

Drivers for Competitiveness: A review of Kenya's Six Decade Horticultural Industry Practise.

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The Private Sector in Development:

New Perspectives on Developing Country and Emerging Market Firms – Firm Strategies, Firm Capabilities, State Business Relations and Institutional Environment

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ABSTRACT

Kenya's six decade horticultural export business has been transformed by the wave of changes largely ascribed today as pre-liberalisation and liberalization periods respectively between 1950-1990 and from 1991 to date. Between these two phases, a transition through which the nascent postcolonial small scale horticultural farming that was largely supply driven transitioned to a more relational, hybrid and vertically integrated horticultural value chains that is today largely demand driven. With increased structural changes relating to consolidation of retail powers, globalisation of supply chains, as well as increased regulatory framework; this work seeks to discern the effect of the sector's production capabilities by appraising the incentives harnessed along this historical trajectory that have allowed this sector to transform and adapt to meet the current demands of competitiveness. This research seeks therefore to highlight the strategic interventions contributed by the public actors, collective actions & institutions and private actors as key change agents in Kenya's horticultural industry while applying an overarching theory of Transaction Cost Economics (TCE) a strand of New Institutional Economics (NIE) framework and resilience principles.

The Kenyan experience brings to light the adaptation and transformative process that the sector has adopted in promoting a competitive horticultural sector responsive to both the local and international needs and demands; this experience brings to the fore lessons of the facilitative role of benign policy environment and stakeholder support to regain the sector's momentum and competitiveness in the global front as related to the role of policy and standards, procurements system in place, stakeholder support and economies of clustering. The resultant effect being long-term mutual trading relationships among nations, attraction of employment, market expansion, foreign direct investments, foreign know-how and expertise as well as a resurgence of small scale exporters in the market.

Introduction

Changes in agricultural and food standards have significantly affected the typology of agricultural value chains (Swinnen, 2014; Henson and Reardon, 2005 and Jaffee 2003). Structural changes related to consolidation of retailers power or end-use markets, globalisation of supply chains has been witnessed in the last two decades (Lee, Gereffi, and Beauvais, 2012). Other major drivers and contributors to these change in agriculture include, increasing competition from global market participants, economies of size and scope in production and distribution (Gachukia, 2015) . The outcome of these change involve restructuring new supply channels to meet new sources of demand, developing new forms of production and processing that may be considered to be lean, efficient and flexible (Zonin, Winck, Zonin, Leonardi, & Machado, 2014). Supply chain governance adjustments from spot to market hierarchies characterised by high levels of integration and alliances (Kherallah & Kirsten, 2002) have been experienced. This outcome may seem to be straightforward and summative but in reality the formative process has had a more radical phases of readjustments before normalcy prevailed albeit at the moment.

Globally, the world economy has become increasingly integrated through trade liberalisations, international technology transfer, and greater mobility of capital and information, there is then a growing interest related in to assess how these changes otherwise referred as globalisation have changed the Kenyan horticultural sector over the six decade of operation (Aggarwal, 2006). The paper then seeks to assess the how the change agents –public, private and collective action -have steered the sector from pre-liberalization/globalization to liberalization/globalisation phase that

has seen Kenya's horticultural industry being an active participant and the net effect to the stakeholders.

This paper is structured as follows. Firstly, by highlighting the methodology adopted. Secondly, the application of transaction cost economics theory as a theoretical perspective. Thirdly, reviewing the general dynamism in agricultural systems and in particular discussing the two stages of Kenya's horticultural sector respectively between the periods of 1950-1990 and 1991 to-date. Fourthly, highlighting competitiveness of the sector as related to capabilities and incentives while highlighting an emergent strategy of small scale exporters through packhouse clusters. Finally, conclusions are inferred from the sector's experience in the said period.

Methodology

To answer these questions, this study begins with descriptive research on the development of Kenyan horticultural industry while focussing on four determinant conditions of standards and compliance, procurement systems, role of stakeholder support and economies of clustering conditions that have seen it characterised into two strands of pre-globalization and globalisation phases; it focuses on fresh fruits and vegetable (FFV) horticultural sector and the issues associated with horticulture. The aim of this paper is to understand the transition changes from a supply driven horticultural chain to demand driven chain and the actors involved; it assesses the industry as its unit of analysis. The discourse in this paper is discussed in light of transaction cost economics Theory (TCE), which is one of the axes of investigation of new institutional economics (NIE) while employing resilience thinking borrowed from social-ecological systems (SES). Therefore, this study conducts a literature review with respect to the state of the sector

trajectory as affected by these two phases of the type of vulnerabilities endured and capabilities harnessed and later presents the two modes of resilient outcomes of Kenya's horticultural landscape embracing both a transformative and an adaptive position. This research relies on a theoretical referential and secondary data material searched from major databases and journals addressing this topic as well as preliminary findings from sector interaction the larger doctoral work by the author.

