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Assessing the Effect of Kenya's Institutional Framework on Export Trade

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THE KENYA INSTITUTE FOR PUBLIC POLICY RESEARCH AND ANALYSIS (KIPPRA)

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Abstract

This study sought to assess the effect of Kenya's institutional framework in promoting export trade as a channel for long-term growth and economic development as enshrined in the Kenya Vision 2030. Panel data obtained from World Bank's Enterprise Surveys spanning 2007, 2013, and 2018 was applied to the censored Tobit estimator. Institutional framework was measured using efficiency of the court system, access to trade finance, frequency of tax inspections, bribes during tax inspections, access to formal training programmes for permanent and full-time employees, rigidity of customs and trade regulations, internationally recognized quality certifications, informal competition, operating licenses, and business licensing and permits. Gender of the owner of the firm, managerial experience, and firm size were used as controls. Tax inspections were associated with a shrinkage in the country's fortunes from export trade. In contrast, access to trade finance, on-the-job training of employees, internationally recognized quality certifications, and firm size were associated with growth in export trade. The findings point towards a need to enhance institutional capacity, undertake regulatory reforms in the export trade sector, invest towards a national quality infrastructure, and enhance self-regulation for export trade promotion.

Abbreviations and Acronyms

CAK	Competition Authority of Kenya
EAC	East African Community
EACC	Ethics and Anti-Corruption Commission
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IDF	Import Declaration Fees
KAM	Kenya Association of Manufacturers
KEBS	Kenya Bureau of Standards
KENAS	Kenya Accreditation Service
KEPSA	Kenya Private Sector Alliance
KNCCI	Kenya National Chamber of Commerce and Industry
KPA	Kenya Ports Authority
KRA	Kenya Revenue Authority
Ksh	Kenya Shillings
MC	Marginal Cost
MENA	Middle East and North Africa
MR	Marginal Return
MSEA	Micro and Small Enterprises Authority
Obs.	Observations
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Squares
R&D	Research and Development
SSA	Sub-Saharan Africa

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1. Introduction

The size of Kenya's export trade has been shrinking over the last two decades[1]. Specifically, although Kenya's exports of goods and services over the last twenty years have averaged 20.4 per cent of GDP, the percentage has fallen to an average of 17.2 in the last ten years before shrinking further to 13.9 per cent in the last five years. In stark contrast, whereas the contribution of exports of goods and services to GDP for Uganda and Rwanda over the last twenty years averaged 14.8 and 12.4 per cent, respectively, the percentage contribution of export trade to GDP in those countries has drastically risen to 14.9 and 18.4 respectively in the last five years. This recent development implies that growth of other East African Community (EAC) countries, especially Uganda and Rwanda, is driven more by export trade compared to Kenya. Specifically, Kenya is increasingly becoming constrained to grow and develop by engaging in export trade. The situation triggers curiosity to understand the missing link for Kenya's waning fortunes from export trade.

Further, the average contribution of export trade to Kenya's GDP lags that of Sub-Saharan Africa (SSA) (29.2%), Middle East and North Africa (MENA) (44.5%), Organization for Economic Cooperation and Development (OECD) (26.2%), and the European Union (EU) (41.0%)[2] over the same period.

The above image notwithstanding, existing research shows that trade is an important driver of growth and development. In effect, promoting export trade could translate to improved growth and development of Kenya. Frankel and Romer (1999), for instance, note that trade has a large and significant impact on growth and development. David (1992) agrees by noting that countries with incentives oriented towards export trade report higher per capita GDP growth. Michael (1976) arrives at a similar conclusion by noting that countries that export more have higher rates of economic growth and development. But what explains the shrinking size of Kenya's export trade? And what should be done to realize a growth that is driven more by export trade?

Although the shrinking size of Kenya's export trade may be attributable to a multiplicity of factors, we specifically narrow[3] our focus to examine how Kenya's institutional framework partly explains the country's waning fortunes from economic activity. Whereas an institution in the English language connotes an organization, in economic literature, institutions are humanely devised constraints that structure economic interaction[4]. They comprise of informal constraints such

1 See Annex A1 and A2.

2 See Annex A3.

3 Practically, it is never possible to examine all the factors that explain export performance in a single discussion paper and, as such, the current paper examines the effect of Kenya's institutional framework on export trade.

4 They support an environment that induces increased trade exchanges.

as sanctions, taboos, customs, traditions, codes of conduct, and formal rules such as constitutions, laws, and property rights (North, 1991). An institutional framework[5] is devised by human beings to create order and reduce uncertainty in undertaking trade exchange. They lower trade transaction costs and thus create incentives to engage in export trade. Information asymmetry is a key source of uncertainty, risks, and increased trade costs since traders engaged in export trade do not have complete information about those they trade with. Indeed, the behaviour of traders in terms of executing trade agreements is always unpredictable. Institutional framework comes in handy to coordinate trade activities, structure the rules of the game, and provide a framework for obtaining remedy should a party breach a trade agreement. Further, asymmetry of information pertaining attributes of goods and services being exchanged, or the performance and trustworthiness of parties in a trade exchange, necessitates creation of an institutional framework with an aim of shaping and coordinating trade exchanges and interactions among traders. Although an effective institutional framework is likely to promote export trade by creating incentives for firms to engage in foreign direct investment, which indirectly promotes export trade, and by providing certainty that agents in a direct trade agreement will honour and execute their part of the deal out of caution that breach of contract will be sanctioned, we also posit that ineffective institutional framework could lead to a soaring of trade costs, which could create a disincentive to directly engage in export trade or engage in foreign direct investment, which indirectly fosters export trade, contributing to the notable shrinkage in the size of Kenya's export trade.

If Kenya's institutional framework is made more effective, then traders would have an incentive to participate more in export trade. Investors interested in undertaking foreign direct investments would also have certainty that their property rights would be protected against potential expropriation. Traders entering into agreements with other parties would have confidence, trust, and certainty that other parties would abide by the agreed trade terms. Should there be a breach of agreement, they would have certainty of receiving compensation. This would create an incentive for more agents to engage in direct export trade or foreign direct investments that indirectly foster export trade.

We hypothesize that the shrinking size of Kenya's export trade is partly due to an ineffective institutional framework. An ineffective institutional framework is associated with higher trade costs, uncertainty, and risk aversiveness in terms of deciding whether to engage in export trade or to undertake foreign direct investments, which indirectly promotes export trade. Institutions such as property rights, enforcement of trade contracts, and protection of investors are important

5 We henceforth use institutions to mean both organizations as in the English language and rules of the game as used in economic literature (North, 1991).

in cushioning traders against uncertainty and unpredictability of parties in a trade agreement.

This paper therefore assesses the effect of Kenya's institutional framework in promoting export trade as a source of growth, development, and long-term economic sustainability. Particularly, the paper reviews Kenya's existing institutional framework that relates to efficiency of the court system, access to trade finance, efficiency in obtaining operating licenses and business permits, frequency of tax inspections, bribes during tax inspections, employee training, rigidity of customs and trade regulations, internationally recognized quality certifications, managerial experience, and informal competition. Further, we determine the extent to which the country's institutional framework promotes export trade and propose recommendations to strengthen the country's institutional framework for enhanced contribution of export trade to Kenya's development as enshrined in the "Big Four" agenda and the Kenya Vision 2030.

2. Literature Review

2.1 Theoretical Literature

2.1.1 New-new trade theory

The theory focuses on firm level exports where a few, heterogenous, and highly productive firms engage in export trade (Melitz, 2003). Particularly, it is only firms that are highly productive that make enough profits to cover sunk costs of entering a new export market and meeting fixed costs incurred to sustain export operations. Further, although removing institutional barriers that offer protection to low-productivity firms drives them out of export trade, these less-productive firms are replaced by the highly productive firms and, in effect, the average productivity of a country rises, wages rise, and the wealth of people increase as a result of natural selection to participate in export trade. Indeed, existence of institutional trade restrictions hampers productivity of firms and in effect weakens the potential of a country to growth and develop more by engaging in export trade.

This paper borrows from this theory to examine how institutional variables—access to trade finance, the court system, tax inspections, bribes during tax inspections, employee training, customs and trade regulations, quality certifications, informal competition, operating licenses, and business licensing and permits affect the likelihood to participate in export trade among Kenyan firms.

2.1.2 Contract theory

Hart and Holmstrom (1986) posit that any trade must be mediated by some form of contract, whether it be explicit or implicit. Williamson (1985) further opines that in situations where parties make investments that are relationship-specific, the only way they can regulate and share gains from trade is by having a long-term contract.

Informational asymmetries are a major issue, and they mostly arise after parties in a trade exchange have entered to a contract[6]. Particularly, at the core of contract theory are firms pursuing the objective of maximizing returns from trade transactions by nudging parties in an exchange to stick to agreed deals. Hart and Holmstrom (1986) further opine that existence of a judicial system able to enforce explicitly agreed upon contractual terms creates a nudging incentive among parties into a trade transaction to abide by agreed contract terms. The outcome is promotion of export trade. In contrast, absence or existence of

6 If information asymmetries arise before a contract is entered into, then there would be adverse selection.

inefficient judicial system that is ineffective in enforcing trade contracts is likely to create a disincentive to engage in export trade. Consequently, the outcome is likely to manifest in a shrinking contribution of export trade to GDP. The judiciary is therefore an important institution whose efficiency or inefficiency is likely to create incentives or disincentives to engage in export trade with sizeable effect on how much export trade contributes to Kenya's growth and development.[7] The paper thus undertakes to examine whether the Kenyan court system serves as an obstacle to operations of firms in the export sector and as a factor in incentivizing or disincentivizing firms to participate in export trade.

