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MSME OWNERS AND THE PATH FROM TECHNOLOGY ADOPTION TO EXPORT INTENTION

I Gusti Bagus Yosia Wiryakusuma*, Wiliam Santoso, Aisha Safira Salsa Hadi Putri, Claressa Feliciona
Universitas Ciputra, Indonesia

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ABSTRACT: This study aims to see how technology adoption plays an important role in shaping the entrepreneurial orientation of MSME owners, which will ultimately encourage the formation of export intentions. The data in this study are 207 MSME owners. Data were obtained by distributing questionnaires online. The data obtained will then be processed using SEM-PLS. This study shows that technology adoption has an influence on entrepreneurial orientation. Entrepreneurial orientation also has an influence on export intention. In addition, entrepreneurial orientation is able to mediate the influence of technology adoption on export intention. However, financial access is unable to moderate the influence of entrepreneurial orientation on export intention. Previous studies tend to focus on managerial factors, entrepreneurial orientation, or external market constraints that influence exports, without placing technology adoption as a prerequisite or main driver in the process.

Keywords: Technology Adoption; Entrepreneurial Orientation; Financial Access; Export Intention; MSMe

*Corresponding Author: bagus.yosia@ciputra.ac.id
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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have a significant role in the Indonesian economy, especially in creating jobs and driving economic growth. MSMEs are important players in the economies of developing and developed countries because they reduce unemployment rates and increase tax revenues, exports, and international and innovative activities of a country (Civelek, 2021). According to Michael et al (2016), MSMEs will be able to gain new experiences when running their businesses in foreign markets, thus increasing their competitiveness against their competitors from foreign markets. However, there are still many MSMEs that do not intend to export even though exports provide many benefits for the company and also for the national economy.

For small businesses, exports can be a reliable source of growth, competitiveness, and survival (Haddoud et al, 2020). However, MSMEs face various challenges in expanding their markets, especially at the international level. Limited access to financing is often a major obstacle for MSMEs to develop their businesses (Hamdana et al, 2021). In addition, the low adoption of digital technology reduces the competitiveness of MSMEs in the global market. Lack of managerial skills and understanding of international standards also hamper the ability of MSMEs to compete in the international market.

In the era of the digital economy, technology is not only a tool, but has evolved into a major enabler in increasing business competitiveness, especially in the small and medium enterprise (SME) sector. The ability to adopt technology by business actors allows them to respond more quickly to market changes, increase operational efficiency, and open up new market opportunities. Aljarboa (2024) emphasized that the adoption of artificial intelligence (AI) by SMEs in the e-commerce sector provides a competitive advantage through personalized customer service and automation of business processes, which ultimately increases efficiency and productivity. In line with this, Putro and Takahashi (2024) stated that the adoption of information technology (IT), when combined with entrepreneurial creativity and perceptions of ease of use, can increase the continued intention to use the technology in long-term business strategies. Meanwhile, Puspitowati et al. (2024) showed that digitalization, when accompanied by access to innovation and market orientation, significantly affects the business performance of SMEs. This confirms that technology is no longer an option, but a prerequisite in strengthening sustainable business competitiveness amidst increasingly rapid global disruption.

Entrepreneurial orientation plays a strategic role as a mediator in strengthening the relationship between various resources and the performance outcomes of small and medium enterprises (SMEs). As a behavioral framework that reflects the tendency to be innovative, proactive, and courageous in taking risks, entrepreneurial orientation acts as a bridge between internal and external factors of the organization and the achievement of superior business performance. Research by Han et al. (2024) shows that in the context of high-tech companies, entrepreneurial orientation mediates the relationship between knowledge digitalization and firm performance through business model innovation. Likewise, Civelek (2022) emphasized that SME performance becomes more significant when entrepreneurial orientation strengthens the influence of access to financing. Another study by Jean et al. (2024) also highlighted that entrepreneurial orientation strengthens the impact of business model innovation on the international performance of SMEs, especially when companies face institutional voids in foreign markets. Ataei et al. (2024) also support this mediating role in the context of students, where entrepreneurial orientation brings together entrepreneurial leadership and intellectual capital with the recognition of business opportunities. These findings emphasize that entrepreneurial orientation does not only stand as an independent factor, but also as a strategic catalyst that optimizes the influence of other factors on business success.

