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Non-Tariff Barriers, Regulatory Quality, and Performance of Small and Medium Enterprises at Namanga Border, Kenya

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Abstract

The purpose of this study was to establish the effect of regulatory quality on the relationship between non-tariff barriers and the performance of SMEs at the Namanga Border, Kenya. The specific objectives of the study were: to investigate the effect of technical barriers on the performance of SMEs at Namanga Border, Kenya; to investigate the effect of customs rules and procedures on the performance of SMEs at Namanga Border, Kenya; to investigate the effect of transport-related barriers on the performance of SMEs at Namanga Border, Kenya; and to assess the moderating effect of regulatory quality on the relationship between: a) technical barriers and performance of SMEs at Namanga Border, Kenya, b) customs rules and procedures and performance of SMEs at Namanga Border, Kenya, and c) transport-related barriers and performance of SMEs at Namanga Border, Kenya. Rational Choice Theory, New Trade Theory, and Institutional Theory guided the literature review. The study adopted an explanatory research design. The target population comprised 285 owners of cross-border retail SMEs engaged in the clothing, footwear, and electronics sectors operating within the Namanga Border town. The study used a purposive sampling method and Slovin's sampling formula to derive a sample of 166 respondents. A systematic questionnaire was used to gather data, which was then analyzed using descriptive statistics and correlation analysis to find out how the dependent and independent variables were related. The correlation results showed that technical barriers ($r = –0.315$, $p = 0.037$), customs rules and procedures ($r = –0.582$, $p = 0.023$), and transport-related barriers ($r = –0.512$, $p = 0.008$) were negatively and significantly related to SME performance. Conversely, regulatory quality had a positive and significant relationship with SME performance ($r = 0.188$, $p = 0.011$). Regression analysis revealed that technical, procedural, and transport-related trade barriers each have a negative and statistically significant influence on SME performance. However, the overall explanatory power of the model was relatively low ($R^2 = 0.023$), suggesting that other unobserved factors may also contribute to SME outcomes. Hierarchical regression further demonstrated that regulatory quality acts as a significant moderating variable, strengthening the impact of trade barriers on performance. The findings affirmed the pivotal role of regulatory quality in cross-border trade, leading to the recommendation for policy reforms aimed at improving regulatory frameworks, streamlining customs processes, and enhancing transport infrastructure.

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1. Introduction

In growing and developing markets, small and medium-sized enterprises (SMEs) are the lifeblood of the economy. As much as 40% of the world's gross domestic product comes from these industries, and they're responsible for 60% of all jobs (World Bank, 2023). The majority of jobs and GDP in high-income countries are created by SMEs. At the same time, in low-income economies, they often operate informally, making their contribution harder to quantify but still vital (ITC, 2021). SMEs drive innovation, poverty reduction, women's empowerment, and inclusive growth (ESCAP, 2020). Despite this, they remain vulnerable due to their limited resources and sensitivity to shifts in regulatory or economic environments, especially in foreign markets (UNCTAD, 2023).

However, data shows that small and medium-sized enterprises (SMEs) in developing nations encounter a lot of obstacles when trying to trade internationally. Direct exports accounted for just 7.6% of total manufacturing sales for SMEs, in contrast to 14.1% for large enterprises, according to a World Bank Enterprise Survey of over 25,000 SMEs in developing nations (World Bank, 2021). In developed economies, SMEs contribute up to 34% of total exports, yet participation rates remain lower for micro (9%) and small enterprises (38%) compared to medium (59%) and large firms (66%) (WTO, 2020).

One of the key barriers to SME participation in global trade is the regulatory and procedural burden. Research shows that regulatory unpredictability, administrative complexity, and non-tariff barriers (NTBs) such as border delays, excessive documentation, and lack of harmonized standards disproportionately affect SMEs (Duval & Utoktham, 2014; OECD, 2019). Li and Wilson (2021) observed that improvements in regulatory quality, particularly in transparency and information technology, significantly increase the likelihood of SMEs becoming exporters. Furthermore, the implementation of the World Trade Organization's Trade Facilitation Agreement (TFA) is projected to reduce global trade costs by 13–17% and increase GDP by up to $67 billion annually, with SMEs expected to benefit the most due to reduced compliance burdens (OECD, 2021).

One of the busiest border crossings within the East African Community (EAC), the Namanga border is located between Nairobi, Kenya, and Arusha, Tanzania. This study focuses on SMEs operating at this border. Namanga, a peri-urban area, lies 140 km from Nairobi and 110 km from Arusha. SMEs in this region are typically categorized into mobile street vendors, service providers, short-term traders who cross to purchase goods, and long-term traders who both sell and buy across the border (Aluoch, 2014). Given the area's dependence on small-scale trade and tourism, the study will explore how NTBs and regulatory quality impact SME performance at this key border point. The research is limited to the Kenyan side of Namanga due to time and budget constraints, as well as the complexity of engaging across jurisdictions.

1.1 Problem Statement

Small and Medium Enterprises (SMEs) play a pivotal role in cross-border trade and economic integration within the East African Community (EAC), particularly at key border points such as Namanga. According to Okumu and Okuk (2010), intra-EAC SME trade grew significantly from USD 3.18 billion in 2010 to USD 5.98 billion by 2018, with a relatively higher increase in trade volumes recorded in Tanzania compared to Kenya (EAC Report, 2011). Despite this growth, the performance of SMEs along the Kenya-Tanzania border has been constrained by persistent Non-Tariff Barriers (NTBs) such as cumbersome documentation, inconsistent regulatory practices, and border delays. These barriers continue to impede seamless trade, raising operational costs and affecting the competitiveness of SMEs (World Bank, 2020). Nonetheless, a section of SMEs has shown resilience and managed to expand their operations, highlighting the need to explore how regulatory quality and NTBs influence their overall performance in cross-border trade.

