

PRIMARY RESEARCH

The influence of market orientation on firm performance: A mediated-moderated model of social media crowdsourcing and competitive advantage in a dynamic environment

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Keywords

Market orientation
Social media crowdsourcing
Environmental dynamics
Organizational performance
Competitive advantage

Abstract

This research investigates the effect of market orientation on environmental dynamics and organizational performance in the context of foreign trade companies, incorporating mediating and moderating effect of social media crowdsourcing and competitive advantage. A quantitative study using a cross-sectional design collected data from mid-level and upper-level managers working in the Netherlands and analyzed the data using SmartPLS 3.0. The results indicated that market orientation has a significant negative effect on environmental dynamics and a positive effect on organizational performance. Meanwhile, social media crowdsourcing mediated the relationship between market orientation and environmental dynamics and organizational performance. Furthermore, competitive advantage had a moderating effect on social media crowdsourcing and environmental dynamics and organizational performance. These findings provide significant theoretical implications for dynamic capability theory, along with practical implications for managers seeking to utilize digital tools to enhance business sustainability.

Received: 9 Jan 2025**Accepted:** 7 Mar 2025**Published:** 25 May 2025

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INTRODUCTION

Due to global market integration, increased global competition, and the rapid adoption new technologies that have altered how businesses operate and how consumers interact and communicate, businesses need to navigate a fluid environment (Geleta et al., 2025). Hence, businesses need to better understand and respond to customer needs to build customer loyalty and achieve sustainable growth, thereby enabling them to survive in an intensely fluid market. According to Etana et al. (2025), to retain and satisfy consumers, a business needs to become skilled at collecting, analyzing, and responding to market data. Organizations must implement a market-oriented strategy to achieve this goal, leveraging new technologies to communicate with customers and collect information (Behfrouz & Tahmasebpour, 2025; Liu et al., 2024).

The business environment today is dynamic and turbulent, requiring organizations to constantly adjust if they are to survive

and thrive (Juárez-Varón & Monreal, 2025). A critical strategic concept in this environment is market orientation, which is the extent to which a firm is committed to gathering, distributing, and acting on market intelligence about both customers and competitors. While much has been written about how market orientation could lead to superior performance, the linkages and mechanisms that explain that performance have become increasingly sophisticated (Tan, 2024; Yaskun et al., 2023). Market Orientation (MO), is defined as “the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs assessments” (Nguyen et al., 2023), enables the linkage of an internal resource focus with an external customer focus. Environmental dynamism is described as the speed and unpredictability of change in external environments (Hernández-Linares et al., 2021). These settings are typically characterized by rapid technological change, evolving customer preferences, increas-

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ing competition, and new economic dynamics. In the face of significant turbulence, the old, reliable relationship between strategy and performance may change. In highly dynamics settings, firms often face greater uncertainty, which may create greater opportunities to exploit or pose a threat to the firm's continued existence (Tang et al., 2022). Thus, a firm's ability to identify, adapt to, and proactively shape its environment is a critical factor in its success. Developing a narrative of how an organization's strategic decisions and internal capacity align with external dynamism can enhance a firm's business performance (Etana et al., 2025).

With the advent of digital platforms and Web 2.0 technologies, a new practice, social media crowdsourcing has been added to market intelligence efforts (Juárez-Varón & Monreal, 2025). Crowdsourcing, which leverages public wisdom and creativity rather than only the firm's resources, enables the generation of new ideas and innovative solutions (Mia et al., 2023). This practice now offers firms a powerful opportunity to supplement market intelligence and thereby improve performance (Basile et al., 2025). Online social networks and collaborative software are the primary methods for disseminating and gathering customer information, requiring businesses to use various Web 2.0 tools to collect such data. Maintaining an online presence is consequently vital for businesses to receive timely customer input and adapt their offerings. As young and small businesses pursue internationalization to reach larger markets and achieve greater growth, this strategy also increases sustainability and profitability. In the Netherlands, as in most European countries, 88% of businesses are SMEs (Juárez-Varón & Monreal, 2025), playing a vital role in social cohesion and economic development. Between 2014 and early 2024, the Netherlands government aimed to increase SME export contributions by 69%, reaching over 1.56 million, especially by supporting technology-based and high-value products and opening new markets (Etana et al., 2025). Competitive advantage the benefit a company has over competitors that elevates its ability to serve customers and boost profits (Tan, 2024) arises from building a unique, hard-to-replicate market position. In today's dynamic business environment, competitive advantage offers resilience against external shocks and is necessary for turning strategy into performance (Ed-Dafali et al., 2023; Jam et al., 2025). Therefore, understanding the sources and types of competitive advantage is crucial for overall firm performance, especially for firms using social media crowdsourcing for market intelligence and decision-making (Falihat et al., 2022; Rua & Santos, 2022).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Dynamic Capability Theory

Dynamic Capability Theory provides a strong framework for explaining how firms succeed in dynamic environments. It shows how firms build and adapt their resource bases to sustain competitive advantage (Kapoor & Aggarwal, 2020). The theory holds that static resources alone cannot ensure a firm's long-term survival in unstable conditions, thereby emphasizing higher-order capabilities, dynamic capabilities, defined as the processes that allow organizations to both respond to and shape their environment. Dynamic capabilities comprise three main processes: identifying opportunities and threats, seizing opportunities through strategic action, and transforming the firm accordingly.

To maintain competitiveness Bleadly et al. (2018) stated that, market orientation is a fundamental strategic capability that encompasses the ability to sense market trends. A market-oriented firm routinely seeks out and disseminates market intelligence, which is central to identifying opportunities and threats. However, traditional market sensing alone is not sufficient in a digital context. Social media crowdsourcing offers a potential seizing capability mechanism, providing a powerful, digital-age means for firms to leverage insights gained from market orientation (Bleadly et al., 2018; Kapoor & Aggarwal, 2020). By using social media to crowdsource ideas, solutions, and feedback from an online community, firms move beyond simply sensing the market through direct or indirect observations.

