

Entrepreneurial orientation and SME export performance: Unveiling the mediating roles of innovation capability and international networking accessibility in the brass industry

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Abstract

PURPOSE: This paper answered the research gap on entrepreneurial orientation with a sample of small and medium-sized enterprises' (SMEs) export performance and the mediating role of innovation capability and international networking accessibility that has not been tested in previous research. This study also tested the effect of entrepreneurial orientation on SMEs' export performance in the global market. The mediating role of international networking accessibility and innovation capability on SMEs' export performance also became another focus of this study. **METHODOLOGY:** This paper implemented a quantitative approach with 282 owners or managers of the SMEs brass industry cluster in Boyolali, Indonesia, who were examined using purposive sampling. **FINDINGS:** The findings of this study revealed that entrepreneurial orientation did not significantly affect SMEs' export performance but did significantly affect innovation capability and international networking accessibility. Another empirical test found that innovation capability had significantly affected SMEs' export performance and the international networking accessibility. International networking accessibility also significantly affected the performance of export SMEs. This study also found an important mediating role of international network accessibility and innovation capability in the relationship between entrepreneurial orientation and SMEs' export performance. **IMPLICATIONS:** This study contributes to research investigating the effect of entrepreneurial orientation on performance by conducting in-depth studies on innovation capabilities and international networking accessibility. Many studies have tested the mediating role of innovation capability and international networking accessibility. The practical implication of this study is that it can help managers or owners of SMEs better understand and find optimal solutions through enhancing innovation capability and international networking accessibility, which can be instilled in the characteristics of SME owners or managers to improve performance. **ORIGINALITY AND VALUE:** The results of this study indicate the mediating role of innovation capability and accessibility of international networking on SMEs' export performance. Therefore, the main contribution of the study is to determine the mediating role of innovation capability and international network accessibility in the relationship between entrepreneurial orientation and performance by integrating the theoretical perspective of the resource-based view (RBV).

Keywords: entrepreneurial orientation, SME export performance, innovation capability, international networking accessibility, brass industry, Indonesia, resource-based view, RBV

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INTRODUCTION

Small and medium-sized enterprises (SMEs) can speed up response to a changing environment and increase economic growth (Pedauga, Sáez, & Delgado-Márquez, 2022; Van Song et al., 2022). SMEs are also driving economic growth, job creation, and regional growth. Studies have found that SMEs could support economic activity by two-thirds of the decline in unemployment due to environmental uncertainty and 43% of income (Pedauga, et al., 2022). The brass crafts industry is one of many SMEs in Indonesia. The products from small and medium industrial centers in Boyolali Regency, Central Java, can penetrate the export market (Export market, 2023). 53% of the products from copper and brass artisans are distributed on the global market in France, Australia, Malaysia, and the United States. The rest is for local markets such as Jakarta, Surabaya, Bali, Yogyakarta, Bandung, and Semarang. This potential has been developed for quality and innovation through product design to have competitiveness at the international level. Products from the center include indoor and outdoor decorative lamps, wall hangings, calligraphy, tables, domes, sinks, bathtubs, and sculptures. SMEs must have strong entrepreneurial characteristics to compete with similar products from other countries. Entrepreneurial orientation will be studied in depth in this study.

Other studies showed a lack of consistency in determining SMEs success in achieving performance. Some researchers stated that the success of SMEs is influenced by individual characteristics such as entrepreneurial attitudes, business planning, and innovativeness (Grabowski & Stawasz, 2023; Kohtamäki, 2008), networking and innovation capabilities (Farida & Nuryakin, 2021), and external factors such as support for international market access (Urban & Sefalafala, 2015). However, the available evidence explains that entrepreneurs as owners will determine a business's success (Aljanabi & Noor, 2015).

Entrepreneurial orientation (EO) is an approach organizations take through business processes, including proactiveness, competitive aggressiveness, autonomy, innovativeness, and risk-taking in achieving entrepreneurial activities (Akbar, Khan, Wadood, & Bon, 2020). Several studies showed that organizations with entrepreneurial orientation characteristics could achieve success in performance (Su, Xie, & Li, 2011; Urban & Mothusiwa, 2014; Zhang & Zhang, 2012). Entrepreneurial orientation is also important for business processes in reaching international markets (Wach, 2015). It is closely related to cycles, practices, and dynamic capabilities of organizations in utilizing resources and responding to the environment (Kropp, Lindsay, & Shoham, 2006; Tkacz, Agirre-Aramburu, & Lizartza-Martin, 2023), rapid economic changes (Pratono & Mahmood, 2015), and technological adaptation, especially in new organizations (Su et al., 2011). Lumkins and Dess (1996) conceptualized entrepreneurial orientation as a combination of risk-taking courage, proactiveness, independence, creativity, and serious strength.

Business ventures oriented to the global market require courage in taking risks, being proactive and creative in behavior, and innovative attitudes in emerging economic conditions and technological innovation (Arabeche et al., 2022; Piwowar-Sulej & Podsiadły, 2022). Various empirical studies revealed that entrepreneurial orientation influenced company performance positively. Previous researchers focusing on SMEs (Omerzel & Antoncic, 2008; Su et al., 2011; Teck, 2012; Urban & Mothusiwa, 2014) had studied the strong effect between entrepreneurial orientation and performance. This topic of this study still attracts SMEs attention, especially when the unit being analyzed is within SMEs oriented to the export market, where there seems to be only a few studies with that scope.

The conceptual framework and empirical research model for researching to develop the mediating role of innovation capability, entrepreneurial orientation, and international networking accessibility, and analyzing the significance of the effect between entrepreneurial orientation SMEs performance with a focus on the firm's resource-based perspective were examined (Barney, 1991). Therefore, this study will examine entrepreneurial orientation on SMEs export performance with two research questions (RQs):

RQ1: How does entrepreneurial orientation affect performance in export market-based SMEs?