Theoretical and Conceptual Framework

Application of Transaction Cost Economics Theory

The general principle NIE posits that institutions are a transaction cost minimising arrangements. The main focus of TCE is the definition of the main structures and coordination of transactions through markets or hierarchies. Transaction costs are thus conceived as the costs of carrying out any exchange, whether between firms in a market place or by transfer of resources between stages in vertically-integrated firms. Hobbs (1996) separates transaction costs into three components: *information costs* that are related to information about products, prices, inputs and buyers and sellers; *negotiation costs* that arise from the physical act of the transaction especially in writing of contracts, and *monitoring costs* that emanate after an exchange has been negotiated. TCE relates to two main assumptions, human behaviour and environmental characteristics. The assumption about human behaviour further relates to opportunism and bounded rationality. Opportunism as defined by Williamson (1979) as 'self-interest seeking with guile' recognises that businesses and individuals sometimes seek to exploit situation(s) to suit their own advantage. In as much as opportunism may not be prevalent, the theory however recognises it as often present in some instances. TCE also views humans as bounded rational individuals who,

although they may always intend to make rational decisions, have physically limited capacity to evaluate accurately all possible decisions and alternatives. Bounded rationality recognises this human limitation in the countless complex situations and future uncertain events (Selten, 1990). On the other hand, the assumption about environmental characteristics further elaborates asset specificity, uncertainty and frequency of transactions. Asset specificity as defined by Williamson (1985) is 'a durable investment undertaken in support of particular transactions' asset specificity ensures that resources in a given transaction relationship are not transferable to other activities (Greenberg, Greenberg, & Antonucci, 2008). Williamson (1989) elaborates six asset-specific types related to site specificity, physical asset specificity, human asset specificity, dedicated assets, brand name capital and temporal specificity.

In particular the environmental characteristics of specificity, uncertainty and frequency of transaction to the Kenyan horticultural sector would be considered as per the following characteristics; namely: Asset specificity in this sector would be considered in light of: the length of the crop production cycle, the longer the period the higher the specificity; the scope for scale economies in processing and post harvest operations would be considered to be low if there was minimal processing required; the degree of specialization of material production inputs and technical knowledge. Temporal specificity would be considered as low for products with a longer perishability span such as fruits compared to vegetables that would be said to have a higher temporal specificity. While uncertainty would be assessed from the degree or rate of commodity perishability; the degree of specificity in the commodity quality required and the degree of specificity in the timing of harvests and crop deliveries (Jaffee, 1993). The following matrix would thus suffice to demonstrate the nature of transactions expected in this sector.

	Asset Specificity			Uncertainty			Mode of Coordination during		
	Production Cycle	Scale Economies	Input Specific	Perishability	Quality specific	Timing Specific	Wholesaling Phase	Processing Phase	Retailing Phase
Vegetables	short	low	low	med	med	med	spot	S/t	S/t to L/t
Fruits	long	med	low	med	med	med	spot	L/t	L/t & VI

L/t long Term, S/t Short term; VI Vertically integrated

Source: Author

The uncertainty characteristic contrasts with the perfect information assumption of the neo-classical economists. Information about the past, present and the future state is not perfectly known for various reasons; in such a state it would be difficult to determine *ex-ante* opportunistic behaviour as well as confirm *ex-post* bounded rationality. It would be prudent to consider these aspects in the light of contract formulation for the unanticipated changes in circumstances surrounding a transaction (Ji, Felipe, Briz, & Trienekens, 2012). Owing to uncertainty, the formulation of contracts *ex-ante* and the ability to verify compliance *ex-post* have largely led to emergence of incomplete contracts and thus the recourse to implement standards and regulations as well as third party means of certification (Busch, 2010; Hatanaka, Bain, & Busch, 2005). The frequency of transaction assumption implies that if transactions are infrequent, then the cost of alternative governance structures may not be justified. Therefore, the volume, number and/or time spread in transactions are important considerations even with the previous assumptions. If they are infrequent, alternative governance structures may not be necessary.

