

INFLUENCE OF MARKET AWARENESS, REGULATORY COMPLIANCE, LOGISTICAL EFFICIENCY AND DIGITAL MARKETING INNOVATION TO INTERNATIONALIZATION BARRIER (A CASE STUDY OF INDONESIAN BATIK EXPORTING BUSINESSES)

Hally Hanafiah^a*, Neng Intan Adinda Suparman^a, Liswandi^a

^a School of Business, President University, Indonesia

ABSTRACT

Indonesian batik SMEs possess a number of significant barriers in their efforts to compete at a global level, which thus constrains their internationalization potential. The main challenges comprise low market awareness, strict regulations compliance requirements, logistical inefficiencies, and a general lack of innovation in digital marketing. Using a quantitative analysis approach, this research gathered its data through structured surveys and statistical evaluations to identify the most relevant obstacles and their impact on export performance. The findings indicate that the four factors of limited market awareness, stringent regulations, logistical efficiency, and low digital marketing innovation are serious obstacles to the internationalization of batik SMEs. Among these, market awareness is the most strongly negatively related to export success. Therefore, the study calls for adaptive strategies that align traditional cultural values with modern global demands. An integrated understanding of local and global market dynamics, innovation, and sustainable practice is crucial for export performance improvement. This study provides a conceptual framework to understand the challenges faced by cultural SMEs, particularly in the batik industry, and seeks to contribute to the current literature.

Keywords: Internationalization barriers, market awareness, regulatory compliance, logistical efficiency, digital marketing innovation

1.0 INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) in Indonesia are crucial drivers of the national economy, contributing approximately 60% of the GDP of the country. Microscale enterprises lead in this sector, making up about 98.70% of the total MSMEs. Though they are the majority in terms of numbers, the productivity of micro enterprises has been quite stagnant over the last

* Corresponding author.

Email address: hally.hanafiah@president.ac.id

decade, reflecting structural weakness and susceptibility to competitive forces (Haryanti & Hidayah, 2018). This shows that government support remains far from being optimized, particularly for micro-scale businesses.

One of the most culturally appropriate sectors in Indonesia's creative economy is the batik sector. Batik is more than a cloth but also a representation of culture expressing Indonesian identity and heritage through generations (Suprayitno et al., 2023). It is woven into daily life, from birth to death, and has both economic and socio-cultural significance (Gunawan et al., 2022). Batik industry also plays a significant role in the community's economy, serving as a substantial source of revenue and a notable contributor to the nation's foreign exchange (Hadi et al., 2023). Within MSMEs, batik manufacturers make up the largest percentage of micro-scale businesses. According to February 2021 statistics from the Ministry of Industry's Center for Crafts and Batik (BBKP), there are currently 3,159 batik businesses in Indonesia, 1,794 of which are operating at a microscale (Andansari et al., 2023).

Despite its cultural value and economic worth, the batik MSME sector faces gigantic challenges in expanding business and reaching global markets. Small- and medium-sized enterprises (SMEs) in Indonesia that are engaged in craft production, including those specializing in batik, encounter numerous obstacles when attempting to enter international markets (Raya et al., 2021). The globalizing movement of MSMEs is one of the strategies to be more competitive in a global economy (Gunawan et al., 2022). However, Indonesian MSMEs still face market access, regulatory complexity, and technology limitations (Pinget et al., 2015).

This study tries to answer these concerns by empirically testing the influence of market awareness, regulations, logistics, and innovation on the export performance of Indonesian batik MSMEs. Using quantitative methods and survey data, this study aims to provide actionable suggestions that can help the internationalization of batik MSMEs and increase their contribution to the local and global creative industries.

Previous research has confirmed that the SME internationalization process is hindered by barriers and driven by drivers, classified SME internationalization barriers as either internal (endogenous to SMEs) and external (beyond the control of SMEs) challenges. While the micro, small and medium enterprise (MSME) sector in Indonesia plays an important role in the national economy, particularly in creative industries such as batik, their entry into global markets is still very limited. There is evidence that the majority of batik companies are

at the micro level, which are prone to having a number of structural challenges, including limited market access, low technology absorption, and complicated regulations (Brochado et al., 2020). This research aims to explore these challenges further and provide actionable suggestions to enhance the global competitiveness of Indonesian batik MSMEs.

The main research question is which variables have the greatest influence as barriers to the internationalization process of small and medium enterprises in improving export performance? In addition there are four questions such as, first does the market awareness a positively influence the internationalization barrier, second does the regulatory compliance a positively influence the internationalization barrier, third does the logistical efficiency a positively influence the internationalization barrier, fourth does the digital marketing innovation a positively influence the internationalization barrier and finally does the internationalization barrier a positively influence export performance.

2.0 LITERATURE REVIEW

2.1 Theoretical framework: Uppsala Model of Internationalization

This study employs the Uppsala Model of Internationalization (Johanson & Vahlne, 1977; Arvidsson & Arvidsson, 2019; Hult et al., 2020) as the main theoretical foundation. The model states that firms internationalize through a gradual learning process, where experiential knowledge gradually reduces uncertainty and leads to greater market commitment. Limited market knowledge hinders the firm's ability to acquire such knowledge, leading to greater perceived risks, and hence greater barriers to internationalization.