The firm would be seizing the opportunity, as indicated by its action and creating realized marketing opportunities. This builds rapidly responsive capabilities to help the firm continuously reconfigure its knowledge base and operational routines, to inform effective alignment with changing market demands, in turn enhancing the firm's adaptive capabilities toward environmental dynamism (Etana et al., 2025). According to Etana et al. (2025), the success of the firm is the result of the interactions between its capabilities and the external environment, and environmental dynamism is an important contextual condition that heightens the need for the firm to activate its dynamic capabilities. In a high-velocity environment, a firm's competitive advantage primarily derives from its dynamic capabilities, which outshine those of its competitors. Competitive advantage is not a self-explanatory construct; rather, it refers to the firm's ability to leverage its resources and dynamic capabilities more effectively than competitors (Liu et al., 2024). The firm will now be able to achieve not only survival, but superior organizational performance.

In this way, dynamic capability theory provides a strong found-

dation for the model, explaining how a firm's market orientation affects competitive advantage through social media

crowdsourcing in a dynamic, unpredictable environment.

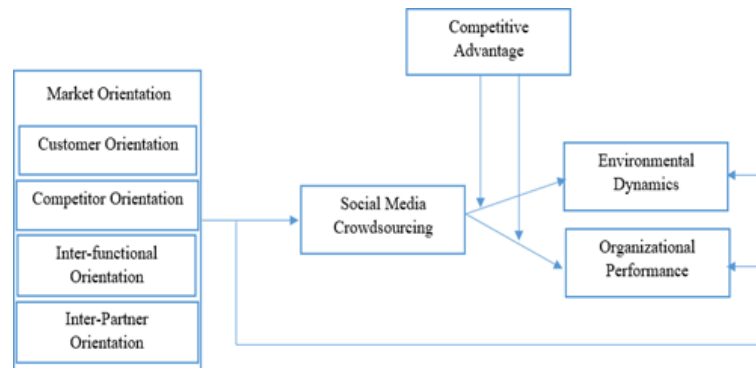


FIGURE 1. Conceptual model

Market Orientation

Juárez-Varón and Monreal (2025) define market orientation as the development of market intelligence that takes into account customers' present and future needs and shares this intelligence across the organization to enable appropriate responses to various needs. According to Yaskun et al. (2023), market orientation is an organizational culture that creates patterns of behavior within the business to analyze clients, provide a service that is more valuable than of competitors, and boost productivity. Customer orientation (identifying and meeting customer needs), competitor orientation (evaluating rivals' strengths and weaknesses), and departmental coordination to facilitate information sharing and deliver greater value to customers are components of market orientation (Nguyen et al., 2023).

Several studies have examined this relationship, but the consensus is that market orientation does not directly produce or affect environmental dynamism; it is predominantly interpreted as a strategic response to environmental dynamism (Borodako et al., 2022; Falahat et al., 2022; Rua & Santos, 2022). In this case, environmental dynamism, which refers to environmental changes in market conditions, technology, and competition that are fast and uncertain, may be viewed as an important external variable that firms attempt to adapt to by having a market orientation (Hassnain, 2022; Hernández-Linares et al., 2021). It is important to note that a firm's market orientation enables it to respond to an uncertain environment by persistently collecting and sharing information about customers and competitors. A high-technology dynamism example: a market-oriented firm will take information from innovation and changes in customer needs (as firms that are market-oriented do that react to customer needs), thereby allowing the firm to modify its strategy to respond and compete

quickly (Puspaningrum, 2020; Wanigasooriya, 2024). Evidence suggests that the positive consequences of market orientation on firm performance are even greater in highly dynamic contexts (Ed-Dafali et al., 2023). In relatively stable environments, the consequences of a high level of market orientation are less pronounced because uncertainty is lower. Falahat et al. (2022) stated that the importance of market orientation for profitability was greater in turbulent markets. Others have suggested that a market orientation, as a dynamic capability, provides the firm with an efficient response function to environmental changes and create a pathway to competitive advantage (Etana et al., 2025; Liu et al., 2024).

According to Nguyen et al. (2023), market orientation is an important aspect of organizational culture, and there is evidence that market orientation relates positively to performance. Borodako et al. (2022) suggested that a market-oriented culture helps organizations respond more effectively to changes in the market environment, leading to improved customer satisfaction, loyalty, and ultimately profitability. More recent studies have supported this finding across a wide variety of industries and countries. Ed-Dafali et al. (2023) noted that extensive research on market orientation has established a strong, positive, and durable relationship between market orientation and multiple dimensions of firm performance, including financial performance (e.g., return on investment) and market outcomes (e.g., market share).

For example, some studies propose that the impact of market orientation on performance is contingent on innovation, claiming that market-oriented firms rely on the market information they collect to develop new products and processes that drive performance (Elgarhy & Abou-Shouk, 2023; Yaskun et al., 2023). Other evidence suggests that environmental influences affect the strength of the relationship, which is useful

for the overall research model. That said, there is abundant literature that provides strong evidence for the basic claim that, to build and maintain high performance, a firm's strategy must be centered on the customer and competitors (Liu et al., 2024; Tan, 2024). Hence,

H1: Market orientation has a direct and significant impact on environmental dynamics.

H2: Market orientation has a direct and significant impact on organizational performance.