RQ2: How can the mediating function of innovation capability and international networking accessibility enhance performance?

Although previous researchers have observed the influence of entrepreneurial orientation on performance, a research gap still exists where not much research on entrepreneurial orientation has been carried out on a sample of export-based SMEs and where the mediating role of innovation capability and international networking accessibility is tested. In addition, this research aims to determine the mediating role of innovation capability and international networking accessibility in the relationship between entrepreneurial orientation and SMEs' export performance by integrating the theoretical perspective of the resource-based view (RBV).

The paper starts with a literature review on resource-based view, entrepreneurial orientation, innovation capability, international networking accessibility, SMEs' export performance, and associated with the hypothesis development. Then, the traditional sections are presented as research methods, results, discussion, conclusion, and implications.

LITERATURE REVIEW

Resource-based view

A resource-based view (RBV) is used in resource-based strategic orientation, assuming that the company wants managerial efforts to achieve a sustainable competitive advantage (Barney, 2001). It measures the company's success in achieving competitive advantage derived from the characteristics of the company itself. This RBV theory asserts that a company will continue striving to maintain its competitive advantage by using useful and superior resources, which competing companies cannot imitate (Barney, 1991). Company resources are all the tangible and intangible assets linked to relatively permanent companies. This view is often used in understanding strategic marketing problems, and it was originally based on several previous works of industrial economists. This concept has grown and been popular in strategic management literature since the mid-1980s.

According to Javidan (1998), company resources comprise capacity, talent, skill, and core competence. These intangible resource factors determine the success of the company's performance. These factors come from the internal aspects of the company as a source of internal strength as the maximum limit in achieving organizational goals. Meanwhile, Hunt and Morgan (1996) argued that RBV theory addresses corporate diversity issues. The theory sees the company as a combination of heterogeneous and imperfect resources, so the resource-based theory is the basis for the competency perspective of the company.

This study focuses on research analysis of the internal capabilities of organizations consisting of entrepreneurial orientation, innovation capabilities, and accessibility of international networks in improving SMEs, focusing on the export market. Therefore, the efforts made by SMEs to compete and achieve the character of innovation capability, entrepreneurial orientation, and the accessibility of international networks were tested in this study. The development of SME strategies based on internal resources was also examined depending on the organization's internal conditions, and the company was seen as having a series of capabilities and resources. To optimize performance, SMEs must learn to combine their capabilities with other companies.

Entrepreneurial orientation

Miller (1983) originally popularized entrepreneurial orientation. This concept focuses on an entrepreneurial firm's characteristics as a company that conducts market innovation on products, the characteristics of courage in risk-taking businesses, and proactive innovation to barrier of competitors. The three characteristics of entrepreneurial companies are then considered an entrepreneurial orientation, referring to the practices, processes, and decision-making activities leading to the latest players. He also categorized entrepreneurship into three types of companies, namely simple firms, planning firms, and organic firms. Furthermore, entrepreneurship is related integrally to environmental variables, structure, strategy, and leaders' personalities. These relationships involve systems and logic from one type of company to another.

Lumpkin and Dess (2001) included entrepreneurial orientation's two dimensions: the tendency to act autonomously and aggressively to competitors. Furthermore, entrepreneurship has been applied at several levels, such as individual, group, and organizational. Entrepreneurial orientation refers to a new company's processes, decision-making activities, and practices. In other words, entrepreneurial orientation includes the key players' intentions and actions, who function in a dynamic generative process that is shown to create new ventures.

Wiklund (1999) emphasized that entrepreneurial orientation is based on the company where proactive actions, innovation, and risk-taking by companies can be affected by several actors inside and outside the company, so that these actions are inherent in entrepreneurship in a management framework. Entrepreneurial orientation is associated with increased organizational performance because the relationship assumes that entrepreneurial-oriented companies have a first-mover advantage and tend to benefit from market opportunities.

Innovation capability

Innovation capability can optimize innovation activities through information technology (Aljanabi & Noor, 2015), new ideas, and taking advantage of opportunities (Keskin, 2006). Innovation capability is also the company's capacity to absorb knowledge in achieving innovative performance by suggesting new services or products in the system or process (Aljanabi & Noor, 2015; Kilic, 2015). Organizations need to acquire the ability to continuously innovate by incorporating their ideas into novelty and bringing that value through business networks (Konsti-Laakso, Pihkala, Kraus, & Management, 2012a; Phuong et al., 2022; Yeşil, Koska, & Büyükbeşe, 2013). Innovation capabilities include processes and outcomes that create value-added products and critical factors in the era of digital technology (Florek-Paszkowska et al., 2021; Yousaf et al., 2022).

Kaszowska-Mojsa (2020) found that corporate strategic innovation has helped accelerate the company's innovation process and collaboration in innovation activities to encourage organizational growth. The study measured the innovation capability of four indicators from the capability dimensions to do the product innovation process. Process innovation capability refers to strategies for rebuilding innovation and company activities in product creation. Innovation capability improves the company's processes and performance because it updates its activities and market achievements (Ahmed, Ibrahim, & Hasaballah, 2017).

International networking accessibility

Network access in Jian and Wang (2013) originally came from the resource-based view from internal companies as the major support in the strategic management publications. Company competencies and resources are all the company's processes, capabilities, assets, and knowledge (Barney, 1991). The competitive advantage and resource-based view assume that heterogeneous firms in their control over these strategic resources are essential assets. Enterprise network accessibility enhances relationships with business networks and handles certain network relationships (Jian & Wang, 2013). Network competence can manage and grow relationships with other organizations, key suppliers, and customers to deal effectively in those relationships, which are core company competencies that influence the company's competitive strength and performance. Networking competence is a firm-specific ability to handle, utilize and exploit inter-firm relationships (Ritter, Wilkinson, & Johnston, 2002).