While previous studies highlight the adverse effects of NTBs on SMEs' performance, such as technical barriers, customs rules, procedural barriers, and transport-related restrictions on trade performance, there is limited research that has explored how regulatory frameworks influence this relationship. SMEs, which form a critical component of regional trade, often struggle to navigate complex trade regulations and NTBs, making them highly vulnerable to trade inefficiencies. The current study explored how NTBs affect SME performance at the Namanga Border and if regulatory quality moderates that relationship, and specifically examines whether higher regulatory quality could mitigate the negative impact of NTBs on SME performance or whether the relationship is stronger or weaker in an environment with poor Regulatory quality by assessing how legal and institutional trade regulations influence SME trade facilitation and business efficiency. This research will provide insights for policymakers on enhancing regulatory interventions to support SME performance and regional trade integration.

1.2 Research Objectives

i. To investigate the effect of technical barriers on the performance of SMEs at the Namanga border, Kenya.

ii. To find out the effect of customs rules and procedural barriers on the performance of SMEs at the Namanga border, Kenya

iii. To establish the effect of transport-related barriers on the performance of SMEs at the Namanga border, Kenya.

iv. To assess the moderating effect of regulatory quality on the relationship between:

   a) Technical barriers and performance of SMEs at the Namanga border, Kenya

   b) Customs rules, procedural barriers, and performance of SMEs at the Namanga border, Kenya

   c) Transport-related barriers and performance of SMEs at Namanga Border, Kenya.

1.3 Research Hypotheses

H_{01} - Technical barriers have no significant effect on the performance of SMEs at the Namanga border, Kenya.

H_{02} - Custom rules and procedural barriers have no significant effect on the performance of SMEs at Namanga Border, Kenya.

H_{03} - Transport-related barriers have no significant effect on the performance of SMEs at Namanga Border, Kenya.

H_{04} – The Regulatory quality does not affect the relationship between:

a) technical barriers and the performance of SMEs at the Namanga border, Kenya;

b) customs rules and procedural barriers, and performance of SMEs at the Namanga border;

c) Transport-related barriers and performance of SMEs at Namanga border, Kenya.

2. Literature Review

2.1 Theoretical Review

2.1.1 Rational Choice Theory

According to Ogutu (2020), rational choice theory is a framework for comprehending and frequently simulating monetary, social, and human behavior. When given a choice between multiple actions, people typically go with the one they think would have the greatest result in the long run, according to Elster (1988). An individual is rational if and only if they behave in a way that maximizes their advantage, as if they were weighing the costs and advantages of certain actions (Friedman, 1953).

The rational choice theory provides a framework for understanding the decision-making processes of traders, which supports a study on non-tariff barriers and the performance of SMEs in cross-border commerce. This theory states that people try to maximize their utility by making decisions after carefully weighing the costs and benefits of those options. In the context of SMEs' performance, traders assess the costs imposed by non-tariff barriers such as technical barriers, customs rules, procedural barriers, and transport-related barriers against the potential benefits of engaging in cross-border trade. Understanding how these barriers impact perceived costs and benefits can elucidate why traders either participate in or avoid cross-border trade.

2.1.2 New Trade Theory

According to Krugman (1985), the involvement of different African countries in intra-industry trade prompted the establishment of the New Trade Theory. A major insight that guided the theory's development was the observation that intra-industry rather than inter-industry trade drives most global trade. Assumption number one in the theory is that buyers have a wide price range to choose from when making a purchase decision. Customers have more options thanks to the market's abundance of businesses offering complementary goods and services; this, in turn, increases competition and encourages businesses to be creative in their pursuit of growth. In terms of how non-tariff obstacles impact SMEs' performance, theorists argue that traders' propensity to engage in trade is proportional to the degree to which non-tariff barriers are eliminated (Krugman & Venables, 1995).

This study is supported by New Trade Theory, which emphasizes the significance of market imperfections and economies of scale in trade dynamics. According to this idea, even international traders can be influenced by the presence of growing returns to scale and network effects, which can propel trade. The capacity of cross-border traders to attain these efficiencies might be impeded by non-tariff obstacles, such as technological hurdles, regulations and

procedures pertaining to customs, and transportation-related obstacles. By examining these barriers, the study can identify how they limit market access and participation, thereby providing insights into policies that could promote more inclusive and efficient cross-border trade practices.

2.1.3 Institutional Theory

According to Meyer and Rowan (2006) and Bruton et al. (2010), the main focus of institutional theory has always been on how different groups and organizations can strengthen their positions and legitimacy by adhering to the norms and regulations of the institutional setting. Organizations and individuals are expected to adhere to formal rule sets, ex ante agreements, shared interaction sequences, and assumed assumptions when we talk about an "institution" (North, 1990; Bonchek, 1997; Jepperson, 1991; Meyer, 2010; Bruton et al., 2010). What is acceptable and what is not is defined by institutions (Di Maggio & Powell, 1991).

The institutional theory is essential in this research study because it forms the foundation for understanding how SMEs must seek regulatory quality to ensure legitimacy in their ventures (Ahlstrom & Bruton, 2001). SMEs must demonstrate value by showing that they engage in legitimate activities. There is a socially created structure that requires entrepreneurial organizations and their members to act in a certain way or face consequences for going against the grain (Schein, 2009). According to Ahlstrom and Bruton (2002), this limits the strategic options and personal agency that SMEs have. Therefore, in order to gain resources and support from stakeholders and society, SMEs must legitimate their activity.