Mediating Role of Social Media Crowdsourcing

According to Siakas and Siakas (2020), crowdsourcing is the practice of businesses using groups as providers of labor, financial resources, expertise, and ideas via an internet platform. Juárez-Varón and Monreal (2025) suggest a business model that leverages collective creativity by outsourcing work that would typically be completed in-house to a large number of individuals via online platform. The rise of open-source software that supports organizations in developing new software programs and apps; the growth of self-managed communities whose activities are built on common interests; the revitalization of amateurs as crowdsourcing calls on the public to contribute content creation, either as amateurs and/or entrepreneurs who have some acquaintance with the subject matter; and the greater availability of production tools used for content creation and communication (Bono et al., 2023). Open innovation and co-creation are two core areas within the broader domain of innovation and management that underpin crowdsourcing (Feng et al., 2023). The crowd (the participants in a crowdsourcing campaign), the crowdfunder (the organization attempting to achieve an objective), the crowdsourcing task (the activity or task that is to be completed), and the crowdsourcing platform (the system, software, or non-software, through which crowdsourcing is administered) represent the common features that define crowdsourcing (Devece et al., 2021).

Luo et al. (2023) propose that the purpose of market orientation is to help a firm adapt to its environment by collecting and using knowledge of that environment. Social media crowdsourcing is a contemporary tool an organization can use to strengthen its market-sensing capabilities and respond more quickly to market changes (Mia et al., 2023). It is a process that results from the firm's strategic actions, not merely an external force that can change the pace of change in an environment. Accordingly, the relationship is better framed as the moderating role of environmental dynamism in shaping the effects of market orientation and social media crowdsourcing on a firm's performance, rather than the other way around. In a highly dy-

namic environment, the ability to sense and respond quickly to change is more valuable, so the positive effects of a market-oriented culture and crowdsourcing increase the potential for strong performance in such environments (Basile et al., 2025). For example, some research has demonstrated that the positive relationship between market orientation and performance is substantially strengthened in high turbulence (Cricelli et al., 2022).

A fundamental component of developing novel products for the market is comprehending consumer needs (Ayuni, 2022). Indeed, the relationship between market orientation and organizational performance is moderated by innovation. Market orientation includes consumer orientation, which affects an organization's capacity for innovation. According to Liu et al. (2024), there are positive relationships among market orientation, innovation, and organizational performance. Since the contemporary environment highlights the strategic significance of customer information for businesses and influences the various management processes within organizations, market-oriented strategies and new technology related strategies are being developed.

Studies have indicated that social media and crowdsourcing can considerably enhance a firm's market orientation capabilities and ultimately improved performance (Ed-Dafali et al., 2023; Rua & Santos, 2022). By utilizing the "wisdom of the crowd," firms can become more responsive to market shifts, foster product innovation, and bolster customer relationships, all factors associated with organizational performance. In the absence of the crowdsourcing mechanism, firms may glean market insights through their market-oriented culture but may not be able to leverage them effectively, thereby yielding a weaker connection to performance (Hernández-Linares et al., 2021; Nguyen et al., 2023; Yaskun et al., 2023). Hence;

H3: Social media crowdsourcing has a significant mediating impact between market orientation and environmental dynamics.

H4: Social media crowdsourcing significantly mediates the relationship between market orientation and organizational performance.

Moderating Role of Competitive Advantage

Market orientation is the cornerstone for achieving competitive advantages that are hard for rivals to imitate Juárez-Varón and Monreal (2025) and can boost the company's long-term performance and positive outcomes, which is what most organizations aim for. Since this resource is hard for rivals to imitate, market orientation becomes essential for gaining an advantage over the competition Falahat et al. (2022) and

for demonstrating a longer-term focus than a more straightforward customer-oriented approach, as it entails a more thorough market analysis. Assuming that market orientation analyses consumers, competition, and market circumstances, the behavioral perspective was expanded by Rua and Santos (2022), who identified two complementary approaches: the market-driven approach and the market-driving approach. The “market-driven” approach, refers to learning, comprehending, and reacting to the behavior of agents in a particular market. A business can be both market-driven and customer-driven, as the two strategies work well together.

Interacting with customers to get their thoughts on subjects and even for the development of new products is one of the necessities that motivate businesses to use crowdsourcing. Ed-Dafali et al. (2023) argue that this interaction enables firms to obtain useful market research to develop new goods or services. Companies utilize crowd sourcing to get ideas from outside the organization and encourage and boost innovation to meet the evolving needs of customers to deal with such a changing environment and rising competition (Yaskun et al., 2023). Crowdsourcing establishes market orientation within the organization, particularly when applied to product and service innovation (Liu et al., 2024).

A company with a significant competitive advantage (such as a strong brand) can use social media crowdsourcing more effectively to strengthen its position and ultimately thrive in a dynamic market; however, the market remains dynamic (Ayuni, 2022). Cricelli et al. (2022) emphasize how competitive advantage moderates the relationship between social media crowdsourcing and organizational performance in a dynamic context. For example, a firm holding a low-cost leadership competitive advantage might use social media crowdsourcing to seek low-cost solutions, while a firm with a differentiating advantage might use it to generate unique product ideas (Bono et al., 2023). The dynamic capability theory suggests that competitive advantage results from a firm’s ability to leverage its capabilities and resource stocks to respond to environmental dynamism.

For instance, a company with a differentiation advantage based on its brand or product quality could use social media crowdsourcing to gather ideas for new, innovative products to enhance customer service. The crowd’s input would be more likely to generate favorable performance outcomes because the company possesses both the brand and capabilities to implement and market the ideas (Feng et al., 2023). Here, competitive advantage functions as a multiplier, enhancing the relationship between crowdsourcing and performance. If a company does not have such an advantage, crowdsourcing activi-

ties could yield a generic product/service that, in the relevant market, a competitor could also create/offer, and which would yield little to no performance outcomes (Puspaningrum, 2020). On the other hand, a company implementing a low-cost leadership strategy would employ a social media crowdsourcing strategy differently. A company with a significant cost advantage, as indicated, would be better positioned to implement crowdsourced cost-efficiency measures, which would directly reinforce its strategy and thereby improve its performance (Falahat et al., 2022). Hence;

H5: Competitive advantage has a significant moderating impact on social media crowdsourcing and environmental dynamics.

H6: Competitive advantage has a significant moderating impact on social media crowdsourcing and organizational performance.

