



The potential for the participation of Nigeria in Global Horticulture Value Chains

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Title: The potential for the participation of Nigeria in Global Horticulture Value Chains

Abstract

Purpose – This paper explores the barriers inhibiting horticulture product export from Nigeria, particularly to the United Kingdom, and identifies those requiring resolution if Global Horticulture Value Chains are to contribute to economic growth in Nigeria.

Design/methodology/approach – A single-case (embedded) research design was adopted. Twenty-six participants from five stakeholder groups (namely, farmers, exporters, air freight forwarders, aviation operators and government institutions) were selected for investigation to examine the research problem.

Findings – The empirical investigation showed that: the existing institutional framework, infrastructure and logistics issues, market penetration issues, stakeholders' incompetence, food safety and quality issues, high transaction costs, operational challenges of exporting, neglect of agriculture and the existing airline market structure are prominent barriers that require resolution if horticultural product exports are to increase.

Research limitations/implications – The study focuses on the analysis of five key stakeholder groups upstream in the supply chain. Further investigation should include stakeholders downstream (importers, wholesalers and retailers).

Originality/value – The specific case study of horticultural product export from Nigeria offers empirically-rich insights into the barriers hindering the participation of Nigeria in global horticulture value chains.

Keywords Nigeria, Emerging markets, Developing countries, Horticulture product export, Global horticulture value chains

Paper type: Research Paper

Introduction

Global supply chains are essential for facilitating growth in emerging markets. The significant influence of exports on the balance of payments means that countries compete through their global value chains (GVCs) to gain competitive advantage (Gereffi and Lee, 2012). The term 'emerging markets' has been given particular

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3 attention in the last two decades, although there is no consensus on characteristics
4 and definition of emerging markets. Jim O'Neil, an economist, forecast the BRIC
5 countries (Brazil, Russia, India and China) as the potential powerhouses for rapid
6 growth in 2001; he has also identified MINT countries (Mexico, Indonesia, Nigeria,
7 and Turkey) as 'emerging economic giants' in 2014. The emerging markets index
8 providers MSCI and FTSE Russell (the leading global providers of investment
9 decision support tools) also have different classification criteria (FTSE, 2016a; MSCI,
10 2017). Notwithstanding, emerging markets are categorized as economies with
11 growth prospects because of market opportunities (such as cheap labor), yet they
12 feature institutional voids (lack of institutional structure that can enable market
13 functioning) which vary across different markets (Khanna and Palepu, 2013). As a
14 result, these markets face various operating challenges, high transaction costs and
15 corruption.

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25 Among the African countries (South Africa, Egypt, Botswana, Cote d'Ivoire, Ghana,
26 Kenya, Mauritius, Morocco, Tunisia and Nigeria) assessed as at September 2016,
27 only South Africa met all the FTSE Quality of Markets criteria (FTSE, 2016c). South
28 Africa is therefore classified as an advanced emerging market, Egypt as a secondary
29 emerging (FTSE, 2016a) while Nigeria is classified as a frontier market (FTSE,
30 2016b). Surprisingly, as a result of a fall in the global oil prices, Nigeria's economy
31 declined drastically from a GDP real growth rate of 6.3% in 2014 to 2.7% in 2015
32 and then to -1.7% in 2016 (CIA, 2017) contrary to previous forecasts. The Financial
33 Times defines a frontier market as a type of emerging market with a lower market
34 capitalization and low level of liquidity (meaning the country's current assets cannot
35 cover its short term debts) compared to other emerging markets (Financial Times,
36 2017). Nevertheless, a frontier market is still regarded as a potential market for
37 growth which could yield a high return on investment like other emerging markets.
38 This classification therefore positions Nigeria as an emerging market.

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48 Emerging markets have been identified as potential markets for growth; it is
49 therefore important that they become integrated into global markets to achieve
50 success (Growth Commission, 2008). Subsequent to this, emerging economies
51 (especially the developing countries) are currently seeking ways to position
52 themselves for participation in global markets (developed economies). This is not
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3 easily achieved. Knowledge of the barriers limiting the participation of emerging
4 economies in global horticulture value chains (GHVCs) is sparse; there is therefore a
5 need to conduct more research.
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9 The purpose of this paper is to explore the barriers inhibiting horticulture product
10 export from Nigeria, particularly to the United Kingdom. This study aims to fill this
11 gap as exploring these issues is perceived to be essential in promoting a well-
12 diversified economy in order to increase economic growth.
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16 This paper is organized as follows. GVCs and their dimensions are discussed
17 followed by a review of the issues relating to participation of emerging market
18 economies in GHVCs. The empirical research methodology is described followed by
19 the discussion of the findings. Lastly, this paper presents the conclusion and further
20 areas for research.
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26 **The Global Value Chain Framework**

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28 The Global Commodity Chains (GCC) framework as developed by Gereffi (1994,
29 p.96-97) is a framework for analyzing both the upstream and downstream activities
30 of firms as they integrate into the global economy. However, it has been advanced to
31 include the impact of value creation, initiation and forms of governance which are
32 attributes that can enhance suppliers' capabilities (Gereffi et al., 2005; Bair, 2005).
33 GCC has therefore been refined to Global Value Chain (GVC). The GVC framework
34 is useful in analyzing the participation of developing countries in global networks
35 because of its capacity to elucidate the issues hindering their involvement and the
36 requirements for successful participation that can result in greater benefits. A global
37 value chain is described as the network of activities carried out by different
38 organizations across different geographical locations starting from production to
39 consumption (Gereffi and Fernandez-Stark, 2011; 2016). The ultimate goal of this
40 chain is to achieve international competitiveness. Its dimensions include:
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- 50 • An input-output structure: This entails a sequential link of value-addition
51 activities from the inception of production to consumption.
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- 54 • A territorial structure: The involvement of globally dispersed firms and supply
55 chain activities that are across the globe.
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- A governance structure: The authority and power relations that control the distribution of financial, material, and human resources within the chain.
- Upgrading: This entails strategies used by developing countries to improve their value addition processes and economic benefits in order to become integrated in global networks (Humphrey and Schmidt, 2002; Gereffi, 2005).
- An institutional context: This requires identifying the influence local, national and international contexts have on the activities in the entire supply chain (Gereffi, 1995).
- Industry stakeholders: The interaction of the different local actors and the activities carried out to achieve industry upgrading.