According to competitive advantage, managers must develop strategies to survive and outperform the global market's competition (Porter, 1980). If a corporation can support and promote competition within its industry, it must also possess the potential to produce exceptional corporate performance. Hormiga, Batista-Canino, and Sánchez-Medina (2011) studied relationships with suppliers, customers, informal networks, and reputation on company performance success. Furthermore, the results indicated that relationships with customers and relationships with suppliers correlated with the company's performance. A similar result was found by Borchert and Bruhn (2010), revealing that human and relational capital, team performance, and company team size impacted the company's goals as measured by company performance.

Taghieh, Taghieh, and Poorzamani (2013) discussed relational capital's role in firm performance. Intellectual and relational capital impacted the company's financial performance. Also, relational and intellectual capital affected the market value of the company. Meanwhile, in their study, GertHuman and Naude (2009) revealed a positive relationship between network capabilities, network competence, and company performance and network capabilities.

SMEs' export performance

Business success depends on the performance in the market position (Day & Wensley, 1988) during uncertain conditions (Rust et al., 2004). Overall business performance can be reflected in the company's financial and non-financial measures (Varadarajan & Clark, 1994). Performance is measured within the company to build the financial aspect and the market of achieving business success. Financial performance means financial measures, such as profit margin fit and returns on investment, while market business performance implies sales volume and market share (Farida & Nuryakin, 2021; Nuryakin, 2021). A company is supposed to pay attention to sales more than growth. A positive relationship exists between market share and measures of performance achievement as measured by ROI (Buzzell & Gale, 1987). Hooley et al. (2005), Srivastava, Shervani, and Fahey (1998) found similar findings. Furthermore, Hooley et al. (2005) stated that superior market business performance resulted in superior financial performance.

Obadia (2008) assessed the relationship between exporters and importers through a pattern of cooperation in terms of collaborative activities between two exchange partners. For example, joint activities develop strategies, achieve future goals, and improve performance, and collaboration includes information and commercial exchanges. Other studies saw cooperation as an outcome – a specific joint activity. Cambra-Fierro, Hart, Mur, and Redondo (2011) measured consumer satisfaction, customer loyalty, well-known brands, market share, and economic profit. In contrast, Acquaah (2012) described performance on productivity growth, profit growth, sales and revenue growth, ROA, and ROS.

HYPOTHESIS DEVELOPMENT

The impact of entrepreneurial orientation on SMEs' export performance

Entrepreneurial orientation plays a strategic role in achieving superior performance (Aljanabi & Noor, 2015; Lee & Lim, 2008; Zhang & Zhang, 2012). This study examined entrepreneurial orientation at the organizational level. An organization's process involves considering several internal and external elements (Wiklund, 1999).

Organizations can use a proactive approach, innovation, and enterprise risk-taking. Therefore, entrepreneurial orientation belongs to the management framework shown that organizations must develop an entrepreneurial orientation to perform better. Entrepreneurial orientation positively affects business performance (Nuryakin, 2021). In addition, the study explained that entrepreneurial orientation also influenced relational abilities and led to business improvement.

Madsen (2007) found that an organization's long-term link to business performance improvement, as gauged by marketing performance (sales growth) and financial performance, was favorable (profitability). The following hypothesis is developed through a thorough literature assessment and earlier studies.

H1: Entrepreneurial orientation influences SMEs' export performance positively.

The impact of entrepreneurial orientation on innovation capability

Wadood et al. (2022) found that entrepreneurial orientation influenced innovation. Meanwhile, Krauss and Michale (2005) explained that entrepreneurial orientation involves autonomous orientation, learning orientation, innovation orientation, competitive aggressiveness, risk-taking, achievement orientation, and proactively seeking opportunities and personal initiatives. Li, Huang, and Tsai (2009) explained that entrepreneurial orientation involves innovation, risk-taking, proactiveness, autonomy, and competitive aggressiveness.

Zhang and Zhang (2012) explored the influence of network capabilities on entrepreneurial orientation and business performance. The results showed that entrepreneurial orientation affected business performance and networking ability. According to Soininen et al. (2012), entrepreneurial orientation consists of innovativeness, proactiveness, and risk-taking. The following hypothesis is developed through a thorough literature assessment and earlier studies.

H2: Entrepreneurial orientation influences innovation capability positively.

The impact of entrepreneurial orientation on the accessibility of international networks

Arif et al. (2013) explained that entrepreneurial orientation involves being innovative, proactive, and taking risks. Lumpkin and Dess (1996) developed indicators of innovation orientation, risk orientation, proactive orientation, aggressive competition, and independence in entrepreneurial orientation.

Kajalo and Lindblom (2015) showed that entrepreneurial orientation is the basis for organizations to improve business performance through the strength of marketing capabilities in opening up rankings and creating value among companies in business networks. At the same time, Knight (2000) explained that entrepreneurial orientation can be realized in autonomy, innovation orientation, risk orientation, proactive orientation, and aggressive competition.

Ramachandran and Ramnarayan (1993) stated that one of the drivers of the company's creation and growth process is interpersonal networks. Networking makes companies strive to increase existing resources, so companies dare to take risks and be proactive in building networking capabilities. Network capability will enable the company to anticipate opportunities in the market and more quickly identify competitors' movements. Randmaa (2011) stated that companies

with a proactive nature seek to integrate the capabilities, behavior patterns, and skills possessed by partner companies by generating relationships between organizations. The following hypothesis is developed through a thorough literature assessment and earlier studies.