2.2 Empirical Review

2.2.1 Technical Barriers and Performance of SMEs

According to Okute (2017), trade is hindered by technical barriers, which include things like technical requirements, voluntary standards, and methods for assessing conformity. The application procedures for numerous certification and conformity assessment procedures for obtaining the certificate of origin are cumbersome, lengthy, and amount to a barrier to trade. Gereffi and Fernandez-Stark (2016) note that small businesses often struggle to comply with extensive paperwork and inspection demands, which consume valuable time and increase operational costs. Additionally, the bureaucratic burden creates opportunities for corruption, as traders may resort to unofficial payments to expedite the clearance process. Research by UNCTAD (2018) further underscores the adverse impact of these delays on SMEs dealing in perishable goods, where prolonged inspections can lead to significant financial losses. The unpredictability of inspection procedures makes it difficult for SMEs to maintain consistent trade operations, undermining their competitiveness and growth.

2.2.2 Custom rules and procedural barriers, and Performance of SMEs

Ekise et al. (2022) found that exports of agricultural and manufactured goods would fall by 0.352 units for every one unit increase in the time it takes for customs documentation and processes. A negative and statistically significant impact on agricultural and manufactured goods was found to be the time required for customs paperwork and processes. The realization of export or import procedures becomes slower or more costly than necessary when there are customs rules and procedural barriers, and it becomes a significant disadvantage for SMEs to be competitive in international markets. Improving the performance of SMEs and providing a tremendous opportunity, particularly for developing nations, to integrate themselves into

international trade can be achieved through the reduction of customs and procedural barriers. The purpose of the study by Jonath et al. (2024) was to examine how customs clearance procedures affect the efficiency of cross-border logistics. Data came from 376 people who visited the Taveta-Holili, Busia, and Malaba one-stop border stations; the study used a cross-sectional design. The results showed that the efficiency of cross-border logistics was enhanced by streamlined customs clearance processes.

2.2.3 Transport-related barriers and Performance of SMEs

Research by George (2021) on the topic of small and medium agro-enterprises engaged in EAC cross-border trade in Tanzania indicated that NTBs, when added to transportation costs, have a negative impact on these businesses. Silla's (2016) study showed that the reduction of roadblocks in Tanzania would favorably improve trade performance. The study also found that the identified NTBS had a significant impact on truck drivers, with 10 stops per trip along Dar es Salaam-Rusumo transit routes, 58 barriers recorded, police roadblocks leading by 46%, followed by weighbridges. According to research by Morwa and Ndilito (2024), commerce performance is significantly affected by roadblocks, customs clearance permits, and road infrastructure. The performance of trade is also impacted by operations of factors associated with transportation. Unfair tactics at weighbridges, random police checks, and lengthy customs processes caused cross-border traders to lose money and time, as shown by the authors. Several elements have been highlighted as adding time and money to the impression of NTBs, including bribery, police checks, and the unloading process during inspections. Because less time is spent traveling and fewer vehicles need repairs, the authors conclude that better road conditions minimize transportation costs. Additionally, investing in infrastructure and facilitating affordable access to compliant transport options can ease the burden of road axle regulations.

2.2.4 Regulatory quality, Non-tariff barriers, and Performance of SMEs

Researchers Hansen-Addy et al. (2020) set out to determine how regulatory business environments in developing nations affect the financing decisions made by small and medium-sized enterprises (SMEs). While using a World Bank Surveys Panel Sample from 2003 to 2020, which covers 30 African countries, the findings revealed a need to tailor regulatory interventions to make various financial services more accessible and affordable for SMEs in developing countries. It is therefore believed that regulation is necessary to provide stable trading conditions and to establish levels of business trust that can benefit SME development.

Zavala *et al*. (2023) investigated whether quality regulation leads to the reallocation of trade. A panel of NTMs from 16 Latin American countries was employed in the study, which ran from 2012 to 2017. One of the most common tools used in trade policy is quality regulation, according to the results. According to the evidence presented by the Panel, trade was generally increased by technical trade barriers and regulations classified as sanitary and phytosanitary measures, and decreased by non-tariff measures like quotas. Technical trade obstacles tended to raise the sales concentration of exporting enterprises from lower-income countries, while sanitary and phytosanitary measures shifted trade away from exporting nations with lower incomes and toward exporting countries with higher incomes. The concentration of exporting or importing enterprises from nations with higher incomes was unaffected, nevertheless. Companies that export, particularly those from nations with lower per capita incomes, end up footing the bill for quality regulation.

3. Methodology

The study adopted an explanatory research design. The target population comprised 285 owners of cross-border retail SMEs engaged in the clothing, footwear, and electronics sectors operating within the Namanga Border town. The study used a purposive sampling method and Slovin's sampling formula to derive a sample of 166 respondents. A systematic questionnaire was used to gather data, which was then analyzed using descriptive statistics and correlation analysis to find out how the dependent and independent variables were related.

4. Results and Discussion

4.1 Descriptive Analysis

4.1.1 Technical Barriers

The aggregate mean score (Mean = 4.0, Std dev. = 0.7) indicates a general agreement among respondents that technical barriers hinder their business operations and limit participation in regional trade. One of the most prominent challenges reported is the lack of clear and accessible information on technical regulations in neighboring countries, which scored the highest (Mean = 4.2, Std dev. = 0.8). Closely following this was the strong agreement with the statement that businesses would benefit from support services to aid in understanding and complying with technical measures (Mean = 4.1, Std. Dev. = 0.1). The cost and complexity of obtaining certifications and product labels were also highlighted as major deterrents (Mean = 4.0, Std. Dev. = 0.7). Additionally, sanitary and phytosanitary (SPS) measures imposed by Tanzanian national bodies (Mean = 3.9, Std Dev. = 0.8), as well as the time and cost of conformity assessments such as inspections and testing (Mean = 3.8, Std Dev. = 0.8), emerged as key obstacles to efficient trading. The challenge posed by stringent product standards and regulations in target markets was also affirmed (Mean = 3.8, Std dev. = 0.7). Thus, the results confirmed that technical barriers, particularly product testing, certification costs, and lack of information, significantly limit SME performance in cross-border trade.

