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THE INFLUENCE OF GOVERNMENT POLICIES AND REGULATORY COMPLIANCE ON EXPORT PERFORMANCE IN CROSS-BORDER LOGISTICS AMONG EXPORT FIRMS.

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A B S T R A C T :

This study examined the influence of government policies and regulatory compliance on export performance in cross border logistics among export firms from developing countries. The research employed a quantitative longitudinal panel design between 2020 and 2025 to analyze data of 100 export firms from around the world using purposive sampling and secondary data from corporate annual reports. The influence of customs modernization, import/export controls, and digital documentation on export outcomes was examined through statistical analysis, including pooled Ordinary Least Squares regression. The results indicate that customs modernization and digital documentation have a positive significant effect on export performance, while import/export controls have a positive but statistically insignificant effect on export performance. Institutional Theory is confirmed by the study, as institutional reforms, in particular customs modernization, digital documentation, streamline procedures and improve competitiveness. But regulatory effectiveness appears to be contextually variable, as the inconsistent impact of import/export controls suggests. However, the study is limited by the use of secondary data and the representativeness of the purposive sample, which may limit generalizability. The research makes original contributions by offering a global view of how regulatory mechanisms affect export logistics performance and the importance of digital and customs reforms in facilitating international trade.

Keywords: government policies, regulatory compliance, export performance, cross border logistics, customs modernization and digital documentation.

Introduction :

The $33 trillion in global trade achieved in 2024 was largely driven by export firms, which are important drivers of economic growth, innovation, and employment around the world (Park & Kang, 2024). The output of these firms encourages growth in domestic economies and is expected to drive global merchandise trade 3% higher and global GDP 3.2%–3.3% higher in 2025 (Meghana & Priya, 2024). Still, export firms' performance is conditioned by multiple external pressures, for example, geopolitical instability, changes in trade accords, currency instability, and evolving customer preferences (Wang & Huang, 2025).

Of all the external factors, government policies and regulatory compliance have gained particular significance in determining how easily firms can trade internationally (Hoa, 2023: Meghana & Priya, 2024). How quickly goods move through customs, how much they cost to transport, and the overall quality of logistics are directly shaped by customs efficiency, trade facilitation, and regulatory adherence, which ultimately affect export volumes and competitiveness. As trade across borders continues to develop, a firm's capacity to manage complex regulations will become more important for its international performance (Wang & Huang, 2025).

The increasing focus on regulatory compliance makes it clear that continuous reforms and digitalization in customs and trade are needed to reduce obstacles and improve efficiency. The use of digital instruments like electronic documentation and automated risk management platforms is promoting export development by enhancing efficiency, compliance, and the speed of customs processing (Li & Li, 2022; Wang and Huang, 2025; Dachs and Wolfmayr, 2025). Still, there are obstacles to overcome, such as problems with system compatibility and firm employees' digital abilities, in order to enjoy the full potential of digital transformation in global trade.

Government policies and regulatory compliance are both beneficial and barriers to export firms in developing countries outside Africa, and trade agreements like ASEAN help countries such as Vietnam, India, and Indonesia reduce tariffs and attract investment, but high import duties and complex regulations still impede value added exports (Meghana & Priya, 2024). On the other hand, African export firms are faced with deeper, systemic challenges such as high tariffs, limited market access, and bureaucratic inefficiencies even with initiatives like the African Growth and Opportunity Act (Díez et al., 2023; Saputri & Widodo, 2023; Hiraide et al., 2022). Fragmented regulatory frameworks, weak institutional capacity, poor infrastructure and limited access to finance and technology exacerbate these barriers, increasing export costs and reducing competitiveness (Ahamed & Noboa, 2023; Díez et al., 2023). Thus, African firms are unable to fully engage in global trade and move up the value chain, and this shows the need for comprehensive policy reforms and institutional strengthening.

