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Research Article

Strategies to Boost Horticulture Development

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ABSTRACT
Developing nations face sluggish growth in the horticulture sector which is seen in declining exports. Though government makes efforts by way of setting fresh produce hubs, agricultural loans, and agricultural extension services and training; imports for horticultural produce are not growing and local produce dominates only in informal markets. Namibia is no exception. Hence, adopting a qualitative research approach and data collection through semi-structured interviews, questionnaires surveys, document analysis, and observations, this study explores the role of competitive strategies to augment horticulture sector growth and development for the public advantage. Findings show that competitive strategies generally exist but are not diffused and adopted to their full potential. Sporadic cases of excelling in differentiation and niche market focus were found among the exporter commercial producers who were also excelling in the diffused and adopted attributes of competitive strategies. Recommendations are cooperative and government protection for smallholder producers and traders

1. Introduction

Production of fresh fruit and vegetables, referred to as horticulture has grown rapidly in a number of countries in sub-Saharan Africa over the past decade. Although horticulture business centres have been set, research on how horticulture business centres could be competitive has been minimal[1-5]. This is in the face of the comparative advantage that sub-Saharan African countries possess, namely: climatic conditions, preferential agreements, limited government controls and low labour costs. On another note, the horticulture trade has many characteristics of a buyer driven commodity chain and hence it needs to be competitive for both growth and sustainability. Therefore, emerging economies including Namibia, strive for positioning in the horticultural sector at domestic and global developed markets. The theory of competitive advantage is based on cost and differentiation. This theory application may serve to unlock the competitiveness of horticultural sector[6-10]. Based on these Porter's generic competitive strategies, the basic competitive strategies, are: cost leadership, differentiation, growth and alliance.

Consequently, studies in Kenya, Ethiopia, Zimbabwe and Zambia have recommended attributes of competitive strategies for the horticultural sector's growth, such as: collaborations, consistency, environmental sustainability, quality, reliability, safety and social welfare, sustainability, traceability and value addition. On a related note, private sectors in the US have similarly adopted; contracting, third party safety and quality audits, and industry maintained-standards to improve efficiencies and product differentiation [16-18]. Though, the attributes of competitive strategies stem from Porter's concept of competitive strategies, the use and understanding of the horticultural sector competitiveness stems from the international trade theories and concepts of mercantilism, absolute advantage popularised and introduced, and Ricardo's comparative advantage concept. Borrowing from international trade theory, firms may derive and sustain competitive advantage via, monopoly rent (protection based), Ricardoian rent (ideology, leadership and resource based) and/or Schumpeterian rent (continuous improvement on quality and feature via innovation based)[11-15].

According to the statistics of the International Trade Centre (ITC), 2020's, the world's average horticultural trade has a negative trade balance of -N$84.3 billion as depicted in Table 1.

Table 1. Average World Trade Balance of the Horticultural Sector 2010 to 2019

Horticultural Sub-sectors	World Trade Balance
Vegetables	-N$ 2 billion
Fruits	-N$ 82.3 billion
Average World Trade Balance: Horticultural Sector	-N$ 84.3 billion

Source: International Trade Centre (ITC), 2020

Table 2 indicates an average trade balance of the horticultural sector in Southern Africa Development Community (SADC) countries.

Table 2. Average SADC Trade Balance of the Horticultural Sector 2010 to 2019

SADC Countries	Vegetables Trade Balance	Fruits and Nuts Trade Balance	
South Africa	N$ 886,2 million	South Africa (World 4th)	N$ 46,7 billion
Zambia	N$ 28,9 million	Tanzania	N$ 3,02 billion
Malawi	N$ 346 000	Mozambique	N$ 810.6 million
Madagascar	N$ 302 000	Namibia	N$ 187,5 million
Mozambique	N$ 94 000	Malawi	N$ 148,1 million
Namibia	-N$ 171 million	Madagascar	N$ 107,8 million

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		Zimbabwe	N$ 64 million
Other SADC Countries	Negative Trade Balance	Eswatini	N$ 17.4 million
		Other SADC Countries	Negative Trade Balance

Source: International Trade Centre [ITC] (2020)

Table 3, respectively, indicates Namibia horticultural sector's trade balances in trading with SADC countries and with the world in totality.

Table 3. Namibia's Average Horticulture Trade Balances with SADC and World 2010-2019

Namibia Sub-Sectors' Trade	SADC Countries	Trade Balance
Vegetables sub-sector	South Africa	-N$ 370, 7 million
	Botswana	-N$ 606 000
	Zambia	-N$ 938 000
	Angola	N$ 12,9 million
	Democratic Republic of Congo	N$ 43 000
Fruits & Nuts Sub-sector	South Africa	-N$ 273,5 million
	Botswana	-N$ 144 000
	Angola	N$ 1,7 million
	Mauritius	N$ 245 000
Namibia Trade with World	Trade Balance	
Vegetables Sub-sector	-N$ 171 million	
Fruit and Nuts Sub-sector	N$ 187.5 million	
Average Namibia's Horticulture Trade Balance with the world	N$ 16.5 million	

Table 1, 2 and 3 show that Namibia is one among the countries with the least horticulture trade balances, namely N$ 16.5 million as an average trade balance over the last ten years. It is shown in the table that countries like Angola and Botswana have low competitive positions in both sub-sectors of horticulture. From the international trade perspective, Namibia has a low competitive position in vegetables and a better position in the fruit and nuts subsector, attributed to production and export of grapes and dates from Karas, Hardap and Kunene regions. Besides South Africa who exports horticultural produce and products to almost all SADC countries, seems to have minimal horticultural trade among SADC countries. Studies on horticulture competitive strategies are minimal ensuing in untapped comparative advantage that SADC countries possess. This has resulted in sluggish growth of the horticultural sector in developing countries including Namibia. Moreover, the competitive strategies for enhanced growth of the horticultural sector are never developed in Namibia's context. Hence, the need to explore the role of competitive strategies to remedy sluggish growth of horticultural sector and develop the same.

Hence, based on the 'diffusion of innovation theory', adopting the qualitative research approaches, the study intends to investigate the role of competitive strategies for enhanced growth of Namibia's Horticultural sector.

2. Literature Review

Extension of globalisation poses both opportunities and challenges for developing countries. This could be exacerbated by the prevailing climate change and the awaited 4th Industrial Revolution. The occurrence of Covid-19 instantaneously disrupted the supply chains in the horticultural sector, resulting in both imports and exports facing chances of decline, and this will impact prices of inputs, services, final products, inflation and exchange rates

3. Evolution of International Trade Theory

Figure 1 illustrates the international trade theory evolution.