2.1.3 Agency theory

It arises when an agent such as Kenya Revenue Authority (KRA) or Kenya Bureau of Standards (KEBs) regulates trade by requiring firms to satisfy certain tax or quality standards requirements before being granted approval to engage in trade of any form, especially export trade (Hart and Holmstrom, 1986). Other agencies execute the mandate of issuing international quality certification, custom clearance, insurance against theft, breakage and spoilage in transit, customs and trade regulations, construction permits[8], issuance of operating licenses, tax inspection, training firms on trade standards and rules of origin, licensing technology, and regulating competition such as the Competition Authority of Kenya (CAK). These institutions act on behalf of the government to ensure firms do not engage in illegal or unlawful export trade, which could have adverse effects on consumers of exported goods and services.

This paper endeavours to examine how institutional inefficiency that manifests itself through rigid tax inspections, bribes during tax inspections, inefficiency in processing operating licenses, access to trade finance, training of employees, informal competition, quality certification, the court system, customs and trade regulations, and business licenses and permits could disincentivize firms against engaging in export trade. The findings are expected to inform the recommendations on the effect of the existing institutions in promoting export trade.

7 The understanding is that the judicial system is able to impose penalties that may be pecuniary or non-pecuniary for breach of agreed trade contracts. To avoid incurring the cost of the judicial penalties, parties into a trade agreement will be nudged to not breach the agreed upon contracts.

8 Especially for firms undertaking foreign direct investment as an indirect promoter of export trade.

2.1.4 Institutional theory

Institutions are humanely devised constraints that structure economic interaction.[9] They are comprised of informal constraints such as sanctions, taboos, customs, traditions, and codes of conduct, and formal rules such as constitutions, laws, rules, regulations, and property rights (North, 1991). They are devised to create order and reduce uncertainty in undertaking trade exchanges. They structure incentive or disincentive to engage in trade activities. Particularly, institutions determine transaction and production costs and consequently profitability and feasibility of engaging in trade activities. Efficient institutions thus create incentives for economic agents to engage in trade activities, while absence of or existence of inefficient institutions creates a disincentive to directly participate in trade activities or engage in foreign direct investment, that indirectly promotes production of goods and services for export.

Regulating trade exchange with institutions is important because firms engaged in transactions face information asymmetry about traits of parties they trade with, the quality of goods and services sold, behavioural unpredictability, consistency in decision-making, and availability of enforceable remedies in case of breach of trade agreements. Institutions therefore emerge to cooperate and coordinate trade transactions.

Assuming firms engage in trade with an aim of maximizing profits, executing successful transactions would take substantial resources. Asymmetry of information regarding the valuable attributes of the goods and services being exchanged, or the performance and trustworthiness of the parties in a trade exchange, necessitates the establishment of institutional and regulatory framework to shape and coordinate the exchange and interactions among economic agents. Particularly, institutions such as property rights, contract enforcement, and investor protection are important because they help economic agents to overcome frictions arising from competing interests of parties in a trade transaction. Particularly, the paper examines how availability of institutions offering trainings and trade finance could promote Kenya's fortunes from export trade. Further, we assess how regulations on informal competition, quality certifications, and customs and trade regulations hinder or promote export trade.

2.1.5 Social capital theory

The theory postulates that information is the main resource embodied in institutionalized networks and relationships (Coleman, 1990). It is capital that accumulates with investment in networks that embody bridging and

9 They support an environment that induces increased production.

linking information on available trade opportunities in various export markets. Membership to trade facilitation and promotion institutions such as the Micro and Small Enterprises Authority, the Kenya National Chamber of Commerce and Industry, the Kenya Association of Manufacturers, and the Kenya Private Sector Alliance, for instance, is investment on social capital, since these trade networks invest in market intelligence, obtain relevant information on available trade opportunities in various markets, and disseminate information to firms within their membership network. It is thus expected that firms that have membership with these trade facilitation, promotion and support institutions are more likely to have access to quality and relevant information on availability of export markets in various countries, the standards, procedures, and requirements to export and therefore are more likely to engage in export trade than firms without membership with the institutions.

Some of the institutions such as the Kenya National Chamber of Commerce and Industry play an important role in promoting export trade by issuing certificate of origin, which is a legal requirement before a firm can engage in export trade. The institutions also undertake capacity building of firms by training on procedures, standards, rules of origin, and requirements for engaging in export trade and accessing certain foreign markets (Rauch, 1999). We assess how capacity building initiatives by these institutions through trainings and supporting self-regulation could promote export trade in Kenya.

2.1.6 Self-selection theory

Firms are rational economic agents making optimizing decisions about what specific markets to sell their goods and services (Roy, 1951). Specifically, the choice to participate in export trade is underlined by an optimizing behaviour where firms simultaneously endeavour to maximize returns from export trade while minimizing costs associated with engaging in economic activity.

Exports of any random firm are influenced by a multiplicity of factors that include accessibility to trade finance, the effectiveness of the court system, managerial experience, on-the-job training, the extent to which customs and trade regulations are a barrier, possession of internationally recognized quality certifications, access to operating licenses and business permits, informal competition, bureaucracy manifesting itself in tax inspections and bribes during the inspections, size of the exporting firm, and even gender of the firm owners, among others. These institutional factors affect the marginal return and marginal cost incurred by exporting firms and in return influence the revealed trade behaviour where rational firms participate in export trade if an only if the marginal return is at least sufficient to cover the firm's marginal cost. Chen and Olland (2014), for instance, observe that more productive and larger firms enjoy a higher probability of engaging in export trade. On-the-job training, managerial experience, effectiveness of the court system, quality certifications, trade finance, operating licenses and business permits are likely to enhance productivity of firms and drive marginal returns above the incurred marginal cost, with the resultant revealed trade behaviour favouring export trade as an economic activity. Effectiveness of the court system is critical in mitigating uncertainty faced by export traders possessing incomplete information about those they trade with while trade finance is important in supporting firms to meet sunk costs incurred while entering an export market. In contrast, excessive bureaucracy that manifests itself in cumbersome tax inspections and bribes requested by tax inspectors, rigidity of customs and trade regulations, and presence of informal competition are likely to raise the marginal cost incurred by exporting firms above the marginal return, resulting in a revealed behaviour that substitutes export trade with other economic activities whose marginal return is at least just enough to cover the marginal cost. These institutional factors play an important role in the optimization decisions made by firms and endeavour to assess how they inform self-selection decisions to participate in export trade among Kenyan firms.

2.2 Empirical Literature

2.2.1 Institutional framework and export trade

Tax inspections, bribes, and export trade

Enforcing tax compliance through inspections is a tool used by tax officials to ensure sufficient revenues are collected to finance government programmes (Buettner and Grimm, 2016). However, taxes are expenses to firms, which shrink net profits (Zheng and Zhang, 2021). This provides firms with disincentives to pay taxes and provide accurate information about their cashflows and taxable income. Tax inspections are therefore used to improve tax compliance. As forms of audits, tax inspections come with sanctions for detected cases of tax evasion (Buettner and Grimm, 2016). Strengthening tax compliance through inspections increases costs incurred by firms (Fan et al., 2020). The cost to firms is incurred through increased managerial and working time spent ensuring tax records are accurate, sanctions for non-compliance, and bribes offered to tax officials by non-compliant firms. Firms that breach the tax code have incentives to bribe tax officials to avoid tax penalties (Cule and Fulton, 2009). Among developing countries, firms report inspections to be a conduit for actions of corruption such as bribery, which strain operations. Safavian et al. (2001) observes that the higher the frequency of tax inspections, the higher the rate of corruption through bribes as tax officials engage in rent-seeking. Further, higher inspections result in higher taxes and fees being paid by firms, which shrinks profits (Vlachos and Bitzenis, 2016). Alm et al. (2016) observe that offering bribes shrinks sales by about 4 percentage points. Informed by this literature, this paper examines tax inspections as an opportunity for rent-seeking behaviour among tax officials, which manifests itself through bribes, strained firm operations, and shrinkage in export trade.

2.2.1.1 Court system and export trade

Faruq (2011) examines the relationship between a country's institutional framework and the quality of its exports using dataset obtained from Feenstra on US imports from 58 countries in 1996. The author notes that institutional factors such as corruption, inefficient bureaucracy, and high risk of expropriation of private property can create uncertainty among producers and discourage them from investing and innovating over the long-term. If the security of property rights is not guaranteed by the court system, and the risk of expropriation of private property is high, firms lose incentives to invest and innovate as uncertainty on the returns from investments mounts. Consequently, this limits the ability of producers to improve the quality of their exports in the future. Using the Ordinary Least Squares (OLS) technique, the study finds that better institutional framework characterized by lower corruption, more efficient bureaucracy, and more secure property rights is associated with improvement in the quality of goods and services exported.