The revised Uppsala Model (Johanson & Vahlne, 2009; Arvidsson & Arvidsson, 2019) also highlights the role of networks as a fundamental mechanism for the internationalization process. Tight logistical and supply-chain connections enable SMEs to coordinate effectively, improve operational efficiency, and reduce the "liability of outsidership" in foreign markets. Thus, logistical proficiency can be viewed as a capability that supports network embeddedness and facilitates market entry.

In addition, the following integration of the model with institutional theory (North, 1991; Arvidsson & Arvidsson, 2019) demonstrates how the behavior of international companies is affected by formal and informal institutions—such as regulations, certification, and bureaucratic structures. In this regard, strict regulatory compliance requirement can serve as institutional obstacles to the internationalization of SMEs.

The model's recent extensions (Hult et al., 2020) reframe "market knowledge" as a part of broader capabilities, including digital and strategic competencies. This evolution is in recognition of the reality that businesses must leverage digital innovation and technological adaptation to propel learning and market commitment at an accelerated rate. Therefore, digital marketing innovation serves as a modern extension of the Uppsala model in empowering firms—especially traditional industries such as Batik SMEs—to enhance visibility and reduce internationalization barriers in the global marketplace.

2.2 Internationalization of Small Medium Enterprises (SMEs)

Internationalization of small and medium enterprises (SMEs) is vital for economic growth and integration within global markets. According to Bertrand et al. (2022), exportation remains the primary internationalization vehicle for emerging market companies, though the majority of SMEs still face a number of challenges that prevent them from engaging in exportation. Lack of market knowledge and less engagement in business networks often restrict SMEs from finding export opportunities (Dhewanto et al., 2018). SMEs, nevertheless, confront several challenges in their internationalization, including limited market awareness, inefficiency in logistics, regulatory compliance problems, and innovation deficit in digital marketing. For instance, Brochado et al. (2020) identify that there are internal barriers (e.g., financial constraints, limited market knowledge) and external barriers (e.g., bureaucracy, regulatory barriers) for SMEs' foreign market entry. The four dimensions of SME internationalization barriers explored in this literature review are market awareness, logistical efficiency, regulatory compliance, and digital marketing innovation. Market awareness is understood as the ability of SMEs to learn and adapt to consumer preferences, market trends, and patterns of competition in international markets.

2.3 Market Awareness

The Uppsala Model conceptualizes internationalization as a process of learning by experience whereby firms gradually accumulate knowledge and commitment (Johanson & Vahlne, 1977; Arvidsson and Arvidsson (2019) explained that firms with fewer foreign market knowledge frames have higher uncertainty and lower speed decision-making in internationalization. According to Billore et al., (2021), SMEs are able to enhance market awareness through extensive sensing of markets, which integrates customer knowledge, networking, and cultural understanding to achieve strategic alignment with target markets. Market knowledge is critical, however, Hultman et al. (2021) found that perceived international market knowledge may not always yield

positive outcomes. Higher perception of such knowledge can enhance SMEs' sensitivity towards internationalization obstacles and therefore discourage them from foreign markets.

In addition, Gunawan et al. (2022) Emphasize that insufficient awareness regarding socio-cultural dimensions, particularly sustainability-related, can prevent SMEs from growing. Most entrepreneurs fail to incorporate values of sustainability into the company culture due to a general lack of knowledge and awareness of evolving expectations in the global market. Combined, these studies suggest that knowledge-related issues—both over-perception of the foreign market's complexity and inadequate knowledge of socio-cultural factors—function as the most critical barriers which constrain SMEs' ability to develop strong market awareness and practice successful internationalization.

2.4 Regulatory Compliance

Regulatory compliance refers to meeting the legal and procedural requirements of exporting to foreign markets. Arvidsson and Arvidsson (2019) integrated institutional theory into the Uppsala framework, showing that firms must adapt to both formal and informal institutions in their target markets. According to Brochado et al., (2020) the internationalization process is hampered by high levels of bureaucracy, legal regulations, and large tax burdens. One SME manager mentioned that legal issues, bureaucracy, and uncertainty are the main obstacles. Meanwhile, the customs theme highlighted barriers such as tariffs and protectionist policies that limit international market access. Similarly, unclear laws or regulations, together with excessive taxation, have hampering effects on small firms (Pinget et al., 2015). Insufficient regulations and support from the government for environmental strategies are often found to be barriers to the transition to greater sustainability (Gunawan et al., 2020). In addition, According to institutional theory, behavior and practices of an organization are not encapsulated solely by internal organization determinants. They are also influenced significantly by the broader institutional context like rules, laws, and other socio-culturally embedded expectations. Organizations adopt such practices to obtain legitimacy and survive (Alnaim & Metwally, 2024). Entities that compose the formal institutions, for example, regulatory frameworks and governance structures, define the legal and procedural environment that charters the operations of firms and puts considerable pressure on SMEs to harmonize their operations with the wider social objectives (Balzando et al., 2025). Therefore government support and stakeholder engagement remain vital to enable batik SMEs to embrace open innovation and maintain competitiveness (Raya et al., 2021).