The governance structure has received considerably more attention because it determines which firm or country is included or excluded in the GVCs (Humphrey and Schmitz, 2000; Gereffi et al., 2005; Nadvi, 2008). Two types of governance structure exist namely: buyer-driven and producer-driven chains and Gereffi (1994) has presented a clear distinction between them. A buyer-driven chain exists where production systems in developing countries are largely controlled by brand-named retailers. This governance structure is typical of labor-intensive, consumer-goods industries and because of their control mechanisms, these large retailers determine the activities and related flows within the chain. A producer-driven chain on the other hand, exists where production systems are controlled by transnational firms. This is a governance structure more apparent in capital and technology-intensive industries.

Exporting countries aiming to achieve competitive advantage must satisfy the requirements for participation (Lee, 2010; Mayer and Gereffi, 2010). These include: the development of a resourceful labor force and upgrading of their capabilities to meet demand; the proliferation of private regulations and standards; production of internationally accepted products; and the certification of processes. Upgrading is defined as a strategy for shifting from traditional products to value-added products in order to gainfully participate in global trade (Gereffi, 2005). Rammohan and Sundaresan (2003) argue that upgrading has a wider consequence on workers and

society beyond the narrow benefit it offers, therefore they emphasized that caution should be exercised before adopting upgrading because it may not yield expected economic advantage. They indicated that “from the perspective of socially embedding the commodity chain, the question is: what are the social implications of upgrading? How does upgrading translate into the lives of peripheral workers? . . . What are its implications for the gender-based division of labor? . . . The emphasis on the “economic” has often led the upgrading theorists to discount these crucial questions relating to the implications of upgrading for labor and the labor process” (Rammohan and Sundaresan, 2003, p.906). Notwithstanding, the GVC framework is being adopted to formulate guidelines that can enable the positioning of developing countries for an improved economy (Humphrey and Navas-Alemán, 2010; Barrientos et al., 2011; Gereffi and Fernandez-Stark, 2011; 2016) even in export horticulture.

Global horticulture value chains (GHVCs)

The global demand for horticultural products (fresh fruit, vegetables and flowers) has paved the way for developing countries to participate in global value chains (GVC) leveraging on their comparative advantages such as arable land, favorable climate and large labor force (FAO, 2013). These countries have not been able to maximize their opportunities as a result of external factors (such as protectionist measures) in importing countries (Dolan and Humphrey, 2000; 2004; Henson and Wilson, 2005; Asfaw et al., 2010) and also internal factors (such as an unfavorable operating environment) in exporting countries (Devlin and Yee, 2005; Diao et al., 2007; Staatz and Dembele, 2008; Vega, 2008).

Nevertheless, GHVCs are important for both the emerging markets and developed economies since they enable the rising demand by the latter to be met. They also enhance the economies of the former by creating employment opportunities, alleviating poverty and enhancing agricultural productivity (Dolan and Humphrey, 2000; McCulloch and Ota, 2002; Sales, 2013; Leipold and Morgante, 2013). GHVCs are buyer-driven chains therefore adherence to buyers’ specification is a critical factor for participation. In other words, intense competition exists in GHVCs and only those that comply with the strict regulations can participate.

The importance of complying with food safety and quality standards

Food safety and quality standards are crucial and are concerned with safeguarding the health of consumers. Food safety and quality standards such as Phytosanitary measures (SPS Agreement) and Codex Alimentarius international food standards are enacted by the World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) (FAO, 2016). Moreover, regulations on food safety standards, environmental sustainability and close monitoring procedures have mandated retailers to be more cautious in relation to the fresh food business. Therefore, they only purchase items from trusted sources ensuring that food products are safely produced (Wilson, 1996; Dolan and Humphrey, 2000). Examples of standards enacted by large retailers in the European market are British Retail Consortium (BRC), the Safe Quality Food (SQF) and the European Retail Good Agricultural Practices (EUREP-GAP) (Trienekens and Zuurbier, 2008). Adherence to these standards is therefore important for emerging market economies involved in global food supply chains. The objective is to ensure that high quality food products are safely produced and stored throughout their supply chains and distributed safely to consumers.

The importance of GlobalGAP (good agricultural practices)

GlobalGAP certification is about good agricultural practices and it allows suppliers of horticultural products (farmers) to undergo quality training where new methods of planting, harvesting and so on are taught to improve agricultural productivity (Ehlert et al., 2011). In this way, good agricultural practices are applied throughout the food production process (ITC, 2011). Although the cost of compliance is high, GlobalGAP certification enhances the participation of exporting countries yielding significant profits (Roy and Thorat, 2008; Henson et al., 2011).

Non-compliance to food safety and quality standards has been emphasized as one of the major challenges (Trienekens and Zuurbier, 2008; Roy and Thorat, 2008; Maertens and Swinnen, 2009; Narrod et al., 2009; Henson and Humphrey, 2010; Mithofer et al., 2011; Paalhaar and Jansen, 2011). Other authors have argued that these stringent standards are enforced to protect products from the domestic market of advanced countries from competition (Henson and Wilson, 2005) and that the stringent requirements are meant to deprive smallholders from participating in

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3 GHVCs (Henson and Reardon, 2005; Maertens and Swinnen, 2009; Asfaw et al.,
4 2010).