Berkowitz et al. (2006) undertook to examine how national institutional frameworks that enforce the rule of law affect export trade. Particularly, efficient institutions in exporting country promote cross-border trade in complex products whose attributes are hard to be specified in a contract. Specifically, the study opines that the effect of institutions on export trade is stronger through production costs[10] than through export transaction costs. They looked at the role of formal institutions such as courts and bailiffs that enforce contracts and protect property rights in providing incentives to traders to export goods and services with certainty that timely and appropriate payment will be received. Azim and Fujiwara (2012) agree by noting doubts over contract enforcement render returns from relationship-specific investments less certain, disincentivizing producers of goods and services for export market to expand production and improve the quality of goods exported. Anderson and Marcouiller (2006) agree with Berkowitz et al. (2006) by arguing that ineffective law enforcement institutions create incentive for corrupt government officials and other predators to collect bribes from traders engaged in export trade.

10 Production costs are a measure of comparative advantage in production.

Innovations from research and development are important in realizing product diversification for not only the foreign, but also the domestic market. The court system plays an important role in protecting ownership rights for new innovations. Using data from the Worldwide Governance Indicators covering the period 1996-2009, Wang (2013) found significant influence of institutional and regulatory framework on intensity of research and development. Particularly, he argues that countries with strong and efficient institutions create incentives for scientists and engineers to pursue research and development. With strong and efficient institutions, scientists enjoy certainty of obtaining patents for scientific discoveries and protection of intellectual property rights. Indeed, such countries also spent more on research and development. Research-driven innovations are crucial in creation of incentives among firms to create new products, diversify the existing product base, and in effect participate more in export trade. Busenitz et al. (2000) further posits that institutional frameworks positively influence innovative and entrepreneurial activity that is important in promoting export trade. Particularly, they opine that a sound institutional framework could lower trade constraints and restructure incentives in the economy to direct self-interested behaviour towards more export trade activity. Wu et al. (2015) corroborate the findings by Busenitz et al. (2000) in their findings that posit that well-functioning institutions support firm innovativeness, translating to creation of new products and diversification of existing ones. Innovation is vital in promoting export trade through introduction of new products and differentiation of existing ones in the foreign market.

Meon and Will (2010) opine that regulatory quality and government effectiveness collectively as government action provide a measure of a country's regulatory burden and bureaucratic efficiency. Meon and Sekkat (2008) found that improvements in factors such government effectiveness and rule of law lead to an increase in the volume of manufactures exported. The findings agree with those by Faruq (2011) in that improvement in rule of law and government action lead to increase in the price of manufactures exported.

Dollar and Kray (2003) hold that countries with better regulatory framework tend to trade more and in effect grow faster[11]. They observe that there is a high correlation between regulatory indicators and export trade. A regulatory framework that secures property rights is important in promoting trade and economic growth in the long-term. Using OLS, they obtain significant effect of trade and regulatory efficiency on log-levels of per capita income. The paper observes that property rights and the rule of law as measures of institutional and regulatory framework inform incentives to invest and innovate. Regulatory quality was measured using

11 Countries that trade more are also countries that have better institutions.

an index of rule of law.[12]Francois and Manchin (2013) arrived at similar conclusion that foreign trade depends on the quality of a country's regulatory framework.

Operating licenses, business permits, and export trade

A regulatory environment that supports firms to easily start exporting while lowering the likelihood of the existing export market are conducive for growth of export trade (Rossi et al., 2021). Moreover, corruption and bureaucratic inefficiency slow down the distribution of trade permits and operating licenses and delays acquisition of new capital and technology, creating uncertainty and disincentive to undertake long-term investments. Reduced domestic investments lead to a decline in productivity, preventing firms from improving the quality of exports in the long-term. Among the institutional factors considered, corruption was the most robustly associated with export quality. Particularly, the study sought to examine how the effectiveness and quality of institutions in different countries affects their ability to improve the quality of goods and services exported. The argument is that any malfunctioning of institutions could limit the ability of firms to improve the quality of goods and services exported in the future by discouraging innovation and investment[13]. More specifically, the findings indicate that if corruption is reduced by one standard deviation, price of manufactured exports could rise by 11.0 per cent. Consequently, since higher prices may reflect improved quality, then a decline in corruption improves the quality of goods and services exported. The methodology borrowed from previous studies on trade and product quality (Schott, 2004; Khandelwal, 2010; Faruq, 2010) that calculate a price index[14] for each exporter as a proxy for export quality and regress it against explanatory variables. The control variables used include human capital, resource endowment such as physical capital, per capita income, technological innovations, expenditure on research and development (R&D), and foreign direct investments.[15] Since export prices may be biased due to exchange rate fluctuations, export prices were converted to purchasing power parity (PPP) adjusted US dollars using information from the *Penn World Tables* (2009). After the adjustment, the effect of business freedom on export prices became positive and statistically significant. Moreover, property rights and freedom from corruption have a positive and statistically significant effect on export prices. Additionally, per capita GDP, expenditure on R&D, FDI inflows and education are positively associated with export prices. The study also concludes that improvements in the

12 For details on the rule of law index, see Kaufman et al. (2002).

13 Foreign Direct Investments (FDI). for example, are likely to be weaker when investors have uncertainty associated to the quality and safety of the institutions in a country such as property rights, corruption, and bureaucracy.

14 Price indices are used in trade literature as a proxy for quality because trade data mainly does not contain information on attributes of goods and services traded.

15 Multinational corporations tend to import better technology from abroad, which allows them to improve the quality of goods and services exported. Knowledge spillovers from multinational corporations to local firms are also possible, and this improves the capability of local firms to improve the quality of goods and services that they export.

regulatory framework and bureaucratic efficiency leads to increase in quality of goods and services exported. Improvements in institutional framework makes countries to become more attractive as trading partners. As such, countries with better institutions also tend to trade more. Further, Mauro (1995); Henisz (2000); Mo (2001); Meon and Sekkat (2005) opine that better institutions are associated with less uncertain business environment, which encourages foreign direct investment (FDI). In turn, increase in foreign direct investments translates to more exports. Hall and Jones (1999) corroborate this observation by noting that efficient institutions are associated with higher productivity, which increases exports by supporting firms to overcome the cost of entering foreign markets. Meon and Sekkat (2008) find that efficient institutions positively affect the volume of manufactured exports. Particularly, if policy makers work to improve the quality of institutional and regulatory framework in Kenya, trade could be promoted through boosting revenues of firms engaged in export trade. Further, Alvarez et al. (2018) argue that institutions promote export trade by stipulating both the rules of the game that every economic agent must abide by, and sanctions for breach of contract.

Levchenko (2007) argues that the concept of institutions refers to a multiplicity of structures that include contract enforcement, property rights, investor and shareholder protection, and political systems. The paper holds that institutional differences may be a source of comparative advantage, meaning that countries with weak institutional framework may not gain from trade, and that factor prices may diverge due to trade. Using data on US imports disaggregated by country and industry, the author sought to determine whether institutions serve as source of trade. The results indicated that differences in institutional framework are an important determinant of export trade flows[16]. Particularly, institutions are important in promoting export trade in that they help economic agents circumvent conflicts arising from breach of agreement by either party in a trade transaction. Omgba (2014) agrees by noting that differences in export diversification are partly explained by a country's institutional framework. Improving the efficiency, strength, and reliability of Kenya's institutional framework could create incentive to firms to innovate and diversify the product base for export expansion, while creating trust and certainty among agents into a trade agreement that trade contracts are legally binding and enforceable.

Bribes arising from inefficient institutional framework are an additional cost to export trade. When costs of participating in trade are high due to bribes, returns from export trade diminish and trade promotion disincentive takes root. Berkowitz et al. (2006) measure institutional quality in terms of indexes on rule of law, expropriation risk, corruption in government, and bureaucratic quality. The

16 Levchenko (2007) refers to it as institutional content of trade.

findings indicated that efficient institutions promote export trade by discouraging incentive to breach contracts. Strong and efficient institutions create incentive for production of complex goods and services for export market as they minimize risks and uncertainties in exchange.

Tan et al. (2019) studied the role of national culture in promoting the trading behaviour of individuals. Using data on individual trading history from 21 countries, they found that the cultural background of an individual significantly influences how often they engage in export trade, the quantity of goods and services traded, and how long they retain their export markets. Particularly, they note that culture is related to an individual's trading behaviour and has implications on liquidity and risk profiles of trade exchanges undertaken. Chen at al. (2015) further argue that a national culture significantly influences an individual's decision-making on whether to participate in export trade, and the specific trade activity to undertake. Andrade et al. (2016) corroborate this observation by noting that emotions, attitudes, and cultural perceptions may inform individual decision-making that may hinder or promote the likelihood of participating in certain export trade activities. Particularly, decisions on which export trade activity to engage in pertains to willingness to take risk, which is further influenced by an individual's cultural orientation as an informal institution. Culture also influences how individuals cope with uncertainty, and the resultant risk aversiveness in deciding which export trade activity to engage in. The findings by Tan et al. (2019) indicated that national culture had a significant effect on export trade.