2.5 Logistical Efficiency

Logistics efficiency is the ability to coordinate supply chain activities in such a manner as to ensure timely delivery along with quality upkeep. Effective logistics is essential for supply chain optimization and minimizing costs but needs to be considered within an overall internationalization strategy. SMEs can benefit from collaboration with experienced logistics partners in reducing internationalization-related challenges Logistics (Rohau et al., 2024). Physical infrastructure was identified as a crucial element in enhancing exports, while the effect of logistics quality on competitiveness levels was significant (Christy et al., 2025) services are recognized as a significant factor in impacting international trade and a country's GDP. Sternadad et al., (2018) quotes logistics as a strategic service with a significant impact on trade flows and economic performance. In developing countries, the importance of logistics is increasing, especially with low value-added manufacturing activities being outsourced elsewhere. This makes it crucial to have efficient and effective logistics systems to enable SMEs, like those in the batik industry, to enter and compete in international markets. It is the positioning of resources in the right time, at the right place, at the right cost, and with the right quality (Rohau et al., 2024) as defined by the Chartered Institute of Logistics and Transport.

2.6 Digital Marketing Innovation

According to Hult et al., (2020) that the evolution of the Uppsala Model introduced the concepts of capabilities away from traditional market knowledge to include digital and strategic capabilities. The capabilities enable organizations to accelerate learning and enhance market commitment using digital platforms. Arvidsson and Arvidsson (2019) also noted that with rapid technology development, the incremental learning logic of the Uppsala Model remains relevant. Hence, digital marketing innovation functions as a modern addition to the model, allowing companies—especially legacy SMEs—to reduce barriers by leveraging technology to reach global audiences.

Digital marketing forms the foundation of digital transformation, which is vital for the economic progress and expanded market presence of SMEs (Sharabati et al., 2024). By integrating new digital technologies into the value chain and processing an immense amount of data, business firms are more likely to embrace new opportunities with new ways of accessing potential customers and being operational on a global scale in real-time. (Herve et al., 2020). In general, digitalization influences foreignization processes of firms in the ease of resource availability, capacities, and competence building, as well as learning and knowledge generation opportunities in target markets (Coviello

et al., 2017). Digital technologies generate higher variability in entrepreneurial processes and allow MSMEs to enhance their capabilities and performance rapidly and conveniently to create value. (Herve et al., 2020).

The market awareness, logistics efficiency, regulation efficiency, and digital marketing innovation dimensions are pivotal in recognizing the barriers for Indonesian batik SMEs' internationalization. Overcoming these barriers requires a combination of capacity-building interventions, government subsidies, and technology adoption. Future research should examine how these dimensions interact and affect one another and impact internationalization success.

3.0 HYPOTHESIS DEVELOPMENT

The issue that the Indonesian batik entrepreneurs must deal with is not only that they must internationalize the commodities of batik but also survive in the global competition (Sulistianingsih et al., 2018). According to Torres et al., (2016) Limited awareness of public incentives (market awareness) prevents the use of pro-internationalization support, thus retarding firms' internationalization. In globalization exposure, domestic culture development and preservation are needed so that the domestic culture in Indonesia will be known nationally and internationally. In order to survive globalization exposure, the individual or country needs an identity (Sulistianingsih et al., 2018). Similarly, there was also an unavailability of information about the market and market players in such a market identified as a hindrance in the process of internationalization (Brochado et al., 2020).

H1: Lack of Market Awareness Impedes Strategic Positioning.

According to Gunawan et al., (2022) Government support and bureaucratic issues have been major challenges to SMEs' plans to become more sustainable the absence of government support includes support for the promotion of local raw materials, local public procurement, and intellectual property rights (IPRs). Referring to the lack of support for local raw materials. In addition, administrative procedures (complex and/or unclear) discourage SMEs from exporting to foreign markets. A survey of SME internationalisation by the European Commission (2015) revealed that an excessively complicated administrative procedure is the most common problem for exporting SMEs. Similarly, Rahman et al., (2020) elaborates that both administrative and economic regulatory barriers are significant for SME internationalisation where administrative regulatory barriers are comparatively more prominent. This poses the next hypothesis:

H2: Regulatory Compliance Impacts International Market Entry.

Internationalization usually involves significant logistical issues, such as inventory management, transportation, tax and customs regulation, quality control, and compliance with international regulations, and international product distribution (Rahou et al., 2024). Moreover, tardy arrival of any single component can have profoundly dislocated impacts in manufacturing the end product as entire production lines can be shut down until all inputs are ready. multinational firms (MNCs) global production fragmentation aim to be located in areas with efficient transport and logistics infrastructure to reduce delays and disruptions in the supply chain, inventory-holding costs, depreciation costs as well as handling costs. (Blyde et al., 2015). This gives rise to the first hypothesis on success in companies:

H3: Weak Logistical Efficiency Delays Internationalization.