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7 On the other hand, Jaffee and Henson (2005) advised developing countries to
8 leverage on these strict requirements to improve the standards in domestic markets.
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10 The lack of infrastructure has often affected the efficient logistics of these time-
11 sensitive products (Devlin and Yee, 2005; Vega, 2008; Goger et al., 2014) causing
12 delays, longer lead times and losses in the supply chain. High transaction costs are
13 also a deterrent to participation (Devlin and Yee, 2005; Belwal and Chala, 2008;
14 Helpman et al., 2008). The lack of credit facilities (Belwal and Chala, 2008; HCDA,
15 2013) also deprives them from investing in facilities such as cold storage,
16 greenhouses and irrigation systems that can enhance their compliance to standards
17 and consequently their competitive advantage. The lack of collective action among
18 the suppliers also hinders them because they do not benefit from the economies of
19 scale required in the global markets (Roy and Thorat, 2008; Narrod et al., 2009;
20 Shiferaw et al., 2011).

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23 Since the local institutional context of horticulture value chains differs between
24 countries, the purpose of this paper is to explore the barriers to global trade of
25 horticultural products specifically from Nigeria.
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29 30 31 32 33 34 35 36 **Methodology**

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38 This qualitative research has adopted a case study approach to provide an in-depth
39 understanding of the barriers hindering the participation of Nigeria in global
40 horticulture value chains. The approach is suitable for exploring this contemporary
41 issue because it allows rich information to be gathered and also allows meaningful
42 conclusions to be drawn (Yin, 2014). In this context, the research approach also
43 enriches knowledge about the supply chain and current state of horticulture export
44 from Nigeria.
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50 Purposive sampling was employed to select the participants for this investigation;
51 five key stakeholder groups in the upstream of the supply chain were targeted as the
52 primary source of information. The stakeholder groups include farmers, exporters, air
53 freight forwarders, aviation operators and relevant government institutions. These
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3 participants were identified by three importers in the United Kingdom and three
4 exporters in Nigeria as important stakeholders during a pilot study carried out in
5 February, 2015. They were therefore selected because they are knowledgeable in
6 the area of interest to this research (Cook et al., 2012). Using a single-case
7 embedded design, multiple views of twenty-six stakeholders were explored through
8 interviews. This single-case embedded design allows a comprehensive detail about
9 the specific case of horticulture product export (HPE) from Nigeria. Direct
10 observation was also carried out at the cargo export terminal of Murtala Mohammed
11 International airport, Lagos. The choice of this location lies in the fact that it is the
12 major international cargo airport for Nigeria and observation of the pre-export
13 operations provided a better understanding of the context of the research. The use of
14 direct observation in addition to the interviews provides a more valid set of evidence,
15 thus multiple sources of evidence is the rationale for using a case study design
16 approach (Yin, 2014).
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26 Primary data were collected between April and November 2015 from the consenting
27 participants, using semi-structured questions. Semi-structured interviews enabled
28 this study to probe deeply into their real experiences in their natural setting and even
29 though there was a list of guided questions to ask, the discussion followed their flow
30 of conversation giving room for richer insights into the topic area (Saunders et al.,
31 2016).
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37 The interviews were transcribed and then analyzed following the thematic analysis
38 guidelines for analyzing qualitative data. The thematic framework recommended by
39 Braun and Clarke (2006) was adopted. This begins with familiarisation of the data,
40 followed by the generation of initial codes, searching for themes, reviewing themes,
41 defining and naming themes, and producing the report. A manual analysis was
42 carried out at the initial stage of the analysis and the Nvivo computer aided
43 qualitative analysis data software was employed at the point of reviewing the themes
44 to aid the organization of the data and enable structured work (Bryman, 2016).
45 Important barriers that hinder the global trade of horticultural products were identified
46 and grouped into overarching and sub-themes having observed their patterns of
47 connection. At the final stage of the analysis, the order of significance of the resulting
48 overarching themes was noted. The empirical investigation provided rich evidence of
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3 the barriers to HPE. The data collection and analytical process followed the ethics
4 code of conduct by ensuring confidentiality, anonymity and protection of respondents
5 from harm (ESRC, 2016).
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10 **Findings and discussion**

11 It should be noted that all the respondents agreed that Nigeria has ample
12 opportunities to engage in the global trade of horticultural products but needs to
13 position itself strategically. The empirical findings from the analysis are presented
14 and discussed below. Farmers, exporting companies, air freight forwarders, aviation
15 operators and government institutions are represented as FM, EC, FFC, AV and
16 GOV respectively. Members of each group are given digit identifiers and only
17 relevant responses were considered, implying that not all interviewees' responses
18 are presented.
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25 *Existing institutional framework*

26 Respondents agreed that the lack of policies to enhance horticulture development,
27 fragmented institutions, lack of institutional support, implementation issues and lack
28 of research are problems that are limiting HPE. Below are some of the quotes that
29 illustrate this finding:
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35 *"All the vegetable exporters as far back as I know; none of us have*
36 *been given any opportunity or received any help from the Federal*
37 *government. We are still doing it from our own purse without any help*
38 *from any organization" (Managing Director at EC2).*
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42 *".....it's our government; they are not doing what they should do"*
43 *(Managing Director at FFC1).*
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47 *"If there is sincerity in our policy, it will transcend down. There is a*
48 *saying that talk is cheap but work the talk. That is the major thing and*
49 *that is exactly what we lack" (Business Manager at AV2).*
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53 *"There are also no incentives such as fertiliser from the government.*
54 *Farmers buy seeds on their own. That is why they have been*
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3 *complaining that government is not helping them” (Principal Agric.*
4 *Superintendent at GOV2).*