Table 1: Technical Barriers Descriptive Analysis

Question	Mean	Std Dev.	Max	Min	Skewness	Kurtosis	N
The stringent product standards and regulations in the target market significantly hinder my ability to participate in cross-border trade	3.8	0.7	5	1	-0.8	1.4	159
The cost and complexity of obtaining the necessary certifications and labels for my products discourage me from engaging in cross-border trade	4.0	0.7	5	1	-0.5	0.0	159
Sanitary and phytosanitary measures imposed by Tanzania's national standard bodies are a significant barrier to my participation in cross-border trade	3.9	0.8	5	1	-0.4	-0.4	159

The time and cost involved in conformity assessment procedures (e.g., product testing and inspections) limit my ability to trade across borders	3.8	0.8	5	1	-0.6	-0.2	159
The lack of clear and accessible information on technical regulations in neighboring countries makes it difficult for me to engage in cross-border trade	4.2	0.8	5	1	-0.3	-0.5	159
My business would benefit significantly from support services that help in understanding and complying with the technical measures required for cross-border trade	4.1	0.1	5	1	-0.7	0.1	159
Aggregate mean & Std Dev.	**4.0**	**0.7**					

4.1.2 Customs Rules and Procedures

The aggregate mean score (Mean = 3.8, Std. Dev. = 0.9) indicates that respondents largely agree that customs-related procedures present notable challenges to their business operations. One of the strongest concerns raised was the impact of high customs charges, which received one of the highest agreement levels (Mean = 4.0, Std dev. = 0.8). Similarly, corruption and demands for unofficial payments were also highly rated (Mean = 4.0, Std Dev. = 0.8). The lack of transparency in customs procedures and valuation methods was also viewed as a substantial barrier (Mean = 3.8, Std dev. = 0.9). Additionally, the complexity of customs documentation (Mean = 3.7, Std Dev. = 1.1) and inconsistent application of customs rules and procedures (Mean = 3.7, Std Dev. = 0.9) were flagged as challenges that undermine predictability and smooth flow of goods. Furthermore, delays caused by customs clearance procedures were recognized as a time-related barrier (Mean = 3.5, Std Dev. = 1.1). Thus, the findings underscore that customs-related procedural inefficiencies, non-transparency, and corruption pose serious obstacles to the performance of SMEs. Streamlining customs procedures, enhancing transparency, and enforcing anti-corruption measures are crucial steps to enhance SME participation in cross-border trade.

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Table 2: Customs Rules and Procedures

Question	Mean	Std Dev.	Max	Min	Skewness	Kurtosis	N
The complexity of customs documentation requirements discourages me from participating in cross-border trade	3.7	1.1	5	1	-0.8	0.3	159
The time taken for customs clearance procedures significantly delays my trade activities	3.5	1.1	5	1	-0.8	0.2	159
High customs fees reduce my profit margins and discourage cross-border trade	4.0	0.8	5	1	-0.3	-0.5	159
Inconsistent application of customs rules and procedures creates uncertainty and hinders performance in cross-border trade	3.7	0.9	5	1	-0.3	-0.5	159
The lack of transparency in customs procedures and valuation methods negatively impacts my trading activities	3.8	0.9	5	1	-0.5	-0.6	159
Corruption and demands for unofficial payments at customs checkpoints are significant barriers to my cross-border trade	4.0	0.8	5	1	-0.8	1.3	159
Aggregate mean & Std Dev.	**3.8**	**0.9**					

4.1.3 Transport-Related Barriers

The overall results indicate a strong agreement among respondents that transport-related issues significantly hinder SME operations in cross-border trade, with an aggregate (Mean = 3.9; Std Dev. = 0.9). Respondents strongly agreed that inadequate road infrastructure negatively impacts business performance (Mean = 4.0, Std dev. = 0.9). Similarly, the view that improvements in transport infrastructure and logistics would enhance cross-border trade was highly rated (Mean = 4.0, Std dev. = 0.8). The issue of roadblocks and police checks also emerged as a significant barrier (Mean = 3.9, Std dev. = 0.9). High transport costs were equally seen as a limiting factor (Mean = 3.8, Std dev. = 0.9). Transport-related delays at the Namanga border also received a relatively high rating (Mean = 3.8, Std dev. = 1.0). Meanwhile, restrictions that limit access to markets on the other side of the border were acknowledged, though with a slightly lower score (Mean = 3.6, Std dev. = 0.9). Thus, the findings confirm that transport-related barriers, such as poor infrastructure, delays, and high costs, pose considerable challenges to the performance of SMEs. Policy efforts to streamline logistics, reduce roadblocks, and invest in infrastructure are vital in boosting the efficiency and profitability of SMEs engaged in cross-border trade at Namanga.