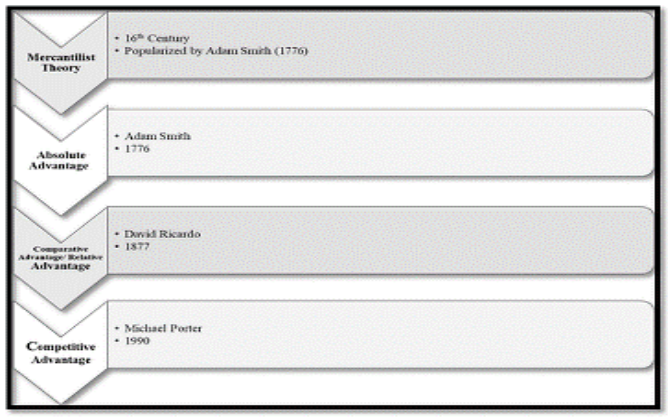

Figure 1. international trade theory evolution

Pre-classical writers on international trade theory described mercantilism as "protectionist". Mercantilism suggests that it is in a country's interests to maintain a trade surplus: to export more than it imports, a trend that led to colonialism in an attempt to secure raw materials. The mercantilist policies are critiqued to only benefit certain members of the society. To achieve this 'zero-sum game' government interventions are advocated. Smith's absolute advantage theory encouraged nations to specialise in products they are efficient in producing, while participating in global free trade to advocate global efficiency. Although labour was the only concern factor of production, a country using less resources to produce than another country has an absolute advantage. Absolute advantage provides benefits of workers becoming more skilled and specialised, reduce waste of time and resources due to shifting from one product type to another and thereby repeated similar production cycles incentivise the development of more effective working styles. The expectations of these neo-mercantilist are for every country to have at least a trade surplus in something that they can do better, while importing what they are less efficient in.

Subsequently, David Ricardo (1877) as cited in Case and Fair (2002) gave the theory of comparative advantage, by arguing that specialisation and free trade will benefit all trading partners, even the absolutely efficient, hence a 'positive sum game'. A country may have absolute advantage in multiple products, but relatively not at the same extent, moreover, a country may have both absolute advantage and comparative advantage. The Ricardoian theory has therefore advocated for a country to specialise in services and products it can produce relatively efficiently and resultantly enhance global efficiency through international free trade. The neo-

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classical theory is factor based, hence engulfed by globalisation and technology. International trade and foreign investment may improve a nation's productivity, inversely; it may be a threat. Efficient producers may as well result from specialisation through 'the economies of scale'. A new theory should not only consider costs as a matter of concern and but should further explain the reasons for some companies in some nations are better than others at creating advantages due to better quality, features and new products innovation. The theory of competitive advantage is based on cost or differentiation. It is against this background that the theory of competitive advantage is gaining momentum. This is simply because no nation can be competitive in everything; the ideal is to deploy the resources into more productive uses.

National competitiveness is defined as the set of institutions, policies and factors that determine the level of productivity. Competitiveness is defined as the degree to which under the free and fair market conditions, a country produces goods and/or services that meet the test of competition. "The true definition of competitiveness is the ability of a region to export more in value-added terms than imports". Namibia as a nation came out as 90th in the Global Competitiveness Index of 2017-2018, downgraded from 84th in 2016-2017. At SADC level, Namibia is third in competitiveness, after South Africa and Botswana being first and second respectively. Despite high competitiveness of Namibia's economy at large, contribution of horticulture to this is not high. A competitive sector should have the ability to sustain profitability through gained and maintained domestic and foreign market shares. It is therefore risky for a sector to only survive on government protection basis, which is not what competitiveness entails. The question is, are government protections on horticultural commodities sustainable. The classical economists' praise of production factors is assimilated by globalization and technology, as anyone can invest anywhere in the globe and may import raw materials due to possession of technology.

4. Competitive Strategies Attributes for Horticultural Sector Enhanced Growth

As initially and extensively published by Michael Porter during the 80s, strategies allow organizations to gain competitive advantage, on the basis of; cost leadership, differentiation and focus, which Porter also referred to as 'generic competitive strategies'. A competitive sector possesses sustainable ability to profitably gain and maintain market share in domestic and/or foreign markets. The role of competitive strategies need not be taken lightly. Nonetheless, none of the studies have explored the role of these competitive strategies in horticultural sector in Namibian context. These competitive strategies may not come to fruition if companies do not apply stringent standards. "There must be stringent standards for product performance, product safety, and minimization of environmental impact and for companies to improve quality, upgrade technology and provide features that respond to consumer and social demands".

Horticultural market is much more buyer driven, hence dictates what is to be produced, at what cost, product variety, quality, food safety, delivery, quality systems, which becomes a sieve as to producers and processors will access the horticultural values chains (Dolan et al., n.d). Apart from government regulation, suppliers have set up quality and safety initiatives to retain consumers' confidence in food systems, differentiate products, protect the brand and control costs, hence, improve competitiveness. "Highly dynamic market segments have emerged for which price is a secondary or a tertiary competitive factor, with emphasis on value addition, convenience, safety and traceability". Multinational buyers, more so, high value horticulture markets demand food safety, quality standards and corporate sustainable responsibility. While spot markets are becoming less important, standing order contract farming is often unsuccessful with smallholder growers, due to lack of quality control, consistency, flexibility, traceability systems, compelling some large traders to backward integrate and these attributes would enable local businesses to connect to international value chains.

Figure 2 summarises the literature on attributes of competitive strategies for enhancing the horticultural sector's growth.

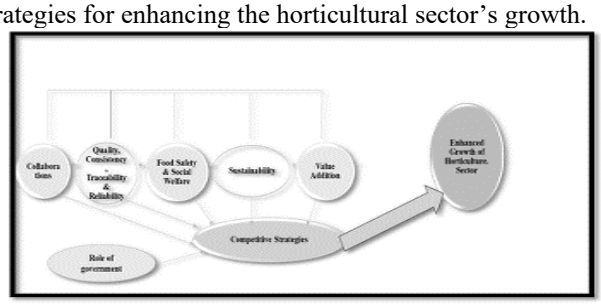

Figure 2. Competitive Strategies Attributes to Enhance Growth of Horticultural Sector

5. Conceptual Framework

Borrowing from the concept of 'competitive advantage' which stemmed from the international trade theories and concepts, studies in Kenya, Ethiopia, Zimbabwe, and Zambia recommended competitive strategies, as well the attributes of competitive strategies worth diffusing and adopting for horticultural sector's growth. Further, innovations are associated with characteristics of relative advantage, compatibility, complexity, observability and personal factors. Figure 3 gives the conceptual framework.