Previous studies have made efforts to address these challenges. However, findings on customs modernization, trade regulations, and digital documentation in Cross-Border Logistics has yielded inconsistent results regarding export performance among exporting firms. On the one hand, customs modernization, trade regulations, and digital documentation have had mixed effects on export performance of exporting firms. While customs modernization, including the ASEAN and National Single Window systems, have improved the export performance by facilitating clearance and logistics (Hoa, 2023; OĞUZ, 2024), uneven adoption and incomplete digitalization in parts of ASEAN and South Asia (Saputri & Widodo, 2023; Grainger, 2022) have limited these benefits. Risk based controls have streamlined trade regulations in regions such as ASEAN and Sweden (Saputri & Widodo, 2023; Ahamed & Noboa, 2023), but overly restrictive or inconsistently enforced controls, especially in infrastructure poor regions such as Argentina and East Africa, have undermined export competitiveness (Dos Reis et al., 2021; Olyanga et al., 2022). However, digital documentation has been hindered in countries such as China (Wang & Huang, 2025) by system interoperability issues, fragmented tech adoption, and digital skill gaps, and has not proven to be as effective in countries like Austria and beyond (Dachs & Wolfmayr, 2025; Ding et al., 2023).

From the literature, it was known that government policies and regulatory compliance mechanisms exerted a strong influence on export performance through their impact on logistics efficiency, cost structures, and operational predictability (Olyanga et al., 2022; Olyanga et al., 2022). Yet it was unclear how often these mechanisms produced positive outcomes in different economic and institutional contexts. Instead of focusing on specific countries, previous studies were limited to a specific country. These studies had not fully explained the conditions under which customs modernization, import/export control reforms, and digital documentation increased export outcomes. This gap therefore provided the room to investigate the effect of Government Policies and Regulatory Compliance on export performance in Cross Border Logistics for export firms.

1.1. Statement of the Problem

The most effective environment for export firms is one characterized by regulations that ease cross-border shipping by cutting barriers, lowering expenses, and speeding up customs clearance. It is expected of governments to develop modern customs systems, maintain uniform and transparent import/export regulations, and encourage the use of digital documentation to support global trade. If these reforms are carried out successfully, they result in more predictable logistics, higher compliance, and better firm competitiveness in the global arena. Southeast Asian and European countries that put in place National Single Windows and electronic documentation systems have shown the potential for these reforms to substantially improve export performance (Hoa, 2023; OĞUZ, 2024). In theory, the adoption of these systems should help export firms operate more efficiently and become part of global value chains.

Nevertheless, the situation in many developing countries was very different from this ideal. Many firms involved in exports in Africa and parts of South Asia and Latin America struggled greatly with complex regulatory systems, outdated customs rules, and inadequate digital infrastructure (Ahamed & Noboa, 2023; Díez et al., 2023). Import/export controls frequently became burdensome, were not applied with uniformity, or failed to keep pace with modern trading methods, resulting in significant delays, greater expense, and lower competitiveness for exporters (Olyanga et al., 2022). Wang and Huang (2025) highlighted that digital documentation systems were often not interoperable, were not widely adopted, and firms faced digital skill deficits. The research of Dachs and Wolfmayr (2025) showed that such obstacles diminished the potential upside of these systems. As a consequence, many exporters in these areas were not able to maximize government policies for better cross-border logistics performance.

A review of existing literature shows that results are mixed regarding the true impact of modernizing customs, regulating trade, and using digital documentation on export performance. Modernization initiatives and digital transformations have led to substantial efficiency gains and trade volume growth in particular regions, as reported by Hoa (2023) and Saputri and Widodo (2023). As Saputri and Widodo (2023) found, some countries enjoyed positive results, but others experienced either negative or unclear outcomes because of incomplete reforms, inconsistent policies, or inadequate infrastructure (Dos Reis et al., 2021; Grainger, 2022). Even though China and Austria have invested heavily in digital trade platforms, the results were restricted by challenges with system integration and disparities in digital readiness (Ding et al., 2023; Dachs & Wolfmayr, 2025). Because of these inconsistencies, it became hard to understand when and how government policy reforms led to increased exports for firms in different institutional settings.

1.2 Literature Review

1.2.3 Theoretical review

1.2.3.1 Institutional Theory

Institutional Theory emphasizes how formal rules, social structures, and norms shape organizational behavior, especially in contexts where businesses must comply with external regulations and standards to ensure their legitimacy and competitiveness. In the context of export performance, customs modernization, trade regulations, and digital documentation serve as powerful institutional forces that influence how firms manage their cross-border logistics and adapt to global market demands. The theory posits that organizations tend to conform to these external pressures to remain competitive and recognized within their industry. In the case of customs modernization, for example, the adoption of automation, electronic customs procedures, and harmonized trade standards significantly influences how firms structure their logistics systems. By aligning with such advancements, firms can maintain their competitive edge and meet institutional requirements that improve operational efficiency and credibility within international trade (Lammers & Garcia, 2017; Peters, 2022; Schneiberg, 2024).