Agricultural Systems Dynamics

Agricultural systems continually evolve in a more dialectic manner. As a thesis, agricultural systems locally or abroad and over time have had to respond to parallel continually adaptive pests, diseases, weeds, environmental conditions among other external shocks that may be prevalent. By way of managing and normalising the situation an antithesis has been sought through advancement in science and technology among other management means; as such, the pest, weeds and diseases have as well or are continuing to be abated overtime. The choice to improve in the agricultural enterprise has been based largely on the production possibilities and incentives therein (Gabre-Madhin & Haggblade, 2004). First, production possibilities remain a key priority to the farmers or investors alike; production possibilities further depend on the available quantity, productivity, and distribution of key productive assets such as land, labour, capital, and water as well as the support network of agronomic services, physical infrastructure and markets. Second, from within the available opportunity sets, prevailing incentive structures determine which of the many available options farmers, marketing agents, collective institutions such as cooperatives and self-help groups will adopt. Incentives such as food security, poverty reduction, transformation of agriculture from subsistence to commercial farming and agribusiness have remained important in such discussions(Gabre-Madhin & Haggblade, 2004).

Respondents agents to these agricultural systems changes are qualified by Gabre-Madhin & Haggblade, (2004) to fall under three agency types, namely public actors through government agencies; private actors through individual farmers/firms and non-governmental organisations and collective actors such as cooperative movements and self-help groups (SHG). Actions or interventions undertaken in a given period determine production outcomes or the dialectic

synthesis. These production outcomes play as the new thesis likely to be the next emergent altered by opportunity sets and incentives in the next period, thereby eliciting another round of responses in a continuous succession of change (p. 757); these motions of successive changes influenced by external factors and human agent interventions can lead to growth or stagnation of an industry or enterprise. The endurance of such changes in an agricultural system dynamic of the dialectic aforementioned is what can be described in terms of resilience concept borrowed from social-ecological systems (SES).

Resilience according to Walker, Holling, Carpenter, & Kinzig, (2004) is the “capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks” (Walker et al., 2004: 2). Resilience thinking incorporates two aspects of adaptability and transformability. Adaptability represents the capacity to adjust responses to changing external drivers and internal processes and thereby allow for development along the current stable environment as well as learning through the adaptive capacity. Transformability on the other hand is the capacity to cross thresholds into new developments. From the limited use in Ecology and environmental studies, resilience framework broadens the description of resilience thinking to incorporate the dynamic interplay of persistence, adaptability and transformability (Folke et al., 2010). The concept of resilience is now used in a great variety of interdisciplinary work concerned with the interactions between people and nature as in this research the interaction of human agency and the agricultural sector (Carpenter, Walker, Anderies, & Abel, 2001).

According to Carpenter et al., (2001), the concept of resilience needs further qualification of the word from the metaphor to a more measurable term; as such the specification given by these

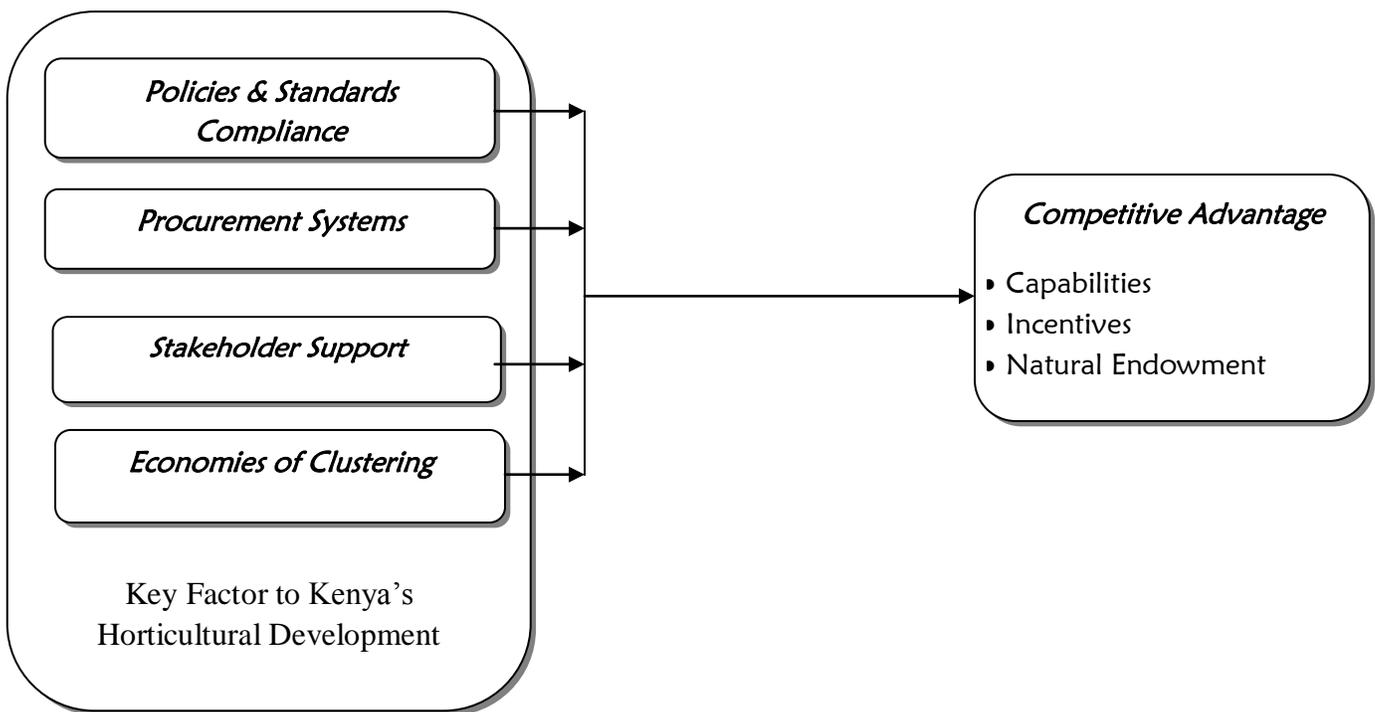
authors specifies that resilience has the following three properties: first, the amount of change the system can undergo and still remain within the same domain of attraction second, the degree to which the system is capable of self-organization despite the external forces and third, the degree to which the system can build the capacity to learn and adapt in the midst of external forces. This paper focuses on the Kenya’s horticultural sector’s resilience from the latter perspective owing to the lessons learnt from the perturbations over the close to six decades.