Trade finance and export trade

Bergin et al. (2021) hold that access to trade finance erodes market-entry barriers, since exporting firms have liquidity to cater for storage and transport costs. Firms undertake bulk purchase of tradeable goods and services and enjoy economies of scale associated with bulk storage and transportation. Rossi et al. (2021) observe that access to finance supports product innovation and in effect enhances the likelihood that firms that were not exporting start exporting while at the same time lowering the probability of exporting firms exiting export trade. Even though financial constraints play a negligible role in supporting market entry for exporting firms, the constraints increase the likelihood of exiting export markets. Azkenazy et al. (2015) further note that liquidity is an important factor when considering whether to enter or exit an export market. Particularly, liquidity problems hinder entry of firms into export markets as they lower the probability of being able to finance sunk costs. Additionally, liquidity constraints enhance the likelihood of firms exiting export markets due to inability to meet recurring costs.

On-job-training, managerial experience, and export trade

Liu and Lu (2016) argue that firms with on-job training programmes have higher productivity and returns. Training imparts skills and competence to employees for enhanced self-regulation and productivity. Hara (2014) observes that employer-provided trainings enhance employee skills, which raise productivity. Improved skills and productivity further promote employees' wage earnings. Morikawa (2021) concurs by observing that on-the-job training improves employee productivity and wages. This study enhances this literature by examining how on-the-job training affects export trade in Kenya. Yung and Nguyen (2020) opine that managerial capability grows a firm's market share. Particularly, highly able managers make the right judgements, leading to the right operational and investment decisions. Managerial capability is key in enhancing value chain competitiveness, product and process innovation and diversification, and enhancement of customer satisfaction. We examine how managerial capability, measured by years of managerial experience, may affect the likelihood of Kenyan firms to engage in export trade.

Quality certification and export trade

Blind et al. (2018) argue that internationally recognized quality certifications promote export trade. Quality certifications nudge consumers to have confidence and trust that exported goods and services are compliant to internationally recognized safety and quality standards, and therefore do not pose health and environmental concerns. Quality certifications further indicate that exported goods and services have been produced, harvested, and packaged in compliance with globally acceptable standards such as those by the World Trade Organization (WTO), Kenya Plant Health Inspectorate Service (KEPHIS), Kenya Bureau of Standards (KBS), and rules of origin established by trade agreements such as the EAC, COMESA, and EAC-EU Economic Partnerships Agreement (EPA).

Customs and trade regulations and export trade

Customs and trade regulations play an important role in regulating specific goods and services, and labour that passes customs boundary of exporting or importing country (Nash et al., 2010). Rigid and cumbersome customs and trade regulations impede export trade. Kaoru et al. (2021) note that countries are likely to export less if the destination market has higher regulatory burdens. Particularly, they note that customs regulatory burdens raise the marginal cost of participating in export trade, and make it an unattractive economic activity. Further, when the trade and customs regulations are a barrier to operations of firms, the country is more likely to export a narrower portfolio of goods and services. Particularly, when customs and trade regulations are rigid and cumbersome, firms are less likely to secure customs clearance and risk incurring costs associated with storage and warehousing, spoilage, and wastage for perishable goods, and most importantly, missed market opportunities.

Informal competition and export trade

Bengtsson (2015) observes that rigid regulations nudge firms to operate informally as a way of enhancing cost efficiency. Firms in the informal sector may enjoy competitive advantage in that they do not incur marginal costs associated with cumbersome regulatory framework. Dario (2021) further observes that protection of intellectual property rights is weaker when formal firms perceive actions of competitors in the informal sector to be curtailing their competitive advantage through channels such as lowering prices and compromised quality for the same goods and services. If consumers are unable to distinguish between goods and services from firms operating as formal entities from those operating informally, then actions of competitors in the informal sector could potentially drive formal enterprises out of business.

Gender, firm size, and export trade

Fernando et al. (2020) posits that incorporating female perspectives and leadership styles in running of firms enhances managerial capability and decision-making, which cushions enterprises against institutional risks associated with incompetence and poor decision-making. The outcome is enhanced firm performance as firms lower costs associated with mismanagement risks. Martin and Lerong (2017) corroborate this by observing that gender diversity affects performance of firms through managerial capacity and strategic decision-making in times of crises. Ibhagui and Olokoyo (2018) observe that the negative effect of leverage performance of firms is most pronounced among small-sized firms, but it diminishes as the firm grows into medium and large enterprises. Samiee and Walters (1990) agree that there exists differences between small and large exporting firms attributable to economies of scale.

We borrow from this empirical literature and observability of relevant variables in the World Bank Enterprise Survey panel dataset to measure institutional framework using efficiency of the court system, access to trade finance, efficiency in obtaining operating licenses, frequency of tax inspections, bribes during tax inspections, access to formal training programmes for permanent and full-time employees, rigidity of customs and trade regulations, internationally recognized quality certifications, informal competition, and business licensing and permits. We further use gender of the owner of the firm, experience of the top manager, and firm’s size as control variables.

2.2.2 Summary of literature

Literature on institutional framework shows that institutions influence export trade through channels such as incentives for foreign direct investments which indirectly promotes export trade, reduces risk of expropriation of private property, provides incentives to innovate with certainty of protection of intellectual property rights, incentive to innovate and improve quality of exports, directly by creating certainty that parties into a trade agreement will abide by agreed terms with breach being sanctioned and compensation accorded to the offended party.

Institutions also in the reduction of costs associated with institutional and bureaucratic inefficiency especially in customs clearance, efficiency of courts in hearing and determining trade disputes, efficiency in executing tax compliance through inspection, access to trade finance, training programmes, issuance of trade permits, and operating licenses.

Further, rigid and cumbersome regulatory frameworks impose marginal costs to trading firms, creating an incentive for firms to trade informally. Quality certifications create confidence and trust among consumers that exported goods and services that have been produced, harvested, processed, and exported in adherence to internationally acceptable quality and safety standards. Indeed, if the customs and trade regulations are rigid and cumbersome, firms are unlikely to secure customs clearance, and risk incurring costs associated with storage and warehousing, spoilage, and wastage for perishable goods, and most importantly, missed market opportunities.

Although existing literature is rich on how *institutional frameworks* influence export trade, few studies, if any, have focused on the effect of institutional framework on export trade promotion in Kenya. This study endeavours to enrich the existing literature by focusing on Kenya and using the Tobit estimator to panel dataset obtained from World Bank's Enterprise Surveys spanning 2007, 2013, and 2018.

3. Relevant Institutional Framework

3.1 Relevant Institutions[17]

The 2010 Constitution of Kenya establishes key institutions whose mandate is key in promoting export trade promotion. Chapter 10 establishes the judiciary with vested authority in hearing and determining criminal and civil matters that include cases on breach of trade contracts by parties into a trade agreement (Government of Kenya, 2010). Owing from its mandate to enforce contracts, a judiciary that is efficient, fair, impartial, and corruption-proof is important in providing incentives to traders to participate in export trade without worrying about breach of contract by parties with whom they enter into trade agreement. Article 40 protects the right to property, including intellectual property rights. Particularly, the Article provides safeguards against the risk of expropriation of private property by the government. In circumstances where the right to property is deprived for public purpose, the constitution provides that the government should adequately compensate the affected agents.

Article 67 establishes the National Land Commission as an institution mandated to advise the National Government on comprehensive programme for the registration of title in land throughout Kenya. Further, the commission is mandated to assess tax on land and premiums on immovable property. Since foreign direct investment is an important channel through which promotion of export trade occurs, efficiency of the Commission in processing registration of land titles and providing land tax regimes and premiums on immovable property that are attractive to investments could create an incentive to foreign and local firms to have access to land as a factor of production, with the outcome being expanded production of differentiated goods and services for export markets.

Bribes at custom clearance increase the cost of trade. Higher cost of trading is likely to discourage traders from engaging in export trade. Delays in obtaining customs clearance for exported goods and services are further likely to compound the cost of trading incurred by traders. Article 79 of the Constitution provides for establishment of the Ethics and Anti-Corruption Commission (EACC). The commission is mandated to investigate and recommend to the Director of Public Prosecutions the prosecution of acts of corruption, bribery, economic crimes, or violation of codes of ethics. The Commission is further mandated to raise public awareness on ethical issues and educate the public on costs of corruption and foster public support in taming corruption (Republic of Kenya, 2011). Whereas written laws anchor formal institutions and regulatory framework, unwritten rules of behaviour

17 The country's relevant institutions as regards export trade are numerous. The purpose of this section is not to exhaust on all relevant institutions, but rather to provide highlights of a few key and relevant institutions as regards export trade in Kenya.

and economic conduct form informal institutions and regulatory framework and are mainly anchored on culture and encompass ethics, morals, virtues, and ethos (North, 1991). Individuals may engage in acts of bribery and corruption during trade transactions simply because the culture does not recognize the acts as morally and ethically wrong. There is an urgent need to revamp the country's efforts in nurturing a culture anchored on universally acceptable ethos and virtues. Since Article 252 of the constitution provides that independent commissions may conduct investigations on their own initiative or on complaints from members of the public, the EACC should reinvigorate investigative efforts on acts of corruption at customs clearance as an effort to lower the cost of trading and promote export trade. The Commission should also consider raising awareness among traders on the need to report incidences of bribery demands by customs clearance officials. Collaborative effort with other institutions such as Kenya Ports Authority and Kenya Export Promotion and Branding Agency could help lower bribery and corruption and the associated cost on export trade.