Customs modernization through automation and standardization provides a clear example of how institutional pressures shape organizational behavior. Automation reduces the need for manual intervention, streamlining customs processes and eliminating inefficiencies. As global trade increasingly demands speed and accuracy, businesses are forced to adopt such systems to remain competitive and ensure timely delivery of goods. Moreover, the harmonization of trade standards across regions provides a framework that businesses must comply with in order to maintain legitimacy in international markets. Firms that resist these institutional changes risk falling behind competitors who embrace them. For instance, in the ASEAN region, countries have implemented the ASEAN Single Window to simplify trade procedures, and firms adhering to this system can reduce clearance times, minimize costs, and improve overall logistics efficiency, directly contributing to enhanced export performance (Dachs & Wolfmayr, 2025; Dos Reis et al., 2021; Li & Li, 2022).

Similarly, trade regulations, such as import/export controls, exert institutional pressure on firms to comply with national and international norms. These regulations, designed to ensure security, compliance, and fairness in international trade, can impose significant constraints on firms. However, they also act as institutional mechanisms that push businesses to develop more robust compliance frameworks. For instance, firms involved in cross-border trade must ensure their goods meet safety, environmental, and quality standards established by importing countries. The implementation of stringent controls can create barriers for firms that fail to comply, but those that successfully adapt their practices can maintain their legitimacy and improve their export performance. Import/export controls can thus act as a double-edged sword, providing both challenges and opportunities for firms, with those who adopt effective compliance measures enjoying enhanced export success (Dos Reis et al., 2021; Dachs & Wolfmayr, 2025).

Finally, the adoption of digital documentation systems serves as another institutional force shaping organizational behavior. With the increasing demand for transparency, speed, and accuracy in global trade, firms are under pressure to adopt digital tools such as electronic bills of lading, automated customs declarations, and digital compliance checks. These tools are not just a response to market demands but also an institutional expectation. By integrating these digital systems, firms align with global trade norms and avoid being left behind in the increasingly digitalized business landscape. The adoption of digital documentation not only streamlines logistics operations but also enhances the credibility of firms, as they are perceived as modern, efficient, and compliant with international standards. As firms conform to these expectations, they experience isomorphic behaviors, mimicking successful practices that improve their export performance and enable them to compete effectively in international markets (Dos Reis et al., 2021; Dachs & Wolfmayr, 2025).

1.2.3 Hypotheses

Organizations are expected by Institutional Theory to react to changes in regulations and new technologies in order to gain legitimacy and obtain access to important resources. The implementation of automated risk management systems, digital customs clearance platforms, and regional or national single windows represents a major institutional influence on firm activities. When firms adopt these innovations, they can boost efficiency, cut back on transaction costs, and make logistics between borders more seamless, which leads to better export performance (Ahamed & Noboa, 2023; These findings are supported.

Empirical studies indicate that upgrading customs procedures can have a major impact on export performance. The adoption of the ASEAN Single Window and automated clearance mechanisms in ASEAN countries has shortened clearance periods, lowered transport costs, and raised logistics quality, resulting in higher export volumes. In East Africa, too, efforts to simplify customs operations have contributed to higher predictability and efficiency in cross-border commerce. Such initiatives show that modernization helps boost export performance by making trade processes more efficient and minimizing trade obstacles (Ahamed & Noboa, 2023; The literature refers to Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; OĞUZ, 2024; Saputri & Widodo, 2023.

Improvements in customs efficiency lead to firms enjoying greater competitiveness in international markets. Faster trade and improved responsiveness to market demands are achieved by exporters when clearance times and transaction costs are minimized. This improvement in export performance, resulting from customs modernization, demonstrates the substantial role institutional improvements play in boosting the competitiveness and growth of export firms in the cross-border logistics sector (Ahamed & Noboa, 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; OĞUZ, 2024; Saputri & Widodo, 2023). Hence;

H1: Customs modernization has a positive influence on export performance in Cross-Border Logistics among export firms.