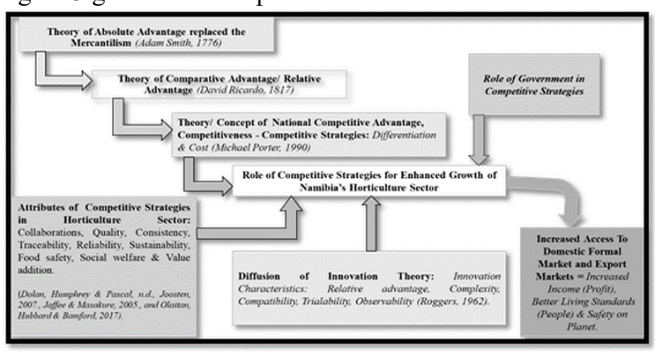

Figure 3. Conceptual Framework

No study known has critically analysed the perception of usefulness, ease of use and intentions to use the competitive strategies (innovations) in Namibia's horticultural sector, which is critical for speedy adoption. Diffusion of innovation theory and the Technology Acceptance Model, both share some key constructs. Assumptions in the study are therefore

that end users who perceive usefulness and easy understanding of use of competitive strategies are likely to adopt competitive strategies. This is because the decision to adopt is in the adopter's hand and wrong innovations can also be adopted. However, the government has the potential to influence or enforce apt innovation adoptions.

Table 4 showing innovation characteristic and potential barriers relationship for adoption

Table 4. Innovation Characteristic and Potential Barriers Relationship for Adoption

Perceived Attributes (Innovation Characteristic)	Questions to Authenticate Potential Barriers for Adoption of Innovation	Application
Relative Advantage	Collaborations are not tried in Namibia's horticultural sector?	Perceived beneficiation from an innovation increases chances of its adoption.
Compatibility	Is it convenient to use the innovation? Is it against the norms and traditional beliefs? Are the innovations set up organized in a state?	The innovation that matches the needs and values of the target adopter has high chances to be adopted.
Complexity	Is there knowledge and skills of using the innovation? What are the risks involved, when it comes to performance failure or safety?	Innovations that are complicated in making are unlikely to be adopted.
Trialability	Do targeted adopters have the knowledge and capacity to try?	Innovations that provide chances to try (e.g. by early adopters) before adoption has higher chances of adoption.
Observability	Are there role models for targeted adopters to observe? Are potential adopters aware or knowledgeable about the existence of innovation?	When an innovation is seen to be working can easily be adopted that the one that is never seen.

Some of the diffusion strategies that companies may embrace to foster speedy adoption of innovations may include: partnerships, encouraging favorable government regulation, pricing, actions to spread knowledge and meeting choices of customers while managing costs but changing features.

6. Methodology

The study adopted a qualitative research approach with exploratory research design based on inductive research approach. The study population was 120 people consisting of key personnel or key members of thirty (30) pertinent stakeholder organisations, whereby 75 people from the study population were sampled as a unity of analysis. A non-probability 'generic purposive sampling' was initially used to establish the respondents to the study interviews. In addition to thirty (30) interview respondents, forty-five (45) people were also part of the sample from the study population, hence the total respondents is 75 to the online questionnaire. The data collection used a hybrid method for primary data collection, namely: interviews, questionnaires, documents review and observations. Firstly, face to face and telephone interviews were conducted with at least one (1) key personnel from one of the organizations. Secondly, the researcher emailed and put online, survey questionnaires consisting of non-structured and structured questions were used on primary data collection from employees and members of pertinent stakeholder organizations. These discussions were useful in bringing to light competitive strategies, initiatives and interventions that are important for the horticultural sector and country at large. Thirdly, observations were also done to support the data collection through interviews and survey questionnaires. On the other hand, secondary data was collected from public and organizational documents. After the data was collected, a qualitative analysis method called thematic analysis was used to analyze the data from the interviews, survey questionnaires, documents and observations. On the other hand, the data gathered through survey questionnaires was first organized by use of descriptive statistics with the aid of an online survey platform called QuestionPro. Descriptive statistics that included the calculation of means, standard deviation, and frequencies (percentages) of item scores were analyzed through graphs, tables and charts. The collected qualitative data was transcribed, edited, classified and an induced thematic data analysis was performed.

7. Data Presentation and Analysis

This section displays the background information of the respondents to the study. The data obtained through semi-structured interviews, observation and documents review was obtained from 75 people as key officials or key members of thirty (30) pertinent stakeholder organizations. These included seven (7) state owned enterprises officials, sixteen (16) government officials, two members of traders' associations (formal & informal) and seven (7) members of farmers' associations. Through online questionnaire surveys, forty-five (45) respondents provided data.

These were also either key officials or members of thirty (30) stakeholder organizations outlined in table 5.

Table 5. Study Sample for Interviews, Observation, Document Reviews and Allocated Codes

01	02	03	04	05	06	07	08	09	10	11	12

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SOE Official	SOE Official	GRN Official		SOE Official	TA Member	FA Member	FA Member	TA Member	SOE Official	GRN Official	GRN Official	GRN Official
13	14	15		16	17	18	19	20	21	22	23	24
SOE Official	SOE Official	GRN Official	GRN Official	GRN Official	GRN Official	GRN Official	GRN Official		GRN Official	GRN Official	GRN Official	GRN Official
25	26	27		28	29	30						
FA Member	FA Member	GRN Official		GRN Official	SOE Official	FA Member						

Keys: SOE = State Owned Enterprise, GRN = Government, TA = Traders' Association, FA = Farmers' Association

Table 6 information of demographic information for questionnaire survey respondents.

Table 6. Demographic Information for Questionnaire Survey's Respondents

1. Age (43 respondents)									
21 to30	7	31 to 40	14	41 to 50	14	51 to 60	4	60 +	4
2. Gender (43 respondents)									
Male			23	**Female**					19
3. Marital Status (43 respondents)									
Married	23	Never Married	19	Divorced	0	Widowed			0
4. Education Level (43 respondents)									
Primary Education		2		Secondary Education	7	Tertiary Education			33
5. Occupation (44 respondents)									
Large Scale Farmer	1	Smallholder Farmer	13	Retailer/ Exporter/ Distributor	5	Informal Vendor			1
State Owned Enterprise Official			20	Government Official					4
6. Number of Years in Current Occupation (43 respondents)									
Less Than 3 Years	13	Between 3 Years and 5 Years	13	Between 6 Years and 10 Years	7	Longer Than 10 Years			10

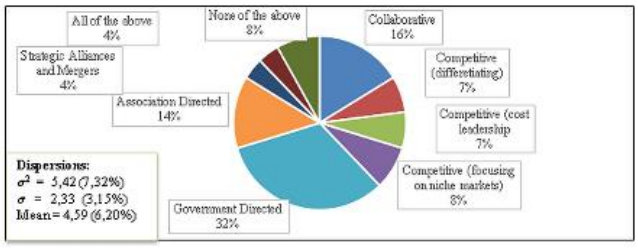

Figure 4. Percentage Response on Competitive Strategies Adopted

Figure 4 above presents the competitive strategies, mentioned by questionnaire respondents to have been adopted by Namibia's horticultural sector in general. Following the frequency rule, government directed is the competitive strategy that is most highly adopted in Namibia's horticultural sector, considering 32% of question seven (7) responses. The second most highly adopted competitive strategy in the sector is collaborations, which received 16% of the responses. Association directed which received 14% of responses was the third most highly adopted competitive strategy. The rest of competitive strategies received below (8,11%) of the responses which is the peak range of standard deviation from the mean, implying that they are adopted to a lesser extent and these are namely: focus on niche markets (8%), differentiation (7%), cost leadership (7%) and strategic alliances and mergers (4%). Eight percent (8%) of the respondents said none of the competitive strategies were adopted in Namibia's horticultural sector, whereas four (4%) said all of the above competitive strategies are adopted, which are also below 8, 11% of the responses. However, none to choices received responses below 3% of responses, which would have otherwise been an extremely lesser extent of adoption.