Digitalization provides new opportunities for SMEs to 'go international' through lower-risk forms of exports, such as direct exports and special offers, coupled with tapping machine learning or digital leverage effects in their global value chain (Hervé et al., 2020). The importance of emerging digital marketing techniques in enabling businesses to reach international markets by leveraging the use of social media marketing, search engine optimization, and AI-powered content personalization (Nunez Cruz et al., 2019). Not leveraging these innovations might see businesses missing out on reaching an expanded international market. This justifies a further hypothesis with regard to success:

H4: Limited Digital Marketing Innovation Restricts Global Reach.

As export performance determinants, external and internal export barriers, Internal barriers consist of such factors as not having market information and difficulty in providing after-sales service or arranging the mechanics of exporting (e.g., documentation). External barriers consist of such factors as perceived trade and non-trade barriers (e.g., standards required). (Anil et al., 2016) Internal determinants, such as limited market focus and low innovation potential, combined with external barriers, such as complex trade regulations and the absence of government assistance, effectively stifle SMEs' export performance (Calheiros-Lobo et al., 2023). Based on above explanation the conclusion:

H5: Internal and External Barriers on Export Performance

4.0 METHODOLOGY

The hypotheses have to be verified by a quantitative investigation and are composed of several variables which are related to multivariate correlations and can be tested statistically by a causal analysis. Latent variable causal analyses are able to be performed by the use of structural equation modeling (SEM). By simultaneously bringing together factor analyses and regression approaches, as SEM methodology allows, one can hence easily speak about complicated models and relationships, which cannot be done by using only regression analysis (Festing et al., 2024). Along this line, the PLS-SEM methodology was used in the current study.

4.1 Variables

The Market awareness enables MSMEs to appreciate consumers' demand, international trend, and the positioning of competition, which is essential in formulating internationalization strategies. Correct marketing is mandatory in international marketplace success. Further, cultural variances propel how MSMEs operate internationally. According to Jin et al., (2018) The conceptualization of country culture differences along with organizational differences are required in managing to mitigate the psychic distance, and support performance in foreign activities.

Regulation is one of the key barriers to internationalization by SMEs. Rules compliance at the host country and home country, such as international trade rules, intellectual property rights, and product standards, comprise regulation compliance. Developing country SMEs operate in a divergent institutional setting, which, in the majority of cases, is plagued by institutional voids in which compliance with laws and regulations is difficult and facilitating systems ineffective (Child, et al., 2021). According to Gunawan et al (2022) research, few SMEs can export their products. While, if the SMEs can fulfill the requirements, they can gain more awareness among global consumers who are sustainability-conscious.

According to Sternad et al., (2018) logistics is a very important service, which can influence international trade and the national GDP. The effectiveness of logistics processes is very important for international competitiveness. Logistics is a part of the supply chain that plans, introduces and manages an efficient storage of goods, services and relevant information from their sources to their use, in order to cater for the requirements of buyers and sellers. internationalization often involves significant logistical challenges, such as inventory management, transportation, customs and tax

management, quality control, and compliance with international standards, as well as the distribution of products in international markets (Rahou et al., 2024).

Digital innovation are companies that provide support to the digital transformation of SMEs (Georgescu, 2023), Digitalization enables SMEs to overcome traditional barriers to internationalization, such as limited resources and geographical constraints, by creating space for lower-risk export modes and facilitating access to international markets through digital platforms and advanced technologies such as machine learning and big data (Hervé et al., 2020).

In Industrial organization (IO) theory, it is the external factors that are seen to be a crucial determinant of the firm's strategy and performance (Anil et al., 2016). Export performance is generally considered to be a prime indicator of the internationalization success of SMEs, but its attainment cannot be separated from the variety of challenges encountered. The determinants of export performance include internal and external factors that affect each other. Internal issues such as the limited concentration of the market, lack of export capacity in innovation, and inefficient control of organizational resources are typically SMEs' weaknesses in international competition. However, external issues such as limited market access, complex trading regimes, and ineffective government policy support also increase the export sustainability capacity of SMEs. In addition, weak interpersonal networks in global business networks and the inability of SMEs to leverage disruptive technologies can also be significant impediments. They determine the strategic parameters of exportation, such as SMEs' potential for strategic fit matching with opportunism and niche market opportunity leveraging with a network approach. Therefore, finding out these barriers and how they influence export performance is an important step to creating more effective SME internationalization strategies (Calheiros-Lobo et al., 2023).

The theoretical context of this study identifies two critical barriers to SME internationalization: internal and external. Internal barriers are financial constraints and knowledge gaps, which hinder SMEs from funding and navigating the complexities of foreign markets (Brochado et al., 2020). External barriers are regulatory hurdles and intense competition in global markets, both of which hinder SMEs' capacity to maintain a strong international presence (Brochado et al., 2020). These barriers interact with drivers that are firm-specific, such as networks and human capital, which drive the

success of the internationalization process. This basic structure assigns a particular emphasis to assess the problems SMEs have in expanding internationally.