However, most of these firms face many constraints, especially when it comes to obtaining external financing. Since these businesses have lower revenues, financial resources, and assets compared to their larger competitors, they are less likely to receive bank credit, which is the first choice when seeking external financing (Civelek, 2021). Access to finance has long been identified as one of the key factors determining the performance and growth of small and medium enterprises (SMEs), especially in the context of developing countries. A business's ability to obtain working capital, investment, and innovation financing is highly dependent on the ease and sustainability of access to formal financial sources. A study by Beltrame et al. (2023)

highlighted the importance of relationship lending as a foundation for SMEs to obtain credit, especially when traditional collateral capacity is limited. Civelek (2022) further explained that access to finance not only directly affects SME performance but also acts as an intermediary in the relationship between entrepreneurial orientation and business success. In the context of gender and entrepreneurship, Tagha et al. (2023) confirmed that access to finance mediates the relationship between entrepreneurial orientation and business performance of women-owned MSMEs, indicating that the role of finance is crucial in closing the gender-based performance gap. Another finding by Bature et al. (2020) also shows that the success of entrepreneurial orientation in improving firm performance is highly dependent on the availability of access to external finance. Overall, empirical evidence shows that access to finance is not only a complementary resource, but also a strategic element that determines the growth capacity and competitiveness of a business.

In recent literature, there is a tendency to separate the discussion between digital technology adoption and export intention as two different research areas, even though theoretically and practically the two are closely related. Most studies focus on one side only—either how SMEs adopt technology for efficiency and innovation purposes, or how they form intentions to expand into international markets—but not many link technology adoption as a strategic initial step leading to export intention. Aljarboa (2024) examines the factors influencing the adoption of artificial intelligence (AI) technology in the context of SME e-commerce, and highlights the role of perceived benefits and implementation barriers. This study emphasizes the importance of organizational readiness and internal motivation to adopt technology, but does not further explore how digital transformation impacts market expansion, especially global markets. Similarly, Putro & Takahashi (2024) discuss technology adoption from the perspective of entrepreneurial creativity and perceived usefulness, and show how perceived ease of use of technology influences entrepreneurs' intentions to continue using technology in the long term. However, this study has not explored further whether the continued use of technology has an impact on changes in growth strategies such as export intentions. Meanwhile, studies on export intentions such as those by Dahal & Krisjanti (2021), and Haddoud et al. (2021), tend to focus on managerial factors, entrepreneurial orientation, or external market constraints that influence exports, without placing technology adoption as a prerequisite or main driver in the process. This creates an important gap in the literature, namely the absence of a theoretical model that unites the digital transformation process (through technology adoption) with the strategic intent to penetrate the international market. In the digital and post-pandemic era, where technology has become the main means of accessing global markets through e-commerce platforms, social media, and digital logistics, this relationship is becoming increasingly relevant but still lacks academic exploration.

This study contributes by repositioning technology adoption as an upstream capability that influences export intention through entrepreneurial orientation, rather than as a direct driver. It extends prior research by integrating these constructs into a coherent mediation model and empirically confirming entrepreneurial orientationas a key transformation mechanism. Additionally, the non-significant moderating role of financial access refines existing assumptions by suggesting that finance is less critical at the intention formation stage and may be more relevant during implementation.

THEORETICAL REVIEW

Technology Adoption

Technology adoption is the process of accepting and utilizing technology by businesses to increase efficiency, productivity, and competitiveness. For MSMEs, technology adoption includes the use of social media, e-commerce platforms, digital systems for financial management, and production technology. According to Aljarboa (2024), technology adoption, particularly AI, provides a competitive advantage through personalized customer service and business process automation. Putro & Takahashi (2024) emphasize that IT adoption, when combined with entrepreneurial creativity, can enhance the sustainability of technology use in long-term strategies. Thus, technology adoption is not merely a tool, but a crucial prerequisite for facing global disruption.

H1: Technology Adoption has an effect on Entrepreneurial Orientation

Entrepreneurial Orientation

Entrepreneurial orientation (EO) describes an entrepreneur's behavioral tendencies toward risk-taking, innovation, and proactiveness. EO is considered a strategic factor that can mediate the influence of various resources on business performance (Han et al., 2024). EO also strengthens the relationship between access to financing and MSME performance (Civelek, 2022) and plays a crucial role in boosting MSME international performance (Jean et al., 2024). Therefore, EO serves as a strategic catalyst that enables MSME owners to optimize technology and other resources to increase export intentions.