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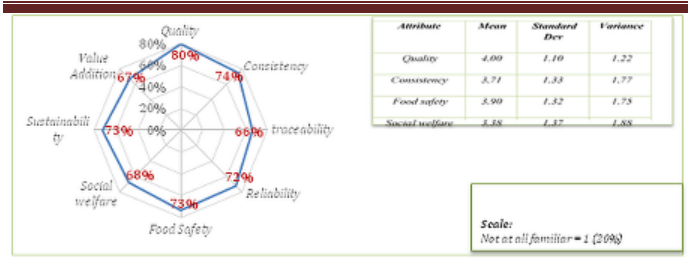

Attribute	Mean	Standard Dev	Variance
Quality	4.00	1.10	1.22
Consistency	3.71	1.33	1.77
Food safety	3.90	1.32	1.75
Social welfare	3.38	1.37	1.88

Figure 5. Percentage Responses in Familiarity for Attributes of Competitive Strategies

Figure 5 above presents the attributes of competitive strategies, mentioned by questionnaire respondents to be familiar or important to the horticultural sector in general. Following the frequency rule, all seven factors qualify to be called attributes of competitive strategies for horticulture in Namibia as they all scored above 60% as a mean percentage. This was based on a Likert scale of Not at all familiar =1 (20%), Slightly familiar =2 (40%), Moderately familiar = 3 (60%), Very familiar = 4 (80%) and Extremely familiar =5 (100%). However, the most important attribute is quality, followed by consistency, food safety, sustainability, reliability, social welfare, value addition and lastly, traceability

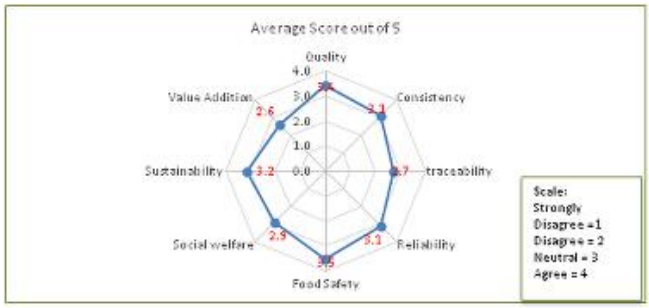

Figure 6. Average Score re Extent of Adoption of Competitive Strategies Attributes

Figure 6 above presents the extent to which the attributes of competitive strategies for horticulture prevail in Namibia's horticultural sector, therefore adoption. Unfortunately, only food safety among the 7 attributes of competitive strategies had a mean score that was above neutral and close agree (food safety (mean 3.5, standard deviation 0.83 & variance 0.68). Quality (mean score 3.4, standard deviation 0.86 & variance 0.74), consistency (mean score 3.2, standard deviation 0.89 & variance 0.79) and reliability (mean score 3.1, standard deviation 0.77 & variance 0.60) where above neutral but far below agree. That means these attributes are somewhat agreed to be prevailing or adopted.

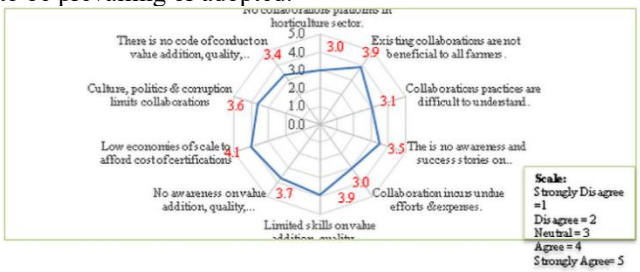

Figure 7. Average Score Responses in Agreement of Prevalent Shortcomings

Figure 7 above presents the shortcomings existing in the strategies of Namibia's horticultural sector, though at different intensities. By applying the frequency principle, the following issues were agreed to by most respondents as the shortcomings existing in the competitive strategies of Namibia's horticultural sector.

- Low economies of scale (mean score 4.1, standard deviation 0.74 & variance 0.55),
- Benefits from existing collaborations (mean score 3.9, standard deviation 1.07 & variance1.14),
- Limited skills (mean score 3.9, standard deviation 1.03 & variance 1.07),
- No awareness on attributes of competitive strategies (mean score 3.7, standard deviation 0.90 & variance 0,81),
- No awareness and success stories (Mean score 3.5, standard deviation 1.13 & variance1.28) and,
- Culture, politics, and corruption (mean score 3.6. standard deviation 1.06 & variance 1.13).
- However, respondents were somehow neutral in agreeing for the following issues to be existing shortcomings in Namibia's horticultural sector.
- Collaboration require undue efforts and expenses (mean score 3.0, standard deviation 0.88 & variance 0,77),
- No platforms of collaborations (mean score 3.0. standard deviation 1.30 & variance 1.69),
- Difficult to understand collaborations (mean score 3.1, standard deviation 0.96 & variance 0.92) and,
- No code of contact on strategy attributes (mean score 3.4, standard deviation 1.08 & variance 1.16).

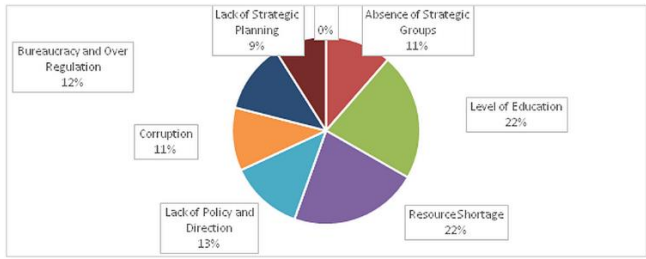

Figure 8. Percentage Responses re Limitations in Strategies for Horticultural Sector Growth

Figure 8 above presents that resource shortage (23%), level of education (22%) were the main limitations found in strategy to growth of horticultural sector in Namibia, as per frequency rate of question responses. Lack of policy and direction (13%), bureaucracy and over regulation (12%), absence of strategic groups (11%), and corruption (11%) were not so highly chosen to be limitations to the sector's growth.