The Micro and Small Enterprises Authority (MSEA) is an example of a legal and institutional framework that promotes, develops, and regulates micro and small enterprises. Particularly, the Authority is mandated to provide an enabling business environment, facilitate access to business development services including capacity building programmes such as training on standards, and procedures to engage in export trade, facilitate formalization and upgrading of informal enterprises, promote entrepreneurial culture, and promote representative associations such as the Kenya National Chamber of Commerce and Industry, which facilitates export trade by issuing certificate of origin, trains exporting firms on applicable rules of origin, and disseminates information on available trade opportunities in different markets to firms (Government of Kenya, 2012). The Kenya Revenue Authority (KRA) also plays an important role in issuing the preferential certificate of origin to exporting firms. The Witness Protection Agency is further mandated to provide protection to whistle blowers and witnesses who report bribery cases both in the private and public sector.

The Bribery Act, 2016 provides a legal framework for investigation, prevention, and punishment of bribery (Government of Kenya, 2016). Before the enactment of the Act, the Anti-Corruption and Economic Crimes Act, 2003 captured bribery as a form of corruption. Whereas the Anti-Corruption and Economic Crimes Act mainly focuses on graft in the public sector, the Bribery Act comprehensively covers bribery and corruption in the private sector. Compared to the Anti-Corruption and Economic Crimes Act, 2003, the Bribery Act, 2016 introduces three new and diverse concepts—participation of private citizens in the fight against bribery, transnational bribery, and matching the giver and recipient of bribe in punishment. Further, the Act enshrines provisions on protection of whistle blowers and witnesses into bribery cases both in public and private sectors. This is the regulatory framework within which individuals requesting for bribes at customs clearance to clear exported goods and services should be sanctioned. The judiciary is an important institution in enforcing penalties and other provisions of the Act. The efficiency, fairness, impartiality, and independence of the judiciary in hearing and determining bribery cases as provided for in the Act is important in determining whether traders and individual trade facilitators from both the private and public sectors have incentive or disincentive to engage in bribery.

Under the Bribery Act, Public or State Officers or an individual in a position of authority in the public or private sector is obliged to report witnessed acts of bribery to the Ethics and Anti-Corruption Commission. The regulatory framework provides punishment by imprisonment for up to 10 years or a fine not exceeding 5 million shillings for failure to report witnessed acts of bribery. Despite this regulatory framework being in place, why do bribes still have to be paid at customs clearance for exported goods and services?

The Public Officer Ethics Act, 2003 stipulates the behaviour and professional code of conduct that is lawfully deemed acceptable, including avoiding improper enrichment and observing professionalism. The Anti-Corruption and Economic Crimes Act, 2003 further stipulates the action of corruption as unlawful, and thus unacceptable. Under the Act, corruption means fraud, bribery, misappropriation of public funds, breach of trust, abuse of office, dishonesty pertaining tax, rate or levy. It stipulates economic crimes as encompassing failure to pay taxes, fees, levies, or charges payable to a public body or obtaining exemptions, remissions, reduction, or abatement in payment of such taxes, fees, levies, or charges. The Law of Contract Act, 2012 provides a framework within which parties into agreements can draw contracts that are legally binding and enforceable before a court of law (Government of Kenya, 2012). The regulatory framework eliminates risks associated with breach of contract by either party into an agreement. Further, the Investment Promotion Act, 2009 provides a regulatory framework upon which foreign firms investing in Kenya can access entry permits for expatriates, certificates, and licenses to establish and operate in the country. The regulatory framework provides incentives to firms interested in foreign direct investments in Kenya as a channel of indirectly promoting export trade to establish operations in the country.

The Kenya Plant Health Inspectorate Service (KEPHIS) plays an important role in ensuring that the quality of agricultural inputs and produce is not compromised with adverse effects on the economy, the environment, and human health. Further, the Kenya Export Promotion and Branding Agency implements promotion of exports and branding initiatives for the country's exports of goods and services.

4. Methodology

4.1 Theoretical Framework

Informed by the self-selection theory (Roy, 1951), we argue that Kenyan exporting firms are rational economic agents that seek to make optimized decisions regarding the destination markets for their goods and services. The firms[18] pursue a dual objective that simultaneously seeks to maximize returns from engaging in export trade and minimizing costs associated with trading. When the marginal cost from engaging in export trade is equal to marginal return,[19] a firm is indifferent between engaging in export trade or not engaging. At this point, the marginal return is just enough to cover the marginal cost. Firms have incentive to engage in export trade when either the marginal return is larger than the marginal cost[20] or the marginal return is just equal to the marginal cost. However, should the marginal cost slightly become larger than the marginal return,[21] the firm loses incentive to engage in export trade. Particularly, firms are likely to substitute export trade as an economic activity with other forms of economic activities when the marginal cost of participating in export trade is larger than the associated marginal return.

The institutional framework is designed to structure and coordinate behaviour and transactions. A framework that encompasses the constitution, Acts of Parliament, and regulations by government ministries is designed to provide the rules of the game that parties into economic transactions such as trade exchanges must abide by. It stipulates actions that are deemed lawful and acceptable and those that are not; the dos and the don'ts.

Committing actions that are regulated as unlawful under the existing regulatory framework, like the Public Officer Ethics Act, 2003, Bribery Act, 2016 and Anti-Corruption and Economic Crimes Act, 2003, for instance, raises the marginal cost of engaging in export trade, creating disincentive to pursue export trade as an economic activity. Bribery under the Bribery Act, 2016 and corruption under the Anti-Corruption and Economic Crimes Act, 2003, for example, raise the cost incurred by cross-border traders, making the objective of maximizing returns from export trade untenable since the unlawful actions are likely to raise the marginal cost of engaging in cross-border trade above the expected marginal return. Bribes paid to officials at custom clearance and during tax inspections, for instance, are costs to the trader and are likely to raise the marginal cost of engaging in export trade above expected marginal return.

18 In this paper, the firm is the unit of analysis. Firms are assumed to be rational economic agents.

19 MC=MR and firms make normal profits.

20 MR>MC and firms make supernormal profits.

21 MC>MR and firms make losses.

When institutions mandated with facilitating and promoting export trade are ineffective due to red tape, disregard of existing laws and regulations, absence of internal policies to enhance self-regulation, or other forms of institutional weakness, the costs incurred by cross-border traders rise. For instance, prolonged delays at custom clearance and cumbersome tax inspections emanating from institutional ineffectiveness raise storage costs, raise the risk of spoilage and wastage of exported goods especially if they are perishable, raise costs associated with missed market opportunities if exported goods and services are not delivered within agreed timelines, create operational inconveniences, and enhance affinity for bribes. Delays may also result in inconsequential breach of trade contracts, especially if the exported goods reach market beyond contractually binding deadlines. A rise in trading costs due to institutional ineffectiveness is equally likely to raise the marginal cost above the expected marginal return, further making export trade likely to be unattractive and making economic agents to turn to other forms of economic activities whose marginal return is higher than the marginal cost. The aggregate impact on the country is shrinkage in the size of export trade and its contribution to Kenya's long-term growth and development.

On self-regulation, if firms do not institute internal controls, processes, policies, and procedures to mitigate institutional risks, the marginal cost of engaging in trade is likely to be higher than the marginal return, making export trade an unsustainable economic activity. Fees and fines imposed on trading firms by the taxman due to tax non-compliance occasioned by a lack of firm's internal policies on tax compliance, for instance, are likely to raise marginal cost above marginal return, making export trade less attractive. Having appropriate governance structures in place and embracing monitoring and evaluation of organization's adherence to ethical business standards is likely to enhance long-term sustainability of enterprises. Desisting from unethical acts such as creative accounting, which culminates in tax evasion, for instance, would cushion firms against the inconveniences associated with cumbersome tax inspections, the associated opportunity for bribes, and fines and fees imposed for being tax non-compliant, which all raise the marginal cost incurred.

Further, undertaking employee training, nurturing an ethical organizational culture, creating and implementing organizational code of conduct and policies around bribery and tax compliance, undertaking system automation for enhanced organizational efficiency, transparency and accountability is likely to lower the marginal cost of engaging in export trade, thereby enhancing the sustainability of firms. Kapri (2021) underscores this framework by arguing that ineffectiveness of institutions such as the court system imposes marginal costs to firms, making it more expensive to operate and in effect, the realized marginal return from engaging in export trade shrinks below what it could have been if institutions were effective.

If institutions are effective, the marginal cost incurred by trading firms shrink as marginal return rebounds (Chakraborty, 2016), and in effect the likelihood of firms to export improves (Melitz, 2003).

We therefore conceptualize Kenya's institutional framework as playing a critical role in either promoting or hindering export trade. If a country's institutional framework is effective, meaning it does not impose restrictive marginal costs to traders, then it is highly likely to promote export trade. However, if a country's institutional framework is ineffective, meaning it imposes restrictive marginal costs to traders, then it is highly likely to hinder export trade.

