

**International
Institute of
Social Studies**

Erasmus

Impact of Standards in the Cut Flower Export Industry in Kenya

A Research Paper presented by:

Bianca Wairimu Karuere

(Kenya)

in partial fulfilment of the requirements for obtaining the degree of
MASTER OF ARTS IN DEVELOPMENT STUDIES

Major:

ECD

Members of the Examining Committee:

Prof. Dr. Syed Mansoob Murshed

Dr. Elissaios Papyrakis

The Hague, The Netherlands

December 2024

Disclaimer:

This document represents part of the author's study programme while at the International Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

Inquiries:

International Institute of Social Studies
P.O. Box 29776
2502 LT The Hague
The Netherlands

t: +31 70 426 0460
e: info@iss.nl
w: www.iss.nl
fb: <http://www.facebook.com/iss.nl>
twitter: [@issnl](https://twitter.com/issnl)

Location:

Kortenaerkade 12
2518 AX The Hague
The Netherlands

Contents

<i>List of Tables</i>	<i>iv</i>
<i>List of Figures</i>	<i>iv</i>
<i>List of Acronyms</i>	<i>v</i>
<i>Acknowledgement</i>	<i>vi</i>
<i>Abstract</i>	<i>vii</i>
Chapter 1 Introduction	1
1.1 Research Question	2
1.2 Research Objective	3
1.3 Relevance to Development Studies	3
Chapter 2 Conceptualization and Theoretical Framework	4
2.1 Contextualization	4
2.1.1 Definition of Standards	4
2.1.2 Evolution of standards	5
2.1.3 The Kenyan landscape of standards	6
2.1.4 Kenya's Floricultural Trade Landscape	8
2.2. Theoretical Considerations	9
Chapter 3 Literature Review	12
3.1 Why Standards Matter	12
3.1.1 Link between Standards to Trade and Development	14
3.1.2 A Win for the Environment	15
3.2 Barriers as presented by Trade Policy	16
Chapter 4 Methodology	19
Chapter 5 Empirical Analysis and Discussion	21
5.1. Results	22
5.2. Discussion	26
Chapter 6 Conclusion and Policy Recommendations	28
<i>References</i>	<i>29</i>

List of Tables

Table 1: Average unit value of competitors	25
--	----

List of Figures

Figure 1: Types of Standards.....	5
Figure 2: Value of cut flower exports by top countries in 2023	8
Figure 3: Inputs and outputs from green house.....	15
Figure 4: Market analysis of Kenyan cut flowers	22
Figure 5: Kenya cut flower export value	23
Figure 6: Kenya cut flower export quantity	23
Figure 7: Kenya cut flower unit value.....	24
Figure 8: Kenya cut flower export unit value against quantity.....	24
Figure 9: Kenya cut flower export unit value and quantity to the UK and the Netherlands	25

List of Acronyms

EU	European Union
KFC	Kenya Flower Council
MPS	Milieu Programma Sierteelt
WTO	World Trade Organization
UAE	United Arab Emirates

Acknowledgement

I would first and foremost like to give my gratitude to my supervisors Prof.Mansoob Murshed and Dr. Elissaios Papyrakis for their support, guidance and encouragement which gave me the push that I required. I would like to further extend this to my student discusants, Rashad and Anahita for their input to my work and Angase and Preksha for their moral support.

Without my institution, non if this would have been possible and I am forever grateful for this opportunity. The last year has taught me that believing in yourself is just the right amount of drive that one can need. I have gotten the opportunity to meet many lovely people, all of whom have had a significant impact to my life which fills my heart with gratitude.

I would like to likewise thank my family for their prayers and support throughout this year. Their long calls and funny memes have been a great contribution to my smile each day. For this I will be forever indebted to them.

I would finally like to thank God for He is the pillar that holds me. None of this would have been possible without His love.

Abstract

Standards are ever evolving to suit consumer preferences which has resulted in a consumer-led markets. Understanding how these perceptions shape the floricultural sub sector in Kenya becomes insightful in grasping the impact of standards in shaping economic prosperity which translates to developmental outcomes becomes of great importance. Using a descriptive analysis approach, the paper aims to analyse unit values in order to bring out how perceptions of quality bring forth a differentiated product that can lead to successful integration into international markets. The findings show that standards do signal quality leading to a preference for those products. This creates a differentiated product that ultimately gains competitiveness. The paper underscores the need to delve into a more nuanced approach between conformers and non-conformers. The study provides a recommendation to policy makers to strengthen the compliance capabilities of marginalized groups, especially small-scale farmers.

Keywords

Trade Standards; Compliance; Unit Value; New Trade Theory.

Chapter 1

Introduction

The link between trade, standards and export competitiveness in the creation of trade policy has become a very crucial dynamic to understand. This new age of the globalized economy is shifting, and a deep prominence has been given to standards as they have the ability over shaping trade flows and influencing developmental outcomes in different sectors. These, presented in their different forms, whether safety, quality, ethical practices or environmental sustainability, these standards have emerged as an important mode of market governance (Henson and Humphrey, 2009).

It has been noted that high income growth in developed countries has led to an increased demand for high quality health, safety and ethical standards (Otieno, 2016; Kariuki, 2014). This has further been reinforced by several campaigns on environmental and social activism where health issues are likewise at the forefront of the contentions. More information on production processes, chemicals used in foods and the origins of the products, is now being preferred. This has brought about a notable shift from an economy of quantities to one of qualities (Riisgaard, 2009) where these consumers' preferences brought a rearrangement to how producers respond to market signals (Wilson and Abiola, 2003). Now what exists is a complex system of codes of practice and enforcement mechanisms especially in the agri-food industry.

Trade as a tool to spur growth is extremely pivotal, especially for emerging nations. Leveraging access to international markets has brought about economic growth as countries have been able to expand their markets and increase production. This has seen different countries make a direct greater effort towards maintaining their exports base, which mainly includes compliance with the standards set as well as implementing export-led policies. Nations with the ability to maintain these standards have an immediate competitive advantage which allows them to further access different high value markets and enhance export performance.

Specifically, delving into the floricultural sector within the agri-food sector, standards can act as a double-edged sword where the integration into international markets will have a ripple effect of stimulating economic growth (Martens and Swinnen, 2009) while on the other hand this becomes a barrier for non-conformers (Wilson and Abiola, 2003). These two perspectives have given rise to many different schools of thought where we have one hand who see it worthwhile for emerging nations to make some sacrifices and adapt to the changes and at the end of it all take advantage of the opportunities that follow (Henson and Jaffee, 2004; Henson, 2006; Zylberberg, 2013; Nungari, 2018). While other schools of thought see it as a great barrier that deprives emerging nations the access to international markets which impedes economic development and growth. All these are noteworthy contributions towards bridging the discussion on to conform or not to conform and at what cost.

It is brought out by Wilson and Abiola, 2003 that there are four main functions to standards;

- They act as a necessity to access international markets where benefits are only available to those who are able to upgrade their production and leave out those who aren't.
- They have influence over those who will have a competitive advantage.
- Standards lead to production of products of higher quality and value through innovation, knowledge transfer and upgrading which earns higher incomes.

- They may also play a role in the formulation of commercial policy, for example, that may suit a specific group of people leading to monopolization of the market and excluding competition.

Deeper scrutiny of these functions further shows that the divide of standards as a catalyst or a barrier are engrained into the understanding of standards. From the discussion, these acknowledgements come from an income-inequality point of view where the spotlight is on the trade-growth effect on the participants within the high value chains. This marks the starting point of this study which seeks to take on a trade-growth effect point of view with the objective is of shedding light to the significance of standards in shaping trade flows and how they can propel developmental and economic prosperity. This study aims to contribute to the schools of thought through a descriptive analysis approach which provides an analysis of how adoption conveys quantifiable trade growth. This will utilize the unit values to signal preference for quality brought about by adoption of standards where higher unit values equate higher quality due to adoption of standards and vice versa.

The focal point of this study will be on the Kenyan floricultural sector back pinned by the standards that govern their access to international markets. As an emerging nation, Kenya has made great strides in accessing, maintaining and leveraging its position in the exporting market. The floricultural sector has made a surmountable contribution to this success as it is among the top foreign exchange contributors (KFC, 2023). As the study focuses on the trade-growth effect, it positions itself well in trying to unveil how standards have contributed to this success. It is noteworthy to mention that there are different types of standards; public regulatory and voluntary or private ones that attract higher prices like ethical or fairtrade standards. For this piece of work, the focus will be on both public and private standards taken as the same thing.

The remainder of this research paper is structured as follows: The next part of this chapter outlines the research question and objectives. Subsequently, chapter two gives the backbone to the research by contextualizing standards globally then narrowing it down to Kenya as it provides an overview of the industry's contribution to trade. It then elaborates the contribution standards has to the competitive and comparative advantage of a product by underpinning trade theories. Chapter three then gives a follow up through some detailed and critical reflections through a literature review that sets the stage for linkages of standards to trade and development and broadly touches on the dilemma of whether to conform or not to conform. This is followed by an introduction and discussion on the choice of methodology in chapter four which will be discussed in chapter five. The final chapter will provide the conclusion.

1.1 Research Question

The main objective of this research is to uncover the impact of standards on the Kenyan cut flower export industry. To achieve this, the thesis will be guided by the following research question:

How have standards shaped the cut flower export industry in Kenya?

The intention of the broadness of the question is to take on a more comprehensive approach in examining the contribution of the standards. This is motivated by the discussions of scholars with the aim to contribute to the trade and development trains of thought. However, to comprehensively answer the question, it is important to narrow it down to a

more precise inquiry on how standards imply quality which triggers consumer preference. To bring this out, it will be guided by the following sub question:

How does compliance with social and environmental standards contribute to product differentiation?

1.2 Research Objective

Building on the research questions, this paper has three main objectives.

- i. To map out a comprehensive understanding of industry standards.
- ii. To investigate the role of standards in enabling or restricting trade and development.
- iii. To evaluate the practical implications of the standards on trade competitiveness and development.

The first two objectives lay a foundation for the framework of the study by contextualizing standards and bringing them closer to the Kenyan cut flower industry. It further sheds light to the floricultural trading landscape and how it has shaped the Kenyan economy. This is to build on to subsequent chapters that delve deeper into the subject matter with empirical evidence which addresses the last objective.

1.3 Relevance to Development Studies

Development is defined to be the process of social change that takes place after long periods of time and brings out economic growth that should translate to poverty reduction and general well-being (Chambers, 1997). This, however, cannot take place if there isn't an intentional effort geared towards growing different sectors which are investing in labor, technological innovations, trade and mindful fiscal management (World Bank, 2004).