H3: Entrepreneurial orientation influences the accessibility of international networks positively.

The impact of innovation capability on international network accessibility

Tsai and Ghoshal (1998) examined the relationship between the relational, structural, and cognitive dimensions of social capital on patterns of resource exchange and product innovation within firms. Social interaction, a manifestation of social structural capital, and trust dimensions, a manifestation of the relational dimension, are significantly related to the resources exchange level, influencing product innovation in the company's network.

Lawson and O'Keefe (2006) described inter-organizational relationships as the process by which an organization builds long-term customer relationships so sellers and buyers work towards a set target. The following hypothesis is developed through a thorough literature assessment and earlier studies.

H4: Innovation capability influences the accessibility of international networking positively.

The impact of innovation capability on SMEs' export performance

Chang and Huang (2022) revealed that a positive global mindset affected relational skills and innovation capabilities, thereby increasing export performance. Market-oriented organizational resources and innovation capabilities are vital to building customer relationships (Milfelner, Gabrijan, & Snoj, 2008). Companies can innovate if their company is successful in utilizing creative ideas in products (Amabile et al., 1996). Khin, Ahmad, and Ramayah (2010) argued that the innovations created by the company provide various benefits, such as the ability to carry out new designs, functions, and features to improve performance.

Khan et al. (2022) showed that innovative capacity significantly impacts a company's agility and improves performance. Organizations need strong learning and innovation capabilities to gain a competitive advantage (Calantone, Cavusgil, & Zhao, 2002). Learning orientation influences company innovation, which in turn affects company performance. The following hypothesis is developed through a thorough literature assessment and earlier studies.

H5: Innovation capability influences SMEs' export performance positively.

The impact of international networking accessibility on SMEs' export performance

Singh and Garg (2008) examined export SMEs and found that SMEs faced many obstacles due to a lack of resources and innovative capabilities. SMEs need to develop strategies to keep their competitiveness. SMEs must build networks and supply chain provision as a process and achieve performance about the advantages of the best products in their industry (Gurau, 2004). Cao et al. (2022) found a relationship between the internationalization of networking and performance. In addition, social networks play an essential role in the relationship between internationalization and company performance.

Meanwhile, Chew, Yan, and Cheah (2008) concluded that core capabilities and competitive strategies affect the performance of SMEs. In adverse conditions, with global economic sanctions on the continuity of exports, it is important for organizations to proactively participate in trading activities on global markets (Le & Review, 2022). In their study, Farida and Nuryakin (2021) found that the ability of business networking positively affects innovation and business performance. Furthermore, relational ability can improve innovation and business performance.

Morgan and Hunt (1994) studied and developed the commitment-trust theory. It asserts that cooperation between interwoven organizations will be created if built based on relational commitment, mutual trust, and the desire to cooperate in business networks for the long term. Dependability, knowledge, and expectations significantly influence performance achievement (Troy et al., 2008). Zhou, Wu, and Luo (2007) also said that networking influenced the performance of SMEs to compete in the international market. Networks in international markets also affected financial and export performance.

Carvalho and Reis (2012) explored information technology's role in analyzing organizational views on creativity in business management. Furthermore, they found a relationship between companies in information technology in business

networks on company performance and the creation of innovative products in the market. The following hypothesis is developed through a thorough literature assessment and earlier studies.

H6: Accessibility of international networks influences SMEs' export performance positively.

This research empirically examined the important mediating role of innovation ability and access to international networks on the effect of entrepreneurial orientation on performance. Although entrepreneurial orientation has been widely studied in the scope of SME research, only a few have examined the mediating role of innovation ability and accessibility of international networks in improving SMEs' performance. This study contributes to the knowledge of resource-based view theory and explores how entrepreneurial orientation affects performance through the mediating role of innovation ability and accessibility of international rankings. Figure 1 shows an empirical research model, an in-depth literature review, and previous research.

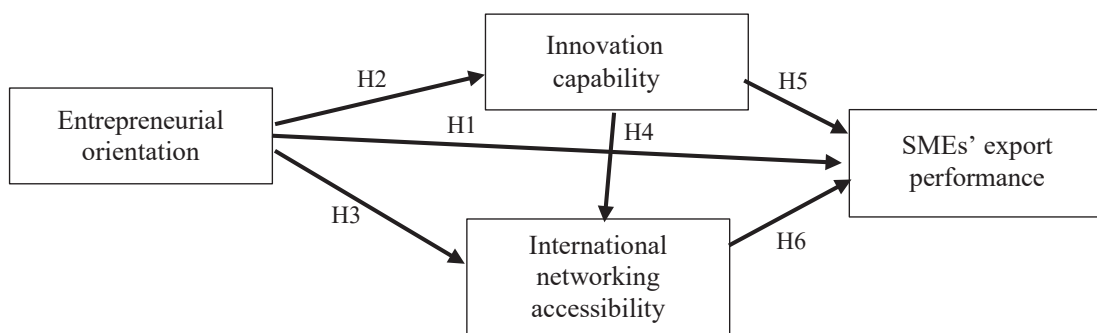


Figure 1. Empirical research model

RESEARCH METHODS

Research design and sample

This study implemented a quantitative approach in testing six hypotheses. Respondents in this study were collected through questionnaires distributed to 208 brass industry managers in Boyolali, Indonesia. However, only 184 samples were considered complete for data processing. The researcher used the purposive sampling method. The returned questionnaire with complete answers was tested further to predict the research construct.