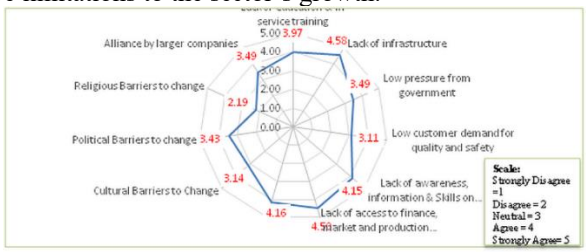

Figure 9. Other Strategy Limitations Preventing Enhanced Horticultural Sector Growth

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Figure 9 above indicates that questionnaire respondents think the following limitations do prevail in limiting Namibia horticultural sector's enhanced growth, as based on the high mean responses, low standard deviation and variance namely:

- Lack of infrastructure (mean score 4.58, Standard deviation 0.64 & Variance 0.40),
- Lack of access to finance, markets and production resources (mean score 4.50, standard deviation 0.74 & variance 0.55),
- Lack of collaboration on private standards and code of contact (mean score 4.16, standard deviation 0.89 & variance 0.79),
- Lack of awareness, information and skills on innovation (mean score 4.15, standard deviation 0.74 and variance 0.55),
- Lack of education and in-service training (mean score 3.79, standard deviation 0.81 & variance 0.66).

The rest of the factors emerged not to be so likely limited enhanced growth of Namibia's horticultural sector, namely:

- Low pressure from government (mean score 3.49, standard deviation 1.22 & variance1.49),
- Low customer demand for quality and safety (mean score 3,11, standard deviation 1.04 and variance1,07),
- Cultural barriers to change (mean score 3.14, standard deviation 1.14 & variance 1.30),
- Political barriers to change (mean score 3.43, standard deviation 1.19 & variance 1.42),
- Religious barriers to change (mean score 2.9, standard deviation 1.09 & variance 1.19),
- Alliance by larger companies (mean score 3.49, standard deviation 0.93 & variance 0.87.

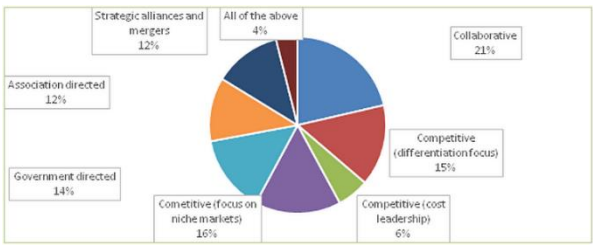

Figure 10. Percentage of Responses for Recommending Competitive Strategies Adoption

Figure 10 above present the rate at which various strategies are recommended for adoption by Namibia's horticultural sector. Based on the response rate, collaborative (21%), Competitive [focus on niche markets] (16%), Competitive [differentiation] (15%) and Government directed (14%) were the most recommended strategies to be embraced by Namibia's horticultural sector.

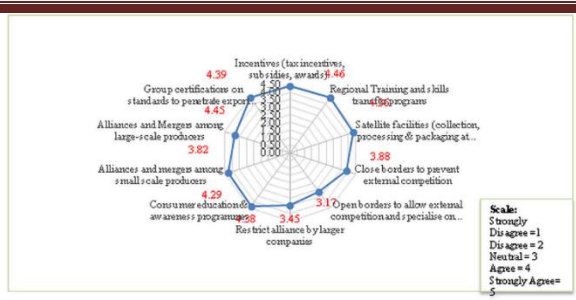

Figure 11. Initiatives/Actions Recommended re Competitive Strategies to Enhance Growth

Figure 11 above presents how the indicated initiatives will improve competitiveness of Namibia's horticultural sector strategy. The following initiatives were highly perceived to improve Namibia Horticultural sectors' growth, based on the highest mean score from the respondents to the question, namely:

- Regional training and skills transfer programs (mean score 4.46, standard deviation 0.55 & variance 0.31)
- Group certification on standards to penetrate export markets (mean score 4.45, standard deviation 0.75 & variance 0.56)
- Incentives [tax incentives, subsidies & awards] (mean score 4.39, standard deviation 0.72 & variance 0.52)
- Consumer education and awareness programs (mean score 4.38, standard deviation 0.63 & variance 0.39)
- Satellite facilities [collection, processing & packaging at constituency level] (mean score 4.36, standard deviation 0.71 & variance 0.50)
- Alliances and mergers among small scale producers (mean score 4.29, standard deviation 0.80 & variance 0.64)
- Close borders to prevent external competition (mean score 3.88, standard deviation 0.89 & variance 0.79)
- Alliances and mergers among large scale companies (mean score 3.82 standard deviation 0.95 & variance 0.91)

On the other hand, restricting alliances by larger companies (mean score 3.45, standard deviation 0.97 & variance 0.94) and opening borders to allow external competition while specialising on competitive (high value) products only (mean score 3.17, standard deviation 1.24 & variance 1.53) where the least chosen initiatives.

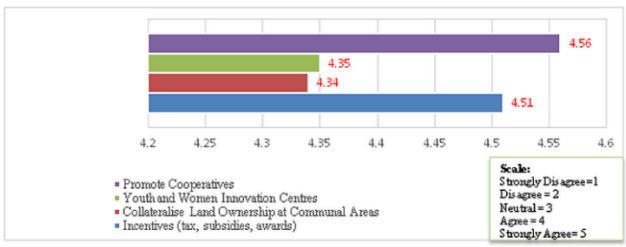

Figure 12. Initiatives Recommended for Inclusion of Youth and Women

Figure 12 present that promoting cooperatives (mean score 4.56, standard deviation 0.66 & variance 0.44) is the most initiative with potential to ensure inclusion of women in

horticultural sector, followed by incentives [tax exemption, subsidies & awards] (mean score 4.51, standard deviation 0.08 & variance 0.65), youth and women innovation centers at constituency level (mean score 4.35, standard deviation 0.68 & variance 0.46), and collateralization of land ownership at communal areas (mean score 4.34, standard deviation 0.81 and variance 0.66) respectively. None of the listed initiatives disagreed on not to help in inclusion of youth and women.

8. Findings Discussion

Findings discussion is presented as per the following themes and sub themes.