Over the years emerging nations have tapped into international markets as part of their efforts to propel development in their economies. This, however, has had them face several challenges, among which is maneuvering the complex system of standards. Non-compliance with these set regulations acts as barriers to trade locking out many nations from the global markets.

The Kenyan floricultural scene plays a major role in supporting the nation's economic health as it is a major source of employment. It holds a high position within the international markets despite the complex system of regulations. This success is attributed to the adherence to standards as it plays a core theme in driving the nation's developmental success as it has leveraged access to high value markets by offering a differentiated product. Shedding light to the contributions of standards to the Kenyan economy gives insight to other emerging nations on the impact of compliance. This study aims to offer an understanding of how developing countries can strategically position themselves in international markets to leverage benefits that come with successful participation that can be translated to developmental outcomes.

Chapter 2 Conceptualization and Theoretical Framework

This chapter provides a good foundation to the understanding of standards as it gives a contextualization by initially defining them and bringing out the different categorizations. It then brings the standards closer to the cut flower industry in Kenya as this is the main subject of study. Within this, it looks into the evolution of standards and how this has been shaped by global cognizance of social and environmental issues. The chapter then goes ahead to look at the trade aspect of the sector and how it has contributed to the economy of the nations as it is a major driver of development as this is the main foundation of the paper. This is then summarized by looking into relevant theories that shed light to how standards can contribute to developmental outcomes. This sets the stage for a good foundational understanding of the cut flower industry in Kenya and the role standards play in.

2.1 Contextualization

2.1.1 Definition of Standards

Standards can broadly be described as rules and regulations used to govern the access goods has to a market. More succinctly, they can be defined as “a limit or rule that is approved and monitored for compliance by an authoritative agency or professional or recognized body as a minimum acceptable benchmark” (Otieno, 2016, pp 23). The WTO goes further to define them as “technical specifications contained in a document that lays characteristics of a product such as levels of quality, performance, safety, or dimensions. Standards may include or deal with exclusively with terminology, symbols, testing and methods, packing or labeling requirements as they apply to a product.”

Standards are therefore the currency used to govern the access of goods to markets both domestically and internationally which are demarcated by several rules and functions. For international markets where the buyers do not have direct interaction with the quality of the commodities, having instruments that can represent both parties becomes important to establish. Sellers can only communicate this through attributes like compliance to standards (Riisgard, 2009).

In the course of time, standards have been observed to evolve from serving not only quality assurance needs but also covering product safety, environmental issues and labor rights (Otieno, 2016). These requirements can take shape in an obligatory manner where failure to comply can attract legal penalties or exclusion from trade (Henson, 2008). On the other hand, they can also be voluntary where their compliance is dependent on the producers (Ibid, pp 71). Standards fall into these different categories depending on how they originated, whether from the market rather private entities or the government.

Public standards are government developed and compliance with them is mandatory and set by public institutions. They are intended to lay out the minimum requirements to signal safety and health protection and quality assurance. Private standards also viewed as voluntary are initiatives of private bodies. These standards go beyond the minimum requirements and are mainly intended to differentiate products within the market. They are mainly geared towards environmental sustainability and labor protection. Access to high value

markets is increasingly becoming challenging, however, the added advantage of adhering to private standards is becoming key to accessing them (Henson, 2008).

Otieno, (2016) points out that that beyond public and private standards, another point that can be used to distinguish them is the relationships to products and processes. It is brought out that some standards are product pioneered, and others are process pioneered (Hulst, 2012; Liu, 2009; Wilson and Abiola, 2003). Product standards have a direct check point to the characteristics of the product which are confirmed through the quality control of the final commodity, these are for example the quality, safety and authenticity of the product. Conversely, process standards are more concerned with the steps taken to achieve the final product and are verified through well-structured inspections which may come off as traceability requirements, management practices and working conditions for laborers.

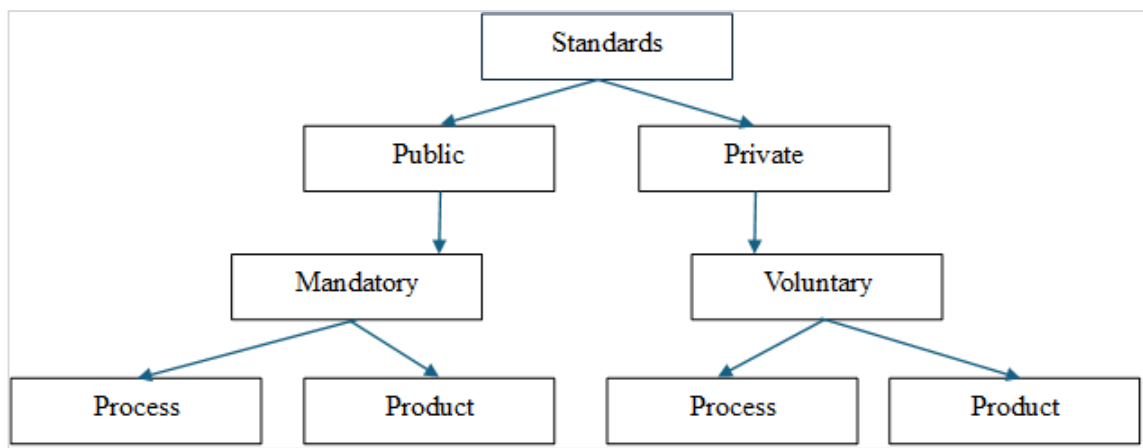


Figure 1: Types of Standards

Source: Otieno, 2016.

This further categorization provides a distinctive point for standards which define the rules that govern them. These are associated with labor, health and the environment, which are broadly social and environmental as initially elaborated.

2.1.2 Evolution of standards

The historical emergence of standards has been a gradual reaction to globalization. This origination has been dated all the way back to the industrial revolution where, as trade grew there was a rising intention to ensure that the commodities were of good quality and ensured consumer health. This change trajectory further advanced post the second world war as international trade started to gain traction (McGovern, 2018). The need for streamlined trade facilitation became a rising concern as several barriers to trade existed. Standards slowly started to crop up to try and come up with a well-ordered commodity transaction across borders and an effort to reduce the barriers that existed. This saw a shift towards better quality and safety regulations that were acceptable to different industries which were trade enhancing. These were foundational pillars to most public regulation.

Soon after this period, there was an amplified voice on social and environmental issues which became the footing of private standards (Liu, 2009). These aimed to look into ethical

matters round labor rights and the implications of production processes on the environment. These concerns gave rise to private standards like Fair Trade and GlobalGap standards. These soon became crucial for access to different high value markets who valued these concerns (Liu, 2009). This was then later and continues to be reinforced by sustainability and climate change concerns. The growing consumer consciousness has played a major role in the evolution of private standards as it has shaped their perceptions of quality and acceptability, which are key drivers of demand and later success to trade performance.

The system of standards has primarily been observed to be imposed on food and agricultural products (Sheldon, 2011) whose market has been shaped by demand side forces. Owing to the fact that these are the main driving impulses, it has become crucial to initially gain consumer confidence which later grows into validation in order to access and maintain the market. "...firms adhere to standards because of the incentives generated by network externalities and the consequent larger demand for their products." (Antonelli, 1994, pp 196,). This demand inevitably becomes the impetus for leveraging trade-growth opportunities.

This evolution process to standards has been credited to bringing along organizational factors. This is observed in the already mentioned market's structure but also the organizations (McGovern, 2018). Organizations that need to maintain the regulations to these standards on both the public and private ends of the spectrum. This process has further led to trade policy creation which has had its own share of critiques mainly centered around them being barriers to trade and advancing protectionist agendas (Sheldon, 2011), which will be brought out in the following chapter.

The growing interconnectedness created by globalization has enabled entry of emerging nations into the international markets. This was marked by the Agreement on Technical Barriers to Trade following the formation of the World Trade Organization in 1995 which was meant to reduce barriers to trade and facilitate international trade cooperation. This was an especially important moment for emerging economies as it allowed access to international markets through standards compliance. This has led to a shift in their production processes from localized regulations to align to the internationally common regulations (Liu, 2009). These are from the most basic ones that ensure product quality and food safety- basically encompassing technical regulations to the more complex ones, that are social and environmental ones based on the chosen market of trade participation.

This entry has been welcomed by standards that govern the flow of the products which marks a secondary kind of evolutions to standards within the context of emerging nations. In order to leverage developmental outcomes from successful integration into international markets, it has become imperative for emerging nations to adhere to these regulations. This has necessitated an adjustment into their definitions of quality to suit the consumer definitions of quality. This, however, requires strategic positioning in the markets as different regions have different sets of standards, for example, Europe being noted to have the most stringent ones. Over the years it has been noted that the evolution of standards is not static but ever evolving requiring constant updating of the regulation. This has been brought out to be trade enhancing, but on the flip, side are the compliance costs that slowly creep behind which poses as one of the main limitations to standard evolutions within emerging economies.

2.1.3 The Kenyan landscape of standards

The Kenya standards scene has witnessed a unique shift towards aligning them to suit international regulations (Wilson and Abiola, 20003). As this cannot be generalized to all

sectors, the horticultural sector in specific is surrounded by multiple requirements as it exports its products to multiple high value markets which to sustain, its compliance is required. Thus, it has seen the industry curbed by several standards, which are mainly voluntary ones. This has come about due to the dominant role played by consumer preferences as there is a growing awareness and consciousness to social and environmental issues (Jaffee, 2003) which has gone above and beyond the traditional quality preferences of color and size (Nyangito, O. et al 2003).

Sustainability slowly started to become a household name in the early 1990s, which brought forth a new wave of private standards into the industry (Kuiper and Gemahlich, 2017). Standards were then introduced into the industry with one of the earliest schemes dating back to 1993; the Milieu Programma Sierteelt (MPS) (Kuiper and Gemahlich, 2017). The was only for the Dutch market which was meant to investigate the working conditions and the environmental impacts of the flower farms (Moosbrugger, 2007). This move not only gave importance to standards but also a shift in promoting positive changes to the industry. Standards then started to play a huge role in guiding penetrating international markets, gaining traction and maintaining its high status in the global value chain.

