (2011) 163–180, https://doi.org/10.1016/j.jom.2010.12.008 [Internet].

[69] C.H. Tseng, R.P. Lee, Host environmental uncertainty and equity-based entry mode dilemma: the role of market linking capability, Int. Bus. Rev. 19 (4) (2010) 407–418, https://doi.org/10.1016/j.ibusrev.2010.03.002 [Internet].

[70] O.U. Oteh, R. Osabohien, J.A. Mbanasor, N.M. Agwu, A.O. Oloveze, K. Hefferon, Marketing capabilities, market orientation and food security of biofortified cassava producers in Nigeria, Journal of Macromarketing [Internet] 43 (4) (2023 Dec) 494–506, https://doi.org/10.1177/02761467231187307 [cited 2024 May 6].

[71] S. Najafi-Tavani, H. Sharifi, Z. Najafi-Tavani, Market orientation, marketing capability, and new product performance: the moderating role of absorptive capacity, Journal of business research [Internet] 69 (11) (2016 Nov) 5059–5064, https://doi.org/10.1016/j.jbusres.2016.04.080 [cited 2024 May 6].

[72] M.L.M. Heyden, S. Van Doorn, M. Reimer, F.A.J. Van Den Bosch, H.W. Volberda, Perceived environmental dynamism, relative competitive performance, and top management team heterogeneity: examining correlates of upper echelons' advice-seeking, Organ. Stud. 34 (9) (2013) 1327–1356, https://doi.org/10.1177/0170840612470229 [Internet].

[73] J.A. Parnell, D.L. Lester, Reevaluating the entrepreneurship-management conundrum: challenges and solutions, J. Appl. Manag. Enterpren. 12 (4) (2007 Oct) 74.

[74] S.F. Slater, J.C. Narver, Does competitive environment moderate the market orientation-performance relationship? J. Market. 58 (1) (1994 Jan) 46–55, https://doi.org/10.1177/002224299405800104 [Internet].

[75] T. Park, D. Ryu, Drivers of technology commercialization and performance in SMEs: the moderating effect of environmental dynamism, Manag. Decis. 53 (2) (2015 Jan 1) 338–353, https://doi.org/10.1108/MD-03-2014-0143 [Internet].

[76] Ó. González-Benito, J. González-Benito, P.A. Muñoz-Gallego, On the consequences of market orientation across varied environmental dynamism and competitive intensity levels, J. Small Bus. Manag. 52 (1) (2014 Jan) 1–2, https://doi.org/10.1111/jsbm.12028 [Internet].

[77] M. Saqib, R. Zarine, Z.M. Udin, Exploring the technology orientation influence on the innovativeness-performance relationship of manufacturing SMEs, Int. J. Innovat. Learn. 24 (3) (2018) 277–300, https://doi.org/10.1504/IJIL.2018.094708 [Internet].

[78] P.H. Tseng, C.H. Liao, Supply chain integration, information technology, market orientation and firm performance in container shipping firms, Int. J. Logist. Manag. 26 (1) (2015) 82–106, https://doi.org/10.1108/IJLM-09-2012-0088 [Internet].

[79] S.F. Wamba, A. Gunasekaran, S. Akter, Ren SJ. fan, R. Dubey, S.J. Childe, Big data analytics and firm performance: effects of dynamic capabilities, Journal of business research 70 (2017) 356–365, https://doi.org/10.1016/j.jbusres.2016.08.009 [Internet].

[80] K.P. Poudel, R. Carter, S. Lonial, The impact of entrepreneurial orientation, technological capability, and consumer attitude on firm performance: a multi-theory perspective, J. Small Bus. Manag. 57 (sup2) (2019 Nov 1) 268–295, https://doi.org/10.1111/jsbm.12471 [Internet].

[81] J.E. Spillan, J.A. Parnell, M.A. Koseoglu, E. Akdeve, Strategic capabilities, niche strategy orientation and performance: a four-nation assessment, IJBPM [Internet] 19 (4) (2018) 427, https://doi.org/10.1504/IJBPM.2018.095078.

[82] K.Z. Zhou, F. Wu, Technological capability, strategic flexibility, and product innovation, Strat. Manag. J. 31 (5) (2010 May) 547–561, https://doi.org/10.1002/smj.830.

[83] P.C. Verhoef, T.H. Bijmolt, Marketing perspectives on digital business models: a framework and overview of the special issue, Int. J. Res. Market. 36 (3) (2019 Sep) 341–349, https://doi.org/10.1016/j.ijresmar.2019.08.001 [Internet].

[84] S. Aral, P. Weill, IT assets, organizational capabilities, and firm performance: how resource allocations and organizational differences explain performance variation, Organ. Sci. 18 (5) (2007 Oct) 763–780, https://doi.org/10.1287/orsc.1070.0306 [Internet].

[85] S. Nevo, M.R. Wade, The formation and value of IT-enabled resources: antecedents and consequences of synergistic relationships, MIS quarterly [Internet] (2010 Mar), https://doi.org/10.2307/20721419.

[86] T.T. Hsu, K. Tsai, M. Hsieh, W. Wang, Strategic orientation and new product performance: the roles of technological capability, Can J Adm Sci [Internet] 31 (1) (2014 Mar) 44–58, https://doi.org/10.1002/cjas.1274.