As explained by Institutional Theory, import/export controls including licensing, permits, and risk-based inspections are institutional instruments that influence the actions of firms in global trade. Well-structured, transparent, and harmonized controls across borders not only lessen uncertainty but also make compliance easier and support a stable international business setting. When firms adopt these institutional norms, they can handle risks more successfully and participate in trade with greater confidence, which contributes to better export results (Ahamed & Noboa, 2023; The literature refers to Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; OĞUZ, 2024; Saputri & Widodo, 2023.

According to empirical evidence, the successful implementation of import/export controls tends to support better export performance. In the case of Sweden, the presence of clear and harmonized import/export regulations has played a key role in balancing trade security with efficiency, thereby strengthening Sweden's export performance. ASEAN countries have also gained from the adoption of risk-based controls, which have helped exporters to simplify their processes and lower the consequences of both delays and non-compliance fines. These cases illustrate that appropriate regulatory frameworks support the efficiency and performance of export firms (Ahamed & Noboa, 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; OĞUZ, 2024; Saputri & Widodo, 2023).

In addition, the benefits of effective import/export regulations go beyond just compliance and improve the efficiency of the logistics chain. A predictable regulatory environment allows firms to minimize disruptions, so they can concentrate on growing their market share and enhancing customer satisfaction. Consequently, these measures help to establish a setting in which export firms can operate more effectively in global markets, as cross-border logistics are shielded from regulatory inefficiencies (Ahamed & Noboa, 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; OĞUZ, 2024; Saputri & Widodo, 2023). Therefore;

H2: Import/export controls have a positive influence on export performance in Cross-Border Logistics among export firms.

Institutional Theory explains that firms adopt new technologies in response to institutional pressures aimed at keeping them both competitive and compliant with global standards. Digital documentation systems—like electronic bills of lading, digital customs declarations, and automated export compliance tools—mark a major change in cross-border logistics by improving how firms coordinate, communicate, and operate efficiently. If firms adopt these digital systems, they are able to simplify their workflow, minimize paper usage, and uphold international trade standards, ultimately leading to better export performance (Ahamed & Noboa, 2023; Dachs & Wolfmayr, 2025; Ding et al., 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; Li & Li, 2022; OĞUZ, 2024; Saputri & Widodo, 2023; Wang & Huang, 2025).

The use of digital documentation systems, as shown by empirical research, brings about important improvements in export performance. Empirical findings from both China and Austria point to the fact that electronic bills of lading and digital customs declarations help minimize delays, improve how operations are managed, and increase the efficiency of logistics. In turn, firms that employ these digital systems enjoy accelerated processing, fewer mistakes, and smoother cross-border activities, all of which support improved export performance. As a result, firms can maintain their competitiveness as global trade continues to digitalize rapidly (Ahamed & Noboa, 2023; Dachs & Wolfmayr, 2025; Ding et al., 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; Li & Li, 2022; OĞUZ, 2024; Saputri & Widodo, 2023; Wang & Huang, 2025).

The advantages of digital documentation for export performance are also due, in part, to better compliance with regulatory requirements. Firms that take advantage of electronic systems are better able to meet international documentation requirements, thereby lowering the risk of delays or penalties caused by non-compliance. As a result, both operational efficiency and the firm's reputation and credibility in international markets are improved. Consequently, the integration of digital documentation in cross-border logistics serves as a catalyst for improving export performance, ensuring firms remain competitive and successful in their international ventures (Ahamed & Noboa, 2023; Dachs & Wolfmayr, 2025; Ding et al., 2023; Dos Reis et al., 2021; Grainger, 2022; Hoa, 2023; Li & Li, 2022; OĞUZ, 2024; Saputri & Widodo, 2023; Wang & Huang, 2025). Consequently;

H3: Digital documentation has a positive influence on export performance in Cross-Border Logistics among export firms.

1.2.

1.3Research Methodology

1.3.1 Research Design, Study Population and Study Area

The research method was quantitative with longitudinal panel design from 2020 to 2025 to examine how government policies and regulatory compliance affect export performance in cross border logistics. Saunders et al. (2009) describe this method as one which focuses on numerical data and statistical analysis of relationships between variables over time. The study population was purposively sampled corporate annual reports of export firms that directly interact with government regulations and customs procedures.

