



STRATEGIC INNOVATIONS AND COMPETITIVENESS OF HORTICULTURE EXPORTERS IN NAIROBI COUNTY, KENYA

¹Mureithi Clement Munyua, ²Dr. Nyang'au Samson Paul

¹Masters Student, Jomo Kenyatta University of Agriculture and Technology

²Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Competitiveness is the ability of a company to generate profits in a sustainable way to accelerate growth. Competitiveness of horticulture exporters is determined by many factors such as innovation capability. The purpose of this study was to examine the role of strategic innovations in competitiveness of horticulture exporters in Nairobi County, Kenya. Competitiveness of horticulture exporters was measured using metrics of profit before tax, market share and return on assets. The specific objectives were to establish the influence of product innovation on competitiveness of horticulture exporters in Nairobi County, Kenya and business model innovation on competitiveness of horticulture exporters in Nairobi County, Kenya. The theories that guided this study were resource based theory and dynamic capability theory. This study used a descriptive design with questionnaire as the instrument for data collection. The target population was 658 horticulture exporters in Nairobi County, Kenya. A formula was used to calculate a sample size of 248 horticulture exporters. The unit of observation was one operations manager from the horticulture exporting organizations. The study used simple random sampling technique to pick respondents. Data collected was analyzed using SPSS version 25 to produce frequencies, descriptive and inferential statistics were used to derive conclusions. The study conducted a multiple regression analysis to determine the relationship between strategic innovations and competitiveness of horticulture exporters. The findings of this study provided crucial information to the horticulture exporting firms on innovations influencing competitiveness. The study concludes that product innovation has a positive and significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya. The study also concludes that business model innovation has a positive and significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya. Based on the findings, the study horticulture exporters in Nairobi County, Kenya, should adopt a dynamic business model innovation approach that focuses on enhancing operational efficiency, securing innovation resources, and fostering strategic collaborations. This approach should involve rethinking their business models to integrate more efficient operational processes, such as lean management and agile practices, to reduce waste, optimize resource use, and respond quickly to market changes.

Key Words: Strategic Innovations, Product Innovation, Business Model Innovation, Competitiveness of Horticulture Exporters in Nairobi County, Kenya

Background of the Study

This chapter presents the background of the study and the statement of the problem. It outlines the objectives of the study, the statement of the problem and the scope of the study. This study examined strategic innovations and competitiveness of horticulture exporters in Nairobi County, Kenya. It was guided by four objectives namely product innovation, market innovation, technology innovation and business model innovation.

According to Hendayana (2019), competitiveness is the company' level of productivity, which enables it to compete with other companies. It is the organization's output by its workforce. Ahman (2019) describes competitiveness as the ability of a company to generate profits in a sustainable way to accelerate growth. Onileowo (2021) asserts that there are various factors that affect the competitiveness of an organization. Innovation is a major factor affecting a company's competitiveness (Onileowo, 2021).

According to Morina (2021), innovation is a major driving factor for organizational competitiveness. Roger (2020) defines innovation as new discoveries that are different from what exists and what has been in place. These discoveries are in form of methods, products, service, processes, and ideas that create value for customers and companies. According to Hui (2018), organizations invest in innovations with the intention to enhance their efficiency and/or effectiveness. Therefore, innovation is an inherent effect of an organization's desire to transform, to improve, or to change several activities at the same time, which can have uncertainty and risk as a side effect.

Ngugi (2018) asserts that innovation is a key business factor since it has an impact on competitiveness. Organizations that are able to carry out innovations appropriately will be able to survive and grow in environments of intense competition and competitiveness. The modern market for horticulture is changing rapidly which require producers to meet stringent quality, consistency, and quantity standards. In the developing world, local and regional market outlets are undeveloped. A global horticulture assessment by the University of California (2021) indicated that the horticulture market was valued at 20.77 billion dollars in 2021. It was projected to reach 40.24 billion dollars by 2026 due to advancements in agricultural practices such as technology. The growth in agricultural sector is significant in the European market and considerably low among developing countries.