[87] C. Nakata, Z. Zhu, M.L. Kraimer, The complex contribution of information technology capability to business performance, Journal of Managerial Issues [Internet] 20 (4) (2008) 485–506. https://www.jstor.org/stable/40604625.

[88] J.B. Barney, D.J. Ketchen, M. Wright, The future of resource-based theory: revitalization or decline? in: J.B. Barney, D.J. Ketchen, M. Wright (Eds.), Journal of Management, 2011 Sep, pp. 1299–1315 [Internet], http://10.1177/0149206310391805.

[89] Federal Democratic Republic of Ethiopia, Regulation No. 526/2022, definition of organization, powers and duties of the Ethiopian enterprise development, Federal Negarit Gazeta (2022).

[90] F. Kock, A. Berbekova, A.G. Assaf, Understanding and managing the threat of common method bias: detection, prevention and control, Tourism Manag. 86 (2021) 104330, https://doi.org/10.1016/j.tourman.2021.104330 [Internet].

[91] P.M. Podsakoff, S.B. MacKenzie, J.Y. Lee, N.P. Podsakoff, Common method biases in behavioral research: a critical review of the literature and recommended remedies, Journal of applied psychology [Internet] 88 (5) (2003 Oct) 879. https://psycnet.apa.org/doi/10.1037/0021-9010.88.5.879.

[92] P.A. Pavlou, H. Liang, Y. Xue, Understanding and mitigating uncertainty in online exchange relationships: a principal-agent perspective, MIS quarterly [Internet] (2007 Mar), https://doi.org/10.2307/25148783.

[93] T. Laukkanen, G. Nagy, S. Hirvonen, H. Reijonen, M. Pasanen, The effect of strategic orientations on business performance in SMEs: a multigroup analysis comparing Hungary and Finland, Int. Market. Rev. 30 (6) (2013 Oct) 510–535, https://doi.org/10.1108/IMR-09-2011-0230 [Internet].

[94] K.Z. Zhou, C.B. Li, How strategic orientations influence the building of dynamic capability in emerging economies, J. Bus. Res. 63 (3) (2010 Mar) 224–231, https://doi.org/10.1016/j.jbusres.2009.03.003 [Internet].

[95] C.L. Wang, Entrepreneurial orientation, learning orientation, and firm performance, Entrepreneurship Theory and Practice [Internet] 32 (4) (2008 Jul) 635–657, https://doi.org/10.1111/j.1540-6520.2008.00246.x.
[96] J. Tang, Z. Tang, L.D. Marino, Y. Zhang, Q. Li, Exploring an inverted U–shape relationship between entrepreneurial orientation and performance in Chinese ventures, Entrep. Theory Pract. 32 (1) (2008) 219–239, https://doi.org/10.1111/j.1540-6520.2007.00223.x [Internet].
[97] A.F. Hayes, Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach, third ed., Guilford Press, 2022.
[98] T.A. Brown, Confirmatory Factor Analysis for Applied Research, Guilford publications, 2015.
[99] J.F. Hair, Multivariate data analysis. https://digitalcommons.kennesaw.edu/facpubs/2925/, 2009.
[100] C. Fornell, D.F. Larcker, Structural equation models with unobservable variables and measurement error: algebra and statistics, Journal of Marketing Research [Internet] 18 (3) (1981 Aug) 382–388, https://doi.org/10.1177/002224378101800313.
[101] L. Hu, P.M. Bentler, Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives, Struct. Equ. Model.: A Multidiscip. J. 6 (1) (1999 Jan) 1–55, https://doi.org/10.1080/10705519909540118 [Internet].
[102] J. Cohen, P. Cohen, S.G. West, L.S. Aiken, in: Applied Multiple Regression/correlation Analysis for the Behavioral Sciences, Routledge, 2013, https://doi.org/10.4324/9780203774441 [Internet].
[103] L. Raymond, F. Bergeron, A.M. Croteau, A. Ortiz de Guinea, S. Uwizeyemungu, Information technology-enabled explorative learning and competitive performance in industrial service SMEs: a configurational analysis, Journal of Knowledge Management [Internet] 24 (7) (2020) 1625–1651, https://doi.org/10.1108/JKM-12-2019-0741.
[104] H.C. Chae, C.E. Koh, V.R. Prybutok, Information technology capability and firm performance: contradictory findings and their possible causes, MIS Q. 38 (1) (2014) 305–326 [Internet], https://www.jstor.org/stable/26554879.
[105] C.R. Bhattarai, C.C. Kwong, M. Tasavori, Market orientation, market disruptiveness capability and social enterprise performance: an empirical study from the United Kingdom, Journal of Business Research [Internet] 96 (2019) 47–60, https://doi.org/10.1016/j.jbusres.2018.10.042.
[106] G. Kim, B. Shin, K.K. Kim, H.G. Lee, IT capabilities, process-oriented dynamic capabilities, and firm financial performance, J. Assoc. Inf. Syst. Online 12 (7) (2011) 1 [Internet], https://aisel.aisnet.org/jais/vol12/iss7/1/.