Theme 1: Current Competitive Strategies Adopted

- ***Existence of Government Directed:*** Based on 40% of the interviews, NAB border closure mechanism, MSP rule of 47% local purchases to qualify for importation of vegetables, growth at home strategy by Ministry of Industrialization, Trade and SME development, Absence of strategic plans at association level and questionnaire responses of 32%, government directed were found to exist in horticultural sector.
- ***Existence of Association Directed:*** Based on only 3% of interviews, associations of traders and producers (NAHOP producers) known to the researcher, NATFP (traders), NISO (informal sector) and Grapes Producers Association, plus the observed absence of strategic plans at association level and average questionnaire responses of 14%, association directed is partly found to exist in horticultural sector, though it is not functional and beneficial as expected.
- ***Existence of Collaboration:*** Based of 13% of interviews, 16% of average questionnaire responses and observed existing associations as indicated above, supported with the collaborations call from the Agronomic Industry Act No 20 of 1992, horticultural sector can be referred to as partially collaborative, though more needs to be done on collaborations to make a meaningful impact on the growth of the horticultural sector.
- ***Existence of Competitive (Niche Markets):*** Based on only 7% of interviews, 8% of average questionnaire responses and after perusing the export statistic of NAB (2019), it came to light that there are some actors taking advantage of international niche markets for grapes, dates, asparagus, blue berries, English cucumber and carrots. During the interviews it was established that the exporter commercial producers meet the global standards of those products and they possess certifications.
- ***Existence of Competitive (Differentiated):*** Based on 10% of interview respondents that said there is differentiation in horticultural sector, and 7% of average questionnaire responses, differentiation partly exists in horticultural sector. In addition, the annual reports of NAB have indicated that for some vegetables such as tomatoes, onions, watermelons, butternuts and cabbages, the market is used to overflowing with domestic supply during the in-season, however, huge supply shortfalls are experienced during the out of season months. This is an indication of the absence of diversification, when producers plant the same products at the same time, though it is driven by seasonality. Producers who manage to supply vegetables out of season are observed to have fetched better prices. By also considering some brands, observable at local retail shops, it is a sign that some producers are trying their best to differentiate their produce from the rest in the market, namely: Green Crisp English cucumber, Agrico branded mushroom, Oshivelo Farming carrots, Sonop tomatoes etc. Hence the horticulture is regarded as partly differentiated. Another observation is retailers brand the product with their business brands and with the team Namibia brands in an attempt to promote local produce.
- ***Existence of Cost Leadership:*** Only 3% of interviews indicated that Namibia's Horticultural sector is competitive by cost leadership, whereas, it has only scored 7% of the average questionnaire responses. However, the cost of production analysis conducted by NAB (2019) indicated that the cost of producing the top ten demanded vegetables is very high compared to the neighbouring country, South Africa. As it is mentioned by 13% of interview respondents, high production cost is one of the major issues as all of the production inputs for horticultural produce are imported from South Africa, hence, the sector is not competitive by cost leadership.
- ***Existence of Strategic Alliance and Mergers:*** Only 3% of the interviews indicated that there is a strategic alliance between GIPF and a private company to produce blue berries. Only 4% of the responses to the questionnaires recognized strategic alliances to be in existence. thus it can be concluded that the sector lacks strategic alliances and mergers, though few isolated cases have occurred.
- ***Existence of Reactive and Non-Coherent Strategies:*** About 63% of the interviewees described Namibia's horticultural sector to be uncompetitive in all aspects of competitive strategies. The sector is reactive in a sense that it produces similar produce based on seasonality. Smallholder producer respondents to the interviews expressed that they are not benefiting much to the MSP scheme, hence targeting the informal markets, which does not give forecast purchases. The current approach to contract farming is also not working well, because it has no legal bindings, however, absence of legal bindings is beneficial because either party can fail to deliver. It is against these the study found the sector is dominated by reactivity and/ or non-coherent competitive strategies.
- ***Familiarity and Adoption of Quality and Food Safety:*** Based on 47% of interviewees that implied to be familiar with quality and an average questionnaire respondent implied to be very familiar with quality, and equally, 47% of the interviewees implied to be familiar with food safety as attributes for the horticultural sector. From the questionnaire survey, the average respondents were in agreement to be familiar with both quality and food safety, as compared to a five-point scale. Quality and food safety are therefore, in general, found to be fairly known as an attribute to the sector's competitive strategies.
- ***Familiarity and Adoption of Consistency, Traceability, Sustainability, Social Welfare, and Reliability:*** Except for social welfare that is 37%; more than 40% of

interviewees' responses implied that they were familiar with these attributes of competitive strategies for horticultural sector's growth, namely: consistency (40%), traceability (43%), sustainability (40%), reliability (40), and value addition (43). On the other hand, more than 40% of the interviewees have agreed that these attributes are partially adopted in Namibia's horticultural sector, namely: consistency (43%), traceability (43%), sustainability (40%), reliability (40%), social welfare (40%) and value addition (43%). On an average judgement, questionnaire respondents disagreed that traceability and value addition is adopted, whilst they are neutral (indifferent) whether consistency, sustainability, reliability, social welfare and value addition is adopted or not. From the observation point of view, these attributes are more adopted at large scale traders' level, except the traceability which cannot happen at the traders' level, without starting from the farm.

- ***High Production Cost, High Transportation Cost and Low Economies of Scale:*** Interview respondents have repeatedly cited high production costs when asked about shortcomings and limitations of strategies for the growth of horticultural sector. The main concern is lack of own production plants for fertilizers, seed breeders, herbicides and pesticides. The other main factor mentioned as contributing to high production costs is electricity as a water pumping cost.
- ***Absence of Strategic Groups and Lack of Strategic Planning:*** Interview respondents of 27% agreed to the question that asked whether lack of strategic planning is one of the limitations in strategy for growth of horticultural sector. Lack of strategic planning scored (9%) when compared to other limitations in strategies for growth in the questionnaire survey.
- ***Lack of Infrastructure and Technology:*** Interview respondents indicate explicitly many potential investors for the horticultural sector are discouraged by lack of infrastructure such as water supply systems (e.g. water canals or boreholes & earth dams), storage facilities, fresh produce collection points at district level, pack houses or processing plants, solar energy infrastructure, irrigation infrastructure, green houses and refrigerated marketing stalls.
- ***Lack of Access to Information and Markets:*** Interview respondents of 17% mentioned lack of access to information as one of the shortcomings in horticultural sector. Information can be one of the benefits from collaboration platforms such as associations and cooperatives. Additionally, lack of awareness, information and skills was tested to be a limiting factor, signifying these points to be among the shortcomings of strategy.
- ***Lack of Policy Direction and Implementation, Horticulture Neglect, Overregulation and Bureaucracy:*** According to the interview respondents of 13% to question five and 7% to question six, lack of Policy Direction & Implementation is among the limitations of strategy for growth and innovation in horticultural sector. On the other analytics, lack of policy direction scored (12%) when compared to other limitations in strategies for growth of horticultural sector. This is also implied when government pressure came out to be limiting strategy's potential to enhance growth, though it is to a lesser extent. Alliances by larger companies to some lesser extent could also limit the strategy's potential to enhance growth; hence regulatory interventions are sometimes required. This argument was evidenced by the mean responses in the questionnaire was 3,49 score out of a five-point scale, a standard deviation of 0.93 and a variance of 0.87%.
- ***Culture, Ethnicity, Corruption and Political Interferences:*** Interview respondents of 3% mentioned cultural and ethnicity to be also limiting the adoption of innovation for growth. Interview respondents of 7% point out political interference has limited the adoption of innovation for growth of horticultural sector. This was referring more to the politicians intervening in the public projects, especially when it comes to the procurement.