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Table 3: Transport-Related Barriers

Question	Mean	Std Dev.	Max	Min	Skewness	Kurtosis	N
Transport-related delays at the Namanga border significantly hinder the performance of SMEs	3.8	1.0	5	1	-0.4	0.2	159
Inadequate road infrastructure around the Namanga border negatively impacts the performance of SMEs	4.0	0.9	5	1	-0.5	0.3	159
High transport costs associated with cross-border trade at the Namanga border reduce the profitability of SMEs	3.8	0.9	5	1	-0.5	-0.1	159
Roadblocks and police checks *en route* to the Namanga border significantly slow down the flow of goods	3.9	0.9	5	1	-0.4	0.1	159
Transport-related restrictions at the Namanga border make it difficult for traders to access markets on the other side of the border	3.6	0.9	5	1	-0.2	-0.4	159
Improvements in transport infrastructure and logistics at the Namanga border would greatly enhance SMEs' cross-border trade performance	4.0	0.8	5	1	-0.3	-0.3	159
Aggregate Mean & Std Dev.	**3.9**	**0.9**					

4.1.4 Regulatory Quality

The descriptive statistics show a moderate agreement, with an aggregate mean of 3.7 and a standard deviation of 0.8. Respondents expressed strong agreement that the regulatory framework is clear and well-structured (Mean = 4.1, Std dev. = 0.5). Moreover, there was a very strong agreement that government and relevant authorities provide adequate guidance and support to SMEs (Mean = 4.5, Std dev. = 0.8). However, concerns emerged regarding the predictability of enforcement (Mean = 3.1, Standard Deviation = 0.9) and the effectiveness of regulatory frameworks in supporting SME participation (Mean = 3.2, Standard Deviation = 0.7). The burden of compliance was moderately rated (Mean = 3.5, Std dev. = 0.8). Likewise, the effectiveness of regulations in reducing non-tariff barriers was also moderately perceived (Mean = 3.5, Std dev. = 0.8). Thus, the findings suggested that while regulatory quality at the Namanga border provides a relatively sound foundation for cross-border trade, greater

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consistency in enforcement, simplification of compliance processes, and further support for SMEs are needed to fully harness its moderating influence on trade performance.

Table 4: Regulatory Quality

Question	Mean	Std Dev.	Max	Min	Skewness	Kurtosis	N
The regulatory framework governing cross-border trade at the Namanga border is clear and well-structured	4.1	0.5	5	1	-0.3	0.4	159
Compliance with trade policies at the Namanga border is straightforward and not burdensome for SMEs	3.5	0.8	5	1	-0.4	0.1	159
The enforcement of trade regulations at the Namanga border is predictable	3.1	0.9	5	1	-0.5	-0.3	159
Regulatory frameworks at the Namanga border effectively support SME participation in cross-border trade	3.2	0.7	5	1	-0.2	0.2	159
Government and relevant authorities provide adequate guidance and support for SMEs to comply with cross-border trade regulations	4.5	0.8	5	1	-0.6	-0.5	159
The existing quality of trade regulations helps to minimize non-tariff barriers for SMEs engaged in cross-border trade at the Namanga border	3.5	0.8	5	1	-0.3	0.1	159
Aggregate Mean & Std Dev	**3.7**	**0.8**					

4.1.5 Performance of SMEs at the Namanga Border

The descriptive findings reveal a high level of performance, with an aggregate mean of 4.3 and a standard deviation of 0.8. Respondents strongly agreed that the level of SME participation in cross-border trade at Namanga is high (Mean = 4.5, Std dev. = 0.8). Similarly, the volume of cross-border trade conducted by individual SMEs was rated positively (Mean = 4.2, Std dev. = 0.5). Respondents also expressed positive perceptions regarding ease of conducting trade (Mean = 4.1, Std dev. = 0.8). This is supported by the high mean score on being well-informed

about regulations (Mean = 4.4, Std dev. = 0.9). Interestingly, respondents also acknowledged that non-tariff barriers still have a significant impact on performance (Mean = 4.2, Std dev. = 1.0). Nonetheless, satisfaction with customs services was high (Mean = 4.3, Std. Dev. = 0.8). Therefore, the findings suggested that SMEs at the Namanga border are performing well in cross-border trade, supported by high participation levels, awareness of trade regulations, and reasonably efficient support services. However, continued efforts are needed to mitigate non-tariff barriers to further enhance performance and competitiveness.

Table 5: Performance of SMEs at the Namanga Border

Question	Mean	Std Dev.	Max	Min	Skewness	Kurtosis	N
The level of SME participation in cross-border trade at the Namanga border is high	4.5	0.8	5	1	-0.5	0.1	159
The volume of cross-border trade conducted by my SME at the Namanga border is substantial.	4.2	0.5	5	1	-0.4	0.3	159
As a business owner, I experience ease in conducting cross-border trade at the Namanga border	4.1	0.8	5	1	-0.3	0.1	159
I am well-informed about the regulations governing cross-border trade at the Namanga border.	4.4	0.9	5	1	-0.6	-0.2	159
Non-tariff barriers have a significant impact on the performance of my SME in cross-border trade at the Namanga border	4.2	1.0	5	1	-0.3	-0.1	159
I am satisfied with the customs services provided to support SME cross-border trade at the Namanga border	4.3	0.8	5	1	-0.5	0.2	159
Aggregate Mean & Std Dev	**4.3**	**0.8**					

4.6 Correlation Analysis

Technical barriers were found to have a negative and statistically significant relationship with SME performance ($r = –0.315$, $p = 0.037$). This implies that the presence of technical trade barriers such as product standards, certification requirements, and compliance challenges reduces the ability of SMEs to operate effectively and achieve growth. Similarly, customs rules and procedures exhibited a strong negative and significant correlation with SME performance ($r = –0.582$, $p = 0.023$). This suggests that complex and stringent customs regulations, lengthy

clearance processes, and bureaucratic procedures at the border considerably hinder the performance of SMEs by increasing operational costs and delaying business transactions.

Transport-related barriers were also negatively and significantly associated with SME performance ($r = –0.512$, $p = 0.008$). This indicates that poor transport infrastructure, high logistics costs, and delays in goods movement across the border substantially reduce the efficiency and profitability of SMEs. On the other hand, regulatory quality demonstrated a positive and statistically significant relationship with SME performance ($r = 0.188$, $p = 0.011$). This shows that when regulations are clear, consistent, and effectively enforced, they create a supportive business environment that enhances SME growth and competitiveness.