Kenya now has four major standards that play a major role in the floricultural sub sector with the first being the MPS set by Dutch producers. This standard requires producers to watch their pesticide usage levels, waste treatment, energy and water usages (Calisti and Holtmaat, 2007). This was followed by the Kenya Flower Council (KFC) standard in 1966 which was aimed at maintaining Kenya's position and reputation in the export markets by coming up with a Kenyan standard that fulfilled most requirements (Bermudez and Nginge, 2004). This was followed by the Global G.A.P standard in 2003, which gained traction into the industry in 2015, which aimed at maintaining good agricultural practices and was later extended to the floricultural sector. The Fair-Trade standard consequently followed in 2004 that was geared towards the social aspect that looked into the experiences of the farm workers (Calisti and Holtmaat, 2007).

This complex dynamic of standards led to efforts by the Kenyan government to localize and harmonize the heterogenous global standards. This move was mainly aimed at reducing the compliance costs, which were becoming a big burden, especially for the farmers. The attempts saw the development of the KS 1758 and the KenyaGAP codes of practice (Otieno, 2016; Bermudez and Nginge, 2024) which contributed to local upgrading. The impact, however, was not as strong as intended, as it has to date not gained enough international significance which would not guarantee entry to different markets like the EU leaving producers with no option but to comply to the same regulations as before.

The nature and extent of standards applied to the Kenyan flowers is evidently mainly driven by market destinations as each market has its own share of regulations. Accessing a high value market is one thing and maintaining that access is another thing. Kenya's presence in international markets is diverse as the nation has been able to leverage entry the several regions; EU, Middle East, East Asia and USA placing it at the frontline of the global flower suppliers. This position has been maintained through constant adjusting to compliance requirements which range from traceability to phyto-sanitary requirements.

The most notable floriculture trading market is the EU, where a large portion of the cut flowers come from Kenya and is the most important market. With this being mentioned, compliance with the regulations is of utmost importance not only to the sector but also to the general economic health of the nation as it pioneers knowledge and innovation creation as well. This leaves the voluntary standards here translating to mandatory requirements as doing otherwise will lead to exemption of trade (Otieno, 2016).

2.1.4 Kenya's Floricultural Trade Landscape

The Kenyan horticultural sector is one of the major contributors to the nation's economy after tea and coffee which plays a significant role supporting both economic and social development. This has gained it a strategic position in the global value chain and a good reputation in the international markets. It contributes to 29% of the nation's GDP and accounts for 57% (Heher and Steenbergen, 2021) of the total export share of which is majorly comprised of cut flowers, fruit and fresh vegetables. Cut flowers takes up the majority of the sub sector at 70% (Kilimo News, 2021) positioning itself as the third largest producer in the world (KFC, 2024).

Over the years, the floricultural sub-sector has seen a general growth trajectory with the highest earnings in 2018. This has been pioneered by cut flowers which is the 2nd most exported product in the country and the 4th largest exporter in the world after the Netherlands, Colombia and Ecuador. This ranking has earned it a significant share of the global market, especially in Europe. Its main destinations are the Netherlands which is a major re-export hub, UK, Saudi Arabia, Germany and United Arab Emirates. This presence is likewise shared with the Netherlands, Colombia and Ecuador as the main competitors.

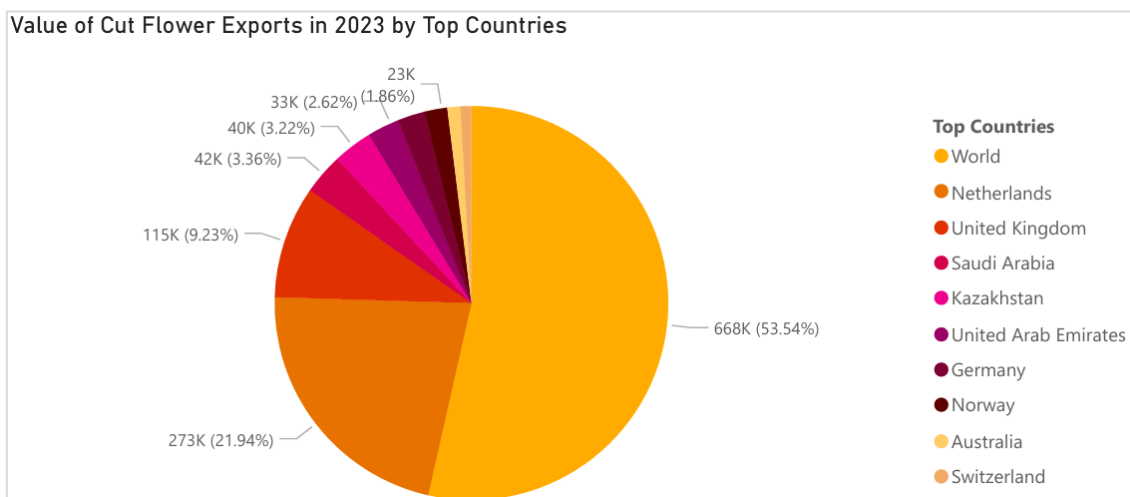


Figure 2: Value of cut flower exports by top countries in 2023

The sector has experienced tremendous growth as Kenya is endowed with favorable conditions of lower energy costs in comparison to other countries and reaped benefits of a strong euro. This in a nutshell has been classified to climatic, contextual, policy and infrastructural factors (Bolo, 2006). This was however slowed down in 2008 due to political unrest and another difficult season in 2010 when the nation experienced a drought. The nation, however, returned to its growth trajectory spurred by an increase in the flower varieties for export and export diversification.

It has however been noted to have an overreliance on European markets, which hold the largest share. This has placed them in a delicate position which is susceptible to risks associated with the constantly changing strict regulatory requirements. However, it is slowly shifting as there is a notable potential in other markets like the Middle East due to its close geographical position.

2.2. Theoretical Considerations

Standards have become an important instrument that contributes to the economic prosperity of a nation, especially for emerging economies. This has been advanced by trade growth theories birthed from traditional and new ones that assume that access to international markets will consequently lead to an increase in exports which will spur development. These come about from discussions based on product differentiation, competitive advantages and perceptions of quality. Development and growth are, however, the end point outcomes of successful integration into global markets, the in-betweens are what really determine the magnitude of success. These determinants fall upon the efforts of a country to leverage its comparative advantage as well as its competitive advantage. The two can work together simultaneously where when a nation has an upper hand in production of a good or service, it allows them to specialize on it by focusing on doing what they do best which reinforces Ricardian theories. Emerging nations have been observed to move along with this trend (Otieno, 2016) where the benefits accrued have been translated to development through market access, product differentiation and industry growth.

Providing unique value to consumers has been a great way of getting and sustaining a competitive edge among different players. (Porter, 1985) brings this out in his competitive advantage theory where product differentiation provides a cornerstone in uniquely positioning products in the markets. Adjusting to consumer demands has been a way that different producers have been used to create this edge which goes beyond the general expectations of quality and brand images to aligning to consumer values. This is blatantly brought out from private standards which show that the product goes beyond technical regulations with an intentional aim into looking to satisfy market demands for flowers that meet social and environmental regulations. Compliance with international standards like the GlobalGap and Fairtrade have provided an opportunity to markets where ethical standards are prioritized. This has inevitably given flower producers the upper hand over the non-compliant producers in those markets. The EU floricultural market positions itself as a great benchmark that generally has its regulations but is surrounded by several evolving ethical and environmental standards, which when complied to gives an upper hand of access. This theory has, however, been criticized for its failure to account for the market barriers that international standards may create. This has become evident in the light of voluntary standards which are dominating the floricultural sector. Non-compliance with these has led to barriers to access different global markets which has been viewed as advancing protectionist agendas as well as discriminatory trade policies.

New trade theories have taken the baton from the traditional trade ones to further advance mainstream international trade voice of Porter and Ricardo to multifaceted positions that go beyond competitive advantages from Krugman who advances both economies of scale and product differentiation. These aim to amplify their capabilities in reinforcing competitive advantages to achieve trade growth which is translated to developmental outcomes.

The position of international standards has been further advanced by (Krugman, 1979; Krugman, 1980) who acknowledges its intersections to economies of scale. He shows how improved firm productivity can create an enabling environment for increased demand brought out by increased export volumes and lower prices on the products. These trade patterns create a comparative advantage, strategically positioning nations in international markets. Krugman's contribution shows that firms can leverage this beyond traditional factor endowments of land and labor to increase returns to scale and specialization to gain a competitive and comparative advantage. Adherence to standards catalyzes this position as they allow for access to different markets. This entry point allows firms to navigate through the demand till they're able to attain a point of scale.

Owing to the high global ranking of the Kenya's cut flower industry and the competitive opportunity created by compliance, flower farmers have had the ability to sustain the high compliance costs which is a major challenge that producers face where economies of scale are part of the contributing aspects. This is majorly observed in the Dutch markets where the quantities exported are significantly large but sold at a lower value. This situation can be back pinned to the UK market who import smaller quantities than the Netherlands but at a much higher value. Adherence has enabled them to access different markets through their differentiated cut flowers reinforcing their trade dominance allowing the benefits accrued to spread over the production process within the value chain. This however is disadvantageous for emerging nations and small flower farmers who have a much harder time meeting these compliance costs and end up being isolated from the trade participation as challenged by (Chang, 2002).

He further brings out that producers can competitively compete based on the uniqueness presented by their product allowing them to stand out in the global markets. This sets good grounds for differentiating a product. In the Kenyan context, this has been enabled through adapting to the progressions of consumer's perceptions on quality. Presenting a unique product that aligns to these interests allows consumers to perceive them at a higher value. Reinforcing Porter's structures to competitive advantage, this positions them at a higher competitive placement against producers who have not adapted them.

Consumers play a very pivotal role in shaping adherence to standards. This comes from the fact that the floricultural export sector is majorly driven through market forces which are centered round the consumers. The gaining and maintaining momentum for demand for products lies at the mercies of attaining consumer confidence and validation. Standards are mostly shaped to move along with the global perceptions of quality, which when delved into deeply, vary between different markets. This stems from a growing consciousness round global issues on social injustices especially on labor and environmental concerns on sustainability and climate change matters. These values have been translated through standards which create a perception of quality (Hudson and Jones, 2003) and further communicating advancements to production processes.