METHODOLOGY

Data Collection

To obtain an appropriate and representative sample of foreign trade enterprises in the Netherlands, a multi-stage sampling method was used. Enterprises in the Netherlands represented a variety of sectors such as tourism, pharmaceuticals, manufacturing, warehousing, administrative services, healthcare, construction, and IT, with many customer- and client-focused roles. Additional stratification was completed by company size, identifying enterprises as micro, small, medium, and large, to distinguish differences in operational capacities. Within each stratum, enterprises were selected using random sampling to ensure representation coverage while minimizing selection bias. After completing the enterprise selection process, middle- and top-level managers from within the enterprise were identified as respondents, due to their in-depth knowledge of the enterprise’s strategic initiatives, such as being market-oriented, in any direction explored in the research.

Participants and Demographics

The study collected responses from 88% of the 545 enterprises contacted, resulting in 480 valid responses from enterprises. Participants consisted of 75% middle managers and 25% top managers. The sizes of companies represented in the sample were micro (43%), small (29%), medium (18%), and large (10%). The sample also accounted for companies across industries, with the most common being tourism(21%), pharmaceuticals(33%), construction(28%), and warehousing (18%). Companies included in the sample also reported a wide range of operational maturity, ranging from those that had been in business for less than 3 years (28%),

more than 10 years (33%), and 5-8 years (39%).

Ethical Considerations

Participants were not financially compensated for participation. All participants were provided with complete information about the study's purpose and gave informed consent prior to participation. Confidentiality measures ensured voluntary participation and ethical compliance.

Measurements

Market orientation

The Market Orientation instrument was developed by Juárez-Varón and Monreal (2025). The 18 items represent four dimensions: customer orientation, competitor orientation, inter-functional coordination, and inter-partner orientation, and are measured using a 5-point Likert scale, with higher scores indicating a stronger market orientation. The reliability measure using Cronbach's alpha was 0.933, and the CFA results were strong.

Social media crowdsourcing

The final elements selected for gauging social media crowdsourcing are those put forward by Juárez-Varón and Monreal (2025), since they cover strategies for inspiring and encouraging clients to get involved by offering suggestions to the business. According to Juárez-Varón and Monreal (2025), this scale based on established scale development criteria. The replies were measured using a five-point Likert scale. The measuring device was examined in two stages. The panel of experts comprised 24 professionals with backgrounds in business and academia who had studied crowdsourcing. There were four items on the scale.

Competitive advantage

The competitive advantage scale was developed by Tan (2024). Seven items were used in its formulation. The Tan (2024) scale was chosen for this study because it best integrates the primary scales that have been employed. A five-point Likert scale was used for the responses.

Environmental dynamics

Etana et al. (2025) established a measurement scale for environmental measurements. It consists of nine items, and answers are recorded using a 5-point Likert scale; higher scores indicate greater perceived environmental dynamism. Both validity and reliability metrics were strong, with CFA findings showing a very good model fit (Cronbach's alpha = 0.926).

Organizational performance

Borodako et al. (2022) developed the Organizational Performance instrument. It consists of eight items, and answers are recorded using a 5-point Likert scale; higher scores indicate superior performance in comparison to rivals. Both validity and reliability metrics were strong, with CFA findings showing a very good model fit (Cronbach's alpha = 0.888).

RESULTS

To test the theories and validate the model, the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach was used. Any exploratory investigation, including this one, can be successfully analyzed using the PLS-SEM approach. According to Hair et al. (2024), the PLS-SEM technique does not impose any sampling restrictions and is suitable for analyzing data that are not normally distributed.

Assessment of Measurement Model

Evaluation of F.L., validity, reliability, AVE

Hair et al. (2024), state that reliability and validity of the measurement model should be evaluated first. As such, we began with an evaluation of the convergent validity, internal consistency, and reliability of each of the indicators. The Composite Reliability (CR) was used to evaluate the reliability of the scale, and the Average Variance Extracted (AVE) was used to evaluate the convergent validity. As noted by Hair et al. (2024), CR values above 0.6 are acceptable, and Table 1 reflects CRs from 0.869 to 0.941, suggesting that the measurement model in this study demonstrated high levels of internal consistency and was appropriate for the sample and demonstrated both consistency and reliability. Results confirmed that all constructs advanced both the model of high internal consistency reliability as well as the convergent validity. For AVE, values ranged from 0.564 to 0.629, which was consistent with Hair et al. (2024) recommendations that AVE values of 0.5 or higher are acceptable. Based on the evaluated constructs as noted by Hair et al. (2024), Cronbach's Alpha greater than 0.7 was found to be appropriate for reliability; in this study, Cronbach's Alpha values ranged from 0.799 to 0.933, confirming reliability for the measurement model.

Discriminant validity

Once the measuring scales' convergent validity and reliability were acknowledged, the variables' discriminant validity was checked. Each latent variable was greater than the correlation coefficient among other constructs and was similar to the criterion reported by Bagozzi et al. (1981), by checking the square root of AVE values to assess discriminant validity.

TABLE 1. Assessment of validity, reliability, and AVE

Constructs	Items	Factor. L	Alpha	CR	AVE
Market Orientation			0.933	0.941	0.571
Customer Orientation	CO1	0.735			
	CO2	0.754			
	CO3	0.751			
	CO4	0.757			
	CO5	0.732			
	CO6	0.793			
Competitor Orientation	CPO1	0.769			
	CPO2	0.717			
	CPO3	0.760			
	CPO4	0.768			
Inter-Functional Orientation	IFO1	0.751			
	IFO2	0.761			
	IFO3	0.784			
	IFO4	0.759			
	IFO5	0.794			
Inter-Partner Orientation	IPO1	0.763			
	IPO2	0.777			
	IPO3	0.774			
Social Media Crowdsourcing	SMC1	0.777	0.799	0.869	0.625
	SMC2	0.786			
	SMC3	0.857			
	SMC4	0.737			
Competitive Advantage	CA1	0.777	0.874	0.903	0.571
	CA2	0.820			
	CA3	0.795			
	CA4	0.715			
	CA5	0.773			
	CA6	0.748			
	CA7	0.752			
Environmental Dynamics	ED1	.813	0.926	0.938	0.629
	ED2	0.788			
	ED3	0.742			
	ED4	0.781			
	ED5	0.785			
	ED6	0.809			
	ED7	0.831			
	ED8	0.722			
	ED9	0.858			
Organizational Performance	OP1	0.780	0.888	0.911	0.564
	OP2	0.836			
	OP3	0.815			
	OP4	0.743			
	OP5	0.898			
	OP6	0.771			
	OP7	0.845			
	OP8	0.799			