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7 *“We have issues about working together and developing synergy;*
8 *everybody is just doing their own. On the part of the government, on*
9 *the part of the stakeholder, there should be a deliberate policy, a*
10 *deliberate effort from both sides to make sure things are being done*
11 *properly” (Deputy Director at GOV6).*

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16 These findings show that institutional structure has a significant effect on the
17 participation of developing economies in global value chains. The results support
18 the concept of institutional void explained by Khanna and Palepu (2013) that the
19 lack of an institutional structure has hindered market functioning in emerging
20 markets. As emphasized by Gereffi (1995), local innovation is a critical factor for
21 export success in developing countries as this could enhance product acceptance in
22 advanced economies. This requires restructuring of policy and organizations and
23 adopting state-of-the-art technologies. The absence of supporting policies and
24 appropriate social structures may hinder the involvement of emerging economies in
25 global horticulture value chains.

32 33 *Infrastructure and logistics issues*

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35 The existence of appropriate infrastructure and logistical factors cannot be
36 overemphasized for developing countries aiming to trade in international markets.
37 The stakeholders interviewed indicated that infrastructure and logistical issues are
38 important constraints to exporting horticultural products.

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42 *“When we don’t have any standard vehicle, we don’t have any storage*
43 *and all those things that will move it immediately. Where is the road?*
44 *Where is the rail? So these are the pressing constraints. The facilities*
45 *are not global trade standard” (Zonal Controller at GOV1).*

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50 One of the respondents emphasized that poor road networks result in inland transit
51 delays and this hinders timely delivery to the export gate.

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3 *“The holdup will cause traffic jam when you are coming from the farm*
4 *and this causes late delivery to Nigerian Aviation Handling Company*
5 *(NACHO) warehouse” (Export Manager at EC3).*
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11 Another respondent noted:

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13 *“We are not able to provide proper packaging to meet the European*
14 *standard and because of that they don’t allow us to bring in all*
15 *horticultural products because of packaging regulations and all that”*
16 *(Customer Service Manager at AV3).*
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21 Other respondents underlined the absence of cold chain facilities and its
22 effect:
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25 *“NACHO has an inoperative cold room. In the event when you miss*
26 *your flight, they can refrigerate it for another day but this time, it's going*
27 *to spoil because there's no way you can keep them. They are*
28 *perishable products, if they cannot meet up with the schedule, they*
29 *have to be refrigerated. Unfortunately, they are not having that”*
30 *(Managing Director at FFC1).*
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35 *“We don’t have refrigerated vehicles. Government is telling us that they*
36 *will give us but we have not seen any” (Managing Director at FM1).*
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40 This empirical evidence confirms that the supply chains of horticultural product
41 export in developing countries can be affected by the lack of appropriate
42 infrastructure (Staatz and Dembele, 2008; Vega, 2008, Foster and Briceño-
43 Garmendia, 2010) which essentially affects the efficient logistics of these time-
44 sensitive products. The lack of cold storage facilities leads to poor post-harvest
45 handling. Inland transit delay also results from poor road networks and consequently
46 leads to the late delivery of products (Portugal-Perez and Wilson, 2009; Djankov et
47 al., 2010; Freund and Rocha, 2011; Hummels and Schaur, 2013). The implication is
48 that low quality products are eventually exported which do not conform to the high
49 quality standards required in the global market.
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Market penetration issues

Employing an international market entry strategy is critical for gaining access to markets in developed economies (Markelova and Mwangi, 2010; Shiferaw et al., 2011; Paalhaar and Jansen, 2011). The interviewees reported that inadequate supply, lack of collective action, focus on a niche market and the lack of value-addition hindered them from penetrating the international markets:

“In Nigeria we are not organized into a co-operative society. This little one we are doing is individual effort and individual effort can never take a country so far” (Marketing Director at EC4).

Two respondents emphasized that current supply is low and cannot meet the demand of the Nigerians in the UK. In other words, they do not see any reason for seeking an additional market for Nigerian horticultural products in international markets:

“..... but when you look at the population of Nigerians there, it's very hard (Chief Executive Officer, FFC2).

“It's just that we have to increase the quantity because the ones we export; they are not even enough for our people over there. So it cannot go to the supermarket” (Managing Director at FFC1).

Another respondent indicated that exported products are the indigenous types with no value-added.

“When I went to Germany, I went to a shop with one of my friends that was living there and I saw some vegetables there. Vegetables that were already cut; not that he was using a knife to cut them –already prepared and packaged vegetables. So these are the standards they are talking about but we lack them!” (Zonal Controller at GOV1).

Interestingly, all the respondents highlighted the fact that horticultural products are exported mainly to satisfy the demand of Nigerians abroad. This is confirmed by the following expressions:

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3 *“Our targets are not Europeans; our targets are fellow Nigerians that*
4 *live in Europe and America. One thing I want you to know is that those*
5 *Nigerian products are being used by Nigerians, not the Europeans -*
6 *Nigerians mainly. They don’t eat any other food in Europe” (Chief*
7 *Executive Officer at EC1).*

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12 *“They just want to satisfy a little market” (Deputy Director at GOV6).*

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14 Value-addition enhances the competitive advantage of exporting countries since
15 market access depends on competition among value-added chains (Gereffi and Lee,
16 2012). Also, the strategy of collective action can enable suppliers to gain faster
17 market access even if individuals have low capability (Roy and Thorat, 2008). The
18 findings in this study show that suppliers have not utilized the benefit of collective
19 action since each individual deals with the market directly. As a result, they do not
20 achieve economies of scale nor have access to food safety standards, international
21 trade information, loans and the necessary skills that could increase their chances in
22 global markets. The results also suggest that the focus of suppliers on the African
23 and Caribbean market (in the UK) is a significant problem at present affecting the
24 increase of its volume of exports. Moreover, the lack of value-addition largely hinders
25 the inclusion of developing countries because global horticulture value chains only
26 hold great prospects for value-added supply chains.