Table 6: Correlation Matrix

		Technical barriers	Custom rules & procedures	Transport-related barriers	Regulatory quality	Performance of SMEs
Technical barriers	Pearson Correlation	1				
	Sig. (2-tailed)					
Custom rules & procedures	Pearson Correlation	.625**	1			
	Sig. (2-tailed)	.000				
Transport-related barriers	Pearson Correlation	.213**	.143	1		
	Sig. (2-tailed)	.004	.054			
Regulatory quality	Pearson Correlation	.046	.052	.203**	1	
	Sig. (2-tailed)	.540	.484	.006		
Performance of SMEs	Pearson Correlation	-.315**	-.582**	-.512**	.188**	1
	Sig. (2-tailed)	.037	.023	.008	.011	
	N	159	159	159	159	159

**. Correlation is significant at the 0.05 level (2-tailed).

4.7 Multiple Regression Analysis

The regression analysis aimed to determine the influence of technical barriers, custom rules and procedures, and transport-related barriers on the performance of SMEs engaged in cross-border trade. The regression results show how different categories of trade barriers influence the performance of SMEs.

Table 7: Model Summary

Statistic	Value
R	0.151
R Square	0.023
Adjusted R Square	0.006
Std. Error of Estimate	0.06671

The model summary showed an R-value of 0.151, indicating a very low correlation between the set of predictors and the dependent variable. The R Square value of 0.023 means that only 2.3% of the variation in SME performance is explained by the three predictors combined. This suggests that the model has limited practical significance in explaining the variance in performance among SMEs. The low R Square indicated that other variables not included in the study may play a more substantial role in influencing SME performance.

Table 8: ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.018	3	0.006	1.377	0.052
Residual	0.792	155	0.005		
Total	0.81	158			

a. Predictors: (Constant), Technical barriers, Custom rules & procedures, Transport-related barriers

b. Dependent Variable: Performance of SMEs

The ANOVA test also reflects this limitation. With an F-statistic of 1.377 and a p-value of 0.052, the regression model does not meet the conventional threshold for overall statistical significance ($p < 0.05$). This means that although the individual variables are statistically significant, their combined influence on SME performance is not strong enough to conclude that the model is a good fit.

Table 9: Regression Coefficients

Variable	Coefficient (B)	Std. Error	Beta	t	Sig.
Constant	1.127	0.217	-	5.187	0.000
Technical barriers	-0.079	0.091	-0.083	0.864	0.009
Custom rules & procedures	-0.128	0.105	-0.116	1.225	0.022
Transport-related factors	-0.196	0.123	-0.121	1.592	0.013

The constant value is 1.127 (p = 0.000), which is statistically significant. This implies that in the absence of trade barriers, SMEs would achieve a baseline positive level of performance.

Technical barriers had a regression coefficient of B = –0.079 with a standardized beta of –0.083, a t-value of 0.864, and a significance level of p = 0.009. This indicates a negative and statistically significant effect of technical barriers on SME performance. The results suggest that higher technical barriers, such as product certification, labeling requirements, and compliance standards, reduce the performance of SMEs, and the relationship is significant at the 5% level.

Custom rules and procedures recorded a regression coefficient of B = –0.128, with a beta value of –0.116, a t-value of 1.225, and a significance of p = 0.022. This demonstrates that customs rules and procedures also have a negative and significant influence on SME performance. It implies that cumbersome and bureaucratic customs processes increase the cost of doing business, delay cross-border transactions, and thereby reduce the efficiency and growth potential of SMEs.

Transport-related barriers showed a regression coefficient of B = –0.196, with a standardized beta of –0.121, a t-value of 1.592, and a significance of p = 0.013. This indicates that transport-related barriers have the strongest negative impact among the three, and the effect is statistically significant. Poor infrastructure, high logistics costs, and border delays make it difficult for SMEs to move goods efficiently, ultimately reducing their performance levels.

4.8 Hierarchical Regression Analysis

The hierarchical regression analysis results were presented in Table 10.

Table 10 Hierarchical Regression Results

Variables	Model 1 β(Std. Error)	Model 2	Model3 β(Std. Error)	Model 4 β(Std. Error)	Model 5 β(Std. Error)
Predictors (Direct effect)					
Constant:	1.127	1.230	0.962	0.520	0.542
Technical barriers	-.079(.091)	-107 (.051)	.207(.08)	1.102(.503)	.821(.573)
Custom rules & Procedures	-.128(.105)	.204 (.052)	.272(.068)	.287(.068)	1.032(.745)
Transport-related barriers	-.196(.123)	.315 (.121)	.015(.081)	.0151(.081)	.178(.085)
Regulatory Framework		.175 (.079)	.292 (.066)	.423 (.073)	.574 (.103
Interactions: (Moderating effect)					
Regulatory quality × Technical barriers, Custom rules & procedures,			.210 (0.096)p=0.03	.595 (0.102)p=0.000	.445 (0.072)p=0.000

Transport-related barriers					
Model Summary Statistics:					
R	.151	0.188	.220	.425	.441
R Square	.023	0.035	.049	.181	.195
Adjusted R-squared	.006	0.029	.027	.162	.176
Std. Error of the Estimate	.06671	0.07707	.06601	.06125	.06073
R Square Change	.023	0.012	.026	.158	.171
F Change	1.377	1.539	4.807	34.107	37.759
Sig. F Change	.252	0.007	0.030	.000	.000

Model 1 examined the direct influence of the three types of trade barriers on SME performance. The results showed a very low R value of 0.151 and $R^2 = 0.023$, indicating that only 2.3% of the variance in SME performance was explained by the predictors. The adjusted R^2 was a negligible 0.006, and the F-change was not statistically significant ($F = 1.377$, $p = .252$), suggesting a weak explanatory model. Among the predictors, transport-related barriers showed a relatively stronger direct effect ($\beta = .196$, p=0.013), compared to technical barriers ($\beta = –.079$, $p = .009$) and custom rules & procedures ($\beta = .128$, p= .0.022).