Theme 2: Exploring Possible Ways to Diffuse and Adopt Competitive Strategies for Enhanced Growth

- ***Collaboration:*** Collaborative competitive strategy is the highly recommendable for enhanced growth of horticultural sector. Collaboration scored 21% (highest) of the recommended competitive strategies in the survey as indicated by mean responses of 4.29 out of five-point scale, standard deviation of 0.80 and a variance of 0.64. This means, alliances and mergers among smallholder producers will improve competitiveness and this could be done through cooperatives. The mean responses of 3.82 score out of a five-point scale, standard deviation of 0.95 and variance of 0.91, which means alliances and mergers among large-scale producers will also improve competitiveness but not to the same extent for smallholder producers. The mean responses was 4.45 out of a five-point scale, a standard deviation of 0.75 and a variance of 0.56, which implies that group certifications on standards to penetrate export markets will improve competitiveness.
- ***Differentiation:*** Based on the interview respondents of 10%, 'differentiation' as a competitive strategy is also recommended for enhanced growth of horticultural sector. Differentiation scored 15% (third) of the recommended competitive strategies. On another note by one of the respondents, differentiation would be difficult to embrace at a smallholder level as they produce what is easy and for what they can find the market.
- ***Cost Leadership:*** Cost leadership competitive strategy is recommendable for enhanced growth of horticultural sector. Cost leadership scored 6% (second last) among the recommended competitive strategies for Namibia's horticultural sector, in the interview protocol. Three of the interview respondents advocates for large commercial producers to embrace the use of solar powered irrigation systems, cooling facilities and other functions in order to save the costs.
- ***Market Development:*** Market development initiative and program intervention' is needed to support competitive strategies for enhanced growth of horticultural sector. The market development mentioned by study respondents in both interviews and questionnaires, as well observations

included, attracting investors, avoiding or minimising the export of raw produce, crafting marketing strategies, conducting marketing researches, providing market information to all actors, enforcing the planting agreements with producers and enhancing quality control systems.

- ***Capacity Building:*** Since lack of knowledge and skills as well as the level of education were among the shortcomings of the current competitive strategies for growth of horticultural sector. Hence, majority of the interview respondents recommended 'capacity building initiative and program intervention' to support competitive strategies. Moreover, the mean responses was 4.45 score out of the five-point scale, standard deviation of 0.55 and a variance of 0.31, which implies that regional training and skills transfer programs will improve competitiveness of horticultural sector. The areas that need capacity building ranges from; budgeting and financial discipline, production, processing, packaging, storage, as well as on all attributes of competitive strategies for enhanced growth of horticultural sector, namely; quality, consistency, reliability, traceability, sustainability, food safety, social welfare and value addition.
- ***Infrastructure and Technology Development:*** Infrastructure and technology development initiative and program intervention to support competitive strategies for enhanced growth is recommended as shown by the interview responses and the mean responses of 4.36 score out of five-point scale, a standard deviation of 0.71 and a variance of 0.50, which implies that establishing Satellite facilities (collection, processing, & packaging at constituency level) will improve competitiveness of horticultural sector. Some of the specific infrastructures and technological items required for enhanced growth of horticulture, as mentioned by respondents to both interviews and questionnaire included; innovation centres, farm equipment and machinery hire centres, collection points (mini-hubs, pack houses & processing), seed production centres, organic fertilizer production centre, water canals, earth dams, boreholes, solar powered irrigation systems and solar powered marketing stalls for hire by smallholder vendors.
- ***Government Procurement Systems:*** Government procurement system initiative and program intervention is needed to support competitive strategies for enhanced growth. This will benefit the inclusion of marginalised groups such as smallholder producers, youth and women to also benefit from procurement systems of government. By simply giving quotas of supplying certain produce by these groups will also solve the issue of lack of access to markets.
- ***Subsidies, Tax Exemption and Awards:*** According to interview respondents' majority agreed that subsidies, awards and tax exemption initiatives would support competitive strategies for enhanced growth. More so, the mean responses was 4.39 out of a five-point scale, a standard deviation of 0,72 and a variance of 0,52, which imply that incentives such as tax exemptions, subsidies and awards will improve competitiveness.
- ***Regulation:*** The interview respondents of 57% recommended regulation initiative and program intervention to support competitive strategies for enhanced growth of horticultural sector. Moreover, the mean responses was 3.45 score out of a five-point scale, a standard deviation of 0.97 and a variance of 0.94, which imply that restricting alliances by larger companies will slightly improve competitiveness.

9. Implications

Research is important to provide a scientific and proven basis for making decisions, be it at government or private business level. Most importantly, businesses that base their decisions on reactivity to the situations confronting them today, without taking cognisance of the future are unlikely to gain and sustain competitive advantage. This study is therefore significant in providing a basis for strategic planning for growth of or within the sector. Literature has made it clear that the country of origin will determine who will access the export markets in the future. It is therefore important to craft coherent competitive strategies that could make Namibia's horticultural sector not only unique, but a competitive and responsible sector. For the horticultural sector being a food sector, fulfilling the attributes such as quality, consistency, reliability, traceability, sustainability, food safety, social welfare and value addition means a lot to the future of the sector and of the nation at large. The international call for meeting these attributes in any food sector is exacerbated by the occurrence of pandemic diseases and climate change. It was also alluded to earlier in this thesis that horticulture has a potential to carry many more pathogens because its shelf life depends on the environment in which it is kept or produced, and maintaining that environment requires some skills, and investment. It is also likely that inefficiencies in the food sector will no longer be tolerated, or else they will result in political instability. Horticulture is also among the sectors that serve part of the economy where the majority of the poor citizens participate. The population of the world is estimated to reach 9 billion in 30 years to come, increasing the demand for food by 70% (Davies 2015). This calls for competitive strategies and their attributes.

Future Areas for Research

Such studies need to be replicated to other agricultural sectors within Namibia. Research may also focus on competitive strategies for each single food commodity to ensure the desired level of attainment is realized. There we need to undertake research by emerging economies to work on coherent competitive strategies to enhance efficiencies and ensure sustainability for the global economy.

Recommendations

For Namibia's horticultural sector to develop, grow, and be sustainable recommendations are made.

1. Establish cooperatives that will improve the inclusion of marginalised groups, whereas, differentiation competitive strategies would be difficult at smallholder level because they produce what is easy and what they can find markets

for. Smallholder producers should therefore be organised in cooperatives to save on all costs, namely: production costs, transport costs, transaction costs and even innovation costs. Cooperatives will help the smallholder producers to access formal markets as they will be able to have consistency on volumes and varieties of produce that traditionally used to discourage traders from buying from them. Cooperatives will also enable smallholder producers to jointly afford certification services.