27 28 29 30 31 32 33 34 35 36 *Stakeholders’ incompetence*

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38 Problems such as insufficient export knowledge, the lack of information, the lack of
39 product knowledge, the lack of appropriate skills and inadequate training were
40 indicated by the stakeholders when asked about their experience of horticulture
41 product export. The respondents complained that stakeholders lack appropriate
42 export knowledge and skills:

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47 *“They lack knowledge of perishable export. Majority of them don’t know*
48 *the value of the vegetable. They just go into the business because*
49 *others are doing it” (Managing Director at FFC8).*

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53 *“We have people who are not knowledgeable in this field” (Deputy*
54 *Director at GOV6).*

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3 *“Again, there is no proper agricultural skill and this will not make*
4 *farmers stay in business” (Principal Agric. Superintendent at GOV2).*
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7 The Deputy Director at GOV6 highlighted the attitude of stakeholders towards
8 embracing good agricultural practices:
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11 *“The truth is that: one, people are not ready to follow good agricultural*
12 *practices. GAP is one of the things we should have like I told you –*
13 *how to do planting, planning, the story behind that export need to be*
14 *properly documented. Just like I said, we jump some of these things so*
15 *our export does not follow good practice. Like I said, anybody exporting*
16 *to those countries need to follow the rules. If you don't follow the rules,*
17 *you can't export” (Deputy Director at GOV6).*
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23 Adequate knowledge of global horticulture supply chains and stringent adherence to
24 requirements have a significant impact on export performance. An awareness of
25 good agricultural practices (GlobalGAP) (Ehlert et al., 2011) is one of the several
26 standards to comply with. According to the findings, suppliers are ignorant of these
27 standards and have not been complying with export regulations. In other words,
28 there is a need to adequately inform and teach them about the supply chain know-
29 how required to position them effectively for global trade participation.
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35 *Food safety and quality issues*

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37 Respondents named food safety and quality concerns such as non-compliance to
38 standards, pest-control issue, poor post-harvest handling and the lack of global
39 certifications resulting in confiscation of exported products as relevant barriers. The
40 following expressions confirmed this finding:
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45 *“Nigerian products, including this particular one, are not yet meeting*
46 *the international standard and I saw recently in the news that the UK is*
47 *rejecting some products from Nigeria. So for me, I think the major*
48 *challenge is standards” (Senior Economist at GOV4).*
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52 *“For example, my exporter had some products like ewedu (corchorus)*
53 *destroyed last few weeks. Products that mostly face rejection are*
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3 *ewedu, efinrin, bitterleaf and water leaf because they are not well*
4 *treated” (Managing Director at FFC8).*
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7 *“The GlobalGAP, that is, good agricultural practice, we don’t have it as*
8 *far as Nigeria is concerned due to the fact that we have not attained*
9 *the level we are supposed to attain. We don’t have farm assurers that*
10 *can assure each farm on the standard” (Zonal Controller at GOV1).*
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14 Two of the respondents emphasized that the food standards are too strict so they
15 cannot often predict the outcome of the screening process by the Department for
16 Environment, Food and Rural Affairs (DEFRA) in the UK. However, non-compliance
17 usually leads to rejection of exported products.
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22 *“The DEFRA normally come up with ewedu (corchorus) and they*
23 *normally say that they are not certified at times and they normally*
24 *confiscate it. At times, you cannot predict the UK people, their standard*
25 *being their standard no matter your explanation to them. So at times*
26 *you meet it; at times you don’t meet it” (Managing Director at EC2).*
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31 *“The major problem is the European Standard. Too many regulations*
32 *by the EU. This is because they don’t understand our food and our*
33 *things. Most times they put embargoes on things that are nothing”*
34 *(Customer Service Manager, AV3).*
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38 The responses above showed that exporting into the EU is not a simple issue,
39 therefore exporting countries should be prepared to comply with essential
40 regulations.
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44 Two interviewees expressed their concerns about the certification process
45 indicating that it might not be thorough since products certified by National Plant
46 Quarantine Service (NPQS) are still being confiscated.
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50 *“If it is not certified by the plant quarantine after the examination, it will*
51 *not be exported. It’s only the ones that has the phytosanitary certificate*
52 *that are allowed out of Nigeria” (Managing Director at EC2).*
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3 *“We’ve not been able to really identify the problem because to the best*
4 *of our knowledge we know we do fumigate and then we follow the rules*
5 *so we don’t see why it will get here and the DEFRA will still tell you*
6 *they saw white flies. It’s a major problem” (Marketing Director at EC4).*
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10 Another respondent noted that the standard compliance officials in the UK
11 sometimes compound the problems during the screening process:
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14 *“The problem is that we discovered recently that the host country, the*
15 *importing country does not help matters too. One, they require that*
16 *some products should be fumigated from Nigeria. But by the time it*
17 *gets to their warehouse too in the UK, they fumigated it again because*
18 *of lack of trust of whether it was properly fumigated. We discovered it*
19 *at a time my Executive Director and other agencies met to really know*
20 *why they reject from the UK. We discovered this double fumigation and*
21 *the UK government said they will work on it and we are trying to look at*
22 *that properly as well. By the time they do double fumigation, the*
23 *permissible level of chemicals would have been more and it will not be*
24 *good for human consumption” (Deputy Director at GOV6).*
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33 Fumigation is the process of treating perishable agricultural products with chemicals
34 (that are gaseous at room temperatures) to eradicate pests (Fernandez, 2015;
35 Hallman, 2017). Fumigation is a method of pest control which enables the removal of
36 harmful organisms on plant products in order to safeguard consumers’ health. As
37 demonstrated in this finding, it is difficult to satisfy international standards because
38 stakeholders do not have adequate knowledge about pest control measures. For
39 example, the Maximum Residual Level (MRL), which is the maximum level of
40 pesticides residue permissible on exported products, (European Commission, 2016)
41 is not known. Moreover, knowledge about good post-harvest handling required to
42 preserve the freshness, taste and quality of high-value agricultural products is
43 lacking (Shukla and Jharkharia, 2013). The results confirm that emerging market
44 economies do not comply with food safety and quality standards which is an integral
45 part of the requirements for exporting food products (Trienekens and Zuurbier, 2008;
46 Henson and Humphrey, 2010; Henson et al., 2011).
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3 The reason for non-compliance with food regulation standards has been attributed to
4 the high cost of compliance (Henson and Reardon, 2005; Maertens and Swinnen,
5 2009; Asfaw et al., 2010). Another important point indicated in the findings is that
6 although exported products were usually screened by NPQS, the National Plant
7 Protection Organization (NPPO) in Nigeria with the responsibility of ensuring a
8 systematic pre-export control and certification process is carried out to prevent or
9 reduce interceptions in importing countries (FAO, 2011), products still face rejection
10 implying that the certification process is not efficient.
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16 *High transaction costs*