We measure *institutional framework* using access to trade finance, whether or not the court system is an obstacle to current operations of firms, inefficiency in obtaining operating licenses and business permits, frequency of tax inspections, bribes during tax inspections, access to formal training programmes for permanent and full-time employees, whether or not customs and trade regulations are an obstacle to the current operations of the firm, whether or not a firm has an internationally recognized quality certification, and whether or not practices of competitors in the informal sector are an obstacle to the current operations of the firm.

Gender of firm owner, and years of experience of the top manager in the export sector[22], and firm size are used to control for non-institutional variables that also influence export trade.

From this theoretical framework, an analytical model is obtained as in (4.1) where export trade is a function of institutional framework, and control variables.

Export Trade = f (Institutional framework, Control variables) *(4.1)*

4.2 Empirical Equation

We track 180 firms from the panel dataset that were surveyed in 2007, 2013, and 2018. To ensure our focus is particularly on firms in the export sector, we further narrow down our sample size to only 81 firms that were surveyed over the three data collection waves and had exported in at least one of the data waves.

We use the share of total annual sales that was exported directly to measure our outcome variable. Among the firms in the export trade sector, 49(60.5%) had non-zero and positive share of direct exports in total annual value of goods and

22 This may be a measure of specialization and managerial competence in export trade.

services sold, 31(38.3%) had a zero share of direct exports in totals sales, while 1(1.2%) did not reveal its share of direct exports in total sales and was treated as a missing value.

Given our outcome variable is continuous, but we desire to limit the effect of the institutional framework to the 49 firms in the export sector that were exporting, and to leave out firms in the sector that had zero share of direct exports in total sales, we estimate equation (4.2) using the left censored Tobit estimator (Tobin, 1958). Since the Tobit estimator for panel dataset estimates random effects only,[23] the random effects model for equation (4.2) was estimated[24].

$$\textit{Export trade}_{it} = \beta_{ojt} + \beta_{kt}\,\textit{Institutional framework} + \beta_{lt}\,\textit{Controls} + \mu_{mt} \ldots (4.2)$$

Where the outcome variable is specified as in (4.3)

$$\textit{Export trade}_{it} = [i_{th}\,\textit{firm exported in year } t > 0,\ i_{th}\,\textit{firm didn't export in year } t = 0] \ldots\ldots\ldots (4.3)$$

In equation (4.2), μ_{mt} is a stochastic error term measuring the effect of other variables that influence export trade but are unobservable in the World Bank Enterprise panel dataset. β_{jt}, β_{kt}, and β_{lt} are vectors of estimated parameters. The outcome variable, the specific variables constituting *institutional framework* and *controls* are defined and measured as in sections (4.3.1). The specific variables comprising of the institutional framework include *access to trade finance, court system, tax inspections, bribes during tax inspections, operating licenses, on-the-job training of employees, quality certification, informal competition, customs and trade regulations,* and *business licensing and permits*. The control variables include *gender of firm owner, managerial experience,* and *control variables*.

4.3 Data

We use panel data obtained from the World Bank's Enterprise Surveys covering three time-periods—2007, 2013, and 2018. It details trade-off between Kenya's institutional framework and export performance. Panel data has also been used by Ibhagui and Olokoyo (2018) on 101 firms in Nigeria but for two waves—2003 and 2007.

23 Because we are using panel dataset, the fixed effects model is inappropriate when using the censored Tobit regression as it would not accommodate variables that are constant over the various data waves. An example of a variable that is constant over time in panel datasets is gender of the owner of a firm. To accommodate for variables that are constant over the panel waves, the censored Tobit estimates the random effects model only.

24 For robustness purpose, we also run the Generalized Least Squares (GLS) estimator.

4.3.1 Definition of variables

Outcome variable

The variable on export trade is continuous and is measured in terms of the share of total annual sales that was exported directly. Among the firms in the export trade sector, 49 (60.5%) had non-zero and positive share of direct exports in total annual value of goods and services sold, 31 (38.3%) had a zero share of direct exports in totals sales, while 1 (1.2%) did not reveal its share of direct exports in total sales and was treated as a missing value.

Institutional framework

a) Access to trade finance

Access to trade finance is a binary variable measured in terms of "1" if a firm had a line of credit or loan from a financial institution as at the time of the survey and "0" if not. Only 39 (48.2%) firms had a line of credit or loan from a financial institution compared to 36 (44.4%) firms that did not, and 6 (7.4%) that constituted non-response. Access to trade finance erodes market-entry barriers as exporting firms meet storage and transport costs with ease (Bergin et al., 2021). It facilitates bulk purchase of tradeable goods and services, and bulk storage and transportation for optimal enjoyment of economies of scale.

b) Court system

Since the court system is critical in enforcing contracts on trade exchanges and adjudicating disputes on breach of trade contracts, we determine whether the Kenyan court system is an obstacle to current operations of firms. A binary variable is used with "1" indicating that the court system is an obstacle and representing 52 (64.2%) of the firms, and "0" indicating the court system is not an obstacle and representing 26 (32.1%). 3 (3.7%) firms did not reveal their perception about the court system and were treated as missing values. Kapri (2021) opines that when the court system is fair and impartial, the contribution of export trade to a country's growth and development improves from enhanced likelihood that firms prefer to export. The fairness of the court system is an important tenet of rule of law, since courts play a central role in resolving commercial disputes among traders. When courts are unfair and serve as obstacles in operations of firms through inefficiency in hearing and determining trade disputes, traders may have incentive to bribe court officials to expedite dispute resolution (Kapri, 2021).

c) Tax inspections

Majority of the firms, 63 (77.8%) had been inspected by tax officials at least once and at most 46 times in the last 12 months while 18 (22.2%) were non-responsive. The variable was measured in terms of the number of times a firm had been inspected by a tax official. Inspections are a tax enforcement tool assessing compliance to the country's tax code. They support tax authorities to detect and seal tax revenue loopholes emanating from tax evasions and avoidance. 16(19.8%) of the firms reported having been requested to give bribes during tax inspections and were coded as "1", 47 (58.0%) had not been requested to offer bribes and were coded as "0", while 18 (22.2%) were non-responsive. If firms are in breach of the tax code, they have incentive to offer bribes to get cushion from tax penalties. As tax evasion and corruption through bribes become predominant, the marginal cost of engaging in bribery and violating the tax code gets lower. Further, the willingness of tax inspectors to take bribes signals firms to offer bribes and vice versa (Cule and Fulton, 2009).

d) Operating licenses

51 (62.9%) firms had applied to obtain an operating license in the last 2 years and were coded as "1", while 28 (34.6%) firms had not made an application to obtain an operating license and were coded as "0", while 2 (2.5%) firms were non-responsive and were treated as missing values. Licenses are important in ensuring orderliness and according rights and obligations to traders (Hersoug et al., 2021). Since licenses accord trading rights to traders and specify the requirements that should be met to ensure safety and quality of exported goods and services, license processing inefficiency is likely to undermine export performance by denying traders the right to get goods and services into foreign markets within contractually binding timelines.

e) Training

Training is important in supporting self-regulation of firms. 33 (40.7%) of firms reported to have formal training programmes for permanent, full-time employees in the last fiscal year and were coded as "1", while 45 (55.6%) reported not to have training programmes and were coded as "0", and 3 (3.7%) did not reveal whether they had formal training programmes and were treated as missing values. Liu and Lu (2016) observe that on-job training improves wages and productivity and benefits to firms are higher than benefits to employees.

f) Quality certification

Quality certification serves as an indicator that exported goods and services have been inspected and tested, and they comply with specified regulatory requirements especially those contained in ISO/IEC 17000 (Kellermann, 2019). In Kenya, goods and services produced locally for the export market are inspected, tested, and certified by the Kenya Bureau of Standards (KEBS), the national standards body established by the Standards Act, 1974, as revised in 2012 (Government of

Kenya, 1974). The Kenya Accreditation Service (KENAS) also undertakes quality certification under the Kenya Accreditation Service Act, 2019 (Government of Kenya, 2019). 24 (29.6%) firms had internationally recognized quality certification mark and were coded as "1", while 53 (65.4%) firms did not have internationally recognized quality certification mark and were coded as "0", and 4 (4.9%) firms were nonresponsive. Blind et al. (2018) note that quality certification fosters export trade.

g) Informal competition

The Competition Act, 2010 provides the regulatory framework for addressing competition in Kenya. It seeks to prevent trade practices that are restrictive, controls mergers and acquisitions, concentration of economic power, and endeavours to control unfair competition (Government of Kenya, 2010). 63 (77.8%) firms reported that practices of competitors in the informal sector were an obstacle to their current operations and were coded as "1", 17 (21.0%) did not perceive competitors in the informal sector to curtail their operations, and 1 (1.2%) were non-responsive. Bengtsson (2015) argues that rigid regulations nudge firms to operate informally as a way of enhancing cost efficiency.

h) Customs and trade regulations

Kenya's customs and trade regulations are anchored on the Customs and Excise Act of 1996, as revised in 2000 (Government of Kenya, 1996), and the Kenya Revenue Authority Act of 1995, as revised in 2012 (Government of Kenya, 1995). 64 (79.0%) firms reported that customs and trade regulations were an obstacle to export trade and were coded as "1", 16 (19.8%) firms that reported customs and trade regulations were not an obstacle and were coded as "0", and 1 (1.2%) were non-responsive. Customs and trade regulations play an important role in regulating the specific goods and services, and labour that can leave the customs boundary (Nash et al., 2010). Customs and trade regulations can impede export trade when they are rigid and cumbersome.

i) Business licensing and permits

56 (69.1%) firms perceived business licensing and permits to be an obstacle to their operations, 24 (29.6%) perceived business licensing and permits not to be an obstacle to their operations, while 1 (1.2%) firm was non-responsive and were treated as missing value. A regulatory environment that supports firms to easily start exporting while lowering the likelihood of existing the export market is conducive for growth of export trade (Rossi et al., 2021). Corruption and bureaucratic inefficiency slow down the distribution of trade permits and operating licenses, and derail participation in export trade. Further, when firms perceive business licensing and permits to be an obstacle to their operations,

they are likely to end up operating as informal entities and this could affect their potential to export.