Theorists Spence (1973) and Akerlof, (1970) bring out compliance to standards as a tool that can be used signal quality and resonance to their values brought out through the regulations. Capturing the importance through this different angle allows producers to leverage the benefits that come with consumer trust (Hudson and Jones, 2003). Spence, (1973) and Akerlof, (1970), state that a gap exists between the exporters and the imports ascertaining that the requirements have been met as this information is not easily verifiable. To bridge this gap, there's a need for genuine demonstration that the products meet the required standards. This brings forth the signaling theory where certain attributes' signals are used to verify quality. Certifications as a signal therefore play a crucial role in bridging the information asymmetry (Akerlof, 1973) between seller and buyers by validating the fact that the commodities have lived up to the requirements. This consequently allows them to command a higher price in the markets as the products have been differentiated (Henson and Humphrey, 2010) further gaining an appreciation from consumers. Through this theory it becomes clear why certified flowers attract a higher price premium.

In summary, this chapter focused on laying a foundation to the understanding of standards from an emerging nation's point of view by offering a theoretical view on the development-trade train of thought. It highlights the new trade theory, economic theory and the signaling theory which work together to bring out benefits of competitive advantages in positioning, maintaining and leveraging the fruits that come with successful integration into the global market systems which has been enabled by offering a differentiated product through compliance with standards. This provides a footing and rationale for the subsequent chapter on

the methodological approach that outlines the design of the analysis trajectory to bring out trade patterns by looking into the unit values as the main unit of analysis.

Chapter 3

Literature Review

Following a contextualization of standards and their contribution to the Kenyan economy, this chapter provides a comprehensive literature review related to the topic at hand which is investigating the significance of standards in contributing to trade and development of emerging nations. This has been positioned within the context of the Kenyan floricultural sector as it is a highly regulated sector and governed by several standards but has withstood the complexities that come with them. Moreover, it continues to emerge as a top cut flower exporter. As formerly discussed, there are two defining perspectives that give life to the understanding of impacts of standards; as a catalyst and as an enabler to trade. This rift has brought out two main discourses on income-inequality and trade-development. Though this paper only focuses on the trade-development aspect, this chapter juxtaposes the two arguments with an aim to give life to a more critical view of the implications of standards.

To debunk this matter, the review will section these arguments into three segments in order to avoid ambiguity and getting lost in the vastness of the conversations. The first will look into why standards matter, this is simply to answer a very simple question, 'why should we?'. This segment will bring out different voices that front the importance of standards to emerging nations by further providing a link between standards to trade and development. To broaden the discussion, the section will look at environmental issues as one of the pivotal concerns to the evolution of standards where it will bring out the importance towards mitigating global warming and climate change and advancing sustainability. This provides a good segway to the next segment which looks to bring out the challenges that come with complying with an emphasis on trade policy. This becomes of great importance as it has played a focal role in shaping the two conversations. It pivots the manifestations of these challenges to the Kenyan cut flower sector within the confines of the EU market. This flow will likewise give a good direction into how some of these challenges have been maneuvered in such a way that all the players in the game are happy. It is envisioned that this will provide an efficient reinforcement to the preceding chapters and a clearer understanding of coming ones.

3.1 Why Standards Matter

This simple question, which may seem somewhat elementary, plays a huge role in bringing out how developmental outcomes to emerging nations can come about. As standards define what can move across international borders this defines their trading positions. In a globalized system where these movements have been restricted by trade barriers in the form of subsidies, tariffs and other non-tariff barriers strategically setting up sectors through adherence has become a way different nations are moving forward. It is however noted that standards may take shape as non-tariff barriers, but this as well provides bargaining power once well poisoned.

Wilson and Abiola (2003) bring out how standards if leveraged properly have the ability to developmentally shift a nation's position. This in the long run is emphasized to improve the quality of life of people. They break down these reasons into three categories where standards are necessary conditions for market access; determining strategic positioning through competitive advantage and finally contributing to the creation of commercial policy.

Standards as prerequisites for access to markets

As the world is shifting and a greater recognition is being placed upon social and environmental sustainability, there's a shift in market governance where consumer demand has become the main driver. Changing global market conditions now require firms to meet more refined, diverse and sometimes unexpected and personalized customer tastes and societal preferences" (Ibid pp 29). This has especially been witnessed by private standards where consumer acceptance is of great value.

Acknowledging these trends creates an opportunity for producers to differentiate themselves from other competitors who do not apply to the standards. This enables a nation to enjoy the benefits of trade. It has inevitably become a prerequisite as non-compliance means a product has been locked out from a specific market.

Compliance with these regulations also triggers sectoral upgrading and innovation. This has been brought out by the fact that in order to meet a standard that will facilitate access to the market, there's a need to first adjust product processes. This becomes key as there is a flow of knowledge across different sectors where propel can further access markets beyond their scopes however, on the other hand, the compliance costs may be detrimental to some producers and unattainable to others.

Standards as determinants of competitive advantage

The relationship between standards and trade has been brought out to be beneficial, however there is a side that has not been well emphasized. This is the compliance cost that is required for a producer to participate in the game. It has been brought to light that standards have the ability to become non-tariff barriers. This has especially been observed for producers who are unable to afford the costs that come with complying. These investments have been broken down into equipment upgrading, training and the costs of certification processes which are an instrument of ascertaining compliance.

However, Wilson and Abiola (2003) further point out that compliance can contribute to the sustenance of the firms by covering the costs accrued by attracting profitability from access to diverse markets which leverage price premiums. This has been especially emphasized for emerging nations who are susceptible to price volatility of traditional commodities like agricultural items which are the main export products. To cushion these impacts of potential loss, leveraging access to broader markets allows a safety net and growth towards attaining a competitive advantage. Ultimately complying with standards brings along long-term benefits through profits earned and market stability which eventually caters to the initial investment costs.

Standards as Instruments of Commercial Policy

The authors bring out the impact of commercial policy as it has a great influence in limiting participation in the international markets as they may create trade barriers and restrictions. On many occasions policy has been used in favor of protectionists and specific monopolies within the value chains as an aim to control the competition and maintain market dominance limiting those with weak bargaining power. This situation has been tried to be maneuvered through creation of more localized regulations that are attainable by more producers however, it has its own share challenges. Such regulations have been observed to become redundant as international consumers still have a preference to their own standards hence not being fully recognized internationally. This situation leads to fragmentation of compliance regulations which become iterative in properties making the compliance process very complicated.

It is however brought out that despite the challenge of trade policies favoring specific groups, those with less bargaining power can enter the conversation through compliance. This has been brought out as a step in the right direction by offering them a voice to them. This enables a representation of minority stakeholders in policy formulation to correct their position of only being 'standard-takers'.

3.1.1 Link between Standards to Trade and Development

Development has been brought out to be the process of social change that takes place after long periods of time and brings out economic growth that should translate to poverty reduction and general well-being (Chambers, 1997). It is therefore the progressive change towards bettering a society's economic and social prospects. Economic growth therefore plays a major role in being a means to facilitate development (Otieno, 2016). The link lies in how standards facilitate trade sustainable practices and economic prosperity. These aspects are then centered at the core of bringing along developmental outcomes through creation of these opportunities.

In relation to trade, successfully participating in the exchange of goods beyond one's border inevitably requires the common regulatory practices to be followed. These have been circumscribed in different forms of standards. They are therefore required prerequisites for international participation in trade. This activity has been set up to improve the economic status of different countries, especially from successful integration to the globalized system by leveraging the benefits that follow. These have been brought out through access to high value markets where products can leverage price premiums and make the most of economies of scale. Products are further differentiated from others on the basis of quality, making them high value items which places them at the front of the line in terms of competitive advantage. The ripple effects are observed when these benefits are pointed out to significantly contribute to a nation's economic success. This has especially been the trajectory in the case of Kenya's floricultural sector.

(Otieno, 2016) brings this link out by first recognizing the role of standards as a public good. To this degree, she brings out how standards should solve common problems which at the tail end of it all should generate benefits that will serve the public. This standing has been brought out to serve all parties within that transaction of goods across the market; the consumers and producers. Standards serve to ensure quality and health, and safety requirements are met. In this line, the quality of health is improved as brought out Phyto-sanitary requirements as well as improving the living standards for laborers which are brought out through fair wage compensation as advocated for by ethical standards which likewise improve their quality of life.

The demands of high levels of performance as a spillover effect of compliance to standards has enabled predominantly emerging nations to upgrade their production processes which has facilitated innovation and knowledge sharing (Grossman and Helpman, 1991). Through this, several other sectors within the country are able to likewise follow the same trajectory of upgrading. This in unison creates a pill of products of quality and high value which enables the whole nation to easily leverage diverse high value markets. This effect is also extended to operational and institutional organization of bodies along the value chain.

Specifically looking at standards that cover social injustices, especially within the rights of the farmers, ethical championing standards have positively impacted the standards of living of laborers. Though this is a market driven incentive, it has contributed to poverty reduction (Otieno, 2016) advancing the foundations of development.

3.1.2 A Win for the Environment

Throughout time, environmental concerns have been a major topic of conversation. This has most especially been witnessed in the production of different products as the majority are resource- land and water intensive. This concern has been elevated internationally as global trade has been pointed out to be a significant contributor to the degradation. These concerns have been amplified as there has been a growing consciousness towards mitigating issues around global warming and climate change. As global pollution is on the rise, consumption and demand for different products likewise continues to escalate. This has led to more intensive production processes creating a pressure on natural resources. This has necessitated a shift in production practices with an aim of embracing more sustainable ways of production. Inevitably, one of the ways to solve this concern and pioneer environmental conservation, has been through standards. To be precise environmental standards, which look into the process by outlining effective ways to manage the situation as well as meeting the growing demand. It is however noted that the contribution of trade varies across industries, which becomes important to know in order to effectively grasp the magnitude of the matter and isolate effective ways to spearhead solutions. In our case, we will look at the horticultural sector where the floricultural subsector falls under.

Lillywhite (2014) brings out that the sector’s interaction to the environment manifests in different forms and shapes but limits this discussion into three aspects. “...firstly, the exploitation and degradation of natural resources (land, water); secondly, the use of, and generation of pollution from, synthetic resources (energy, fertilizer and pesticides); and thirdly, the visual and cultural impact of horticultural infrastructure.” (Lillywhite, 2014, pp 603). These demarcations have revealed that regardless of the size of the sector, as most flower farms are on small parcels of land, heavily influence environmental degradation. While on the other hand, contributors to global warming and climate change within the same are energy combustion, transportation, refrigerated storage and inorganic inputs (Wainwrite, et al., 2014).