This study used a Structural Equation Modeling (SEM) approach with the AMOS program in testing modern and research hypotheses. A quantitative approach to data analysis with Structural Equation Modelling in the AMOS 21 program was used for this study. Data analysis tested each indicator model and evaluated the parameters of goodness of fit (Anderson & Gerbing, 1988). This study also employed Maximum Likelihood Estimation (MLE). Multivariate normality requirements in SEM testing are needed to estimate structure coefficients (paths). MLE requires endogenous variables that are normally distributed (Hair, Babin, & Anderson, 2019). The measurement model implemented convergent validity to ensure the validity of indicators in measuring the variables being tested. The significance of the indicators assessed the suitability of the indicators in forming latent variables. Therefore, SEM analysis was carried out by testing the parameters of goodness of fit and the research hypothesis on the causal relationship in the model. SEM assumptions expected to be met include the Chi-Square value expected to be small, Probability \geq , $CMIN/DF \leq 2.00$, $GFI \geq 0.90$, $AGFI \geq 0.90$, $TLI \geq 0.95$, $CFI \geq 0.95$, $RMSEA \leq 0.08$ (Arbuckle, 2011).

The reason for choosing this region was that there is currently a cluster of brass industry SMEs that uses a production process with basic ingredients made from the local area. Second, regional economic growth experienced relatively good growth reflected through product sales in the brass industry cluster's export market. Third, the local government supported the brass industry cluster to encourage economic growth in the vicinity. This study empirically aims to prove the independent variable's impact on the dependent variable. The author collected data by distributing questionnaires to the research sample. The characteristics of the sample in this study are provided in Table 1.

Table 1. Respondents of the research sample

Sample characteristics	Number of sample	Percent
Gender		
Male	177	96.2%
Female	7	3.8 %
Age		
< 25	56	30.4%
26 - 30	27	14.7%
31 – 35	23	12.5%
36 – 40	30	16.3%
41 – 45	30	16.3%
> 45	18	9.8%
Education level		
Elementary	55	29.9%
Junior high school	52	28.3%
Senior high school	68	37%
Diploma	5	2.7%
Bachelor's degree	4	2.2%
Family background		
Entrepreneur	50	27.2%
Non-Entrepreneur	134	72.8%
Business operation (years)		
1 – 5	70	38%
6 – 10	50	27.2%
11 – 15	26	14.1%
16 – 20	36	19.6%
> 20	2	1.1%
Number of employees		
< 25	156	84.8%
26 – 50	18	9.8%
51 – 75	6	3.3%
76 – 100	4	2.2%
Market Coverage		
Asia	125	67.9%
Europe	43	23.4%
Middle East	16	8.7%

Variable and measurement of construct

This research used a quantitative research design. The quantitative research design tested the hypotheses and empirical research models. This study used a sample of SME brass industry clusters by identifying five relevant constructs: entrepreneurial orientation, innovation capability, accessibility of international networks, and SME performance. An in-depth literature review identified research variables. Furthermore, reliability and validity tests were carried out. Each construct of entrepreneurial orientation, innovation capability, international network accessibility, and SME performance was measured using a 7-point Likert scale (1 strongly disagree – 7 strongly agree). The endogenous constructs in this study are innovation capability, access to international networks, and export performance of SMEs. In contrast, the exogenous construct in this study is entrepreneurial orientation.

Entrepreneurial orientation is a process based on proactive action, innovation, and risk-taking by the company (Wiklund, 1999). Entrepreneurial orientation in this study was measured by four statement items: (1) Support for the discovery of new ideas, (2) Proactive in seeking new opportunities, (3) New technology in production, (4) Courage to take risks in new product launching.

Innovation capabilities are the organization's ability to optimize innovation activities through information technology (Aljanabi & Noor, 2015). Innovation capabilities in this study were measured by five statement items: (1) Ability to create new products, (2) Ability to respond to market demand quickly, (3) Ability to create products according to market demand, (4) Adaptation of technology in the production process and (5) Ability to create attractive product designs for the market.

Network access is a company-specific ability to handle, use, and utilize inter-company relationships (Ritter et al., 2002). Access to networks in this study was measured by four statement items: (1) Close relationships with international

networks, (2) Mutually beneficial relationships with buyers in international markets, (3) Mutually solutive relationships with relations in international markets, (4) Support relations in the international market in expanding the market.

Overall business performance can be reflected in the financial and non-financial measures of the company (Varadarajan & Clark, 1994). Export market performance was measured using four statement items: (1) Increase in profit, (2) Increase in total assets, (3) Increase in product sales, and (4) Growth in income.

RESULTS

Descriptive statistics and correlations

Table 2 describes descriptive statistics and matrix correlations on entrepreneurial orientation, innovation capability, international networking accessibility, and SMEs' export performance. Table 2 also describes the standard deviation, average value, and correlation matrix between research variables that support testing models for H1 to H6.

Table 2. Mean, standard deviation, and correlation of the construct

Construct	Mean	Std. Dev.	EO	IC	INA	SEP
Entrepreneurial orientation (EO)	4.772	0.769	1.000			
Innovation capabilities (IC)	4.723	0.848	0.369**	1.000		
International network access (INA)	4.563	0.886	0.291**	0.404**	1.000	
SMEs' export performance (SEP)	4.295	0.874	0.331**	0.514**	0.494**	1.000

Note: *p <0.05, **p<0.01.

Validity and reliability testing

This study tested validity using confirmatory factor analysis (CFA) testing, while reliability testing used construct reliability testing by looking at the Critical Ratio (CR) value. Further testing determined Construct Reliability (CR), Average Variance Extract (AVE), and Discriminant Validity (DV) values on each exogenous construct and endogenous construct. Validity and reliability testing was conducted by looking at the CR value for each construct.

The validity and reliability of each construct based on Table 3 reveals the construct of entrepreneurial orientation, innovation capability, international networking accessibility, and SME performance of more than 0.7, thus fulfilling the required criteria. While the test results on the average variance extract value showed a value of more than 0.5. The Discriminant Validity value of each construct revealed more than 0.7. Table 3 shows the calculations with the AMOS Program on validity and reliability.