Further testing of latent variables confirmed that they had discriminant validity. According to Hair et al. (2024), an indicator's loadings should be greater than the loadings of each of its cross-loadings. Results for discriminant validity are provided in Table 2, where the correlation coefficient among other constructs is smaller than the square root of the AVE values of the five constructs.

TABLE 2. Assessment of discriminant validity

Constructs	1	2	3	4	5
Competitive Advantage	0.756				
Environmental Dynamics	0.714	0.793			
Market Orientation	0.624	0.765	0.786		
Organizational Performance	0.619	0.720	0.858	0.751	
Social Media Crowdsourcing	0.614	0.564	0.630	0.656	0.790

Assessment of structural model

With the variance assessment considered, the predictive relevance model was used to assess the model fit (Hair et al., 2024). To evaluate the model fit, the R^2 magnitude of the dependent variables was also included. The R^2 value scan ranges from 0 to 1, with larger values indicating that the model has good explanatory power according to the model evaluation guidelines proposed by Hair et al. (2024). Within the structural model, the endogenous latent variables had R-squared values of 0.75, 0.50, and 0.25, respectively. Hence, the R^2 value of environmental dynamism in this study was 0.608, indicating that 60.8% of the dynamics' variance is of moderate values in formulating market orientation prediction accuracy. Next, the R^2 value of organizational performance was 0.878, indicat-

ing that 87.8% of the variance in organizational performance is of moderate values in relation to prediction accuracy with market orientation. Finally, the SMC's R^2 value of 0.533 indicated that 53.3% of the variance in SMC is significant in terms of prediction accuracy with market orientation, organizational performance, and environmental dynamics.

Direct and indirect analysis

Hypotheses proposed were tested using SmartPLS 3.0, (Hair et al., 2024), and the significance of the path coefficient effect was assessed with a non-parametric bootstrapping procedure (2,000 replications). PLS-SEM was used to evaluate the structural model for this inquiry using the path coefficient standardized β , t values, and significance levels (p). The results concerning the evaluation of the hypotheses from the PLS analysis are presented in Table 3. Hypothesis 1 shows that market orientation has a negative and significant impact on environmental dynamism ($\beta = -0.477$, $t = 7.208$). Hypothesis 2 shows that market orientation has a positive and significant impact on organizational performance ($\beta = 0.269$, $t = 3.345$). Table 3 shows the mediating role of social media crowdsourcing between market orientation and environmental dynamism ($\beta = 0.178$, $t = 2.895$). Furthermore, the table shows the mediating role of social media crowdsourcing between market orientation and organizational performance ($\beta = 0.067$, $t = 1.994$). However, it also shows the moderating role of competitive advantage on social media crowdsourcing and environmental dynamism ($\beta = 0.190$, $t = 2.904$). Lastly, the moderating role of competitive advantage on social media crowdsourcing and organizational performance ($\beta = -0.137$, $t = 2.984$).

TABLE 3. Results of direct and indirect effects

	Relationships	β	Mean	SD	T Values	p Values
H1	MO->ED	-0.477	-0.480	0.066	7.208	0.000
H2	MO->OP	0.269	0.261	0.080	3.345	0.001
H3	MO->SMC->ED	-0.178	-0.178	0.062	2.895	0.004
H4	MO->SMC->OP	0.067	0.064	0.033	1.994	0.047
H5	CA*SMC->ED	0.190	0.188	0.065	2.904	0.004
H6	CA*SMC->OP	-0.137	-0.134	0.031	2.984	0.017

DISCUSSION

This study reinforces the main hypothesis by showing that market orientation has a major impact on organizational performance and environmental dynamics, both directly and indirectly through the moderating influence of competitive advantage and the mediating impacts of social media crowdsourcing. These results are consistent with those of Juárez-Varón and Monreal (2025), Tan (2024), and Yaskun et al. (2023), who

highlighted market orientation as a crucial facilitator of innovation and operational efficiency. Similarly, the findings of Ed-Dafali et al. (2023) and Rua and Santos (2022), who emphasized its importance in coordinating environmental dynamism with market demands, are echoed by the role of market orientation in promoting responsiveness and adaptation.

The finding indicates that market orientation can have a negative and significant effect on environmental dynamics. While

perhaps unexpected, this is soundly situated in the context of the firm's strategic orientation. Most previous studies find a positive relationship, claiming that strong market orientation, which includes collecting and disseminating information about customer and competitor preferences, leads firms to respond to the growing demand for sustainable goods and conduct sustainable practices (Elgarhy & Abou-Shouk, 2023). However, these results are consistent with a more sophisticated reading that differentiates between "proactive" and "reactive" market orientations. A firm with a reactive or short-term market orientation can adopt a short-term orientation to satisfy immediate consumer demand and reduce costs, ultimately to the detriment of the firm's environmental sustainability (Nguyen et al., 2023). A firm can demonstrate a reactive, or short-term, market orientation when it only responds to market signals that signal demand for lower prices; typically, that demand is satisfied through less sustainable materials or production processes.