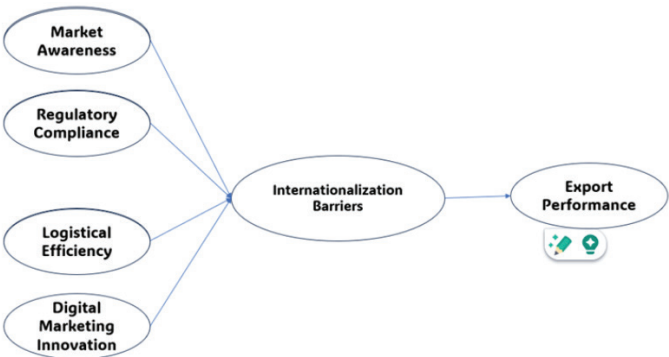


Figure 1 Structural model

4.2 Population And Sample

The population sample of this research is SMEs of batik that can potentially extend their business to the international market. Purposive sampling was used, and the company must have operated for more than one year. Respondents are owners, decision-makers, or executives who personally make strategy regarding internationalization. The respondents were selected with these conditions to ensure that the gathered data are valid and reliable.

4.3 Data Analysis using Structural Equation Modeling

The data were analyzed using Structural Equation Modeling (SEM) to examine interactions between latent variables for internationalization barriers for SMEs. The reason SEM was applied is the ability to handle complex relationships among variables, as well as latent and measured indicators. For our research, an SEM model has been applied for testing and estimating the impact of such factors as awareness of market, availability of resources, as well as regulative barriers upon readiness for internationalization.

SEM analysis was conducted with SmartPLS software to quantify the relationship between the variables and evaluate the strength of the path coefficient in the model. The path coefficients obtained will show the degree to which the relationship between the variables is strong and whether the hypothesis to be tested is accepted or rejected. SEM enables one to test structural models with multiple latent variables simultaneously, which better reflects factors that influence SME internationalization.

5.0 RESULTS

As Figure 2 indicates, the structural model reveals that regulatory compliance ($\beta = 0.579$) exerted the strongest positive effect on internationalization barriers, meaning that challenging regulations and export regulations significantly hinder batik SMEs' internationalization. Meanwhile, logistical efficiency ($\beta = -0.462$) and market awareness ($\beta = -0.271$) exert negative effects on internationalization barriers, meaning that higher efficiency and higher awareness lower perceived barriers. Online marketing innovation ($\beta = -0.000$) is still not significant, indicating technology adoption is yet to be translated into lowered export barriers. R^2 value of 0.538 indicates that these four variables explain 53.8% of the variance in internationalization barriers, while R^2 for export performance (0.770) indicates high explanatory power of the model.

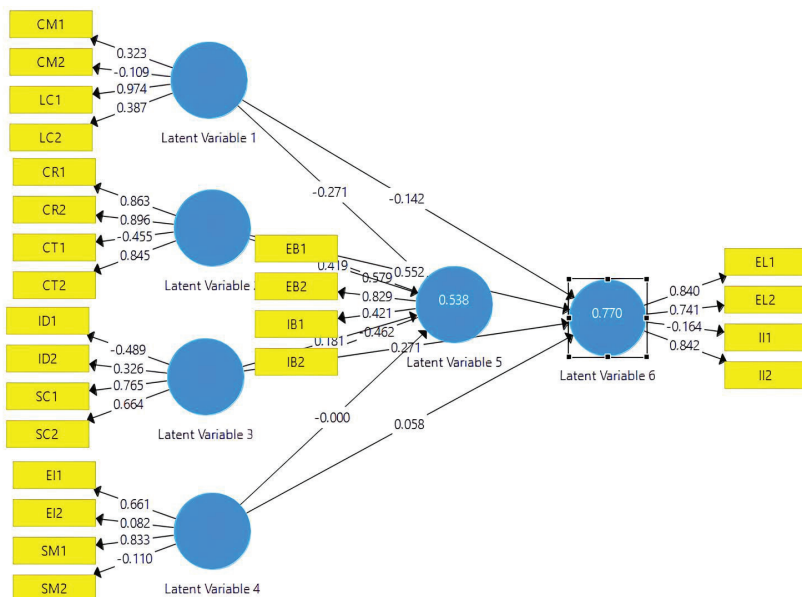


Figure 2 Results of the Structural Equation Model (PLS-SEM)

The study employed Structural Equation Modeling with Partial Least Squares (SEM-PLS) to test the proposed relationships among the constructs. The findings revealed the following results:

5.1 Measurement Model Evaluation

All the model's latent variables were assessed with reflective indicators. Outer loadings for most indicators were above the threshold of 0.7, demonstrating adequate indicator reliability. Exceptions with slightly lower loadings (e.g., CM2 = 0.323, SM2 = -0.110) were kept on the basis of theoretical significance and total construct validity.

5.2 Structural Model Evaluation

The structural model was evaluated based on path coefficients, R-squared (R²) values, and the relationship significance between latent variables. The path coefficients are shown in Table 1.