Table 3. Scale item for measures

Construct	Items	Standardized factor loading	CR	AVE	DV
Entrepreneurial orientation	EO1	0.775	0.854	0.583	0.764
	EO2	0.713			
	EO3	0.716			
	EO4	0.643			
Innovation capability	IC1	0.747	0.918	0.559	0.748
	IC2	0.750			
	IC3	0.842			
	IC4	0.831			
	IC5	0.765			
International networking accessibility	INA1	0.728	0.881	0.553	0.744
	INA2	0.886			
	INA3	0.845			
	INA4	0.748			

Construct	Items	Standardized factor loading	CR	AVE	DV
SMEs' export performance	SEP1	0.731	0.881	0.549	0.741
	SEP2	0.933			
	SEP3	0.624			
	SEP4	0.913			

Note: AVE = average variance extracted; CR = construct reliability; DV = discriminant validity.

The reliability and validity of the four constructs, entrepreneurial orientation, innovation capability, international network accessibility, and SMEs' export performance, showed the loading factor value. The loading factor value of entrepreneurial orientation for items EO1, EO2, EO3 and EO4, respectively, are 0.775, 0.713, 0.716, and 0.643. The loading factor value of innovation capability for items IC1, IC2, IC3, IC4, and IC5, respectively, are 0.747, 0.750, 0.842, 0.831, and 0.765. The loading factor value of international networking accessibility for items INA1, INA2, INA3, and INA4, respectively, are 0.728, 0.886, 0.845 and 0.748. The loading factor value of SMEs' export performance for items SEP1, SEP2, SEP3, and SEP4, respectively, are 0.731, 0.933, 0.624, and 0.913.

The results of construct entrepreneurial orientation, innovation capability, international networking accessibility and SMEs' export performance show construct reliability with a value of more than 0.7. The average variance extracted value is more than 0.5, and discriminant validity is more than 0.7.

Table 3 concludes the validation testing on entrepreneurial orientation, innovation capability, international network accessibility, and SMEs' export performance. Hair et al. (1998) explained the required criteria, called the loading factor value of more than 0.6. Hence, the five constructs were valid.

Structural model

Figure 2 shows the model fit, estimating the path in the proposed model. Table 3 describes the results of individual tests on the significance of the relationship between variables and the standard coefficient of the path to be proposed in testing the hypothesized model. Based on the five hypotheses, all statistically significant relationships went in the expected direction, supporting H1 (impact of entrepreneurial orientation on SMEs' export performance), H2 (impact of entrepreneurial orientation on innovation capability), H3 (impact of entrepreneurial orientation on international network accessibility), H4 (impact of innovation capability on international network accessibility), H5 (impact of innovation capability on SMEs' export performance), H6 (impact of international network accessibility on SMEs' export performance).

Before AMOS, varimax rotation testing was carried out to check the validity of the construct model (Gerbing & Hamilton, 1996). Acceptable test criteria are loading factor > 0.60 and loadings are more than cross-loadings. All items are retained based on these criteria. The results of the factor analysis are in Table 4.

Table 4. Factor analysis in this research

Construct	Number of items	Number of factors	Accumulated percentage of explained variance
Entrepreneurial orientation	5	1	49.190
Innovation capability	5	1	70.191
International networking accessibility	4	1	73.101
SMEs' export performance	4	1	74.020

Hypotheses test

Structural Equation Modelling explains two categories: measurements in the research model and structural equation models. Table 2 describes the structural equation model. Overall, the measurement of the fit model on the structural equation modeling indicates a pretty good fit model value with TLI = 0.955, CFI = 0.963, GFI = 0.901, RMSEA = 0.056, AGFI = 0.866, as explained in Table 5. The Amos SEM test shows the goodness-of-fit value for the model in Table 5. The fit index in Table 5 indicates that the model fits the data well. Table 5 also shows the structural model in this study.

Table 5. Model fit test

	CMIN/DF	GFI	AGFI	NFI	CFI	RMSEA
Structure model	1.565	0.901	0.866	0.904	0.963	0.056
Recommended value	< 3	> 0.9	> 0.8	> 0.9	> 0.9	< 0.1

This research implemented a quantitative approach to data analysis with Structural Equation Modelling in the AMOS 21 program. Structural Equation Modelling explains two categories of analysis: measurements in the research model and structural equation models. Table 6 reveals the structural equation model to testing empirical research model:

Table 6. Hypothesis model testing

Interaction variables	Proposed effect	Coefficient	t value	Significant	Result
Entrepreneurial orientation – SMEs’ export performance	Positive	0.139	1.465	0.143	Rejected
Entrepreneurial orientation – innovation capabilities	Positive	0.497	4.719	0.000	Accepted
Entrepreneurial orientation – international networking accessibilities	Positive	0.222	2.087	0.037	Accepted
Innovation capabilities – SMEs’ export performance	Positive	0.309	3.551	0.000	Accepted
Innovation capabilities – international networking accessibilities	Positive	0.380	4.092	0.000	Accepted
International networking accessibilities – SMEs’ export performance	Positive	0.287	3.486	0.000	Accepted

Note: Significant at $p \leq 0.10$; if $(t) \geq 1.96$.