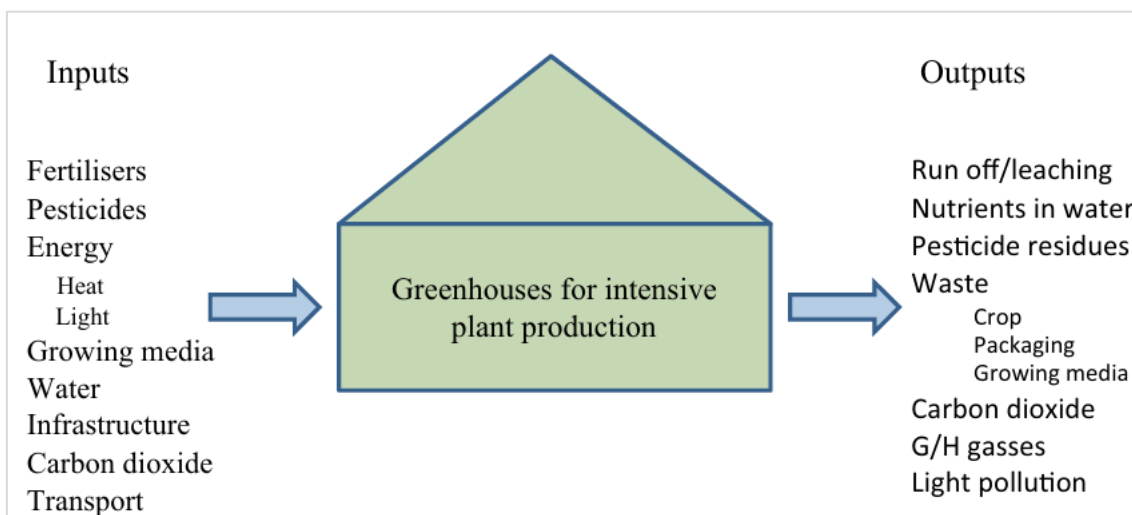


Figure 3: Inputs and outputs from green house

Source, (Wainwrite, et al., 2014).

Several mitigation measures have been put in place to minimize the effects of horticultural farming on the environment of which standards have stood out (Wainwrite, et al., 2014). These have set out agricultural practices that aim to stipulate safety, quality and

environmental criteria that require producers to watch their pesticide usage levels, waste treatment, energy and water usages (Calisti and Holtmaat, 2007). As there has been a rising awareness of these issues, consumers now demand their products to meet these set regulations. These demands have inevitably become the impetus for market access as failure to recognize these leads to their being locked out. This has therefore led to mass adoption of environmental standards as observed that many farmers are shifting their production processes to more sustainable modes which is a ‘win for the environment’.

The incentive to avoid being locked out has worked to the advantage of the farmers as this has led to them accessing different markets which has facilitated export growth. The increasing demand for their products has seen different emerging nations gain dominance in the markets, earning them a competitive advantageous position which is sustained through consumer trust. This has also seen many firms driven towards innovative practices as they adopt new technologies that are in line with sustainably acceptable modes of production. All this further promotes economic viability.

This without a doubt has its own share of challenges which stem from the inability to meet the compliance costs which are inclusive of the upgrading capacities. This impact has especially been seen to hit the small-scale farmers who have not had the ability to leverage benefits from economies of scale. However, different institutions are providing support mechanisms in order to bridge the gap (Lillywhite, 2014). Such are training workshops as well as financial support from cooperatives.

3.2 Barriers as presented by Trade Policy

International trade has made a great stride in initiating opportunities for different nations to extend their products beyond their borders. This especially for emerging economies has observed a positive growth towards leveraging revenue which continues to translate to developmental outcomes. When standards joined the chat, this access then become more difficult to attain inevitably locking out those who could not keep up. This was not only for those unable to access the markets, but also for those who accessed the markets and wanted to continue to participate in the trade. This already paints a good picture to reflect the barriers created by the new advancements. Initial access becomes difficult for nations who do not have the capacity to front the compliance costs while at the same time, it poses great challenge as they are constantly evolving and becoming more stringent. This adds onto already existing restrictions through tariffs and sanctions.

Creation of trade policy through standards has been observed to be restricting to emerging nations. These have blatantly brought out the North-South divide which essentially brings out the positions of standards ‘takers’ and ‘makers’. In the bearings of standard makers, these policies have been challenged to advance protectionist agendas for parties who would like to preserve some demand for their own products. It likewise has been pointed out to favor existing monopolies who want to individually secure the markets. These situations have been manifested through the creation of stringent standards that are restricting and limiting in nature. These have also been brought out to be overlapping to other pre-existing standards that address issues that have already been adequately covered resulting to standard fragmentation. This situation creates a vast pool of regulations that emphasizes the complexity of compliance.

The uptake of standards predominantly falls upon the shoulders of emerging nations - the standard takers. These nations have less bargaining power to their formulations as the markets are consumer driven by consumers whose perceptions of quality shape how products will be presented to them. This inevitably does not leave any wriggling space since the only way to access these markets is to comply with the regulations, otherwise putting

themselves at the risk of inaccessibility which ultimately leads to no trade. This process has been critiqued to acknowledge neither transparency nor participatory principles. (Liu, 2009) "...standards as competing and eroding the multilateral efforts to reach consensus on standards and facilitate their international harmonization. At a meeting of the SPS Committee in June 2005, the representative of Argentina stated that: "If the private sector was going to have unnecessarily restrictive standards affecting trade, and countries had no forum in which to advocate some rationalization of these standards, twenty years of discussions in international fora would have been wasted." (WTO 2005- G/SPS/R/37/Rev.11)" (ibid, pp 222).

The cost of non-compliance heavily weighs on the shoulders of emerging nations as brought out by Henson and Jafee (2006) who emphasize on their delicate position in integrating into global markets. This is on the account that they are unable to meet the demands due to insufficient resources and infrastructure. These in turn will have ripple effects in the capacity of a nation to first access the markets and second to benefit from competitive advantages. This situation is further emphasized by Martens and Swinnen, (2009) who points out that the potential consequences to non-compliance are very high whose broader implications could result to trade restrictions like import bans. In the long run, it's detrimental to a nation's reputation for one that would like to leverage benefits from international markets and attain their trust which further takes away opportunities for export competitiveness.

Jafee, (2003) brings these concerns by contextualizing them to the EU which is a high value market and a major import hub. This is especially for Kenyan cut flowers as the main export hub. This stature positions the market at high levels of attainability, as one that is heavily shaped by consumer preferences, there is a broad diversity of standards which aim to cater to the varying landscape of consumer demands. This puts nations that are within this market and those that want to enter in interesting positions as the regulations are several and overlapping. These implications have been manifested through the inability of small-scale farmers to successfully participate at the same levels as larger firms. As the standards are constantly evolving, importers are required to keep up with the pace and upgrade their processes. This comes with a financial burden which immediately creates limiting factors for different firms, potentially marginalizing those without the capacity to fully advance. These difficulties faced by the Kenyan cut flower farmers merely represents the challenges encountered by other nations who are yet to attain a competitive advantage within the international markets. Crossing the finish line is one thing, but maintaining the wins is another thing all together. This being one of the challenges that participants in high value markets are facing.

To conclude this section, it is evident on the positions paved by standards in light of the encouragements to delve into international trade, its interplays with trade policy and wider contributions to environmental conservations by likewise tackling global warming and climate change. The discussions on their distinguishments in facilitating the different prominent conversations on whether to conform or not to conform, whether they are trade enablers or restrictors or whether they uphold principles of morality lies within the position of a nation and who leads the conversation. The priorities and outcomes that they would foresee for themselves how deep into the future likewise have a role in placing in contributions. Bearing the short-term inconveniences for long term economic success has been the direction that most of the literature has taken even though having a deep critique on the impacts of standards. Juxtaposing the two main discourses identified in the paper; trade-growth and trade-inequality have been pivotal in shaping these dilemmas as one cannot be completely isolated from the other as they both contribute to the successes and downfalls of each.

Through this strategic flow and presentation of literature it provides a good segway into the next chapter that delves deeper to empirically presenting the impacts of standards in shaping developmental outcomes. It brings out the significance of standards in signaling

quality which creates a differentiated product that can compete competitively in international markets to a level that brings out developmental outcomes especially for emerging nations.

Chapter 4 Methodology

The objective of this thesis is to bring out the impacts of standards in the Kenyan floricultural sector. This chapter therefore aims to quantifiably portray the practical implications of the standards on trade competitiveness and development. To achieve this, it will seamlessly flow from providing a background that reinforces the concepts brought out from the theoretical positions to outlining the approach. It builds a case on the analysis tool by offering a critical outlook to its use then talks about the data.

Aiginger, (1998) brings out the concept of the quality ladder where he states that “The notion of quality has become increasingly important in economics during the past decade. On the macro-economic level, it has become obvious that the advanced industrialized countries can compete with countries endowed with cheap labor only when they climb up the ‘quality ladder’ by producing ever more sophisticated products” (Aiginger, 1998, pp 95). In our case, this adjustment towards sophistication lies within the plight of attaining consumer validation through aligning to their preferences.

Standards have the capability of uniquely positioning a product that adjusts with consumer expectations which creates a sense of quality that differentiates them. It reinforces a product's position in resonating with set values and reflects commitment to meeting them. The products' appeal is enhanced, and consumer confidence is built which inevitably makes it the product of choice. This aspect presents conformers with an upper hand in leveraging benefits accrued from a wider market base as opposed to non-conformers. This sets them up both competitively and comparatively. The theoretical underpinnings show that a differentiated product by virtue of its quality should likewise reflect a difference in price. “Assuming that a consumer has access to product information, two products of different quality cannot be sold at the same price” (Laibuni et al. 2011, pp 4).

To bring this out, the methodological approach will take on a descriptive analysis method that will use the unit values of cut flower exports which will serve as the main analytical tool. This line of action is intended to provide information on the ability of standards to spur growth and development by presenting a differentiated product to the markets whose position will attract higher profits. The study assumes that unit value correlated with quality where, the higher the unit value, the higher the quality is.

In order to concisely address these impacts, the study opted for a descriptive analysis approach that breaks down the chunk of trade data on export performance indicators into chewable pieces. This has been done with the intention of bringing out key characteristics, patterns and trends of pricing and market positioning in relation to international standards that can be inferred from the unit values without delving into complex inferential statistics. This provides a good foundational starting point for further pieces of work that will delve deeper into the impacts of standards.