Conceptual Framework

Figure 1.0. Conceptual Framework

Independent Variables

Dependent Variable



The conceptual framework relates to the key factors that have been considered critical in promoting the sectors competitiveness. They are summed up as Policy standards & compliance,

Procurement systems, stakeholder support and economies of clustering. The discussion of the policies & standards compliance and procurement systems are discussed in detail under the pre-liberalization and liberalization sections while the variables on stakeholder support and economies of clustering are distinctly discussed.

Pre-Liberalisation Horticulture Sector in Kenya and Swynnerton Plan

The transformation of Kenya's fresh fruits and vegetable export sector can be structured into two stages over the past five decades. The first stage took place in the 1950s and proceeded to the late 1980s; while the second stage was evidenced to start in the early 1990 to date. Primary driver for the first stage was the government and in Kenya; benevolently, the transition from the colonial government to the postcolonial government was mediated by the 'Plan to Intensify the Development of African Agriculture in Kenya' in between 1954 to 1959 or as it commonly known as Swynnerton Plan (Ochieng, 2007). The Swynnerton Plan (1954–59) is much celebrated as the foundation of agricultural policy making and innovation in postcolonial Kenya's agrarian development. It is this policy that was considered instrumental to development of institutions, organizations, and other policies that were facilitative in the development of commercial smallholder agriculture in postcolonial Kenya. These policies include: private property rights in land, contract farming, and state and market support of the African commoditization process through agricultural research institutes and credit schemes.

In the horticulture sector in particular, the Swynnerton Plan saw the formation of the National Horticultural Research Centre (NHRC) being started in 1957 at Thika. With early independence period also, Minot and Ngigi, (2004) note that the horticultural sector got a higher priority in

order to improve the conditions of the African majority, this was facilitated by the creation of the Horticultural Crops Development Authority (HCDA) in 1967 and subsequently attracting international investors with interest in horticultural sector. Notably was the entry of Del Monte formerly Kenya Cannery into the Kenyan pineapple sector.

Starting around 1974, Kenyan fruit and vegetable production and exports began to grow more rapidly, ironically this period recorded a sharp drop in agriculture due to the drop in world commodity prices precipitated by the oil crises of 1973-1979. This growth was driven by first, by the investment that increased the capacity of the Kenyan pineapple processing industry as led by Del Monte and the export demand of vegetables especially Asian vegetables (Dolan & Humphrey, 2000) as an indirect effect of the expulsion of the South Asian community in Uganda under the regime of Idi Amin. Second, the government also promoted Kenyan African participation in the trade by encouraging foreign owned firms mostly owned by Asians to take on African partners among others. The continued demand of fruits and vegetables was met by increased involvement of smallholders producing for the fresh fruits and vegetable export market. By 1988, Kenya was the main supplier of fresh and chilled vegetables to the European Union (Dolan, Humphrey and Harris-Pascal, 1999).