H2: Entrepreneurial Orientation has an effect on Export Intention

H3: Entrepreneurial Orientation mediates the effect of Technology Adoption on Export Intention

Financial Access

Access to financing is the ability of MSMEs to obtain working capital, investment financing, and funds for innovation through formal financial institutions and investors. According to Beltrame et al. (2023), relationship lending is key for MSMEs in obtaining credit when limited collateral is a barrier. Bature et al. (2020) found that the success of EO in improving business performance is highly dependent on the availability of access to financing. Tagha et al. (2023) also highlight the importance of access to financing in closing the gender gap in MSME business performance. Thus, access to financing plays a strategic role in strengthening MSME competitiveness.

H4: Financial Access moderates the effect of Entrepreneurial Orientation on Export Intention

Export Intention

Export intention is the intention or tendency of business actors to expand their markets through export activities. Export intention reflects the readiness of MSMEs to face risks, conduct international market research, and adapt products to global standards. Haddoud et al. (2021) emphasize that a strong entrepreneurial orientation drives export intention through innovation and risk-taking. Dahal & Krisjanti (2021) also show that high EO is associated with stronger export intention. In the context of Indonesian MSMEs, export intention is seen as a growth strategy that can strengthen national competitiveness.

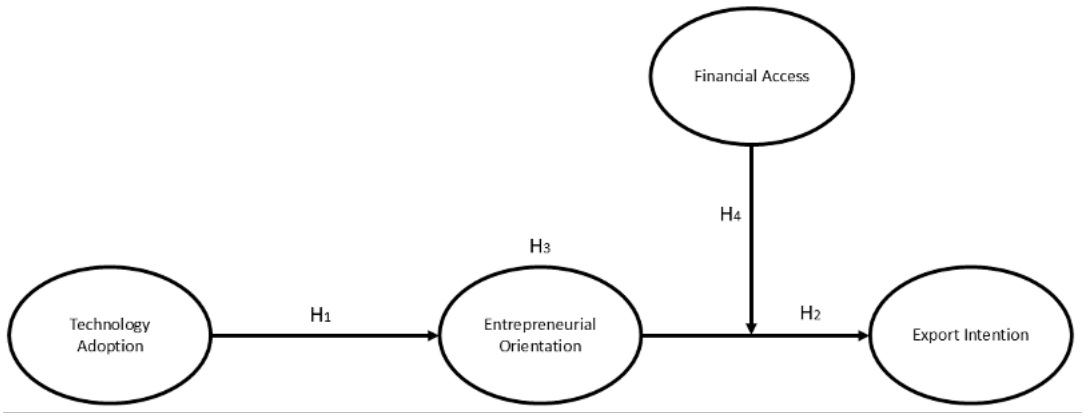


Figure 1. Research Framework

RESEARCH METHOD

This study employed a quantitative, cross-sectional design using primary data collected from MSME owners and owner-managers in Indonesia. The unit of analysis was the individual business owner or owner-manager because this actor generally exercises direct authority over technology use, entrepreneurial decision-making, financing decisions, and export-related

strategic planning in MSMEs. The study examined four latent variables: technology adoption (TA) as the independent variable, entrepreneurial orientation (EO) as the mediating variable, financial access (FA) as the moderating variable, and export intention (EI) as the dependent variable. The population consisted of MSME owners operating in Indonesia, while the final sample comprised 207 valid respondents. Respondents were included when they owned or managed an MSME, were directly involved in business decision-making, and had sufficient knowledge of the firm's technology adoption, financial condition, and market expansion orientation. Data were collected using a structured questionnaire containing 39 statement items, with the complete measurement items reported in Appendix 1 to support replication. All items were measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Before analysis, the dataset was screened to remove incomplete responses, duplicate entries, and responses that did not meet the respondent criteria.

The questionnaire was distributed to MSME owners through online and direct survey procedures. The instrument was designed to capture respondent perceptions of the firm's adoption of technology, entrepreneurial orientation, access to finance, and intention to enter or expand into export markets. To improve procedural consistency, each respondent received the same item sequence, response scale, and construct indicators. The questionnaire also included screening questions to confirm respondent eligibility. The use of owner-level respondents was intended to reduce key-informant bias because the constructs under study require direct knowledge of strategic and operational decisions. Several EI items capture both intention and preparatory aspects of exporting. This measurement decision was retained because early-stage export intention among MSMEs often includes concrete preparatory consideration, such as searching for foreign market information, evaluating internal readiness, and assessing resource availability. Therefore, EI was treated as an intention-oriented construct with preparatory elements rather than as actual export behavior.