- The statistical testing on hypothesis 1 found a significance value of 0.143 and a path coefficient value of 1.465, indicating that entrepreneurial orientation had no significant impact on SMEs’ export performance. Thus, hypothesis 1 was rejected.
- The statistical testing on hypothesis 2 regarding the influence of entrepreneurial orientation on innovation capabilities found a significance value of 0.000 and a path coefficient value of 4.719, indicating that entrepreneurial orientation positively influenced innovation capabilities. Thus, hypothesis 2 was accepted.
- The statistical testing on hypothesis 3 found a significance value of 0.037 and a path coefficient value of 2.087, indicating that entrepreneurial orientation had a significant positive effect on international network access. Thus, hypothesis 3 was accepted.
- The statistical testing on hypothesis 4 examining the impact of innovation capabilities on SMEs’ export performance found a significance value of 0.000 and a path coefficient value of 3.551, indicating that innovation capabilities had a significant positive impact on SMEs’ export performance. Thus, hypothesis 4 was accepted.
- The statistical testing of hypothesis 5 examining the effect of innovation capabilities on international market network access found a significance value of 0.000 and a path coefficient value of 4.092, indicating that innovation capabilities had a significant positive effect on international market network access. Thus, hypothesis 5 was accepted.
- The statistical testing on hypothesis 6 found a significance value of 0.000 and a path coefficient value of 3.486, indicating that international network access had a significant positive effect on the export performance of SMEs. Thus, hypothesis 6 was accepted.

Figure 2 illustrates the model of the relationship between international networking accessibility, entrepreneurial orientation, innovation capabilities, and SMEs’ export performance.

Mediation role testing

The author tested the mediating effect of innovation capabilities and international networking accessibility through data processing results on the AMOS SEM path coefficient as studied (Baron & Kenny, 1986). The role of mediation was tested by seeing the significant relationship between independent and dependent variables:

- The findings explained that the direct relationship between entrepreneurial orientation and SMEs’ export performance was not statistically significant ($\beta=0.139, p=0.143$). Thus, Baron and Kenny’s (1986) test was not met.

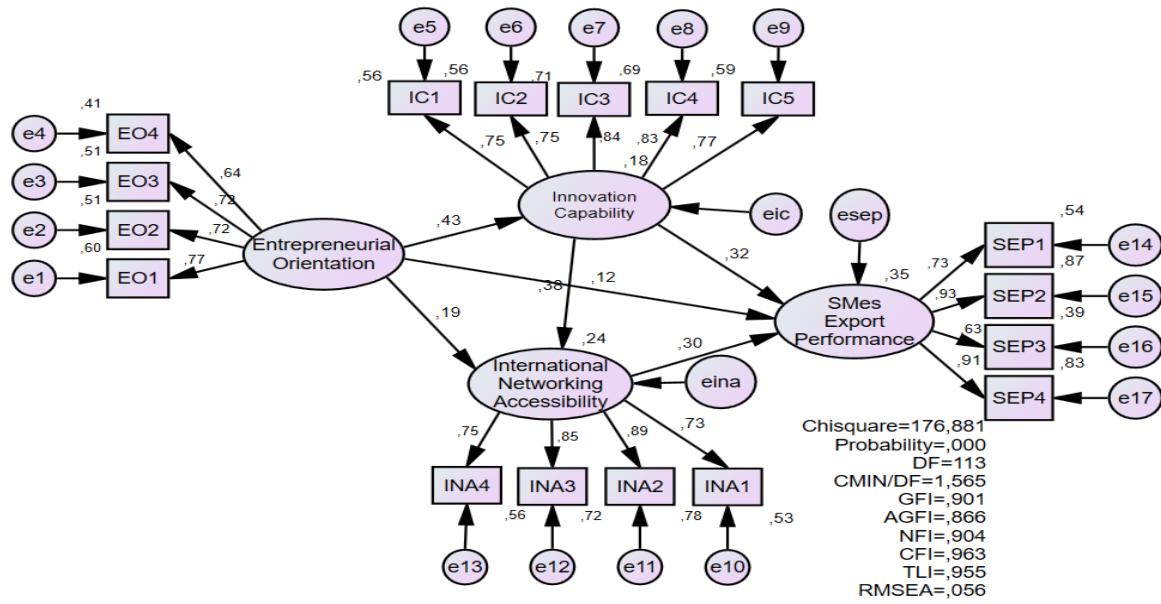


Figure 2. Full model

- The first mediating role of the indirect relationship of entrepreneurial orientation on SMEs' export performance through innovation capabilities was statistically significant ($\beta=0.309$, $p=0.000$) and ($\beta=0.497$, $p=0.000$). Thus, the first mediation test of Baron and Kenny (1986) was met. Innovation capabilities mediated the relationship between entrepreneurial orientation and SMEs' export performance.
- The mediating role of the two indirect relationships of entrepreneurial orientation on SMEs' export performance through international networking accessibility was statistically significant ($\beta=0.222$, $p=0.037$) and ($\beta=0.287$, $p=0.000$), so the second mediation test of Baron and Kenny (1986) was met. International networking accessibility mediated the relationship between SMEs' export performance and entrepreneurial orientation.
- The mediating role of the three indirect relationships of entrepreneurial orientation on SMEs' export performance through innovation capabilities and international networking accessibility were statistically significant with values ($\beta=0.287$, $p=0.000$) and ($\beta=0.222$, $p=0.037$). Thus, the third test of Baron and Kenny (1986) was met. International networking accessibility mediated the relationship between SMEs' export performance and entrepreneurial orientation.

DISCUSSION

Entrepreneurial orientation had no significant influence on SMEs' export performance. They found that entrepreneurial orientation supported SMEs' performance. This study also debated previous findings about entrepreneurial orientation affecting SMEs' export performance (Kalinic & Brouters, 2022). This study also did not align with the theory that business-oriented organizations will be characterized by innovative behavior, dare to take risks, and always trying to produce new products through proactive behavior to capture market opportunities (Covin & Slevin, 1989; Wiklund Shepherd, 2005). This study proved empirically that entrepreneurial orientation had no significant effect on the performance of SME exports. The SMEs selected for the sample in this study were export-oriented SMEs based on industrial clusters in one area where the interaction pattern built was based on social kinship and kinship. This interaction pattern did not fully demonstrate the three characteristics of entrepreneurial orientation: proactive, risk-taking, and innovativeness, so the findings were insignificant.