Post-Liberalisation Horticulture Sector in Kenya

Barrett, Ilbery, Browne, & Binns, (1999) described generally this period as the Post-Productivist Transition (PPT). They described the period as the one that embraces the whole food chain, from production, processing to consumer choices and marketing systems that have evolved to link them. This PPT is therefore to Reardon, Barrett, Berdegué, & Swinnen, (2009) a

procurement reorganisation issue from spot market to a modernised procurement system with the following characteristics, namely: one, a shift from no standards to use of private standards quality and safety largely driven by the EU retailer such as European Retailers Protocol for Good Agricultural Practice (EurepGap); second, a shift from spot markets relations in traditional wholesale markets to use of relational and vertical coordination mechanisms; and third, a shift from local procurement by individual stores, to centralized procurement using distribution centres, complemented with a shift to sourcing through national, regional, and global networks (p. 1719).

The effect of the PPT to small holder farmers and exporters was not as such a smooth transition; to start with there was a huge decline in smallholders supply from 7,000 exporters reported in mid-1980s to less than 3,000 in early 1990s (Jaffee, 2003) and a further decrease to less than 500 currently registered fresh fruits and vegetable exporters. This decline was linked to the demand pull concerns of retail buyers about issues such as consistency of product characteristic such as: product quality, presentation, product range, packaging and innovation (Humphrey, McCulloch, & Ota, 2004); maximum residue levels for pesticides and social and environmental issues such as child labour and handling and use of pesticides. However, albeit recently Henson, Jaffee, & Masakure, (2013) noted that smallholders evidently play a key role in the discharging of risk by exporters in that many exporters combine their own production with smallholder procurement; the small holder farmers have as well to competitively supply, in terms of quality and price; reliability, flexibility, and risk management; and food safety compliance (Jaffee, Henson, & Rios, 2011); this view also justifies the existence of a hybrid type of gorgvacne structure by way of lead firms and exporters being supplied by the individual small scale farmers or collectively by the co-operative groups and Self Help Groups (SHGs) and societies. Overall 65–80 per cent of

all fresh horticultural imports from sub-Saharan Africa is marketed through the large multiple retailers (Barrett et al., 1999).

In order to keep up with the modernised procurement systems four main approaches were adopted, namely; Backward integration, product segmentation, modified extension and higher intensity out-grower systems (Jaffee & Masakure,2005). Backward Integration was adopted by many leading exporters from the mid-1990s for their raw material needs and ensuring traceability and control. Product segmentation has been employed by some exporters as a defensive strategy that is aimed at full traceability and due diligence record keeping thus some exporters use different sources for different clients (Freidberg, 2003). Intensified extension has been proposed to facilitate information dissemination regarding detailed fertilization and spraying programmes indicating remedies for common problems. Close out-grower governance has been developed by the exporters for the purposes of intensive oversight programmes. Through this oversight, traceability is assured through variety of means, including planting schedules records, seed procurement records, production records for individual plots, pesticide use, storage, and disposal records, harvest and produce delivery records, product flow records, the numerical tagging/labelling throughout the supply chain and periodic out-grower audits (Jaffee & Masakure,2005, pp. 329,330).

The post liberalization move was aimed at as a strategic response since there was limited volumes of export growth in the mid 1990s despite the increase in value. As such, push and pull factors have driven the product and market reorientation in the industry; the push side saw the former business model here characterised as pre-liberalization becoming less viable in the face of broader trend and competition especially by Egypt and Morocco for bulk produce trade

especially as a result of cheaper airfreight rates (Dolan & Humphrey, 2000). While Kenyan airfreight rates for fresh produce had been \$1.40-1.60 per kg, comparative freight rates have been \$0.75 for Egypt and \$0.60 for Ghana by air transport (Jaffee, 2003, Jaffee & Masakure,2005) . On the pull side, other than the bulk produce trade, the rise in demand for ‘high care’ broad range of products from mixed salads, assortment of cut vegetables produced under severe hygienic conditions was witnessed starting in 1997. The trade in high care products in selected pre-packaged forms have become a primary source of profit for leading exporting firms especially destined for the UK market where these processes were previously being handled from.

Accompanying the four main approaches of backward integration, product segmentation, modified extension and higher intensity out-grower systems is the outsourcing or expansion and modernization of pack-house facilities for purposes of quality assurance and food safety management systems within the leading companies (Jaffee, 2003). Joint ventures with the Kenyan government has reaped major breakthrough results through Kenya Plant Health Inspectorate Service (KEPHIS) established in 1997. This organization has assisted in certification of phytosanitary and quality inspections certifying the exporter firms with the required phytosanitary certificates. Quality assurance function has been taken as a cost centre in these companies. However, majority of new entrants into the export sector and seasonal exporters have opted to outsource this service from either the Horticultural Crops Directorate(HCD) or other packhouses proximate to Jomo Kenyatta International airport in Nairobi.