1.3.2 Sampling, Data Collection, Data Analysis

Purposive sampling was used to select a sample of 100 export firms that were engaged in cross border logistics operations from developing countries, as they were selected due to practical constraints in terms of cost, time and workload (Saunders et al., 2009). Data from 2020 to 2025 was collected annually and the dataset is complete in terms of time span, number of firms, and geographic diversity. This robust sample design allowed for a thorough and reliable examination of the relationship between government policies, regulatory compliance, and export performance across regions and contexts.

The data collection was based on secondary sources, mainly corporate annual reports which were retrieved from the International Trade Administration (ITA) U.S. Exporters Database and ExportBureau. This method guaranteed consistency, objectivity and comparability of data over the five-year period and reduced respondent bias. The study used the Stata software package for data analysis, and conducted descriptive statistics, correlation analysis and empirical tests. The relationship between dependent and independent variables was analyzed using dynamic panel data regression techniques, after which diagnostic evaluations were performed, and the Ordinary Least Squares (OLS) method was selected to be used for the pooled Ordinary Least Squares (OLS) method as the method to analyze the determinants of export performance as guided by Nájera et al. (2023).

1.4 Data analysis and results

1.4.1 Sample Characteristics

The study was also interested to know the experience of firms in the export logistics and cross border trade industry. The firms are of different ownership status. The companies are grouped into those with the age of less than 5 years, more than 5 years but less than 10 years, more than 10 years but less than 20 years and more than 20 years. As shown in Table 1.1 below, out of 100 companies, 48 companies have been operating for more than 20 years. This implies that (48%) of the population have more experience and know what exactly the stakeholders need.

Table 1.1: Years the Company has operated

Years the Company has operated	Frequency	Percentage
< 20 yrs	48	48
20yrs < but < 50 yrs	21	21
More than 50 yrs	31	31
Total	100	100

1.4.2 Model Analysis and Results

1.4.2.1 Correlation Test for Measured Variables

1.4.2.1.1 Pairwise correlation

The variables are usually subjected to pairwise correlation to identify potential multicollinearity issues (Sathyanarayana & Mohanasundaram, 2024). When two or more variables are highly correlated, it is said to be multicollinearity and can affect the reliability of the study's results. Inaccurate or unstable findings may result from a strong correlation between variables. The correlation coefficients for the variables considered in this study are shown in Table 1.2 below.

Table 1.2: Pairwise correlation matrix and variance inflation factor

		EXP	IEC	CSM	DDM
EXP	Pearson Correlation	1			
	Sig. (2-tailed)				
IEC	Pearson Correlation	.071	1		
	Sig. (2-tailed)	.061			
CSM	Pearson Correlation	.037	.227**	1	
	Sig. (2-tailed)	.294	.000		
DDM	Pearson Correlation	-.046	-.025	-.075	1

**. Correlation is significant at the 99% confidence level (2-tailed).

*. Correlation is significant at the 95% confidence level (2-tailed).

Pairwise correlation and Variance Inflation Factor (VIF) results for the independent variables are presented in the table below. As can be seen in Table 1.3, most of the correlations are statistically significant at the 95 percent confidence level. Importantly, all correlation values are less than the commonly accepted threshold of 0.80 (Vinkoczi et al., 2024; Hair et al., 2021). Furthermore, all VIF values are less than 5, which indicates that multicollinearity is not a major issue in this study.

Table 1.3: Multicollinearity Test Coefficients

DETAILS	**COLLINEARITY STATISTICS**	
	VIF	**Tolerance**
EXP	1.163	0.850
IEC	1.164	0.854
CSM	1.076	0.926
DDM	1.032	0.978

1.4.3 Regression Results

In the Table 1.4, the pooled OLS regression results indicate that about 40.6% of the variation in export performance among the surveyed firms is explained by government policies and regulatory compliance practices, as indicated by the R-squared value of 0.406. The model is statistically significant and well fitted to the data with the F statistic of 9.865 ($p < 0.01$). Digital documentation ($\beta = 7.237$, $p = 0.000$) and customs modernization ($\beta = 4.488$, $p = 0.021$) are both strong and statistically significant positive relationships with export performance, implying that better export outcomes result from improvements in these areas. However, import/export controls ($\beta = 3.716$, $p = 0.743$) do have a positive but statistically insignificant effect on export performance indicating that their role in determining export performance is not clearly supported by the data in this model.