Data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). SEM-PLS was selected because the model tested simultaneous direct, mediating, and moderating effects among latent variables. The analysis followed two sequential stages. First, the measurement model was evaluated by assessing indicator reliability through outer loadings, internal consistency reliability through Cronbach's alpha and composite reliability, convergent validity through Average Variance Extracted, and discriminant validity through the Fornell–Larcker criterion and heterotrait–monotrait ratio. Second, the structural model was assessed by examining path coefficients, coefficient of determination, effect sizes, predictive relevance, and bootstrapped significance values for the direct, indirect, and interaction effects. EO was tested as a mediator in the relationship between TA and EI through the indirect effect procedure. FA was tested as a moderator of the EO–EI relationship. Before constructing the interaction term, FA was mean-centered to reduce multicollinearity. The EO × FA interaction term was then generated using the product-indicator approach in SEM-PLS, and the moderating effect was evaluated from the significance, direction, and magnitude of the interaction path toward EI.

RESULTS

This study involved 207 respondents consisting of MSME owners with diverse demographic backgrounds and business characteristics. The profile of the respondents will provide an important picture for designing digitalization strategies, training, and policy interventions that are in accordance with their demographic and economic characteristics. Table 2 shows the characteristics of the respondents in this study.

Based on age distribution, most respondents are young entrepreneurs, namely 64.25% under the age of 25. This shows the high participation of the younger generation in entrepreneurial activities, especially in the micro-business sector. Meanwhile, in terms of gender, female respondents dominate at 69.08%, while men are 30.92%. This reflects the increasingly active involvement of women in the business world, especially in the context of MSMEs in Indonesia. In terms of last education, 54.59% of respondents are bachelor's graduates (S1), while 36.71% have a high school/equivalent education, followed by diploma graduates (6.76%) and postgraduates (1.93%). This finding indicates that most entrepreneurs have a sufficient level of education to access and utilize digital technology and information to support the development of their businesses. Based on the scale of the business, the majority of respondents (88.89%)

come from micro-businesses, namely businesses with annual revenues of less than 300 million rupiah. The dominance of micro business actors shows that the results of the study will be very relevant to the needs and field conditions of the micro, small and medium business sector, such as limited access to capital, technology, and markets. Therefore, the findings of this study are expected to provide useful input in designing MSME development strategies in the future.

Table 1. Respondent Characteristic

Respondent Characteristics	Frequency
Age	
Under 25 years	133
25–35 years	59
36–45 years	12
46–55 years	2
Above 55 years	1
Total	207
Gender	
Female	143
Male	64
Total	207
Last education	
High school/equivalent	76
Diploma (D1-D3)	14
Bachelor's degree (S1)	113
Postgraduate (S2/S3)	4
Total	207
Business scale	
Micro (Revenue < 300 million per year)	184
Small (Revenue 300 million – 2.5 billion per year)	14
Medium (Revenue 2.5 – 50 billion per year)	9
Total	207

Source: Processed data

The measurement model was first evaluated to establish the internal consistency and convergent validity of the latent constructs. As shown in Table 2, all constructs exceeded the commonly accepted reliability threshold, with Cronbach's alpha and composite reliability values above 0.70. The AVE values also surpassed the minimum criterion of 0.50, indicating that each construct explained more than half of the variance in its indicators. These results confirm that export intention, entrepreneurial orientation, financial access, and technology adoption were measured with adequate reliability and convergent validity.

Table 2. Validity & Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	AVE
EI	0.913	0.928	0.589
EO	0.883	0.907	0.550
FA	0.879	0.908	0.623
TA	0.936	0.946	0.636

Source: Processed data

The results of the reliability and construct validity tests indicate that all variables in this study have very good internal consistency and convergent validity. Based on the Cronbach's Alpha value, all variables scored above the threshold of 0.70, indicating that each indicator in the construct has a high level of reliability. The Export Intention (EI) variable recorded a Cronbach's Alpha value of 0.913, followed by Entrepreneurial Orientation (EO) of 0.883, Financial Access (FA) of 0.879, and Technology Adoption (TA) of 0.936. This consistency is also strengthened by the Composite Reliability (CR) value, where all variables have scores above 0.90, indicating very adequate measurement stability. In addition, the Average Variance Extracted (AVE) test also showed good results, with all variables having AVE values above the

minimum value of 0.50. The highest AVE value is found in the Technology Adoption variable of 0.636, followed by Financial Access (0.623), Export Intention (0.589), and Entrepreneurial Orientation (0.550). These results indicate that the instrument used has adequate convergent validity to support further analysis.