The unit value of exports is defined to be the nominal sales divided into some quantity measure (Aiginger, 1998) and is sometimes used as a measure of export performance and international competitiveness (Szczygielski and Grabowski, 2012). This approach has however received an essential critique on that being one's argument on price alone as an indicator of quality may not be accurate especially in situations when the goods are differentiated beyond the basis of quality but other factors like horizontal product differentiations (Szczygielski and Grabowski, 2012; Aiginger, 1998; Laibuni et al. 2011; Deaton, 1988). This study takes this argument into account and averts this major concern as it investigates cut flowers as the only commodity without delving into the flower varieties or specific characteristics of color and size. As initially pointed out in relation to the different types of standards; mandatory

and voluntary/private, the study recognizes the blatant differences for each however, this paper accounts for both as serving the same purpose.

$$\text{Unit value} = \frac{\text{Total Export Value}}{\text{Total Export Quantity}}$$

The export data on price and quantity will be gathered from UN Comtrade and will run from 2004 to 2023. This time frame has been selected post the global financial crisis to check on the industry's recovery and the 2015 Paris Agreement as it is assumed that there was an awareness and attention to global sustainable practices.

This study further recognizes the limitations in its development of the methodological approach which has a limited the scope of comparability as the study only looks at Kenya and its main competitors. The first is on the data gap on the use of nations that comply to standards and those that do not comply. This would have added to the analysis by giving a more nuanced understanding of the impacts of standards, especially for their contribution to developmental aspects especially for emerging nations. Another limitation is on the previously critiqued argument that the basis on price alone may not conclusively be captured by quality especially when the basis of differentiation goes beyond one product.

In conclusion, the chapter offers a good approach that provides practical implications of the standards on trade competitiveness and development. It leverages descriptive statistics that is intended to tell the story on Kenya's competitive position which is within broader the market outcomes despite the limitation on data gaps that exist. The following chapter on the empirical analysis will utilize the design outlined with the aim of revealing patterns, trends and characteristics.

Chapter 5 Empirical Analysis and Discussion

This chapter of the thesis aims to bring everything together by trying to quantifiably reveal how standards have the ability to spur development. Owing to the fact that standards can differentiate a product in market this creates an environment for attaining competitive advantage, this analysis seeks to identify patterns from export performance data that will isolate the results to quality as a result of the compliance with standards. The main tool of analysis will be unit values which, to be specific, will focus on unit export values through a descriptive approach.

This analysis has been majorly informed by the New Trade Theories mainly advanced by Krugman and Porter who further develop traditional theories on competitive advantage. They bring out that a competitive advantage can be attained by presenting a uniqueness to the market to bring along product differentiation as opposed to previous earlier theorists who placed competitive advantage on resource endowments on land and labor. This stance is further developed where this uniqueness can be brought about by presenting qualities of high quality to the markets. This becomes most essential in this study as demands fulfill consumer requirements of quality. To advance this further the analysis investigates for instances of economies of scale whether Kenya had been able to leverage a significantly high demand.

The focus on unit export value data specifically becomes interesting to use as it has received its fair share of applauses (Deaton, 1988; Aiginger, 1998; Bykova, Ghodsi and Stehrer, 2018) as well as critiques (McKelvey, 2010; Szczygielski and Grabowski, 2012). This stems from the point of using it as a price proxy to signal quality. The study takes this unique position to account and goes beyond quality analysis to complement it through a market share analysis over a period of 15 years in order to infer a relationship between the two. It goes further to provide a comparative analysis with its main competitors to bring out how different countries compete based on the unit export value which is basically the nations unit value compared to The Netherlands, Colombia and Ecuador. This further gives a glimpse of their competitive advantage or disadvantage.

The context applied is on the Kenyan floricultural sector by looking at the cut flower export sector. This has specifically been selected because Kenya has a competitive advantage in the trade of cut flowers despite this industry facing several complex dynamics of standards. It is through compliance that the nation has been able to access high value markets which has especially given them this advantage.

Through the analysis, it is intended to reveal that compliance to standards equates to high quality which manifests through high unit values. As for the market trends, they aim to reveal competitive advantages in relation to other competing nations. This will likewise note any significant trends over time based on the quality and pricing as well as in major destinations.

The initial step is an analysis of Kenya's main importers based on the 2023 export value figures. This is then followed by an analysis of the unit values over the years which will be reinforced by a comparison to the export quantity. This is intended to understand the importance given by giving perspective to the demand of the flowers.

In order to have a feel of the market dynamics in competitiveness, the paper will further look at the average unit values and this will come about from a comparison to its main competitors who are the Netherlands, Colombia and Ecuador. It allows for an inference on the price relativities which will give a direction demand.

5.1. Results

The results will be presented through visualizations of graphs that will give a sense of the price and demand trends, market dynamics and competitive advantages that will be the guide towards inferring quality from compliance to standards. This will also be back pinned by the presentation of tabulated average unit values from which will position Kenya against its main competitors; the Netherlands, Colombia and Ecuador. This will highlight the competitiveness in prices.

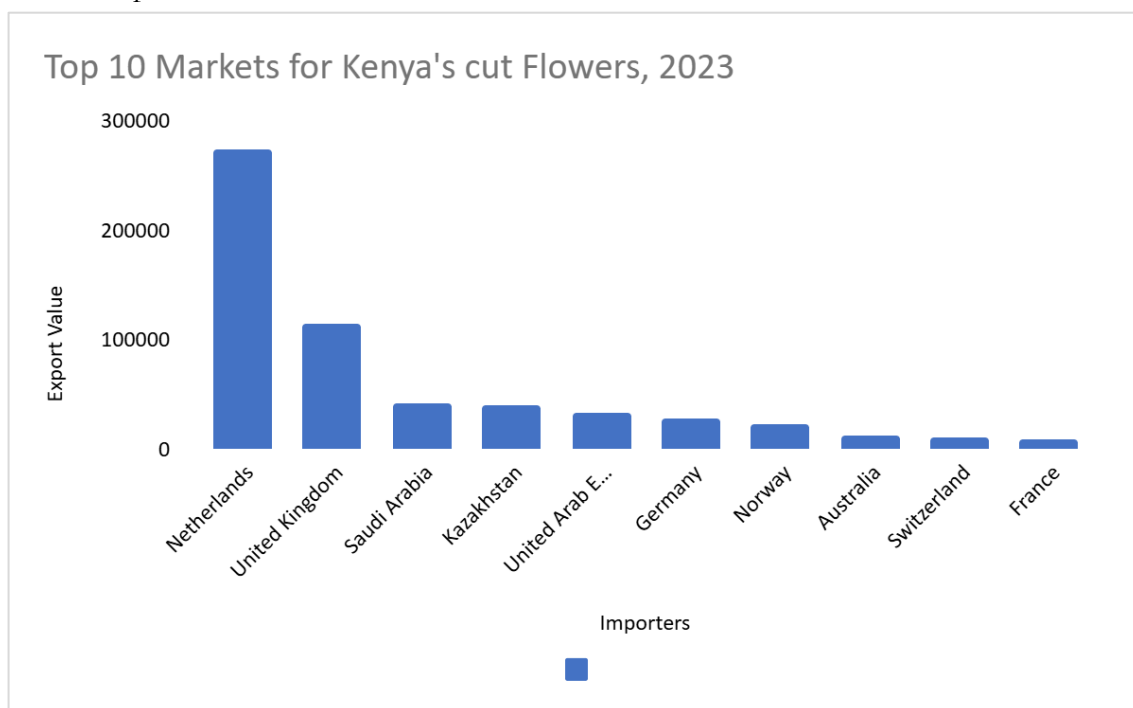


Figure 4: Market analysis of Kenyan cut flowers

Figure 4 shows that on the top exports of Kenyans cut flowers mainly go to the countries within the EU with the Netherlands and the UK taking lead. This reveals that the majority of the market is within the EU. This is a good indication of Kenya's strategy in leveraging access to the market. It is also noted that though there's a market concentration in the EU as well as a diversification away from traditional markets to other as indicated to be the Middle East. This region is mainly represented by the Saudi Arabia, Kazakhstan and the UAE, which have made it to the top rankings.

In Figure 5 the values of Kenya's flowers are observed to increase overtime showing a positive growth trend which may indicate a growing prominence and appreciation of the county's flowers. There are observable peaks in 2008 and 2021 which are attributed to recovery from the financial crisis and the Covid19 pandemic.

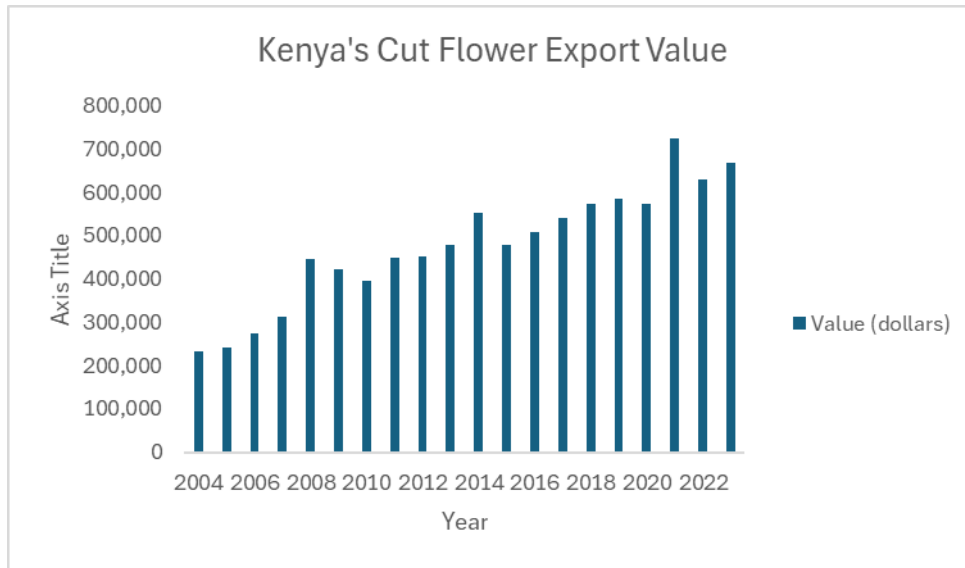


Figure 5: Kenya cut flower export value

The observation of values is further reinforced by looking at the quantities that have been exported, which similarly reveals a positive growth trajectory. This shows that there's a growing global demand for Kenyan flowers. In a standard burdened sector, there's a great need to sustain the global advancements of ethical, environmental and social pioneering which represent perceptions of quality. This necessitates producers to stay abreast of consumer preferences through evolving perceptions of quality. The graph likewise shows that there is an increased presence either in the existing markets or new ones.