The second hypothesis that market orientation positively and significantly affects organizational performance concurs with decades of both marketing and strategic management literature. One of the underlying propositions of this literature is that firms that can create, disseminate, and respond to market intelligence (about customers and competitors) are better able to create superior value for customers, and ultimately in the market. This is attributed to a market-oriented culture focusing the whole organization schematically, enabling effective front-of-the-house coordination across departments (including product development, marketing, and selling), to all work toward the common goal of market satisfaction more effectively than competitors (Yaskun et al., 2023). All of this strategic coordination enhances marketing capabilities, customer loyalty, and market share, all of which contribute directly to greater financial and non-financial performance. Thus, a strong market orientation is deemed a reliable source of sustainable competitive advantage and is pivotal for firms to succeed in dynamic and competitive environments.

An important mediator of social media crowdsourcing between market orientation, environmental dynamism, and organizational performance is arguably a mechanism to explain how a firm's market orientation translates into enhanced environmental dynamism and organizational performance. When firms take a market-oriented approach, they are more comfortable collecting and responding to external information. By utilizing Twitter, Instagram, or even their own community, firms leverage social media crowdsourcing to gather ideas about new green products, sustainable packaging designs, or environmentally sustainable business processes from a vast, diverse, and motivated pool of participants (Feng et al., 2023). This

crowdsourced data provides an extensive amount of information on consumer preferences for sustainability and uncovers new environmental challenges and opportunities that would not normally be captured through traditional market-oriented research. This process of "open environmental innovation," where knowledge is obtained from external stakeholders and brought back into a firm's R&D function for product, service, and process design, allows the market-oriented firm to identify environmentally driven needs from consumers, while also generating creative, actionable solutions to respond to previously unknown (and sometimes difficult) consumer needs (Bono et al., 2023). Thus, a firm's market-oriented engagement with different stakeholder groups on environmental issues is enhanced through the firm's utilization of social media crowdsourcing as a direct outcome of its superior environmental dynamism. In other words, as a market-oriented firm, engagement in sustainability programs moves from a reactive to a proactive innovation approach through social media crowdsourcing to engage with its stakeholders on environmental issues. While a firm's market-oriented culture of gathering and responding to market intelligence and other stakeholder insights is a well-established source of performance (Mia et al., 2023), the finding about mediations suggests a more complex relationship, as the effect on performance was not direct, but occurred through a mechanism.

The result shows that competitive advantage moderated the relationship between social media crowdsourcing and environmental dynamism, and performance illustrates an important perspective regarding the organizational significance of an organization's internal capabilities for accessing external resources. Social media crowdsourcing can undoubtedly function as a very effective and useful mechanism for obtaining environmental information and ideas from a broad swath of individuals, but not all firms may be able to effectively harness the input from the social media crowd to improve environmental performance. Competitive advantage may work as a moderating variable in the relationship between crowdsourced ideas and outcomes or possibly be a positive factor in the relationship between crowdsourced environmental ideas and outcomes (Liu et al., 2024). The crowdsourcing firm with a competitive advantage will likely have highly competent organizational and technological support for the conversion of crowdsourced ideas into formal operations more readily or efficiently (Ed-Dafali et al., 2023). Conversely, a firm without a strong competitive advantage may have difficulty connecting with a sizable crowd or may simply struggle to effectively use crowd sourcing, which may also indicate they are not able to create substantial social media crowd sourcing as a pro-

cess/procedure for making substantial environmental changes. Additionally, more importantly, firms possessing greater competitive advantage have greater absorptive capacity and knowledge about how to integrate crowd sourcing knowledge into their processes and new product development (Falahat et al., 2022; Puspaningrum, 2020).

Theoretical Implications

This research study advances significant theoretical implications from its findings by connecting Dynamic Capability Theory (DCT) with market orientation, social media crowdsourcing, and organizational performance. The findings theoretically extend DCT by extending its traditional focus on internal resources and routines for adaptation into a new dimension that incorporates digital and externally enabled capabilities. In this case, it illustrates that a firm's dynamic capability, in particular its ability to both sense and seize market opportunities, can be enabled and amplified in the digital era. This is important as social media crowdsourcing is a powerful external sensing process that facilitates a market-oriented firm to access large-scale information rapidly and at low cost about new market trends, environment, or organizational improvement. A firm may be able to "sense" a broader set of environmental signals through social media crowdsourcing, such as latent customer needs, and possibly other environmental changes that may need to be addressed to sustain and cultivate a competitive advantage in changing market conditions (Juárez-Varón & Monreal, 2025). If DCT is to be meaningful in a networked world, it necessarily needs to address a firm's dynamic ability to leverage digital/externally enabled platforms to rejuvenate its dynamic capabilities.

Moreover, the study provides an important advancement for DCT by revealing the moderating role of competitive advantage on the crowdsourcing relationships, and in doing so, extends DCT's basic premise. Although DCT argues that dynamic capabilities lead to competitive advantages over time, this study reframes this relationship, indicating that the existing competitive advantage (i.e., the firm's resource base) moderates the effectiveness of the dynamic capability. A firm that is strongly branded or has superior R&D infrastructure would have greater ease in implementing any innovative ideas gathered from the crowd and, in turn, would convert sensing and seizing capabilities into improved performance outcomes.

Practical Implications

The research emphasizes that whilst a market-based perspective is essential, in our digital age, a focus solely on the market is insufficient. Managers should proactively integrate so-

cial media crowdsourcing as a core tool for environmental performance as well as organizational performance. This means moving beyond the use of social media for marketing purposes and establishing social media as a key channel for open innovation. Managers should develop structured crowdsourcing campaigns by soliciting ideas for new products, sustainable practices, and operational efficiencies directly from customers, partners, and the public. It is also important to invest in platforms and employees to manage and analyze the crowdsourced ideas. The findings indicate that firms can no longer wait and rely on the market signals; firms must proactively develop a two-way dialogue to retrieve intelligence and, at the same time, promote their image for transparency and engagement.