Table 1 Summary of Hypotheses Result				
Hypothesis	Path	Coefficient	Result	R ²
H1	Market Awareness → Barriers in Internationalization	-0.271	Supported	0.538
H2	Regulatory Compliance → Barriers in Internationalization	0.579	Supported	0.538
H3	Logistical Efficiency → Barriers in Internationalization	-0.462	Supported	0.538
H4	Digital Marketing Innovation → Barriers in Internationalization	-0.000	Not Supported	0.538
H5	Barriers in Internationalization → Export Performance	0.538	Supported	0.770

5.3 Hypothesis Testing

H1: The path coefficient of Market Awareness Negatively influence Barriers in Internationalization is -0.271, which indicates that low market awareness considerably increases internationalization barriers. H1 is thus supported.

H2: The regulatory compliance path Positively Barriers in Internationalization is 0.579, and there is a very strong and positive relationship. Complicated regulation and certification increase the internationalization barrier to SMEs even more. H2 is supported.

H3: Internationalization Barriers and Logistical Efficiency are significantly and negatively correlated with one another (-0.462), indicating logistical inefficiencies increase as export difficulties increase. H3 is confirmed.

H4: There is no material association between Innovation in Digital Marketing and Internationalization Barriers (-0.000), indicating there is no significant impact. Therefore, H4 is not supported.

H5: The final path from Barriers in Internationalization negatively influence Export Performance is 0.538, showing a huge positive impact. More internal and external barriers result in poor export performance outcomes. H5 is supported.

5.4 Coefficient of Determination (R^2)

Endogenous latent construct Barriers in Internationalization possessed an R^2 of 0.538, i.e., market awareness, regulatory compliance, logistical efficiency, and digital marketing innovation explain 53.8% of its variance. The variable Export Performance possessed an R^2 of 0.770, which means that 77.0% of its variance is explained by the barriers in internationalization.

6.0 DISCUSSION

The findings of this study shed light on several major barriers and facilitators of Indonesian batik SMEs' internationalization and export performance. First market awareness was, for example, also found to greatly contribute negatively to internationalization barriers (H1). This is in parallel with the argument of Torres et al. (2016) that a lack of awareness of international market opportunities and incentives from the public discourages SMEs' efficient foreign market navigation. The low external loading of CM2 (cultural misalignment) also indicates the difficulty in matching contemporary market demands with conventional cultural identity, validating the need for better strategic positioning and international branding of batik.

Second, regulatory compliance was positively and significantly correlated with internationalization barriers (H2), as per Gunawan et al. (2022) and Rahman et al. (2020). Complex trade regulations and certification procedures remain critical issues for SMEs attempting to conduct business offshore. This implies there is a pressing need for policy streamlining and additional institutional support, particularly in facilitating SMEs' access to export documentation and compliance procedures. Challenges to internationalizing tend to be delays in enforcing policy, changes in policy with little to no notice, decision procedures that take excessive levels of bureaucracy, and regulations that are poorly constructed and inefficiently enforced (Balzano et al., 2025). These findings are further reinforced consistent with institutional theory, According to Alnaim & Metwally (2024), laws, regulations, and social expectations form the external institutional environment with which organizations must interact to obtain legitimacy and survive. Organizations' responses and behaviors are influenced by the external institutional environment. Third, logistical efficiency was an important impediment to internationalization (H3). Infrastructure shortcomings and supply chain breakdowns largely explained greater export complexities, in agreement with Blyde et al. (2015). This again confirms that physical and operational limitations in logistics are a major structural issue for batik exporters in Indonesia.

In contrast, Digital Marketing Innovation (H4) showed no significant correlation with the barriers to internationalization. Previous studies have highlighted the critical role of digital marketing in enhancing SMEs' market presence and overall performance by improving customer engagement, brand visibility, and competitive advantage (Sharabati et al., 2024). However, our findings diverge from this perspective, suggesting that digital innovation is not a predominant factor in resolving challenges associated with exportation for SMEs in the batik industry. Compared to research done by Hervé et al. (2020) and Georgescu et al. (2023), where digital transformation is discussed as a stimulating factor for SME internationalization, the results here indicate that a majority of Indonesian batik SMEs are 'digitally' equipped to some extent—mainly through social media and e-commerce—although these activities are primarily promotional or domestic in nature. Therefore, in this case, marketing through the internet does not elevate internationalization barriers, although the available digital marketing technology remains underutilized. As pointed out by Gunawan et al. (2022), several cultural SMEs focus on marketing their 'non-digital' heritage and traditional forms of promotion, which may explain their apparent lack of export readiness. This outcome also aligns with Mulyanti et al. (2025), who observed that in Indonesia, digital technology has yet to be considered a key driver of SME internationalization. Even though most SMEs have adopted social media and e-commerce, the vast majority of these technologies are utilized for domestic promotion rather than for complying with export requirements. Digital innovation within the batik niche acts more as an enabler than a determinant of internationalization and requires further digital literacy and ecosystem support to leverage global competitiveness. This is also consistent with Hadi et al. (2023), who found that the participation of batik SMEs in institutional schemes is largely voluntary, illustrating a lack of strategic involvement and a low capacity to transform external support into export preparedness.