Model 2 added the moderating variable, regulatory quality. R^2 increased to 0.035, with a statistically significant F-change ($F = 1.539$, $p = .0028$), indicating that regulatory quality as a moderating variable contributes meaningfully to the model. The β coefficients for technical barriers (-.107), custom rules and procedures .204), and transport-related barriers .315) showed slight changes.

In Model 3, the R^2 increased to 0.049, with a statistically significant F-change ($F = 4.807$, $p = .030$), indicating that regulatory quality as a moderating variable contributes meaningfully to the model. The β coefficients for technical barriers (-.207), custom rules and procedures (-.272), and transport-related barriers (-.015) showed slight changes. At the same time, the interaction term (Regulatory Quality × All Predictors) was significant ($\beta = .210$, $p = .03$), suggesting a moderating role.

Model 4 expanded on this by incorporating further interaction effects, leading to a much higher R value of 0.425 and $R^2 = .181$, implying that 18.1% of the variation in SME performance was explained by the predictors and their interaction with regulatory quality. The F-change was highly significant ($F = 34.107$, $p = .000$), confirming the improved model fit. The interaction term now had a stronger effect ($\beta = .595$, $p = .000$), affirming the significant moderating role of regulatory quality.

Model 5, the full model, further refined the interactions. The R^2 increased slightly to .195 with an adjusted R^2 of .176, meaning that 19.5% of the variance in performance was now explained. The interaction effect remained significant ($\beta = .445$, $p = .000$), while changes in the main effects of the barriers were noted, for instance, the coefficient for technical barriers rose to $\beta = .821$, and for custom rules and procedures to $\beta = 1.032$, implying enhanced influence under the presence of regulatory quality.

Therefore, the hierarchical regression analysis revealed that while the direct effects of trade barriers on SME performance are relatively weak, the inclusion of regulatory quality as a moderating variable substantially improves the model's explanatory power. This suggests that regulatory quality enhances or buffers the impact of trade-related barriers on SME performance at the Namanga border.

4.9 Hypotheses Testing

Table 11: Summary of Hypotheses

Hypotheses	Beta (β)	P-values	Decision
H01 - Technical barriers have no significant effect on the performance of SMEs at the Namanga border, Kenya	-0.079	0.009	Reject
H02 - Custom rules and procedural barriers have no significant effect on the performance of SMEs at Namanga Border, Kenya.	-0.128	0.022	Reject
H03 - Transport-related barriers have no significant effect on the performance of SMEs at Namanga Border, Kenya	-0.196	0.013	Reject
H04a: Regulatory quality does not affect the relationship between technical barriers and the performance of SMEs at the Namanga border, Kenya	0.21	0.03	Reject
H04b: Regulatory quality does not affect the relationship between customs rules and procedures and the performance of SMEs at the Namanga border, Kenya	0.595	0.000	Reject
H04c: Regulatory quality does not affect the relationship between transport-related barriers and the performance of SMEs at the Namanga border, Kenya	0.445	0.000	Reject

5. Conclusion

The study concluded that technical barriers, including certification requirements, a lack of harmonized standards, and insufficient access to regulatory information, significantly impact the performance of SMEs. These barriers limit the ability of SMEs to meet export requirements and access regional markets. The complexity and cost of compliance often discourage small businesses from fully participating in trade, thereby stunting their growth and reducing their competitiveness. Addressing these barriers would require the harmonization of product standards across borders and the provision of support to help SMEs comply with regulatory requirements.

Cumbersome documentation processes, lack of transparency, delays in goods clearance, and corruption at border points all contribute to inefficiencies in the trade process. These factors increase operational costs and lead to delays in delivery, which in turn adversely affect customer satisfaction and the business's reputation. Simplifying customs procedures, digitizing clearance systems, and enhancing transparency at border points are essential measures to enhance SME operations in cross-border trade. Poor infrastructure, frequent roadblocks, high transportation costs, and delays in cargo movement all disrupt the timely delivery of goods,

thereby increasing the cost of doing business. These challenges limit the ability of SMEs to maintain consistent supply chains and respond effectively to market demands. Investment in road infrastructure, streamlining cross-border transport procedures, and improving logistics networks would play a critical role in alleviating these barriers.

When regulatory institutions are effective, predictable, and transparent, they help cushion SMEs from the negative effects of trade barriers. Good regulatory quality ensures that compliance requirements are fair and consistently applied, reduces opportunities for corruption, and enhances the overall efficiency of trade processes. This creates an enabling environment where SMEs can operate with confidence and reliability. Finally, the study highlights that trade barriers, including technical, procedural, and transport-related ones, are major obstacles to the performance of SMEs at the Namanga border. However, their impact can be substantially mitigated through strong regulatory frameworks that support efficient and transparent trade practices.

6. Recommendations

SMEs should invest in staff training, use digital platforms for customs documentation, form alliances for reduced trade barriers, and institutionalize dialogue between trade authorities and border management agencies. Strengthen regional cooperation through the East African Community (EAC) to address cross-border trade bottlenecks collectively. The research also suggests that SMEs strategically respond to trade barriers by adopting compliance practices, extending New Trade Theory to the SME context, and highlighting the active role of institutions in shaping firm-level competitiveness through regulatory quality. The Kenyan government and regional trade bodies should harmonize product standards, adopt capacity-building programs, and adopt digital clearance systems to improve SME performance. Investment in road infrastructure, logistics services, and strengthening regulatory institutions can also help overcome transport barriers.