The research found that a company's existing competitive advantage heavily shapes the success of social media crowdsourcing. For companies that have reputable brand equity, a well-established R&D department, or a clear dominant position in their market, a social media community can serve as a significant stimulant and leverage to enhance their financial and environmental performance. In the same vein, managers and owners of companies should view social media crowdsourcing as a strategic device that ultimately builds on their existing advantages rather than entirely as an isolated activity. Companies that are already at a disadvantage face additional structural disadvantages in the community. Therefore, building internal competencies (such as enhancing internal processes or strengthening brand equity) will act as a table stake requirement to consistently attract a quality audience and encourage them to engage with and act on proposed ideas.

Limitations and Future Research

First, the cross-sectional design, which collected data at only one point in time, does not allow the study to make definitive causal claims in relation to the variables. Generalizability is also impacted by temporal factors. Because of its cross-sectional nature, the study is unable to take into consideration how the relationships that are detected change over time. Richer insights into how market orientation affects performance over long periods of time and under various external contexts may be obtained through longitudinal studies (Hair et al., 2024). Second, the sample was limited to the Randstad region of the Netherlands, which is a representative and diverse economic region, but it cannot encompass the operational context of foreign trade firms in the entire country. Therefore, these geographic limitations undermine the generalizability of findings to the Dutch business context. Finally, data were collected from only one source (middle- and top-level managers),

thus leaving room for common method bias. Although perceptions provided by high-level managers give us a strategic view, they may not be representative of lower-level employees' and other stakeholders' perceptions, and social desirability bias may impact their self-reported data. Finally, future studies could examine additional moderators, like the level of technological turbulence in a sector or even a firm's internal culture, to identify other context-appropriate conditions that contribute to social media crowdsourcing. A mixed-methods study design, so that some analysis may come from quantitative surveying and other qualitative interviews, would provide additional context and possibly better understanding of the mechanisms of these variables.

CONCLUSION

The study demonstrated that market orientation has an impact on environmental dynamism and organizational performance in the context of foreign trade firms, with a mediating and moderating role of social media crowdsourcing and

competitive advantage. These findings suggest that social media crowdsourcing has a mediating relationship between market orientation, environmental dynamism, and organizational performance. These findings show that competitive advantage has a moderating impact on social media crowdsourcing and its relationship with environmental dynamics and organizational performance. A company can then use this digital tool to engage with the market in developing and responding to the sustainability demands of its consumers. Crowdsourcing is subsequently linked to a firm's competitive advantage, which later facilitates the improvement of current strengths within the firm for leverage. Thus, this study posits that an existing or even high level of market-orientation in today's dynamic, rapid-paced business environment is insufficient to intentionally obtain sustained or socially important performance. Instead, it should be strategically considered as a firm's digital crowdsourcing capabilities or skill set that is instead optimally leveraged through a firm's competitive advantage.

REFERENCES

- Ayuni, R. D. (2022). Crowdsourcing: Tools for viral marketing: Phenomenological studies# anysongchallenge on tiktok online platform. *Communi-care: Journal of Communication Studies*, 9(2), 108–114. <https://doi.org/10.37535/101009220223>
- Bagozzi, R. P., Fornell, C., & Larcker, D. F. (1981). Canonical correlation analysis as a special case of a structural relations model. *Multivariate Behavioral Research*, 16(4), 437–454.
- Basile, G., Vrontis, D., Chatterjee, S., & Bianco, R. (2025). Examining the impact of crowdsourcing and open innovation from the emerging country perspective. *Management Decision*, 63(7), 2177–2201. <https://doi.org/10.1108/md-02-2024-0341>
- Behfrouz, A., & Tahmasebpour, M. (2025). Modification of clinoptilolite zeolite adsorbent from miyaneh mines to remove ammonia from the water environment. *Environment and Water Engineering*, 11(3), 239–250. <https://doi.org/10.2175/106143097x125308>
- Bleady, A., Ali, A. H., & Ibrahim, S. B. (2018). Dynamic capabilities theory: Pinning down a shifting concept. *Academy of Accounting and Financial Studies Journal*, 22(2), 1–16. <https://doi.org/10.1080/09639280701430306>
- Bono, C., Mülâyim, M. O., Cappiello, C., Carman, M. J., Cerquides, J., Fernandez-Marquez, J. L., Mondardini, M. R., Ramalli, E., & Pernici, B. (2023). A citizen science approach for analyzing social media with crowdsourcing. *IEEE Access*, 11, 15329–15347. <https://doi.org/10.1109/access.2023.3243791>
- Borodako, K., Berbeka, J., Rudnicki, M., Łapczyński, M., Kuziak, M., & Kapera, K. (2022). Market orientation and technological orientation in business services: The moderating role of organizational culture and human resources on performance. *Plos one*, 17(6), e0270737. <https://doi.org/10.1371/journal.pone.0270737>
- Cricelli, L., Grimaldi, M., & Vermicelli, S. (2022). Crowdsourcing and open innovation: A systematic literature review, an integrated framework and a research agenda. *Review of Managerial Science*, 16(5), 1269–1310. <https://doi.org/10.1007/s11846-021-00482-9>
- Devece, C., Palacios-Marqués, D., & Ribeiro-Soriano, D. E. (2021). It-based strategy, capabilities, and practices: Crowdsourcing implementation in market-oriented firms. *Review of Managerial Science*, 15(1), 15–32. <https://doi.org/10.1007/s11846-019-00369-w>
- Ed-Dafali, S., Al-Azad, M. S., Mohiuddin, M., & Reza, M. N. H. (2023). Strategic orientations, organizational ambidexterity, and sustainable competitive advantage: Mediating role of industry 4.0 readiness in emerging markets. *Journal of Cleaner Production*, 401, 136765. <https://doi.org/10.1016/j.jclepro.2023.136765>
- Elgarhy, S. D., & Abou-Shouk, M. (2023). Effects of entrepreneurial orientation, marketing, and innovation capabilities, on market performance: The mediating effect of sustainable competitive advantage. *International Journal of Contemporary Hospitality Management*, 35(6), 1986–2004. <https://doi.org/10.1108/ijchm-04-2022-0508>
- Etana, N. G., Kero, C. A., & Getahun, M. (2025). Effects of dynamic capabilities and multichannel integration quality on bank performance: A moderated mediation model analysis. *African Journal of Economics and Business Research*, 4(1), 39–68. <https://doi.org/10.4314/ajebr.v4i1.3>