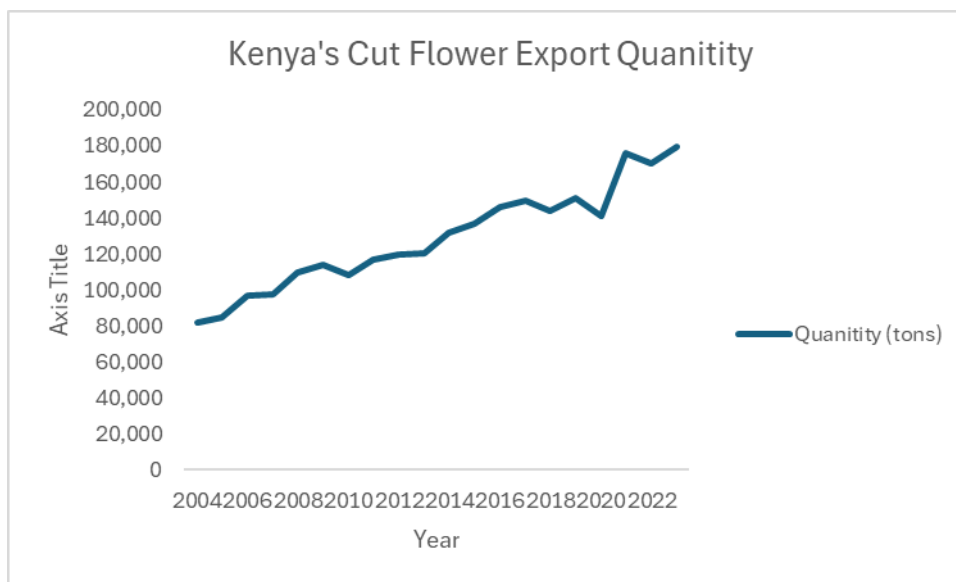


Figure 6: Kenya cut flower export quantity

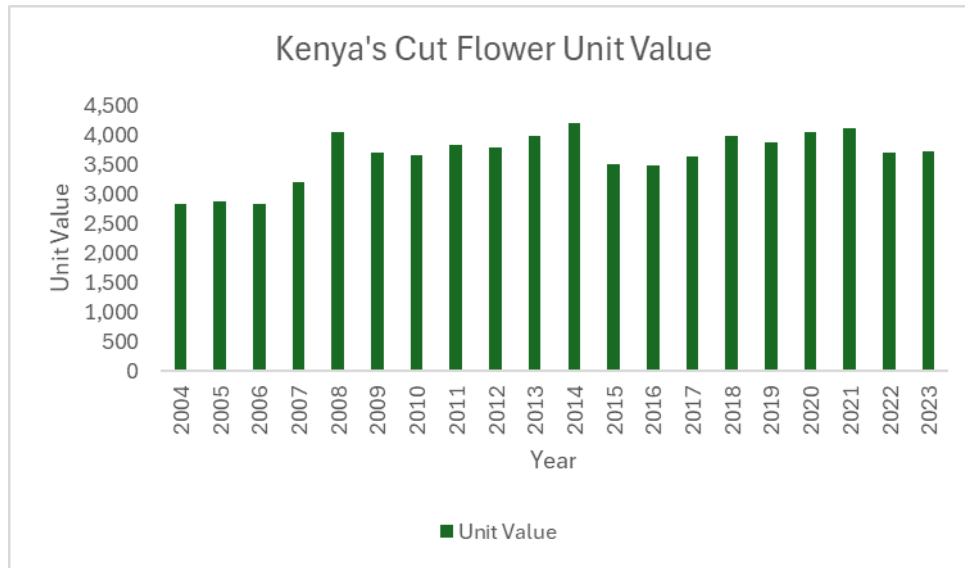


Figure 7: Kenya cut flower unit value

The figure above represents the unit values which are the main tool of analysis for this paper. It reveals a positive trajectory with some fluctuations showing differences in price per ton which are followed by periods of recovery. This suggests that there's a perception of higher quality in international markets and the consumers are willing to pay the price premiums. There are two points where the prices peaked in 2014 and 2021. This, however, has been followed by fluctuations in price showing that they were not fully sustained in the long term.

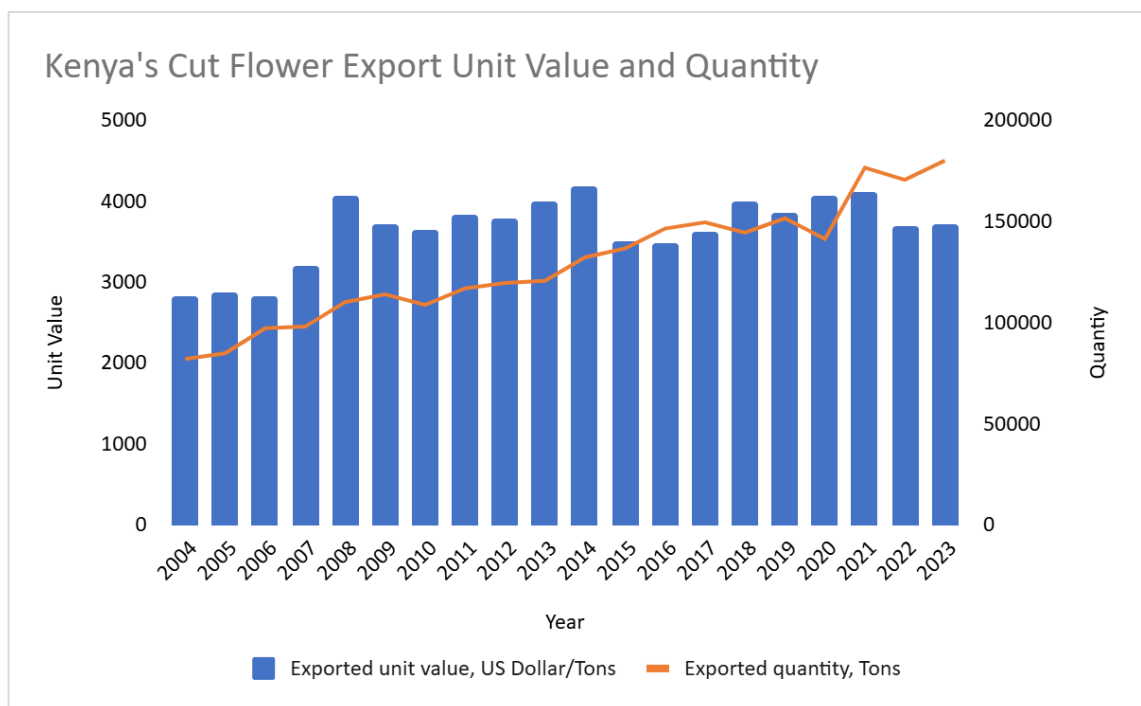


Figure 8: Kenya cut flower export unit value against quantity

When the quantity trends are extrapolated to the unit value trends, it shows that they do not increase or decrease identically. For example, in 2022 and 2023, the prices were stable, but the quantity increased during this period. The quantity shows an upward trend, exhibiting that the demand has been sustained. Conversely, it is also noted that Kenya has exported flowers at a higher price with a notable decrease in quantity which is especially prominent between 2004 and 2014. This reveals that the flowers are of a high quality as the consumers continue to pay more for a smaller number of flowers, which further shows a high appreciation for the flowers and a sustained demand.

A deeper scrutiny on the main EU importing countries, The Netherlands and the UK shows that the unit values are higher in the UK as opposed to the Netherlands who import a significant number of flowers. This is due to the fact that the Netherlands is a main re-export hub. However, in both markets, the demand is high and well sustained. As the UK only import for their own usage, they pay much more for a lower number of flowers showing that they have placed a high value on the Kenyan market. In the Netherlands, they pay less for more indicating a great demand for the flowers blatantly revealing economies of scale. This is also noted for the years between 2015 and 2023 where the quantities gradually increase despite the values are fluctuating.

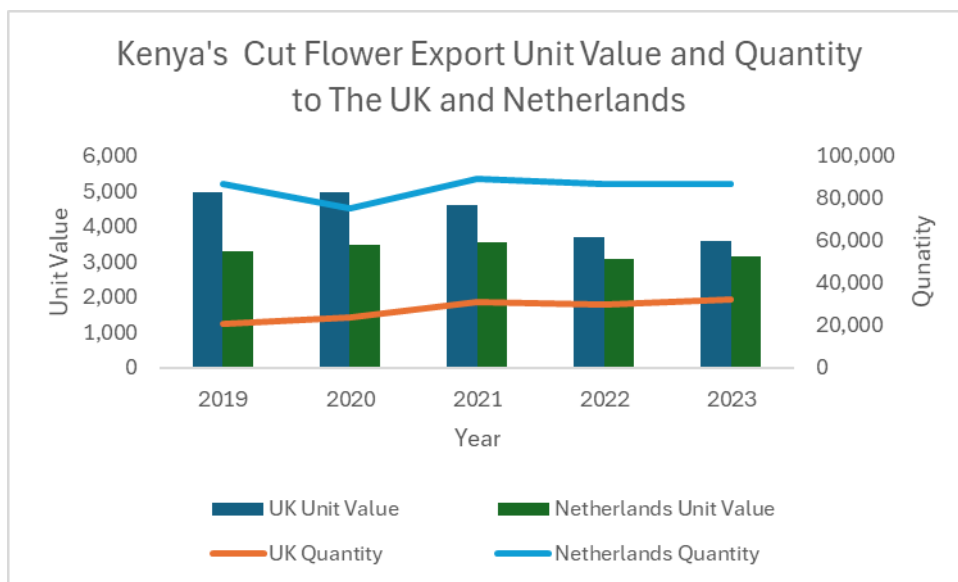


Figure 9: Kenya cut flower export unit value and quantity to the UK and the Netherlands

Looking into the average unit values of the main cut flower competitors in comparison to Kenya, it is observed that there is a blatant difference between their unit values. Where, although Kenya competes competitively between them, understanding how it has maintained its high rankings becomes important.

Netherlands	8047
Colombia	6100
Ecuador	5539.6
Kenya	3884.8

Table 1: Average unit value of competitors

This difference can be pointed to be an outcome of different market dynamics where Colombia and Ecuador mainly export their flowers to the Unites Staes of America as

opposed to Kenya's which is the EU in totality. Netherlands on the other hand is one of the world's largest re-export hubs who is Kenya's main market.