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18 Total costs of transaction (such as cost of production, freight costs and transport
19 costs) are currently high and therefore have a negative effect on product prices and
20 suppliers' profit margins. The stakeholders emphasized that high transaction costs
21 are also a major problem that discourages their participation in GHVCs. The
22 following expressions confirm this finding:
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28 *"The freight charge too is part of it" (Cargo Operations Manager at*
29 *AV4).*

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32 *"Like I told you, freight charge, quarantine charge, and every other fee*
33 *are paid. By the time you do all that and you find out all what you have*
34 *paid is even more than the actual thing you are exporting. So on the*
35 *other end when I now get them sold, am I going to make all this money*
36 *back?" (Cargo Operations Manager at AV4).*
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41 Two interviewees noted that product prices are higher due to high transaction costs
42 and this consequently results in a lack of competition:
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46 *"Some past four/five years ago, Tony farm in Lokoja was about to*
47 *break through on cut flowers, especially Rose. I was part of the team*
48 *that monitored that farm. The flower was actually introduced from*
49 *Kenya as a seedling, so they brought it into the country, they multiply it*
50 *and tried to export it to England up to three times. But I learnt they lost*
51 *the market due to China's competition. China flood the market with*
52 *their product and it's a lot cheaper for people to buy China's own at the*
53 *expense of what people in Nigeria can sell. So we lost that market*
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3 *opportunity and the farm has to close down” (Zonal Controller at*
4 *GOV1).*

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7 *“When you put the cost of production in Nigeria together, to be*
8 *competitive over there is very very difficult. One, the cost of inputs here*
9 *are very exorbitant. Cost of fund, energy, so many things put together.*
10 *We discover that for them to compete over there by the time you put all*
11 *the airport logistics together is very high. So they can’t compete.*
12 *Everything about it is not just encouraging. You’ll rather produce and*
13 *sell in Nigeria. At a time there was Yako farm that was exporting*
14 *mangoes straight to London there, after some time because of cost of*
15 *production it stops. There was a time Nasarawa paper yam was*
16 *exported to the UK there but all of a sudden, it also stopped. When you*
17 *put cost of production in Nigeria together, it’s very very high” (Deputy*
18 *Director at GOV6).*

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27 Results show that high transaction costs incurred are due to institutional voids, the
28 lack of infrastructure and facilities and poor export conditions. Since high transaction
29 costs have a significant effect on product prices, suppliers’ competitive advantage in
30 the global market becomes low. This finding is consistent with Devlin and Yee (2005)
31 and Belwal and Chala (2008) who state that the overall cost of exporting is high in
32 developing countries thus inhibiting export.

33 34 35 36 37 *Export operational challenges*

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39 Problems identified include documentation issues, non-compliance to export
40 regulations, longer lead times, limited working hours, non-standardized export
41 system, bribery and corruption.

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45 Respondents highlighted the export process and the condition of the export terminal:

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48 *“It’s not up to standard if we are talking about the export warehouse.*
49 *It’s not up to standard, we are not prepared, and we are not ready. And*
50 *until something is being done that will make us expand more than what*
51 *we are doing now. What we are still doing is an individual effort” (Cargo*
52 *Manager at AV1).*