2. Commercial producers need to form strategic alliances through mergers, partnerships and joint ventures in order to efficiently manage the resources they have and improve on the economies of scale and value addition. Commercial producers should also adopt the cost leadership competitive strategies such as backward integrating by embracing cost saving technologies. In the long run, technologies such as solar powered irrigation (Namibia is gifted with solar energy) and soil organic content improvement practices would enhance horticultural production.
3. Establish proper regional training and skills transfer programs to improve the competitiveness of horticultural sector and ensure capacity building. Capacity building may therefore include: training, mentorship, awareness, exposure trips and in-service training.
4. Infrastructure and technology development is essential and critical to the growth of this sector. Where possible, government, donor organisations or investors should lease to producers and provide infrastructure and technology to actors in the horticultural sector in order to incentivise participation and growth in the sector. The infrastructure and technology referred hereto ranges from: water canals, irrigable water pipe systems, boreholes, earth dams, pack houses, fresh produce collection points, solar operated cooling facilities and even solar powered marketing outlets for smallholder traders in each locality. Technology may also include equipment, machinery, seed and fertiliser production, software and tools that could make the operations of the producers or traders more efficient.
5. The government should allocate quotas to smallholder producers or even smallholder traders with a meaningful quota on the annual government procurement budget, so that they will be able to sustain their businesses, as accessing formal markets seems not to have worked over the past decades. These quotas should however not be permanent, otherwise they would create laziness. Therefore, five years could be the limit for a cooperative to benefit from government procurement quotas.
6. Subsidies and tax exemptions could apply to cooperatives in the first five years of existence, to boost them and be able to compete in the domestic and external markets. Other incentives like awarding government tenders to cooperatives and/ or awarding special loans should be considered by government and development agents. Government and development agencies should discontinue giving grants to individuals, who often tend to be inefficient.
7. Market Development through MSP is the only way for producers to survive other countries' competition until actors in the horticultural sector are organised. Moreover, Namibia is a smaller nation with typologies of actors in the sector of horticulture, so, it would be unfair if unprotected competition is missing. Yet there be pressure for national companies to be competitive both domestically and internationally. In addition, infant protection, market quotas to smallholder producers and youth & women, off-take agreements, establishing marketing facilities (outlets) for small-scale vendors, organising small-scale vendors, local produce promotions, consumer awareness campaigns and branding of domestic produce are some of the market development activities that should be considered for growth of horticultural sector.

10. Conclusion

This study identified the competitive strategies that exist or are missing in Namibia's horticultural sector. However, it was also critical to reveal the familiarity and adoption status of the attributes associated with such competitive strategies. Absence of attributes or characteristics such as; quality, consistency, reliability, traceability, sustainability, food safety, social welfare and value addition will affect the growth of any horticultural sector (Joosten, 2007). This is because the horticultural sector is more buyer driven than producer driven, resulting in those stuck with the push-based approach to production, suffering the consequences of low or unsustainable competitiveness. Joosten (2007) recommended market awareness of key characteristics, joint ventures, technical advice & inspection services, training, market surveys, improved varieties, and preservation to the horticultural sectors. However, Joosten (2007) did not distinguish the recommendations necessary to different actor categories in the horticultural sector. Aleem et al. (2018) identified farm management practices and socio-economic factors to have affected the economic performance of Norwegian farms. In Namibia's context, this conclusion needed further examination because of different farmer categories. Even in Ghana, Annor et al. (2014) identified access to credit, high input and labour costs to be the main barriers that prevented farmers from complying with the Global Gap, as compared to those farmers that have access to off-farm income, market information and extension services. However, the severity of these barriers may not be the same at all levels or categories of farmers. Thus adoption of competitive strategies can be best fostered if the firm is clear on the barriers to adoption, which informs the decisions that a firm should take to counteract the barriers.

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References

[1] T. Ajam, "More eyes on VOVID-10: The perspectives from economics: The economic costs of the pandemic and its response," *S Afr J Sci.2020*, 116(7/8), 2020.
[2] H. Aleem, G. Lien and Hardaker, "Economic Performance and efficiency determinants of crop producing farms in Norway," *Emerald*, 69(9), 2018, 1481-1434.
[3] D. P. Anderson and C. R (n.d), Hall, "Adding value to agricultural products. The Texas A&M University System," L-5361(RM 1-8) 8-00
[4] B. P. Annor, Mensah-Bonsu and J. B. D. Jatoe, "Compliance with global gap standards among Smallholder pineapple farmers in Akwapim-south, Ghana," *Emerald*, 6(1), 2016, 21-38.
[5] K. Appiah, C. Osei, H. Selassie and E. Osabutey, "The role of government and the international Competitiveness of SMEs: Evidence from Ghanaian ono-traditional exports," *Emerald*. 15(4), 2019, 296-322.
[6] N. Baporikar, "Strategies for Enhancing Competitiveness of MNEs. IGI Global," 2016.
[7] P. J. Batt and J. Noona. "Global trends in food quality: An exploratory study in fresh produce Acta Hortic," 831, 2009, 95-104.
[8] M. Bianchi, A.D. Benedetto, S. Franzo and F. Frattini, "Selecting early adopters to foster the Diffusion of innovations in industrial markets: evidence from a multiple case study," *Emerald*, 20(4), 2017, 620-644
[9] K. E. Case and R.C. Fair, "Principles of economics,Prentice Hall," *New Jersey*, 2002.
[10] M. Das and K. Rangarajan, "Impact of policy initiatives and collaborative synergy on sustainability and business growth of Indian SMEs," *Emerald*, 2019.
[11] F.R David and F.R David, "Strategic management. A competitive advantage approach, concepts and cases," *Pearson Global ed. London*, 2017.
[12] C. Dolan and J(n.d) Humphrey, "Horticulture commodity chains: The impact of the UK market on the African fresh vegetable industry," IDS Working Paper 9.
[13] E. Golan, B. Kristof, F. Kirchler, L. Calvin and K. Nelson, G. Price, "Traceability in the U.s food supply: Economic theory and industry studies," *United States Department of Agriculture*, 830, 2004.
[14] T. Huggins and IzushI, "The competitive advantage of nations: Origins and Journey," *Emerald*, 25(5), 2015, 458-470.
[15] H. Kyomugisha, J. Mugisha and C. Sebata, "Potential determinants of profits and market efficiency of potato market chains in Uganda," *JADEE*, 7(1), 2016, 52 -68.
[16] C.N Madu, "Reliability and quality interface," *Emerald*, 16(7), 1999, 691-698.
[17] S. Mann, A. Breakers, J. Schweiger and G. Mack, "Greenhouse vegetable production in Netherlands and Switzerland: A grounded look at sector competitiveness," *Emerald*, 21 (4), 2011, 339 -351.
[18] M. Naor, E. Bernardes, C. T. Druehl, and Y. Shiftan, "Overcoming barriers to adoption of environmentally-friendly innovations through design and strategy," Emerald, *International Journal of Operations & Production Management*, 35(1), 2015, 26-59.