References

Ahlstrom, D., & Bruton, G. D. (2001). Learning from successful local private firms in China: Establishing legitimacy. *Academy of Management Perspectives*, *15*(4), 72-83.

Aluoch, P. D. (2014). Complexities of informal cross-border trade: Vulnerabilities and coping strategies among traders in Namanga, Kenya. *Unpublished Master Dissertation, International Institute of Social Studies. The Hague, Netherlands*.

Bonchek, M. S. (1997). *From broadcast to netcast: The Internet and the flow of political information*. Harvard University.

Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: where are we now and where do we need to move in the future?. *Entrepreneurship theory and practice*, *34*(3), 421-440.

DiMaggio, P. J., & Powell, W. W. (1991). The iron cage revisited. *The new institutionalism in organizational analysis*, 63-82.

Ekise, B. et al. (2022). *Effect of Customs Documentation and Procedures on Kenya's Agricultural and Manufactured Commodity Exports to Uganda.* Asian Journal of Economics, Business and Accounting, 99-107.

Elster, J. (1988). The nature and scope of rational-choice explanation. In *Science in Reflection: The Israel Colloquium: Studies in History, Philosophy, and Sociology of Science Volume 3* (pp. 51-65). Dordrecht: Springer Netherlands.

Friedman, M. (1953). The methodology of positive economics.

George, W. (2021). *Economic effects of non-tariff barriers on small and medium Agro-enterprises in the East African Community Cross Border Trade in Tanzania*. International Journal of Foreign Trade and International Business.

Gereffi, G., & Fernandez-Stark, K. (2016). *Global value chain analysis: A primer*. Duke University, Center on Globalization, Governance & Competitiveness (CGGC).

International Trade Centre (ITC). (2021). *SME Competitiveness Outlook 2021: Empowering the green recovery*. Available at: https://intracen.org/resources/publications/sme-competitiveness-outlook-2021, Accessed on July 17, 2025.

Jepperson, R. (1991). Institutions, institutional effects, and institutionalism. *The new institutionalism in organizational analysis*, 143-163.

Jonath, A., Panga, F., Nkunda, R. & Scovia, A. (2024). *Customs Clearance Procedures and Cross-Border Logistics Performance in East Africa: A case of Malaba-Busia and Taveta-Holili One-Stop Border Posts.* Journal of Cooperative and Business Studies, 8(1), 1-20.

Krugman, P. R. (1985). Increasing returns and the theory of international trade.

KRUGMAN, P., & VENABLES, A. J. (1995). QUARTERLY] OURNAL OF ECONOMICS. *The Quarterly Journal 0fEc0n0mics*, *110*(4), 857-880.

Li, Y., & Wilson, J. S. (2021). *Trade facilitation and SME participation in international trade: Evidence from developing economies*. World Bank Policy Research Working Paper. Available at:https://documents.worldbank.org/en/publication/documents-reports/documentdetail/294951629359247057, Accessed on July 17, 2025.

Meyer, H. D., & Rowan, B. (2006). Institutional analysis and the study of education. *The new institutionalism in education*, *113*.

Meyer, J. W. (2010). World society, institutional theories, and the actor. *Annual review of sociology*, *36*(1), 1-20.

Morwa, B. & Ndilito, N. (2024). *Trade Effects of Non-Tariff Barriers in Tanzania: A Case of the Dar es Salaam-Namanga Busy Border Trade Post.*

North, D. C. (1990). *Institutions, institutional change, and economic performance*. Cambridge UniversityPress.

OECD. (2019). *Trade facilitation and the global economy*. OECD Publishing.

OECD. (2021). *Trade facilitation and the global economy*. Available at:https://www.oecd.org/trade/topics/trade-facilitation, Accessed on July 17, 2025.

Ogutu, O. V. (2020). *Infrastructural Development as a Determinant of Kenya–China Economic Relations* (Doctoral dissertation, University of Nairobi).

Okumu, L. & Nyankori, J. C. (2010). *Non-tariff barriers in the EAC Customs Union: Implications for trade between Uganda and other EAC countries*. Economic Policy Research Centre. Series No. 75.

Okute, A. M. (2017). *Non-Tariff Barriers to Trade in the East African Community: A Case of Exporters in Kenya.*

Schein, E. H. (2009). *The corporate culture survival guide* (Vol. 158). John Wiley & Sons.

Silla, B. S. (2013). *The Non-Tariff Barriers and Impacts on Trade Performance in Tanzania: A Case of Selected Check Points*.

UNCTAD. (2018). *Borderline: Women's cross-border trade in the Sahel*. UNCTAD.

UNCTAD. (2023). *The role of SMEs in advancing sustainable development goals*. Available at:https://unctad.org/news/role-smes-advancing-sustainable-development-goals, Accessed on July 17, 2025.

World Bank. (2020). *World Trade Report 2020: Government Policies to Promote Innovation in the Digital Age.* Washington, D.C.: World Bank Group.

World Bank. (2021). *World Bank Enterprise Surveys – SME performance data*. Available at: https://www.enterprisesurveys.org, Accessed on July 17, 2025.

World Bank. (2023). *Small and Medium Enterprises (SMEs) finance: Improving access to finance for SMEs*. Available at:https://www.worldbank.org/en/topic/smefinance, Accessed on July 17, 2025.

World Trade Organization (WTO). (2020). *World Trade Report 2020: Government policies to promote innovation in the digital age*. Available at:https://www.wto.org/english/res_e/publications_e/wtr2020_e.htm, Accessed on July 17, 2025.