Table 1: Comparison of Pre and Post Liberalization Horticultural Sector

Determinants	Pre-Liberalization	Post-Liberalization
Period	1950's to late 1980s	1990s to date
Primary Driver	Traditional Procurement: Spot Market, Wholesaler	Modernised procurement System: Retail Driven
Principal change agent	Post colonial Government	Retail market & Competition
Public participation	Swynnerton Plan & Subsequent Policies: NHRC 1957, HCDA 1967	KEPHIS 1997, PCPB, KARI
Supply Chain Strategy	Supply Driven/Push System	Demand Driven/Pull System
Nature of product	Loose pack (cartons)	Broad range (Panets)
Private Action	Salient	GlobalGap, KenyaGap/KS 1758, HEBI, FPEAK
Sector Governance	Majorly Spot Markets	Relational, Hybrid & Vertically integrated chains
Collective Action	Formation of Self-Help Groups and Cooperative schemes	Value chain Clusters & Hybrid Structure with SHG and Co-operative Schemes

Source: Author

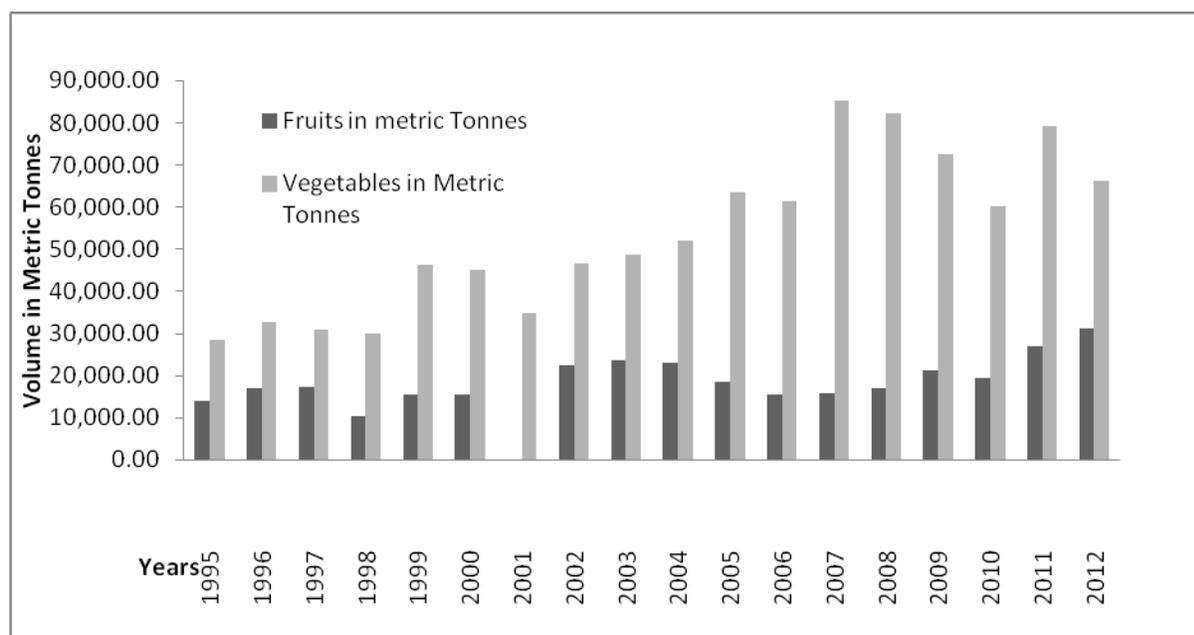
Horticultural Sector Competitiveness

The competitiveness of African suppliers of high-value horticultural produce depends on their low costs of production, complementarity to European seasons, relatively short flight times and ability to supply produce of the quality and quantity required by international markets (Barrett et al., 1999) thus characterized by a demand for healthy, ethically produced high-quality food, presented as a convenience product, with customers willing to pay for value added. Largely competitiveness in the horticultural sector may be clustered into capabilities, Incentives or natural endowment(s) otherwise referred as comparative advantages.