Control variables

a) Gender

49 (60.5%) firms were owned by women and were coded as “1, 31 (38.3%) were owned by men and were coded as “0”, and 1 (1.2%) was non-responsive. Gender inequality is a major factor behind unequal distribution of material and non-material benefits accruing from free trade. Fernando et al. (2020) opines that inclusion of female perspectives and leadership styles within a firm enhance managerial capability and decision-making of the organization, making it to cushion itself from institutional risks that negatively affect firm performance. Martin and Lerong (2017) further corroborate the observation by Fernando et al. (2020) by arguing that gender diversity affects firm performance through managerial capacity and strategic decision-making during times of crisis.

b) Managerial experience

Majority of the firms, 80 (98.8%) had top managers with an experience of at least 4.0 years and at most 52.0 years in the export sector while 1 (1.3%) was non-responsive. Managerial experience supports making informed trade decisions that minimize on risks and costs while maximizing on returns (Dong and Doukas, 2021). Yung and Nguyen (2020) further observe that managerial capability grows firm’s market share, with highly able managers being able to make the right judgements that translate to the right operational and investment decisions.

e) Firm size

15 (18.5%) firms were micro and were coded as “1”, 37 (45.7%) were small and were coded as “2”, and 29 (35.8%) were medium and were coded as “3”. Samiee and Walters (1990) observe that there are differences in performance influenced by their size and capability to tap into economies of scale and access information on new market opportunities.

4.3.2 Summary statistics[25]

Table 4.1: Summary statistics

Variable	Obs	Mean/ Proportion (%)	Std. Dev. (%)	Min	Max
Exporting firms	49	21.2	22.1	3.0	100.0
Non-exporting firms	31	0	0	0	0
Gender female	80	61.3	49.0	0	1
Trade finance	75	52.0	50.3	0	1
Court obstacle	78	66.7	47.4	0	1
Inspections frequency	63	3.4	5.9	1.0	46.0
Inspections bribes	63	25.4	43.9	0	1
Experience manager	80	21.3	11.4	4.0	52.0
Training employees	78	42.3	49.7	0	1
Customs regulations	80	80.0	40.3	0	1
Certification	77	31.2	46.6	0	1
Competition informal	80	78.7	41.2	0	1
Operating licenses	79	64.6	48.1	0	1
Licensing and permits	80	70.0	46.1	0	1
Size					
Micro	15	18.5	39.1		1
Small	37	45.7	50.1		2
Medium	29	35.8	48.2		3

Outcome variable

The summary statistics for the 31 firms that were not exporting were all zeroes (0). This is sensible because those firms had total annual export value of zero (0). However, for the 49 firms that were exporting, the average share of exports in total annual sales was 21.2 per cent with the minimum share of exports in the total sales being 3.0 per cent and maximum share being 100.0 per cent.

Institutional framework

52.0 per cent of the firms had a line of credit or loan from a financial institution while 48.0 per cent did not have. 66.7 per cent of the firms perceived the Kenya court system as being an obstacle to their operations compared to 33.3 per cent, which felt the court system was not an obstacle. Firms had been inspected for an average of 3.0 times within a year with the least and maximum number of visits

25 Differences in the percentages reported in sections 4.3.2 and those reported in section 4.3.1 emanate from the sample in 4.3.1 including missing values while missing values are dropped in 4.3.2.

being 1.0 and 46.0, respectively. 25.4 per cent of firms gave bribes when visited by tax inspectors compared to 74.6 per cent which did not. 42.3 per cent of the firms had formal training programmes for full-time and permanent employees compared to 57.7 per cent which did not.

31.2 per cent of the firms had an internationally recognized quality certification label while 68.8 per cent did not have. 78.7 per cent of the firms perceived practices of competitors in the informal sector to be an obstacle to their operations compared to 21.3% which did not perceive practices of competitors in the informal sector to be an obstacle. Majority of the firms (80.0%) perceived customs and trade regulations to be a barrier to export trade compared to only 20.0 per cent which did not perceive customs and trade regulations to be an obstacle. 64.6 per cent of the firms had made application for operating licenses compared to 35.4 per cent which had not made an application. 70.0 per cent of the firms perceived business licensing and permits to be an obstacle to their operations compared to 30.0 per cent which did not perceive business licensing and permits to be an obstacle.

Control variables

Majority of (61.3%) were owned by women compared to only 38.7 per cent which were owned by males. The mean years of experience of the top manager in the export sector was 21.3 with the minimum and maximum being 4.0 and 52.0, respectively. 18.5 per cent of the firms were micro, 45.7 per cent were small, and 35.8 per cent were medium.

4.4 Diagnostic tests

Normality, multicollinearity, and heteroscedasticity tests were carried out. Residuals of the models followed a normal distribution[26] ($p<.05$). A variance Inflation Factor (VIF) of 2.8 was obtained, indicating multicollinearity was a not a major problem since the obtained VIF was below the acceptable limit of 10 (Ferre, 2009). Chesher and Irish (1987) observe that residuals obtained in a censored normal linear model are just OLS residuals. Following this approach, a ($\chi^2=0.4, p=0.6$) was obtained from the *Breusch-Pagan* test for heteroscedasticity, indicating the homoscedasticity assumption was not violated.

26 The *Shapiro-Wilk Test* was used.

5. Results

5.1 Introduction

The fitted models were good fit as shown by the p-values associated with the Wald Chi-Square (p=0.0, χ^2=40.5) and (p=0.0, χ^2=28.7) for the Random-effects Tobit and the Random-effects Generalized Least Squares (GLS) models, respectively.

5.2 Empirical Results

Institutional framework

Trade finance, certification, and firm size were statistically significant both in the *Left Censored Tobit* and the *GLS models*. Tax inspections frequency and employee training were, however, statistically significant only in the *Tobit model*. We follow Papke and Wooldridge (1996) in interpreting results for fractional outcome variable.

a) Trade finance

We find that for every firm that secures a line of credit or loan with a financial institution, the share of direct exports in total sales is likely to increase by 0.1 percentage points, on average, using the *Tobit model* compared to what would happen if the firm had no access to credit. Using the *GLS model,* the share of direct exports in total sales grows by an average of 0.1 percentage points if the firm had access to a line of credit with a financial institution compared to firms without credit access. Our findings indicate that access to trade finance promotes export trade. It erodes market-entry barriers as exporting firms meet storage and transport costs with ease (Bergin et al., 2021). It facilitates bulk purchase of tradeable goods and services, and bulk storage and transportation for optimal enjoyment of economies of scale. Askenazy et al. (2015) observe that liquidity problems hinder entry of firms into export market as they lower the probability of being able to finance sunk costs. Further, liquidity constraints enhance the likelihood of firms existing export market due to inability to meet recurring costs.

b) Quality certification

If a firm has an internationally recognized quality certification, the share of direct exports in total sales is likely to grow by 0.2 percentage points, on average, using the *Tobit model* compared to firms without quality certification. From the *GLS model,* the share of direct exports in total sales grows by an average of 0.1 percentage points if the firm has an internationally recognized quality certification compared to firms without the certification. Our findings indicate that quality possession of internationally recognized quality certification promotes export trade. The findings corroborate those by Blind et al. (2018) who note that firms with internationally recognized quality certifications gain trust and confidence from consumers in foreign markets that exported goods and services have conformed to internationally recognized safety and quality standards and do not pose health and environmental risks. The effect of the enhanced confidence and trust on exported goods and services is increased demand, which fosters export trade.

c) Tax inspections

For every tax inspection visit by tax officials, the share of direct exports in total sales is likely to shrink by an average of 0.02 percentage points. The findings indicate that the frequency of tax inspection shrinks exports. Inspections are carried out to assess compliance to the existing tax disclosure requirements (Cule and Fulton, 2009). Time spent with tax officials during tax inspections is time that could have been spent in undertaking trade transactions or enhancing operational efficiency for improved firm performance in export trade. This argument is consistent with our results, which indicate that tax inspections contribute to shrinkage of exports. They create bureaucratic inefficiency, which adversely affects export trade. Lahiri and Ali (2021) see inspections as a form of corruption and bureaucracy that ends up straining operations of firms. The adverse effect on firms' operations may manifest in shrinking exports. Consistent with our findings, Alm et al. (2016) found that inspections create incentives for bribes, which consequently shrinks sales. Enhancing the effectiveness of tax administration in the country could enhance export trade.

d) On-job training

On-job-training for permanent and full time employees is likely to grow the share of direct exports in total sales by an average of 0.1 percentage points compared to what would happen in absence of training. Training plays an important role in enhancing self-regulation. It enhances managerial efficiency by instituting internal controls, processes, and procedures to mitigate institutional risk. Our findings indicate that training of employees positively and significantly grows exports. This non-monetary trait of a job improves employee morale, improves productivity, and supports self-regulation, which consequently enhances export trade as an economic activity (Liu and Lu, 2016). Training entrenches institutional culture among employees and in effect helps mitigate institutional risks.