Entrepreneurial orientation had a significant influence on innovation capability. This finding differs from previous studies revealing that entrepreneurial orientation was positively related to innovation ability (Makhloufi et al., 2021). However, this study supported (Lee et al., 2019), explaining that entrepreneurial activity increased through a skilled and competitive workforce to provide business opportunities through innovative capacities.

Entrepreneurial orientation had a significant influence on the accessibility of international networks. Similarly, Ramachandran and Ramnarayan (1993) showed that one of the drivers of the process of creating and growing companies was to use corporate networks so that these networks increased organizational value (Kurniawan, et al., 2020). Also, companies with a proactive nature sought to integrate the capabilities, behavior patterns, and skills possessed by partner companies by generating relationships between organizations Randmaa (2011).

Innovation capability significantly affected the accessibility of international networks and SMEs' export performance. This finding is similar to previous studies concluding that the development of innovation capabilities would affect marketing capabilities and relational capital (Sulistyo & Siyamtinah, 2016). Companies willing to share information, share specific assets, and build business networks will create products in the global market (Konsti-Laakso, 2012). Landry, Amara, and Lamari (2002) also found that relational and network assets positively impacted increasing innovation.

The accessibility of international networks had a significant influence on SMEs' export performance which resembles where networks built with relational relationships became an important resource for organizations (Jian & Wang, 2013). Cao et al. (2022) highlighted the importance of social networks in international marketing. Luo et al. (2004) also found that relational resources such as customer relations and social capital determined performance. Sin et al. (2005) also revealed that the relational marketing orientation effectively improved performance.

CONCLUSION

This paper draws several conclusions based on a literature review and empirical studies. First, entrepreneurial orientation focused on export-based SMEs in this study did not significantly affect the performance of export-based SMEs. This study was conducted on 208 brass industry managers in Boyolali, Indonesia, and found that entrepreneurial orientation with the characteristics of innovation, risk-taking and proactivity had no significant effect on performance. Second, entrepreneurial orientation had a significant positive effect on innovation capabilities. Third, entrepreneurial orientation had a significant positive effect on international networking accessibilities. The four innovation capabilities significantly and positively affected SMEs' export performance. The five innovation capabilities had a significant positive effect on international networking accessibility. The six international networking accessibilities significantly and positively affected SMEs' export performance. These findings provide some interesting and important implications, theoretically and practically.

Theoretical implications

This study provides the following theoretical implications. First, this study contributes to addressing the research gap. It explains previous research investigating the determinants of the performance of export-based SMEs by exploring the relationship between entrepreneurial orientation through the mediating role of innovation capability and access to international networks. Previous researchers argued that there were inconsistencies in research findings on the effect of entrepreneurial orientation on performance so a mediating variable was needed to be able to improve performance through innovation capabilities (Konsti-Laakso et al., 2012; Phuong et al., 2022; Sulistyo & Siyamtinah, 2016) and access to international market networks (Kurniawan et al., 2020; Linehan & Scullion, 2008; Mu, 2013)

Second, this study contributes to research investigating the effect of entrepreneurial orientation on performance by conducting in-depth studies on innovation capabilities and access to international networks, in contrast to most previous studies, which only focused on the direct effect of entrepreneurial orientation on performance (Akbar et al., 2020; Hove & Vambe, 2014; Kalinic & Brouthers, 2022; Nuryakin, 2021; Semrau, Ambos, & Kraus, 2016; Wiklund & Shepherd, 2005).

Third, many studies have been on the mediating role of innovation capability and access to international networks. However, only a few have conducted studies on export SMEs, showing the importance of the characteristics of respondents and objects studied empirically. The results showed that the two constructs could improve performance, so SMEs need to adjust their strategy to increase sales of export products in international markets. In addition, with the development of technology, the use of the internet to access international networks needs attention for SMEs when entrepreneurial orientation does not directly affect export performance.

Practical implication

This study's results can guide export-based SMEs to optimize their innovation capabilities and benefit from their position of accessibility in international market networks to improve SMEs' export performance. Besides, the results can help owners or managers of SMEs better understand and find optimal solutions through increasing innovation capability and access to international networks to be instilled in the characteristics of SME actors in improving performance. An entrepreneurial orientation with the characteristics of support for the discovery of new ideas, proactive in seeking new opportunities, new technology in production, and courage to take risks in new product launching cannot directly affect improving export performance. Therefore, SMEs must gradually increase their innovation capabilities and expand access to international networks to achieve performance.

SMEs players must actively build innovation capabilities and access to a strong and high-quality international network and ensure frequent interaction with partners in international markets so that it will support increased product orders, market coverage and sales. Lastly, these findings also show that export-based SMEs need to consider other appropriate strategies to increase the number of their customers when companies have access to international market networks. Thus, companies can apply innovation capabilities and access to international networks.

Limitation and recommendation

The results of this study have some limitations. The next studies should consider adding other variables, including networking competence, relational capabilities, social capital, and competitive advantage, as a company strategy closely related to product sales performance in the export market. In addition, this study also has other limitations related to the level of this research, which cannot be generalized to other studies. Future researchers need to realize that the results of this study are limited to cluster-based industrial SME brass products where the products are marketed in only a few export areas and still focus on developing countries as export destinations. Therefore, it is necessary for future researchers to exercise caution in sampling research and extending findings that explain export performance in the scope of SMEs

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