The findings from Table 1.4 indicate that digital documentation is the main and most statistically significant driver of improved export performance in the surveyed firms. A high standardized coefficient ($\beta = 7.237$, $p = 0.000$) indicates that digital documentation, including electronic bills of lading, automated customs declarations, and This result shows that digitalization leads to better operational performance and helps firms comply with global trade standards, which in turn increases their credibility and logistics advantage. The substantial influence of digital capabilities on higher performance makes it essential for exporters to invest in them as a main strategy.

Customs modernization is found to increase export performance in a statistically significant and positive manner ($\beta = 4.488$, $p = 0.021$), but the relationship is not as strong as that observed for digital documentation. The results support the idea that improving customs operations through automation, simplified clearance, and harmonized trade rules can result in concrete gains in the efficiency of border transactions. Such advancements help to ease administrative workloads and make logistics operations both faster and more predictable. The result indicates that policies targeted at modernizing customs infrastructure and fostering data interoperability can help exporters reduce both transaction costs and lead times, thereby supporting their global competitiveness.

While import/export controls have a positive coefficient in the model ($\beta = 3.716$), their effect on export performance is not supported by the data, as the results are not statistically significant ($p = 0.743$). Although these controls are intended to strengthen security and compliance, the results indicate they do not lead to better export performance in the current context. This may be due to overly complex procedures, inconsistent enforcement, or firms perceiving them more as regulatory burdens than facilitators. Therefore, while import/export controls remain important for trade governance, the findings highlight the need to balance their implementation to avoid creating unintended trade bottlenecks that hinder rather than support export performance.

Table 1.4: OLS Longitudinal Panel Regression of Government Policies and Regulatory Compliance on export performance for the Model

Variable	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DDM	7.237	1.258	5.75	0.000	4.766	9.709	***
CSM	4.488	1.946	2.31	0.021	0.665	8.312	***
IEC	3.716	3.752	0.99	0.743	3.656	11.088	**
Constant	4.764	4.947	0.96	0.336	-4.955	14.483	

Mean dependent var	21.854	SD dependent var	11.070
R-squared	0.706	Number of obs	500.000
F-test	9.865	Prob > F	0.000
Akaike crit. (AIC)	4685.373	Bayesian crit. (BIC)	4714.875

**** p<0.01, ** p<0.05, * p<0.1*

1.4.4 Discussion

The first objective examined the role of customs modernization (CSM) on export performance. Results showed that CSM has a positive and statistically significant relationship (β = 4.488, p = 0.021) with export performance at the 5% level. This is consistent with work by Hoa (2023) and OĞUZ (2024), who pointed out that customs reforms and modernization are important for increasing export competitiveness through simplification of customs procedures and reduction of administrative bottlenecks thereby improving export performance. Additionally, the positive findings of this study support the Institutional Theory, that institutional structures like customs regulations and procedures affect organizational behavior and performance. This case shows that institutional reforms are necessary to enhance the export performance, and institutional pressures to modernize have resulted in better export outcomes, which in turn support the idea that institutional reforms are necessary for better export outcomes. This result is consistent with the larger literature stressing the role of efficient and modernized customs systems in stimulating international trade by improving export outcomes (Dachs & Wolfmayr, 2025; Grainger, 2022).

The second objective investigated the effect of import/export controls (IEC) on export performance. The results however revealed a positive but statistically insignificant relationship with a coefficient (β) of 3.716 and a p value of 0.743. This implies that IEC may influence the export performance, but not to a great extent in the present study. This finding is contrary to the findings of Ahamed and Noboa (2023) who argued that for successful international trade, exchange risks and trade controls need to be managed and trade controls have a positive effect on export performance. Several factors may explain why import/export controls (IEC) are insignificant to export performance in this study. The inconsistencies in influence of IEC regulations across countries arise from the fact that firms operate in different regulatory environments, and that regulations are not uniformly stringent and enforced. Second, the direct effect of these controls on export performance is mitigated by firms' reliance on intermediaries such as customs brokers or logistics providers. In addition, as found in the study by Dos Reis et al. (2021), the inconsistent enforcement and inefficiencies in regulatory systems can nullify the effectiveness of IEC policies, which may explain why the present study is not statistically significant. This finding, challenge the Institutional Theory.