Control variables

Firm size

Using the *Tobit model,* the share of direct exports in total sales is likely to improve by an average of 0.2 percentage points if the firm is medium-sized compared to what would be exported if the firm was micro. Using the *GLS model*, the share of direct exports in total sales is likely to grow by an average of 0.1 percentage points compared to what would be exported if the firm was micro. Our findings indicate that firms are more likely to export more if they are medium in size compared to what would happen if they were micro-enterprises. As a firm characteristic, size is a measure of a firm's specialization in export trade, ability to enjoy economies of scale, which are characterized by exportation of goods and services in large volumes at low costs, and even better managerial decision-making. The findings are supported by Ibhagui and Olokoyo (2018), who posit that firms are likely to perform better as they grow in size. Samiee and Walters (1990) further opine that differences in firm size may be a source of comparative advantage that could support enjoyment of economies of scale.

Tabular presentation of results

Table 5.1: Left-censored random-effects Tobit regression results

Share of direct exports in total sales	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	0.1	0.1	1.2	0.2	-0.1	0.2	
Trade finance	0.1	0.1	2.3	0.02	0.02	0.2	**
Court system	0.03	0.1	0.5	0.6	-0.1	0.2	
Inspections frequency	-0.02	0.01	-1.7	0.1	-0.1	0.004	*
Inspections bribes	0.03	0.1	0.4	0.7	-0.1	0.2	
Managerial experience	0.002	0.003	0.9	0.4	-0.003	0.01	
Employees training	0.1	0.1	1.9	0.1	-0.003	0.2	*
Customs and trade regulations	0.1	0.1	0.9	0.4	-0.1	0.2	
Certification	0.2	0.14	3.2	0.001	0.1	0.3	***
Informal competition	-0.1	0.1	-1.4	0.2	-0.2	0.04	
Operating licenses	-0.03	0.1	-0.6	0.6	-0.2	0.1	
Business permits	-0.04	0.1	-0.6	0.5	-0.2	0.1	
Size							
Medium	0.2	0.1	2.5	0.01	0.04	0.3	**
Large	0.1	0.1	0.8	0.4	-0.1	0.2	

Constant	-0.2	0.1	-1.7	0.1	-0.5	0.03	*
Sigma_u	0	0.04	0.0	1	-0.1	0.1	
Sigma_e	0.2	0.02	7.7	0	0.1	0.2	***
Mean dependent var.	0.1		SD dependent var	0.2			
Number of obs.	49		Chi-square	40.5			
Prob > Chi²	0.0		Akaike crit. (AIC)	20.4			
*** p<.01, ** p<.05, * p<.1							

Table 5.2: GLS regression results

Share of direct exports in total sales	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	0.1	0.1	1.4	0.2	-0.03	0.2	
Trade finance	0.1	0.1	1.7	0.1	-0.01	0.2	*
Court system	0.02	0.1	0.3	0.8	-0.1	0.1	
Inspections frequency	-0.003	0.004	-0.7	0.5	-0.01	0.01	
Inspections bribes	0.1	0.1	1.1	0.3	-0.1	0.2	
Managerial experience	0.002	0.003	0.8	0.4	-0.003	0.01	
Employees training	0.1	0.1	1.3	0.2	-0.03	0.2	
Customs and trade regulations	0.02	0.1	0.2	0.8	-0.1	0.1	
Certification	0.1	0.1	2.1	0.04	0.004	0.2	**
Informal competition	-0.1	0.1	-0.7	0.5	-0.2	0.1	
Operating licenses	-0.01	0.1	-0.1	0.9	-0.1	0.1	
Business permits	-0.01	0.1	-0.3	0.8	-0.1	0.1	
SIZE							
Medium	0.12	.1	1.8	0.1	-0.01	0.2	*
Large	0.01	.1	0.2	0.9	-0.1	0.2	
Constant	-0.12	.1	-1.2	0.2	-0.3	0.1	
Mean dependent var	0.1		SD dependent var	0.2			
Overall r-squared	0.5		Number of obs	49			
Chi-square	28.7		Prob > Chi²	0.01			
R-squared within	0.5		R-squared between	0.4			
*** p<.01, ** p<.05, * p<.1							

6. Conclusion and Policy Implications

6.1 Conclusion

Kenya's institutional framework affects exports of goods and services by firms. Specifically, access to trade finance, the frequency of tax inspections, on-the-job training of employees, internationally recognized quality certifications, and firm's size significantly affect export of goods and services in Kenya.

6.2 Policy Implications

i) **Capacity:** Evidence points that firms have incentive to engage in bribery to expedite securing of operating licenses and fastening customs clearance for exported goods and services when responsible institutions are inefficient. Institutions mandated with undertaking customs clearance and issuance of operating licenses should strengthen and expand the existing digital platforms to support capacity for effectively and efficiently executing custom clearance and license issuance requests. They should institute internal self-regulation mechanisms through good institutional governance and creation of institutional policies against bribery.

ii) **Regulatory reforms:** Evidence shows that actions of competitors in the informal sector shrink export trade. Firms are likely to operate informally to enhance cost efficiency if the existing regulatory framework is rigid and cumbersome. There is need to review the country's regulatory framework as relates to export trade to enhance coherence and eradicate overlaps and rigidities. Reforms in the country's customs and trade regulations, for instance, could enhance access to foreign markets for Kenyan goods, services, and labour.

iii) **National quality infrastructure:** Evidence shows that possession of internationally recognized quality certifications promote export trade. There is need to entrench Kenya's quality infrastructure in a unified policy to enhance institutional coordination in provision of quality services as regards standards, certification, conformity assessment, and market surveillance.

iv) **Self-regulation:** There is need to invest towards nurturing a national and organizational culture of acceptable morals, values, virtues, and customs as the foundation for formal institutions. Through trainings, managerial experience and employee compliance to best work ethics could be enhanced with the outcome being reduced institutional risk which consequently promotes export trade.

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Annexes

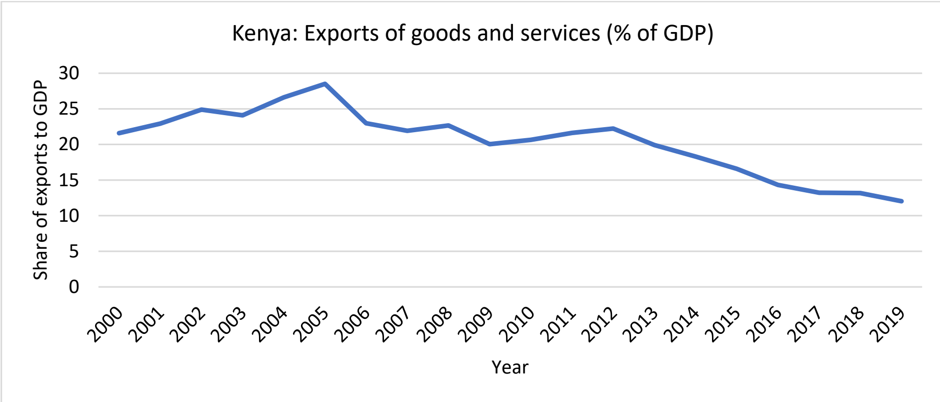
Annex A1: Size of Kenya's export trade as share of real GDP

Year	Kenya: Exports of goods and services (% of GDP)
2000	21.6
2001	22.9
2002	24.9
2003	24.1
2004	26.6
2005	28.5
2006	22.9
2007	21.9
2008	22.7
2009	20.0
2010	20.7
2011	21.6
2012	22.2
2013	19.9
2014	18.3
2015	16.6
2016	14.3
2017	13.2
2018	13.2
2019	12.0

Source: World Development Indicators27

27 See https://databank.worldbank.org/source/world-development-indicators# for raw data.

Annex A2: Kenya: Contribution of exports trade to GDP



Source: Data from World Development Indicators

Annex A3: Country and regional comparison of export trade as share of GDP

Time	Uganda: Exports of goods and services (% of GDP)	Rwanda: Exports of goods and services (% of GDP)	Kenya: Exports of goods and services (% of GDP)	MENA: Exports of goods and services (% of GDP)	SSA: Exports of goods and services (% of GDP)	OECD: Exports of goods and services (% of GDP)	EU: Exports of goods and services (% of GDP)
Average (20 years)	14.7	12.4	20.4	44.5	29.2	26.2	41.0
Average (10 years)	14.8	15.4	17.2	44.4	27.4	28.4	44.8
Average (5 years)	14.9	18.4	13.9	40.7	24.3	28.9	46.4

Source: Data from World Development Indicators

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