Table 3. Inner Model Result

Hypothesis		*t*-value	*p*-value	Interpretation
H1:	TA -> EO	12.129	0.000	Hypothesis accepted
H2:	EO -> EI	8.240	0.000	Hypothesis accepted
H3:	TA -> EO -> EI	6.581	0.000	Hypothesis accepted
H4:	Moderating Effect 1 -> EI	1.350	0.178	Hypothesis rejected

Source: Processed data

The results of the hypothesis test show that technology adoption has a significant effect on entrepreneurial orientation, with a t-statistic value of 12.129 and a p-value of 0.000, so this hypothesis is accepted. This finding strengthens the argument that the ability of SMEs to adopt modern technology, such as artificial intelligence, operational digitalization, and online platforms, encourages an increase in proactive, innovative, and risk-taking attitudes in business actors (Aljarboa, 2024; Putro & Takahashi, 2024). In addition, the study by Chatterjee et al. (2020) proved that technology adoption is significantly correlated with an increase in entrepreneurial orientation in female SME actors in rural India. Thus, technology plays a role not only as a tool, but also as a trigger for changes in entrepreneurial behavior.

The second hypothesis also shows significant results with a t-statistic of 8.240 and a p-value of 0.000, indicating that entrepreneurial orientation has a strong influence on export intentions. This is in line with various studies that emphasize the role of entrepreneurial characteristics such as innovation, risk-taking, and proactivity in driving market expansion decisions (Torkkeli et al., 2021; Ataei et al., 2024). Jean et al. (2024) also showed that entrepreneurial orientation functions as an important internal force in dealing with institutional voids in the international market. This result is reinforced by the findings of Dahal and Krisjanti (2021) who found that SMEs with high entrepreneurial orientation tend to have stronger export intentions than those without.

The mediation hypothesis also proved significant, with a t-statistic of 6.581 and a p-value of 0.000, indicating that entrepreneurial orientation mediates the relationship between technology adoption and export intention. This means that technology does not directly increase export intention, but the process is facilitated by the transformation of entrepreneurial behavior. This supports the framework of Han et al. (2024), where entrepreneurial orientation is a critical path in the mediation model between digital knowledge and firm performance. Civelek (2022) also stated that SME performance and export strategy are indirectly influenced by entrepreneurial orientation formed through stimuli such as digital adoption.

However, unlike the previous hypothesis, the fourth hypothesis is rejected because the t-statistics value is only 1.350 with a p-value of 0.178. This indicates that financial access does not act as a significant moderator in the relationship between entrepreneurial orientation and export intention in the context of this study. Although many previous studies such as Bature et al. (2020), Beltrame et al. (2023), and Shariff et al. (2017) emphasize the importance of access to financing in supporting business expansion, these results indicate that for most micro-entrepreneurs, export intentions may be driven more by psychological and internal factors such as motivation and digital literacy, rather than solely by financial support. In the context of respondents who are mostly from the micro sector (88.89%), this result is understandable, considering that limited capital may not be considered the main inhibiting factor in forming export intentions, but rather mental readiness and adoption of the technology itself (Rita & Huruta, 2020; Hamdana et al., 2021).

DISCUSSION

The finding that technology adoption significantly strengthens entrepreneurial orientation advances the argument that digital transformation in MSMEs is not merely an operational phenomenon but a behavioral and strategic reconfiguration process. Prior studies have shown

that technology adoption enables entrepreneurial innovation, market responsiveness, and proactive opportunity search among MSMEs (Chatterjee et al., 2020). This study extends that position by suggesting that technology does not only improve efficiency; it also reshapes how MSME owners interpret uncertainty, scan markets, and mobilize resources. AI adoption and digital tools may enhance competitiveness by reducing information frictions and accelerating decision-making routines (Aljarboa, 2024), yet their strategic effect depends on whether owners convert technological exposure into entrepreneurial action. In this sense, the result supports Putro and Takahashi's (2024) argument that IT adoption becomes sustainable when it is combined with entrepreneurial creativity. The debate, therefore, shifts from whether MSMEs adopt technology to how technology adoption changes the entrepreneurial posture of small firms. For MSME managers, the practical lesson is direct: digital investment should not be treated as a narrow administrative upgrade, but as a capability-building mechanism that cultivates innovation, proactiveness, and controlled risk-taking.