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3 *"It is a poor and unorganized system" (Managing Director at FFC8).*
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5 One of the issues raised was export documentation:
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8 *"And our people are not ready for documentation. Once they ask them*
9 *to do this and this, they will just tell you - I don't have time for that. So*
10 *that has been the basic thing that is affecting us from exporting. The*
11 *documentation aspect has been an issue" (Cargo Manager at AV1).*
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18 Emphasis was also placed on inadequate knowledge about export requirements:
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20 *"Majority of them lack exporting experience but they believe they know.*
21 *Products should be packaged separately. "For example, they mix up*
22 *the products concealing other products like bitter roots" (Managing*
23 *Director at FFC8).*
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28 Another concern raised by respondents was the short hours of operation (8a.m to
29 5p.m) at the export terminal however, the Business Manager at AV2 noted that it
30 was not an issue since the export of horticultural products is still at its infant stage of
31 development:
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35 *"The limited working hours doesn't affect our export. You know Nigeria*
36 *export is in its teething period. By the time it blows up very well, that*
37 *can be looked into as a possible way of expanding and promoting it.*
38 *But now, export is still in its teething period" (Business Manager at*
39 *AV2).*
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44 Two interviewees complained that they also struggled with bribery and corruption:
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47 *"The local barriers are there, too much charges from customs from this*
48 *from that, it ought not to be so. There's a high exploitation. After you*
49 *have undergone rigorous export procedure, a custom officer will still*
50 *expect you to give him some amount per kilo (Kg) which is exploitation.*
51 *So it's not encouraging export at all! That's the major major barrier at*
52 *least from the local aspect." (Marketing Director at EC4).*
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3 *“And we have problem of so many agencies– action of bribe before you*
4 *export vegetables from the airport “(Managing Director at EC2).*
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7 Compliance with international trade regulations is crucial for exporting countries/firms
8 as this determines entry into export destinations. Results confirm that consignments
9 that are not accompanied by satisfactory documents (such as adequately completed
10 phytosanitary certificate) are not allowed entry into importing countries supporting
11 EUROPHYT (2014) where the documentation issue is listed as one of the reasons
12 why consignments of plant, plant products and other regulated articles are
13 intercepted. A phytosanitary certificate is issued to certify that exported plant
14 products have conformed to the required criteria and are therefore fit for export.
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21 Export operations and the exporting environment should facilitate the smooth
22 logistics of horticultural products due their perishable nature (Sales, 2013). On the
23 contrary, the findings show that export procedures take longer time because of the
24 involvement of too many agencies carrying out documentation checks and also
25 because of a lack of automation. The time delays have an adverse effect on
26 horticultural products subjecting them to quick deterioration (Djankov et al., 2010).
27 Moreover, bribery and corruption hinders thorough pre-export checks.
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32 *Neglect of agriculture*

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34 Issues highlighted by respondents include a lack of investment in farming, the
35 subsistence system of farming, shortage of labor, heavy reliance on oil and
36 importation. Respondents pointed out that the Nigerian government has not yet
37 focussed on agriculture:
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42 *“We have good land mass, land that doesn’t even need fertilizer to*
43 *grow. Good land mass, it’s just that the government instead of them*
44 *having interest in agriculture, all their attention is just geared towards*
45 *oil. Thank God that the oil is dying now so we want the new*
46 *government to focus on agriculture” (Business Manager at AV2).*
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51 *“You know in Nigeria agriculture is not taken as a serious business. So*
52 *far, many have not actually engaged in it may be because of our*
53 *lackadaisical culture of farming. Here, people believe that where you*
54 *can quickly make money is through oil” (Zonal Controller at GOV1).*
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3 *“..... like the green beans that is coming from Kenya, we have*
4 *those kind of beans but it's not been developed. It's just that Nigerian*
5 *government overlook agriculture; they focus on oil! oil! oil! If they can*
6 *put half of what they are putting into oil into agriculture at least we'll be*
7 *there in no time” (Marketing Director at EC4).*
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11 Interviewees emphasized that the people do not show much interest in farming:
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14 *“We don't have enough people farming. People are lazy to farm. The*
15 *land is there but there are no farmers and the thing is that even to farm*
16 *to sell locally is also a big market honestly but there are no farmers!*
17 *We only export to the UK but there are other countries even in Europe*
18 *here, other areas that have not been explored at all” (Marketing*
19 *Director at EC4).*
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23 *“There is no real commercial farming, people are not interested in farm,*
24 *old hands are in the farm. Go to cocoa farm now, old trees are there;*
25 *nobody is planting new ones. Go to cashew, no one is planting new*
26 *ones. No rubber, nobody is planting new ones” (Deputy Director at*
27 *GOV6).*
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34 Another stakeholder however, stressed the need to engage in farming not only for
35 export reasons but also to facilitate agricultural productivity in the domestic market.
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38 *“Nigeria should take agriculture seriously. We need to have interest in*
39 *agriculture” (Customer Service Manager at AV3).*
40

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42 *“If it's export, it brings more income but the only thing is let the people*
43 *go back to the farm. At least there must be a product to export before*
44 *you think of exportation” (Cargo Operations supervisor at AV5).*
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48 While there are general comments about the neglect of agriculture by the
49 government, the response by AV5 shows that there is a need to focus on a certain
50 product, making it competitive.
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54 The high dependence on oil revenue has allowed Nigeria and its government to
55 ignore investment in the agricultural sector whereas with substantial investment, it
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can help alleviate poverty, increase global food security and enable environmental sustainability (FAO, 2014). The findings show that since farmers supplying international markets engaged in a subsistence rather than commercial farming, it is difficult to satisfy international demand with their low output. Moreover, good agricultural practices are lacking and this greatly hinders participation in the global trade of horticultural products because GlobalGAP requires adequate investment in farm resources in order to enhance pest control and traceability (Ehlert et al., 2011).

Existing airline market structure

Respondents reported that indirect flights, limited air connectivity and the lack of competition among airlines are some of the challenges facing horticulture export. They noted that British Airways is the major carrier and this is based on the premise that it operates a direct flight to the UK, its flight departure time is favorable to exporters and it has an established market presence:

“Only British Airways schedule flight move in the evening and get to Heathrow in the morning. They operate direct flight. Other airlines like Virgin Atlantic, Virgin Nigeria, also operate direct flights but they move in the mornings and get there in the evenings. So, the products get to the customer the next day. That is the reason we prefer British Airways. Other European airlines like KLM, DHL, Turkish, and Lufthansa are connecting flights. They get to their hub before connecting to the UK and because these products are perishable items, it is not advisable to use them” (Managing Director at FFC8).

“BA move directly from Lagos to London but our own flight move from Lagos to Belgium. We have to truck it from Belgium to London. We can't compare what we are going to go through with BA, so that's the reason why most of them use direct flight. For us, what we do is twice in a week” (Cargo Manager at AV1).