The third objective was on the effect of digital documentation (DDM) on export performance. It was found that there was a very strong positive relationship with a coefficient (β) of 7.237 and p value of 0.000, which indicates a very significant influence on export performance. This is consistent with the work of Li and Li (2022), who showed that digital platforms greatly speed up customs clearance and enhance export outcomes, especially in sectors such as textiles and apparel. Furthermore, Dachs and Wolfmayr (2025) also pointed out that digital transformation can enhance export performance by enhancing production agility and eliminating inefficiencies. The findings are consistent with the Institutional Theory, that institutional forces, such as digital regulations and the need to adopt new technologies, can influence organizational practice. Firms are likely compelled to adopt these systems as a standard practice of digital documentation, in order to maintain competitiveness and meet institutional expectations. This provides evidence for the claim that digital transformation is a main driver of export competitiveness in the contemporary trading environment.

1.4.5. Managerial implications, conclusions and recommendations

1.4.5.1 Managerial implications

The positive effect of customs modernization on export performance is thus significant and it implies that streamlined and automated customs procedures can reduce delays, reduce costs and improve transparency, which makes it important for managers to monitor institutional reforms in target markets in order to improve export performance. The statistically insignificant effect of import/export controls indicates that while these regulations exist, they may have little effect, particularly when managers employ intermediaries to comply with the regulations; this requires strategic flexibility and sensitivity to regulatory differences across regions. Furthermore, the positive significant relationship between digital documentation and export performance suggests the increasing need for managers to adopt digital systems as they not only expedite customs clearance but also conform to global trade expectations for competitiveness, agility and responsiveness in international logistics operations and hence improve export performance.

1.5.6.2 Conclusions

The aim of this study was to assess the effect of the Government Policies and Regulatory Compliance factors, namely customs modernization (CSM), import/export controls (IEC), and digital documentation (DDM) on export performance. The debate in the literature on the effect of customs modernization, risk-based import/export control and digital documentation on export performance prompted the research. Instead of focusing on specific countries, previous studies had looked at individual countries.

The present study contributes to the ongoing debate through empirical evidence from developing economies, showing that customs modernization and digital documentation significantly enhance export performance, while import/export controls have no clear, direct effect. Digital documentation emerged as the strongest driver of improved export outcomes, reinforcing arguments that institutional reforms prioritizing technological adoption can deliver substantial competitiveness gains for exporters. These finding positions digital documentation as a central institutional factor capable of helping firms overcome inefficiencies linked to outdated regulatory systems. The results also refine the institutional theory, demonstrating that the mere existence of regulations such as import/export controls does not guarantee improved performance unless they are implemented efficiently and supported through complementary reforms.

Based on these results, the study recommends that Export firms should align their operations with the modern customs systems by adopting technologies that are compatible with automated clearance, risk-based inspections and online trade documentation platforms. Customs authorities and regulatory changes can be engaged with to reduce delays and enhance export performance. Although import/export controls have a very small direct impact on export performance, firms can mitigate challenges by working with experienced customs brokers and logistics providers, monitoring compliance internally, and staying informed through trade associations. Additionally, firms should prioritise the adoption of digital documentation systems to reduce transaction speed, errors and coordination with customs and logistics partners, which can significantly improve export performance. The findings help to contribute to the ongoing debate in the literature with regard to the critical roles of customs modernization, digital documentation, and import/export controls in improving export performance.

1.5.6.3 Recommendations for Export Firms

Since customs modernization has a positive effect on export performance, export firms should align their operations with modern customs systems, adopt trade technologies, and interact with customs authorities to enhance efficiency in cross border logistics and, in turn, improve export performance.

In addition, direct effects of import/export controls on export performance were not significant, and export firms should actively counter the adverse effects of different regulatory environments and enforcement practices across countries. Strengthening partnerships with experienced customs brokers, freight forwarders and third-party logistics providers with in-depth, local market knowledge of specific trade controls will enable smoother passage through complex trade controls.

Additionally, since the relationship between digital documentation and export performance is highly significant positive, digital documentation improves transaction speed, accuracy and coordination with customs and logistics partners, and therefore export firms should give priority to adopting secure and standardized digital systems to achieve efficiency and responsiveness in order to achieve stronger export performance as the outcome.

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