Lastly, barriers to internationalization positively impacted export performance (H5), which indicates that internal and external barriers such as complexity of the regulatory environment, market knowledge, and inefficient logistics systems directly limit SMEs' performance internationally. This is in consensus with Anil et al. (2016) and Calheiros-Lobo et al. (2023), who pointed out the adverse effect of unresolved barriers on long-term export growth.

Overall, the findings validate the Institutional and Uppsala perspectives that internal learning capabilities (such as market knowledge and logistics management) and external pressures (such as regulations) jointly affect SME

internationalization timing and success. This suggests that policy interventions need to tackle not only regulatory simplification but also capability building programs.

7.0 LIMITATIONS

This research has some limitations that need to be taken into account. The focus on a finite population of Indonesian batik SMEs may be said not to capture the entire variance of the problems faced by SMEs in other industries. Second, results are dependent heavily on the validity and completeness of survey returns, which are likely to introduce biases. The changing circumstances of global markets and technological advancement may also give rise to new barriers not addressed in this study. Future studies will have to deal with these limitations by raising the sample size, incorporating longitudinal data, and examining the consequences of new emerging technologies for circumventing such barriers.

By surmounting such challenges and relying on their heritage, Indonesian SMEs in the batik sector are capable of shining internationally, being an essential element of the national economy and cultural diplomacy.

8.0 CONCLUSIONS

This research evaluates the fundamental structural and strategic challenges in the internationalization process for Indonesian batik SMEs. It emphasizes consideration of the following four components: market awareness, regulatory complexity, logistics, and innovation in digital marketing. It has been found that the lack of market understanding, complicated regulatory frameworks, and inefficient logistics systems can constrain internationalization and impact exports negatively. Therefore, it is crucial for SMEs to understand international markets and refine their positions to meet and trend global demands while maintaining their cultural identity. The impact of compliance within the regulatory frameworks also suggests the need for reforms and institutional support. There is a need for facilitated exports, simplified certification, and government-sponsored training. Although the results indicate that innovation in digital marketing barely alleviated the challenges, that does not mean it has no value. It suggests SMEs in the Indonesian batik industry are not tapping into the available digital means for internationalization. With more training, digital marketing has the potential to be a tactical means for internationalization and improved competitiveness. Improved logistics and strategic partnerships with third-party logistics providers can support the internationalization.

References

- Alnaim, M., & Metwally, A. B. M. (2024). Institutional pressures and environmental management accounting adoption: Do environmental strategy matter?. *Sustainability*, 16(7), 3020. <https://doi.org/10.3390/su16073020>
- Andansari, D., Kamarudin, K.H., Shyafary, D. and Pristanti, H. (2023). Innovation of Craft and Batik Products in the Industrial Revolution 4.0 Era in Indonesia, *AIP Conf. Proc.* 2706, 020200 (2023), <https://doi.org/10.1063/5.0120511>
- Anil, N. K., Shoham, A., & Pfajfar, G. (2016). How export barriers, motives, and advantages impact export performance in developing countries. *International Journal of Export Marketing*, 1(2), 117. <https://doi.org/10.1504/ijexportm.2016.081554b>
- Arvidsson, H. G., & Arvidsson, R. (2019). The Uppsala Model of internationalisation and beyond. *International Journal of Finance and Administration*, 42(2), 221-239.
- Balzano, M., Marzi, G., & Turzo, T. (2025). SMEs and institutional theory: major inroads and opportunities ahead. *Management Decision*, 63(13), 1-27. <https://doi.org/10.1108/MD-05-2023-0734>
- Bertrand, O., Betschinger, M. A., & Brea-Solís, H. (2022). Export barriers for SMEs in emerging countries: A configurational approach. *Journal of Business Research*, 149, 412-423. <https://doi.org/10.1016/j.jbusres.2022.05.045>
- Billore, S., & Billore, G. (2020). Internationalization of SMEs and market orientation: A study of customer knowledge, networks and cultural knowledge. *European Business Review*, 32(1), 69-85. <https://doi.org/10.1108/EBR-06-2018-0112>
- Blyde, J., & Molina, D. (2013). *Munich Personal RePEc Archive Logistics Infrastructure and the International Location of Fragmented Production Logistics Infrastructure and the International Location of Fragmented Production*. 45749.
- Chishty, S. K., Helmi, M. O., Inkesar, A., Khan, N., & Mallick, M. F. (2025). *Managing logistics performance on export and international market competitiveness: An evaluation using firm business data*. <https://doi.org/10.53894/ijirss.v8i3.6506>
- Coviello, N., Kano, L., & Liesch, P.W. 2017. Adapting the Uppsala model to a modern world: Macro-context and microfoundations. *Journal of International Business Studies*, 48(9): 1151-1164. <https://doi.org/10.1057/s41267-017-0120-x>
- Dhewanto, W., Lantu, D. C., Herliana, S., & Azzahra, S. (2018). The entrance mode for small and medium enterprises in the Indonesian fashion industry to international market. *International Journal of Business Innovation and Research*, 16(3), 267-284. <https://doi.org/10.1504/IJBIR.2018.092619>
- European Commission (2015). Internationalisation of Small and Medium-sized Enterprises, *Flash Eurobarometer* 421. <https://europa.eu/eurobarometer/surveys/detail/2090>
- Festing, C., & Proff, H. (2024). Mediating the Paradoxes of (De-) Internationalization through Digital Platforms. *Int. Journal of Business Science and Applied Management*, 19(2). <https://doi.org/10.69864/ijbsam.19-2.187>
- Georgescu, A., Tudose, M. B., & Avasilcăi, S. (2023). Digital Innovation Hubs: SMEs' facilitators for digital innovation projects, marketing communication strategies and business internationalization. In *Marketing and Smart Technologies: Proceedings of ICMarTech 2022, Volume 2* (pp. 307-330). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-9099-1_21
- Gunawan, A. A., Bloemer, J., van Riel, A. C. R., & Essers, C. (2022). Institutional Barriers and Facilitators of Sustainability for Indonesian Batik SMEs: A Policy Agenda. *Sustainability (Switzerland)*, 14(14), 1-25. <https://doi.org/10.3390/su14148772>
- Hult, G. T. M., Gonzalez-Perez, M. A., & Lagerström, K. (2020). The theoretical evolution and use of the Uppsala Model of internationalization in the international business