“Other airlines operate different flights. BA has direct flights to London” (Export Manager at EC3).

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3 *“From our own perspective, our time of departure affect it. They are not*
4 *ready to work our time. Exporters want it to go that same day and it’s*
5 *not that possible” (Cargo Operations Supervisor at AV5).*
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9 One of the respondents raised air connectivity as a problem:

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11 *“One of the things that is not enabling export is that some countries*
12 *that will want our vegetables also, we are not having the airline to*
13 *connect the flights” (Operations Manager at FFC6).*
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17 Two of the interviewees highlighted the effect of this lack of competition:

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19 *“The vegetables that come by air, the major carrier is BA and their*
20 *charges are also high because they don’t have competition so they just*
21 *do it anyhow. You know and nobody is also saying anything. If you*
22 *wanted to do may be 2 tons, because of the cost you’ll say no, I can’t*
23 *afford to do it so let me reduce it to 1ton or even ½ a ton which is also*
24 *limiting export.” (Marketing Director at EC4).*
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30 *“Even when the customer comes very early in the morning, they know*
31 *that AV1 flight will be going by 2 0’clock and shipment has to be ready*
32 *by 12noon. So they will delay in a way that they will not be able to give*
33 *it to us by that 12. So at the end of the day, it will miss connection. So*
34 *at the end of the day, they will have to give it to BA. If the customer or*
35 *the agent did not do their paper work properly, or they don’t complete*
36 *their export process, they can have delay at the export shed there to*
37 *the extent that we will no longer be able to send it on our flight. Those*
38 *are the basic challenges that we have” (Cargo Manager at AV1).*
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46 The scheduled flight time and the need to use a direct flight to achieve same day
47 delivery have forced suppliers to transport perishables through British Airways, the
48 major carrier. This implies that the airline market is not particularly competitive. The
49 findings show that suppliers preferred direct flights to indirect flights (hub and spoke
50 model) operated by most other airlines to ensure the timely delivery of horticultural
51 products. This evidence supports the study by Djankov et al. (2010) that extended
52 travel time spent during transit when an indirect flight is used may have a significant
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3 effect on product quality. The current airline market structure affects HPE since it is
4 dominated by an airline whose services may sometimes not satisfy suppliers.
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7 Direct observation validates the findings therefore producing robust empirical
8 evidence. It should be stressed that neglect of agriculture and the airline market
9 structure identified by the respondents are barriers not indicated in previous studies.
10 They constitute major barriers to participation of Nigeria in GHVCs.
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14 15 **Conclusions and scope for further research**

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17 The purpose of this paper is to explore the barriers hindering the participation of
18 Nigeria in global value chains, particularly global horticulture value chains. Based on
19 thematic analysis of the empirical investigation, the study shows that the main
20 barriers are the current institutional framework, infrastructure and logistics issues,
21 market penetration issues, stakeholders' incompetence, food safety and quality
22 issues, high transaction costs, export operational challenges, neglect of agriculture
23 and the existing structure of the airline market.
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30 This study has highlighted that the lack of supportive policies and institutional
31 support affect participation in GHVCs. This suggests that there is a need to set up
32 horticulture development policies and strategies to enhance horticulture export.
33 Similarly, appropriate institutions should co-operate to create awareness about the
34 requirements of global trade and guide stakeholders accordingly. The results show
35 that the stakeholders lack export and product knowledge. It is therefore important to
36 educate them through adequate training and skill empowerment programmes to
37 improve their supply chain capabilities. Moreover, it would be essential for relevant
38 institutions in developing countries to ensure compliance to international food safety
39 and quality standards throughout the supply chain as this will have a spillover effect
40 of safeguarding the health of consumers even in domestic markets.
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49 From a managerial perspective, it is crucial for developing countries to adopt
50 upgrading strategies to enhance their involvement in GHVCs (Gereffi, 2005). This
51 implies that their focus should be on high-value products rather than the traditional
52 low-value products. GHVCs aim to provide consumers with convenience and high
53 quality products which means that the capabilities of suppliers will be improved to
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3 meet this demand. It is therefore fruitful for suppliers of horticultural products to
4 incorporate additional value into the supply chain (McCulloch and Ota, 2002; Goyal
5 and Sharma, 2009), processing the raw products further by sorting, cleaning,
6 trimming, weighing and pre-packing them to meet buyers' (especially large
7 retailers/supermarkets) requirements and demand for convenience food.
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11 This study offers new contributions to the literature on GVCs. The findings show that
12 neglect of agriculture and the airline market structure are also important barriers that
13 inhibit the participation of emerging markets in GHVCs. This is different to results
14 presented in other studies. The underpinning reason for these findings is that Nigeria
15 has focussed on oil as the primary export product and source of national income. As
16 a result of its sole reliance on oil, the country has not engaged in local innovations as
17 emphasized by Gereffi (1995) as a critical factor required for export success. In other
18 words, its policies, institutions, infrastructure, facilities, export and supply chain
19 processes have not undergone restructuring to facilitate diversification into HPE.
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23 One of the research limitations is that the study has focussed on the analysis of five
24 stakeholder groups in the upstream of the supply chain. Since adequate knowledge
25 is the key to participation in GHVCs, future research could include stakeholders in
26 the downstream of the supply chain (importers, wholesalers and retailers) in an
27 empirical investigation to provide new valuable insight. Although many emerging
28 markets have a feature of institutional voids, the variety and composition of their
29 natural resources differs and this might have a significant effect on their degree of
30 participation in GHVCs. Therefore, further research is needed in emerging markets
31 that have a similar context to Nigeria before generalizing the results. Moreover, it
32 would be beneficial if a future study investigates how institutions in developing
33 countries could collaborate to support the participation of suppliers in GHVCs.
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