The significant effect of entrepreneurial orientation on export intention further confirms that internationalization begins before actual market entry. It begins in the strategic cognition of the owner. This finding is consistent with Torkkeli et al. (2021), who showed that risk-taking and international growth orientation shape global expansion decisions in family firms. It also aligns with Haddoud et al. (2021), who identified managerial factors as central determinants of export intention in MSMEs from developing economies. However, the present finding adds nuance to this debate by showing that export intention is not explained only by external opportunity structures, such as market openness or institutional support, but also by the internal entrepreneurial logic through which owners imagine, evaluate, and pursue foreign market possibilities. Dahal and Krisjanti (2021) similarly found that MSMEs with stronger entrepreneurial orientation demonstrate stronger export intention, particularly when financial access is available. This study confirms the first part of that argument but complicates the second: entrepreneurial orientation appears to matter even when finance does not function as a decisive boundary condition. Managerially, this suggests that MSMEs cannot wait for perfect financial conditions before developing export ambition. They need to build export-oriented alertness, market learning routines, product adaptation capacity, and risk discipline before financing becomes strategically useful.

The mediating role of entrepreneurial orientation provides the central theoretical contribution of this study. Technology adoption does not directly translate into export intention as a simple digital-capability argument might suggest. Instead, technology adoption affects export intention through the entrepreneurial orientation of MSME owners. This finding is consistent with Han et al. (2024), who showed that entrepreneurial orientation mediates the relationship between knowledge digitalization and technology-based firm performance. It also resonates with Jean et al. (2024), who demonstrated that entrepreneurial orientation strengthens the effect of business model innovation on MSME international performance, particularly in institutionally imperfect markets. In parallel, Civelek (2022) emphasized that MSME performance and export strategies are indirectly shaped by entrepreneurial orientation formed through digitalization stimuli. The present study therefore positions entrepreneurial orientation as the behavioral conversion mechanism through which technology becomes internationally meaningful. This matters because much MSME digitalization policy assumes that technology provision will naturally generate competitiveness. The evidence here suggests a more demanding logic: technology creates export intention only when it activates entrepreneurial interpretation, strategic experimentation, and market-facing initiative. For practitioners and policymakers, the implication is that digitalization programs should integrate entrepreneurial training, export-market simulation, mentoring, and opportunity-recognition exercises rather than distributing digital tools as isolated interventions.

The non-significant moderating effect of financial access challenges a dominant assumption in MSME research: that finance necessarily strengthens the conversion of entrepreneurial orientation into stronger firm outcomes. This result differs from Beltrame et al. (2023), who emphasized the role of relationship lending in strengthening the performance implications of entrepreneurial orientation. It also departs from Bature et al. (2020), who

conceptualized financial access as a contingency factor that enhances the EO–performance relationship, and from Shariff et al. (2017), who found that financial access can strengthen the effects of entrepreneurial orientation, market orientation, and learning orientation on MSME performance. The contradiction is theoretically important. It suggests that finance may be less decisive at the intention-formation stage than at the implementation or scaling stage. In a sample dominated by micro-enterprises, export intention may be shaped more by digital literacy, owner confidence, market imagination, and perceived readiness than by formal financial access. Finance may enable execution, but it may not necessarily create strategic willingness. This distinction is critical for MSME internationalization theory because it separates the psychology of export intention from the resource structure of export realization. The study is nevertheless limited by its self-reported and cross-sectional design, which may introduce common method bias despite procedural and statistical remedies. Future research should use longitudinal or multi-source data, distinguish export intention from actual export behavior, and examine whether financial access becomes more influential once MSMEs move from intention to concrete export entry.