In line with these general classifications, specific advantage to Kenya's export related to a comparative advantage is the leverage on the industry's asset specificity of Kenya's location, availability of cheap labour, and the tropical climatic conditions favourable for the year round for crop production as well as Nairobi's location as a centre of air transport to various destinations especially Europe; competitive advantages related to incentives include: first, preferential treatment and agreement under the Lomé Convention between African Caribbean Pacific Countries and the EU for concessionary access for Kenyan Vegetables to EU (Dolan & Humphrey, 2000); second, Kenya's close co-operation with supermarkets and other market sources Asfaw, Mithöfer, & Waibel (2010); third, non-interference by government in the commercial transactions; fourth, economies of clustering which provides support in logistics, market penetration and market identity (Dolan & Humphrey, 2000). fifth, Kenya has been considered as an early adopter of EurepGap standards as well as initiating the KenyaGap standards (Henson, Masakure, & Cranfield, 2011). Competitive advantage through productivity has as well been witnessed by most Kenyan exporters having installed processing systems to meet the stringent regulatory requirements such as traceability, invested in post harvest facilities that meet customers quality expectations, while contributing immensely in post harvesting processes such as product combinations, presentations and packaging and logistics. Third, sustained demand for horticultural products all year round;

Figure 1 demonstrates part of this growth that Kenya has achieved in the past 18 years summarized in form of metric tonnes of fruits and vegetables exported as follows:

Figure 1: Kenya's Export Quantities for Fruits and Vegetables between 1995-2012



Source: Adopted from HCD statistics

Due to competitiveness of Kenyan horticultural sector, market channels disintegrations-transfer of functions to new actors- have occurred for competitive reasons; due to effectiveness reasons, the sector has reached to its targeted groups, and by efficiency reasons the sector has decreased distribution costs from producer to final consumers, and finally through equity reasons the bargaining power of a group of actors has been strengthened (Dijkstra, Meulenber & Tilburg, 2001, 229).

Compliance and the readjustment to the export sector demand has resulted to further competitive advantages that have promoted profitability and sustainable trade as well as new markets. Compliance has as well promoted new sector investment, improvement of production systems, improvement of worker and consumer welfare, fostered a healthy public-private collaboration, adoption of safer production and processing systems and promotion of domestic food safety and agricultural productivity. An initiative of private-public collaboration was witnessed by FPEAK

(the Fresh Produce Exporters Association of Kenya), KEPHIS (Kenya Plant Health Inspection Services) and KEBS (Kenya Bureau of Standards) who were actively involved in meeting the challenge of conforming to public and private food standards in the European Union. In particular, they were involved in the national technical committee working towards a national equivalent standard, KenyaGAP. The richness of the local institutional environment, the importance of aid donors for the Kenyan economy and Kenyan government, and the widely-recognised importance of export horticulture for rural development, all came together to create rich and varied responses to the perceived challenge of the EUREPGAP standard (Humphrey, 2009) this led to the formation KenyaGap and subsequently this standard has been adopted a KEBS standard 1758. Kenya has as well successfully lobbied for Horticultural Ethical Business Institute (HEBI) HEBI a Private Standard Initiative (PSI) that was developed in 2003 as a uniform social code of practice, which translated the UK's ETI code in reference to Kenyan labour laws.

The formation of these two standards of KenyaGAP and HEBI characterises the Kenyan FFV supply chain as adopting what Tallontire, Opondo, Helson & Martin (2011) consider as governance mechanisms beyond the vertical integration; they propose that there is need to consider horizontal governance. That is, how the new regulatory institutions involve and affect other formally or informally involved in setting, monitoring, improving or implementing such standards at the national levels (Tallontire, *et al.*, 2011). Private standards initiative and governance in Kenyan horticulture is best ascribed by the two kinds of standards that relate to global standards on labour and good agricultural practice (GAP); both have been adopted as a result of buyer pressure in the agri-food chain. KenyaGap is an initiative that has been benchmarked with GlobalGap/EurepGap. HEBI is a Private Standard Initiative (PSI) that was

developed in 2003 as a uniform social code of practice, which translated the UK's ETI code in reference to Kenyan labour laws.

Stakeholder Support

Stakeholder support in the horticultural sector has been described as supportive as from the pre-liberalization period after the implementation of Swynnerton Plan (1954-1959) that first saw the formation of the National Horticultural Research Centre (NHRC) being started in 1957 and subsequent the setting up of the Horticultural Crops Development Authority (HCDA) in 1967. Largely, stakeholder support in this sector has been categorised into four groups namely; Government organizations, Educational organizations and Industrial organizations (Webber & Labaste, 2010); with the first two receiving large support from the government in their mandate.

Government organizations: The Kenya Plant Health Inspectorate Services (KEPHIS) organization emerged as a partner to help train newly formed private nursery service providers. KEPHIS is a regulatory agency for quality control of agricultural input and produce in Kenya. It coordinates all matters relating to crop pests and disease control and advises the Director of Agriculture on appropriate seeds and planting materials for export and import. A department in Kenya's Ministry of Agriculture, the Pest Control Products Board (PCPB), regulates the importation, manufacture, exportation, distribution, and use of pest-control products in Kenya. It ensures that only PCPB assessed products are used in the country. The Horticultural Crop Development Authority (HCDA) is a Kenyan parastatal organization tasked with promoting and regulating the horticulture sector it has since 2014 been reconstituted as Horticultural Crops Directorate.