- ecosystem. *Journal of International Business Studies*, 51(1), 38-49. <https://doi.org/10.1057/s41267-019-00293-x>
- Hadi, P., Nurfauziah, N., Suhartini, S., & Muafi, M. (2023). Participation of Batik SMEs Towards Business Independence And Collaborative Advantage: A Case Study On Natural Color Batik Smes. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, 8(4), 32.
- Haryanti, D. M. H., & Hidayah, I. (2018, July 24). *Potret UMKM Indonesia: Si Kecil yang Berperan Besar*. <https://Www.Ukmindonesia.Id/>
- Herve A, Schmitt, C., & Baldegger, R. (2020). *Digitalization, Entrepreneurial Orientation and Internationalization of Micro-, Small- and Medium-Sized Enterprises Management Review*, 10(4), 3-4. <http://doi.org/10.22215/timreview/1343>
- Jin, H., & Hurd, F. (2018). Exploring the impact of digital platforms on SME internationalization: New Zealand SMEs use of the Alibaba platform for Chinese market entry. *Journal of Asia-Pacific Business*, 19(2), 72-95 <https://doi.org/10.1080/10599231.2018.1453743>
- Lobo, N. C., Ferreira, J. V., & Oliveira, M. A.-Y. (2023). Internationalization and Export Performance: A systmetatic Review with Bibliometric Analysis. *Sustainability*, 15(11).
- Mulyanti, R. Y., Wati, L. N., & Suhana, S. (2025). What factors influence the internationalization of small and medium enterprises (smes)? a gender-based approach. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 9(1), 253-272. <https://doi.org/10.22437/jiituj.v9i1.38816>
- Nunes Cruz, R., Fernandes, A. M., & Rosário, T. (2019). Determinants of Innovation in Digital Marketing. *Journal of Reviews on Global Economics*, 8(July), 1722–1731. <https://doi.org/10.6000/1929-7092.2019.08.154>
- Pinget, A.; Bocquet, R.; Mothe, C. (2015). *Barriers to environmental innovation in SMEs: Empirical evidence from French firms*. *Management* 2015, 18, 132–155. https://shs.cairn.info/article/E_MANA_182_0132?tab=texte-integral
- Praselia, A. (2021, march). Faktor-Faktor yang mempengaruhi Persaingan dan Pertumbuhan Pasar: Budaya, Sosial, Personal (Suatu Literature Review). *Jurnal Ilmu Manajemen Terapan*, 2(4), 21. <https://doi.org/10.31933/jimt.v2i4>
- Rahman, M., Akter, M., & Radicic, D. (2020). Internationalization as a strategy for small and medium-sized enterprises and the impact of regulatory environment: An emerging country perspective. *Business Strategy and Development*, 3(2), 213–225. <https://doi.org/10.1002/bsd2.90>
- Raya, A. B., Andiani, R., Siregar, A. P., Prasada, I. Y., Indana, F., Simbolon, T. G. Y., ... & Nugroho, A. D. (2021). Challenges, open innovation, and engagement theory at craft smes: Evidence from Indonesian batik. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 121. <https://doi.org/10.3390/joitmc7020121>
- Sharabati, A. A. A., Ali, A. A. A., Allahham, M. I., Hussein, A. A., Alheet, A. F., & Mohammad, A. S. (2024). The impact of digital marketing on the performance of SMEs: An analytical study in light of modern digital transformations. *Sustainability*, 16(19), 8667. <https://doi.org/10.3390/su16198667>
- Sternad, M., Skrucany, T., & Jereb, B. (2018). International logistics performance based on the DEA analysis. *Communications - Scientific Letters of the University of Žilina*, 20(4), 10–15. <https://doi.org/10.26552/com.c.2018.4.10-15>
- Sulistianingsih, D., & Pujiono, P. (2018). *The Protection of Indonesian Batik Products in Economic Globalization*. 192(Icils), 198–204. <https://doi.org/10.2991/icils-18.2018.38>