- Falahat, M., Soto-Acosta, P., & Ramayah, T. (2022). Analysing the importance of international knowledge, orientation, networking and commitment as entrepreneurial culture and market orientation in gaining competitive advantage and international performance. *International Marketing Review*, 39(3), 463–481. <https://doi.org/10.1108/imr-02-2021-0053>
- Feng, Y., Vanam, S., Cherukupally, M., Zheng, W., Qiu, M., & Chen, H. (2023). Investigating code generation performance of chatgpt with crowdsourcing social data. *2023 IEEE 47th annual computers, software, and applications conference (COMPSAC)*, 876–885. <https://doi.org/10.1109/compsac57700.2023.00117>
- Hair, J. F., Sarstedt, M., Ringle, C. M., Sharma, P. N., & Liengard, B. D. (2024). Going beyond the untold facts in pls–sem and moving forward. *European Journal of Marketing*, 58(13), 81–106. <https://doi.org/10.1108/ejm-08-2023-0645>
- Hassnain, A. (2022). Employees' performance and motivation. *Journal of Administrative and Business Studies*, 8(3), 19–26. <https://doi.org/10.20474/jabs-8.3.2>
- Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2021). Dynamic capabilities and sme performance: The moderating effect of market orientation. *Journal of Small Business Management*, 59(1), 162–195. <https://doi.org/10.1111/jsbm.12474>
- Jam, F. A., Khan, T. I., & Paul, J. (2025). Driving brand evangelism by unleashing the power of branding and sales management practices. *Journal of Business Research*, 190, 115214. <https://doi.org/10.1016/j.jbusres.2025.115214>
- Juárez-Varón, D., & Monreal, E. G. (2025). Market-oriented entrepreneurship and the impact of social media and crowdsourcing on continuous organizational learning. an empirical study. *Sustainable Technology and Entrepreneurship*, 4(1), 100088. <https://doi.org/10.1016/j.stae.2024.100088>
- Kapoor, M., & Aggarwal, V. (2020). Tracing the economics behind dynamic capabilities theory. *International Journal of Innovation Science*, 12(2), 187–201. <https://doi.org/10.1108/ijis-05-2019-0050>
- Liu, F., Yang, G., & Singhdong, P. (2024). A moderated mediation model of entrepreneurship education, competence, and environmental dynamics on entrepreneurial performance. *Sustainability*, 16(19), 8502. <https://doi.org/10.3390/su16198502>
- Luo, S., He, S. Y., Grant-Muller, S., & Song, L. (2023). Influential factors in customer satisfaction of transit services: Using crowdsourced data to capture the heterogeneity across individuals, space and time. *Transport Policy*, 131, 173–183. <https://doi.org/10.1016/j.tranpol.2022.12.011>
- Mia, M., Shamsudin, M., Zayed, N., Mirzoieva, T., Shtuler, I. Y., & Bogma, O. (2023). Crowdsourcing for business strategy and sustainability: A partial least square structural equation model. *Scientific Bulletin of National Mining University*, (3). <https://doi.org/10.33271/nvngu/2023-3/184>
- Nguyen, P. T. M., Mai, K. N., & Nguyen, P. N. D. (2023). Does trust affect antecedents of inter-organizational governance mechanisms and elicit successful collaboration via innovation? an empirical study from a market-oriented economy in vietnam. *Sustainability*, 15(12), 9547. <https://doi.org/10.3390/su15129547>
- Puspaningrum, A. (2020). Market orientation, competitive advantage and marketing performance of small medium enterprises (smes). *Journal of Economics, Business, and Accountancy Ventura*, 23(1), 19–27. <https://doi.org/10.14414/jebav.v23i1.1847>
- Rua, O. L., & Santos, C. (2022). Linking brand and competitive advantage: The mediating effect of positioning and market orientation. *European Research on Management and Business Economics*, 28(2), 100194. <https://doi.org/10.1016/j.iedeen.2021.100194>
- Siakas, D., & Siakas, K. V. (2020). Value proposition through knowledge sharing and crowdsourcing: Engaging users of social networking. *Journal of Media Management and Entrepreneurship (JMME)*, 2(1), 124–138. <https://doi.org/10.4018/jmme.2020010108>
- Tan, C. (2024). *Sources of competitive advantage for emerging fast growth small-to-medium enterprises: The role of business orientation, marketing capabilities, customer value, and firm performance* [Doctoral dissertation, RMIT University]. <https://doi.org/10.14414/jebav.v23i1.1847>
- Tang, X., Xie, G., Deng, J., Shao, K., Hu, Y., He, J., Zhang, J., & Gao, G. (2022). Effects of climate change and anthropogenic activities on lake environmental dynamics: A case study in Lake Bosten Catchment, NW China. *Journal of Environmental Enagement*, 319, 115764. <https://doi.org/10.1016/j.jenvman.2022.115764>
- Wanigasooriya, P. (2024). Antecedents of urban sustainability and firm performance: Moderating role of conservation innovation. *Journal of Management Practices, Humanities and Social Sciences*, 8(6), 53–67. <https://doi.org/10.33152/jmphss-8.6.5>
- Yaskun, M., Sudarmiatin, S., Hermawan, A., & Rahayu, W. P. (2023). The effect of market orientation, entrepreneurial orientation, innovation and competitive advantage on business performance of indonesian MSMEs. *International Journal of Professional Business Review*, 8(4), 39. <https://doi.org/10.26668/businessreview/2023.v8i4.1563>