Educational organizations: The Kenya Agricultural Research Institute(KARI) is Kenya's national organization for coordinating agricultural research. Its National Horticulture Research Centre (NHRC) focuses on horticultural research. Both KARI/NHRC continues to play a vital role in training producer groups and service providers on proper horticulture techniques.

Industrial organizations: The Fresh Produce Exporters Association of Kenya (FPEAK) is a member-supported private association in the horticulture industry. It is Kenya's principal association representing growers and exporters. FPEAK's mission is to develop Kenyan horticulture in the global marketplace. In addition to marketing and technical support, it lobbies for its constituents' agendas, administers Kenya-GAP a code of practice for Kenya's horticulture industry adopted from the GLOBALGAP, and promotes member compliance in other international standards.

The Agricultural Association of Kenya (AAK) is the umbrella organization for manufacturers, formulators, re-packers, importers, distributors, farmers, and users of pest-control products. AAK assists in the training and certification of agro- chemical service providers on the proper and safe application of pesticide on small-grower farms.

Economies of Clustering: Outsourcing Pack-house Services to Nascent and Small Scale Exporters

Packhouse capital expenditure has been considered to be a large investment including third party certification (Hatanaka et al., 2005) to most nascent and small scale exporters; equally well maintenance conditions at the packhouse processing area is often larger and requires a considerable amount of funds. However, investors and stakeholder support such as one provided by HCD has facilitated the erection of these packhouses as well as ensuring compliance with the

international food safety standards (IFSS); these packhouses are as well proximately located next to the Jomo Kenyatta International Airport for ease of freight logistics; with high hygiene standards, washable tables and cold stores (Okello, Narrod, & Roy, 2007). The small scale exporters using them and who constitute of around 27% have therefore significantly reduced transaction costs related to packhouse activities and refrigeration which have been cited to be the third largest cost after production and airfreight costs. Costs related to maintenance of these facilities are thus eliminated and being critical also of vegetables' low temporal specificity, exporters dealing with these perishables can leverage on their market prices for their future growth and expansion. Despite the advantage of such an outsourced service, packhouses have as well been known to be a source of major uncertainty and disjointed information systems in fruit and vegetable supply chain (Bosona & Gebresenbet, 2013) as well as network complexity (Skilton & Robinson, 2009) due to the large number of the users sharing the same facility. Vigilance on the side of the exporters is demanded in order to have accurate traceable steps and processes in case of product recalls.

Horticultural Sector Constraints

Despite the resilient nature of the sector and support given by the stakeholders, this sector amongst other agricultural sector continue to experience challenges that limit the sector's full realization of its potential. Some of the issues mostly cited as challenges include: poor infrastructural development which affects movement of the produce from the point of production to the consumption point; lengthy approval procedures which further contributes to cost of production; high taxes on factor inputs; unfriendly labor laws and activities of trade unions

among others. Kenya has not been able to effectively attract significant FDI flows, reflecting largely the combined effects of political and macroeconomic instability, weak infrastructure, poor governance, inhospitable regulatory environments, intensification of competition for FDI flows due to globalization, and poor marketing strategies (Njoroge & Okech, 2011). Other constraints that have been cited include inadequacies in trained manpower on food safety and quality systems; Underdeveloped marketing information systems for sharing on market trends and forecasting on market demands; Information gap leading to inadequate or lack of thereof information on the expectation of the requirements by the consumers and especially on the expected standards (Mwangi, Nambiro, & Murithi, 2002).

Conclusion

The development processes documented in this paper suggest that Kenya's horticultural competitiveness can to a large extent relate to the benign policies that were incepted from the post colonial periods with the intention of developing commercial agriculture. Consequent to the Swynnerton Plan cum policy, major support structures and systems such as the formation of Horticulture crops directorate and National Horticulture Research Centre that focuses on horticultural research still remain instrumental in their mandate that they were set out to date. Characteristic too of Kenya's sector has been realized of its rich contract development and involvement of small holder farmers in the larger supply chain sector, such contracts have promoted the realization of the sector demands of labor intensive production of horticultural crops. The transitioning to modernized procurement systems characterized as embracing the whole food chain, from production, processing to consumer choices and marketing systems have prompted the Kenyan sector to upgrade its systems in standards compliance; this has benefited it

from the first mover advantage in terms of critical sourcing from compliant nations. The realization of this success points at Kenya as case through which institutions assessing impact of benign policies can be able to achieve while appreciating the current strategies of small scale exporters cluster resurgence in global market.

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