CONCLUSION AND FURTHER STUDY

This study concludes that technology adoption strengthens MSME owners' entrepreneurial orientation, and that entrepreneurial orientation subsequently drives export intention. The findings clarify that digital transformation does not automatically produce export-oriented behavior; rather, its strategic value emerges when technology adoption cultivates innovativeness, proactiveness, and risk-taking among MSME owners. Entrepreneurial orientation therefore operates as the key explanatory mechanism that translates digital capability into international market aspiration. This evidence refines the causal logic of MSME internationalization by positioning technology adoption as an upstream strategic capability whose effect on export intention depends on entrepreneurial cognition and behavior. The non-significant moderating role of financial access further suggests that, at the intention-formation stage, internal entrepreneurial readiness may matter more than external financial support.

This study remains limited by its cross-sectional design, self-reported data, and focus on export intention rather than actual export behavior. The sample of Indonesian MSMEs also constrains broader generalization across sectors, regions, and stages of internationalization. Future research should employ longitudinal designs, larger and more heterogeneous samples, and a clearer distinction between export intention, export readiness, and realized export activity. Further studies may also examine digital literacy, innovation capability, international market knowledge, and market orientation as additional mechanisms that connect technology adoption with export outcomes. Practically, the findings imply that MSME owners should treat technology not merely as an operational efficiency tool but as a basis for entrepreneurial renewal. For policymakers, financial assistance should be complemented by programs that build digital competence, entrepreneurial mindset, and international market preparedness.

ETHICAL DISCLOSURE

This research was conducted in accordance with ethical research principles. Participation was voluntary, and all respondents were provided with an explanation of the research objectives, data confidentiality, and the right to withdraw at any time without consequence. The data obtained were used solely for academic purposes and confidentiality was guaranteed. No research procedures posed any physical or psychological risks to the respondents.

CONFLICT OF INTERESTS

The authors declare no potential conflicts of interest, either financial or non-financial, that could influence the results, interpretation, or publication of this research. All analyses and conclusions presented are based solely on the research data and findings.

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Appendix 1. Item Measurements

Variable	Item	Statement
Export Intention	EI1	I plan to expand my business market overseas in the next few years.
	EI2	I believe that exporting my products will increase the profitability of my business.
	EI3	I am interested in exploring international market opportunities for my products.
	EI4	I have done research on the potential overseas market for my business.
	EI5	I am confident that my products are competitive in the international market.
	EI6	I am investing in packaging and product quality to meet international standards.
	EI7	I am trying to find overseas business partners to expand my distribution network.
	EI8	I am interested in meeting the demand for products from overseas even though I have never exported before.
	EI9	I am prepared to face the risks associated with selling in international markets.
Entrepreneurial Orientation	EO1	I enjoy exploring new business opportunities that have not been widely explored.
	EO2	I often take risks to get better results in business.
	EO3	I prefer to innovate rather than follow existing market trends.
	EO4	I am open to new ideas that can improve my business.
	EO5	I am quick to respond to changes in customer needs and preferences.
	EO6	I have a clear long-term vision for the growth of my business.
	EO7	I am willing to try new methods to improve business efficiency.
	EO8	I believe that competition is an opportunity to grow better.
	EO9	I tend to make different decisions from competitors to gain competitive advantage.
	EO10	I often experiment to find new ways to run my business.
Financial Access	FA1	I have easy access to information about financial products that are relevant to my business.
	FA2	I can get capital loans with appropriate terms for the development of my business.
	FA3	I use banking services to manage my business finances.
	FA4	I feel that banks or other financial institutions support MSMEs like my business.
	FA5	I have sought financing assistance from financial institutions to expand my business.
	FA6	I have access to investors or angel investors who are willing to support my business.

	FA7	I use digital financial services to facilitate business transactions.
	FA8	I understand the various financing options available to MSMEs.
	FA9	I feel that I can easily meet the loan requirements from financial institutions.
	FA10	I have a good relationship with the banking party that provides financial support for my business.
Technology Adoption	TA1	I use technology to facilitate daily business operations.
	TA2	I feel that technology helps improve the efficiency of production and distribution of my business.
	TA3	I use digital platforms to market my products to customers.
	TA4	I am open to new technologies that can help my business grow.
	TA5	I invest in technology to support my business activities.
	TA6	I use social media as my primary marketing and customer communication tool.
	TA7	I stay up to date with technology developments that can be applied to my business.
	TA8	I believe that adopting technology is essential to staying competitive in business.
	TA9	I use technology to manage inventory, finances, and customer relationships.
	TA10	I plan to increase the use of technology in my business in the future.