5.2. Discussion

The purpose of the study is to analyze the impacts that standards have in bringing forth developmental outcomes and trade progress to emerging nations. This work underscores the cut flower industry in Kenya by delving into the unit values which will be indicative of demand for high quality flowers. This demand creates a competitive advantage which strategically positions a nation in the global markets to earn a price premium that will accrue economic benefits intended to developmentally elevate a nation. The findings are reinforced by export trends, market share analysis as well as a comparative exploration into Kenya's main competitors; The Netherlands, Colombia and Ecuador which will provide a firm ground to inferring from global prices.

This discussion will interpret the trends by examining how compliance to standards could potentially boost Kenya's trade performance which translates to developmental outcomes. It breaks the results down by answering the main research question; 'how have standards shaped the cut flower export industry in Kenya?' and reinforcing main discourses highlighted in the study. It reflects on the link to trade and development and affirms its sustenance through trade resilience while providing some limitations as well and their impact on the findings.

The key findings reveal a steady upward trend from the unit values, which are indicative of high perceived quality and competitive advantage in the international market. This is strengthened by a consistent demand which is brought out by a positive trajectory from the export quantities manifesting that there is consumer validation and acceptance for Kenyan flowers as their perceptions of quality have been met. It has also been observed that economies of scale are being established as the quantities are increasing antagonistically to the values. This gradual increase shows that Kenya has firm grounds in leveraging benefits of trade and the country is receiving a higher demand for their flowers. This further reinforces the discussion of quality.

Standards in Kenya have majorly contributed to the initial access of the nation into the EU markets which is identified as one that is surrounded by a web of complex standards. By this means, the nation's flowers have been identified to be of high quality which have had the flower singled out to be of high value. This is translated into their high prices and constantly growing demands. The nation is likewise being observed to diversify its markets base to other middle eastern nations exemplifying ability to access new broader markets. As theorized by Akerlof, standards have signaled quality in the context of Kenya. This further propels the trade-growth discourse.

In light of developmental outcomes, Kenya has translated benefits accrued from trade majorly into upgrading within the sector as environmental standards have shaped efficient use of resources like water. Socially, the laborers are able to access fair wages elevating their standards of living. There has also been a propulsion of innovation and knowledge sharing, which has been extended to different sectors.

The limitations however lie in Kenya's lack of a more diverse market base that is observed which sets the country at a risk by being affected by price fluctuations. It should also be noted that despite the country leveraging its position in scale, it is of greater importance to understand why the differences are very blatant.

To conclude the chapter, understanding initial abilities of standards is important especially in light of the New Trade Theories that give an initial foundation on their impact of

creating a product that can be differentiated by the virtue of its quality signaled by compliance. This sets fertile ground for markets access which allows nations to attain competitive advantages. The later developmental impacts are revealed socially, environmentally and financially as standards are a public good.

Chapter 6 Conclusion and Policy Recommendations

The research paper studied the impacts of standards in shaping developmental outcomes which was contextualized in the Kenyan context by specifically delving into the cut flower sector. The study had three main objectives. Firstly, it brought out industry standards by broadly breaking them down from their structures to their diverse roles as well as mapping out their evolution which is important in order to understand their position especially in the floricultural sector that is consumer driven. The research then analyzed the role of standards in enabling and restricting trade by juxtaposing it as a catalyst and a barrier. Thirdly, the paper brought out implications to trade competitiveness by the mere fact of presenting a differentiated product by virtue of quality. This chapter aims to provide a summary of the study by compiling the main findings and underpinning them to the literature and theoretical foundations.

The results of the study found that perceptions of quality are a driving factor that propels the floricultural sector in Kenya which has allowed them to leverage price premiums. This perception of quality has been attained by the standards adherence by Kenyan farmers which has allowed them to strategically position themselves to first access the markets, followed by maintain their positions and finally attaining dominance that has been presented by a growing demand for their flowers.

These findings follow the theorizations of Krugman and Porter who advance the interconnectedness of product differentiability and competitiveness where once an industry adjusts to consumer demand this creates a product that they value and are willing to pay a price premium for. These have been brought out to be signals of quality.

This study confirms these findings by recognizing that in order to initially access a market in order to even participate in trade, there's a need to understand the consumers within those markets. This is done by adherence to standards. The consequence of not toeing the line results in being locked out of international borders or potentially having their products being banned from those markets. This as observed in the Kenyan context, exemplifies successful use of standards as compliance has allowed them to initially access high value markets and sustain this access by consequently evolving with the perception of quality. The literature brings out barriers caused through standards as a trade policy, but all speak of the importance of compliance, especially to emerging nations.

The study adds on to existing literature on the ability of standards to signal quality as a differentiating factor in the markets that will eventually bring forth economic success which translated to developmental outcomes for emerging nations. Though this study strategically uses unit values as the main analytical tool, it would have been expanded by looking more critically at the competitors in order to draw stronger inferences in their competitiveness with Kenya. Future research can further enhance understanding by providing a more nuanced approach by looking at compliers against non-compliers. The recommendation to policy makers would be to strengthen compliance support, especially to small scale farmers, by offering compliance subsidies.

References

- Aiginger, K. (1998). Unit Values to Signal the Quality Position of CEECS. (pp 93-158).
- Akerlof, G. (1970). The Market for 'lemons': Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics* (pp 488-500).
- Antonelli, C. (1994). Localized Technological Change and the Evolution of Standards as Economic Institutions. *Information Economics and Policy*. (pp. 195-216).
- Bermudez, S. and Nginge, J. (2004). The Kenyan flower subsector: A model of enhanced competitiveness through mandatory and voluntary sustainability standards. International Institute for Sustainable Development.
- Bolo, M. (2006). Knowledge, technology and growth. The Lake Naivasha cluster in Kenya. *World Bank Institute Africa*.
- Bykova, A. Ghodsi, M. and Stehrer, R. (2018). The Evolution of Trade Unit Values: A Measurement on Quality.
- Calisti, R. and Holtmaat, E. (2021). Do sustainable standards exclude small farms? Modeling the Kenyan floriculture sector. *Earth*.
- Chang, J. (2002). Kicking away the Ladder: Development Strategy in Historical Perspective.
- Chambers, R. (1997). Whose Reality Counts? Putting the First Last.
- Deaton, A. (1988). Quality, Quantity and Spatial Variation of Price. *The American Economic Review*. (pp 418-430).
- Grossman, M. and Helpman, E. (1991). Trade Knowledge Spillovers, and Growth.
- Heher, U. and Steenbergen, V. (2021). Kenya Supply to Multinationals exposed Local Firms to International Horticulture Markets. *An Investment Perspective on Global Value Chains*. (pp 234-255).
- Henson, S. (2008). The Role of Public and Private Standards in Regulating International Food Markets. *Journal of International Agricultural Trade and Development*. (pp 63-81).
- Henson, S. and Humphrey, J. (2010). Understanding the complexities of private standards in global agri-food chains as they impact developing countries. *The Journal of Development Studies*. (pp 1628-1646).
- Henson, S and Jaffee, S. (2006). Food Safety Standards and Trade: Enhancing Competitiveness and Avoiding Exclusion of Developing Countries. *The European Journal of Development Research* (pp 593-621).
- Hudson, J. and Jones, P. (2003). International Trade in Quality Goods': Signaling Problems for Developing Countries. *Journal of International Development*. (pp 99-1013).
- Hulst, R. (2012). Sustainability in Floriculture.
- Jaffee, S. (2003). From Challenge to Opportunity: Transforming Kenya's Fresh Vegetable Trade in the Context of Emerging Food Safety and other Standards in Europe. *The World Bank*.
- Kariuki, M. (2016). Transitions to Certification Schemes and Implications for Market Access: GlobalGap perspectives from Kenya.
- Kenya Flower Council. (2023). Annual Report.
- Kilimo News. (2021). State of the Horticulture Industry in Kenya. <https://kilimonews.co.ke/general-news/state-of-the-horticulture-industry-in-kenya/> (Accessed: 20th May 2024).

- Krugman, P. (1979). Increasing Returns, Monopolistic Competition and International Trade. *Journal of International Economics*. (pp 469-479).
- Krugman, P. (1980). Scale Economies, Product Differentiation and the Pattern of Trade. *American Economic Review*. (pp 950-959).
- Kuiper, G. and Gemahlich, A. (2017). Sustainability and politicalization: Certifications in the cut flower industry at Lake Naivasha, Kenya. *Africa Spectrum*. (pp 31-35).
- Laibuni, N. et al. (2011). Kenyan Cut Flower and Foliage Exports: A Cross-Country Analysis. *Journal of Development and Agricultural Economics*. (pp 37-44).
- Lillywhite, R. (2014). Horticulture and the Environment. *Horticulture: Plants for People and Places*. (pp 603-617).
- Liu, P. (2009). Private Standards in International Trade: Issue, Opportunities and Long-Term Prospects. (pp. 205-233).
- Martens, M. and Swinnen, J. (2009). Trade Standards and Poverty: Evidence from Senegal. *World Development* (pp 161-178).
- McGovern, E. (2018). International Trade Regulation.
- Moosbrugger, R. (2007). Kenyan flowers, ethical trade and the question of sustainable development.
- Nungari, M. (2018). The Power to Flourish: Unearthing the Roots of Kenyan Flower Producers' Market Access Strategies.
- Nyagito, O. Olielo, T. and Magwaro, D. (2003). Improving Access through Standards Compliance: A Diagnostic Roadmap for Kenya. World Bank Publication.
- Otieno, G. (2016). Standards and development: Perspectives from Kenya's Horticultural Export Industry.
- Porter, M. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*.
- Riisgaard, L. (2009). How the market for standards shapes competition in the market for goods: Sustainability standards in the cut flower industry.
- Sheldon, I. (2011). Food Standards and International Trade. (pp. 393-415).
- Spencer, M. (1973). Job market signaling. *The Quarterly Journal of Economics*. (pp 355-374).
- Szczygielski, K. and Grabowski, W. (2012). Are Unit Export Values Correct Measures of the Exports' Quality? *Economic Modelling*. (pp 1189-1196).
- Wainwright, H. Jordan, C. and Day, H. (2014). Environmental Impact of Production Horticulture. *Horticulture: Plants for People and Places*. (pp 503-522).
- Wilson, J. and Abiola, V. (2003). *Standards and Global Trade: A Voice for Africa*. World Bank Publication.
- World Bank. (2004). *Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports*. Poverty Reduction and Economic Management Trade Unit and Agricultural and Rural Development.
- Zylberberg, E. (2013). Bloom or Burst? A Global Value Chain Approach to Small Holder Flower Production in Kenya. *Journal of Agribusiness in Developing and Emerging Economies* (pp 4-26).