According to Fresh Produce Exporters Association of Kenya. (2021), accessing markets by new horticulture exporters is often impossible because of infrastructure and insufficiency of available agricultural inputs. Therefore, there is need to develop market infrastructure, information technology and integrated processes to help producers gain access to markets more effectively (Fresh Produce Exporters Association of Kenya 2021).

According to Usman (2020), innovation through information management is a critical element for achieving competitiveness. Information management plays a key role in organizational management in the modern age and in highly competitive industries. Sari (2018) study on innovation and organizational performance found a strong relationship between organizational innovation and performance across financial firms.

Dauda, Akingbade and Akinlabi (2019) examined innovative strategies among selected small and medium enterprises in Lagos Metropolis, Nigeria. Their findings revealed that effective execution of innovations enhanced both organizational profitability and the company's market share. According to Morina (2021), companies engage in innovative practices to enhance survival in turbulent environment. However, many are not able to achieve their business goals and objectives

and eventually collapse due to failure of effective innovations and ability to execute the innovations.

Benadate and Kising'u (2019) emphasize the profound influence of organizational innovation on competitive advantage. Their study highlights that improvements in processes and products significantly enhance firm competitiveness, underscoring the importance of continuous innovation in sustaining market position. Ngugi (2018) further supports this notion, demonstrating a positive correlation between the adoption of innovative strategies and organizational competitiveness. Organizations that strategically innovate experience higher market competitiveness and are better positioned to adapt to evolving market dynamics.

Horticulture contributes largely to the gross domestic product in Nairobi County, Kenya. It is a major source of employment for majority of the population in the country accounting to about 350,000 directly and supports over six million livelihoods. Food grown in the country is consumed locally while some is grown for export purposes. Both local and export consumption contributes a large percent to the country's economy. According to the Kenya National Bureau of Statistics (2021), horticulture earnings increased to Kshs 158.1 billion in 2021 from Kshs 150.2 billion shillings in 2020, which indicated a 5% increase.

Statement of the Problem

Horticulture contributes largely to the Kenyan economy (KNBS, 2021). However, only 4% of all the horticultural produce, which includes fruits and vegetables, is exported while 96% is being consumed locally. The economic report on the first quarter of 2022 indicated a significant drop in total horticulture exports earnings by Kshs 20 billion (KNBS, 2022). This drop was attributed to low quality of produce such as avocado, which led to rejection and reduced returns from flowers. Export earnings from fruits, flowers, vegetables dropped by Kshs 3.6 billion, Kshs 10.3 billion and Kshs 6.1 billion respectively. According to Fresh Produce Exporters Association of Kenya (2021), the sector faces challenges in accessing markets, adopting new technology, and meeting strict market requirements. Nairobi county export sector relies heavily on the European Union market, which accounts for 45% total exports. However, increased strict requirements for quality, consistency, and quantity standards have necessitated rapid innovations, which are constrained Kenyan horticulture sector due to low cash flows among producers and exporters.

According to Mbabazi (2022), the Nairobi horticulture sector experiences low production and productivity due to low adoption of advanced technologies, which limits its competitiveness in the global market. In addition, Heher and Steenbergen (2020), assessment on the Nairobi- Kenya horticulture market indicated that low adoption of innovative agricultural practices led to non-compliance with international quality and safety standards, which led to export rejections. Horticulture exporters in Nairobi-Kenya fail to achieve competitiveness due to high production, transaction, and marketing costs, which result from undeveloped value chain management. Despite efforts to train producers and exporters on quality and safety standards by horticulture export professionals, the sector still faces challenges due to rapid changes in technology in the target market (Fresh Produce Exporters Association of Kenya 2021). Diego et al. (2020); Onileowo et al. (2021); Morina (2021); Ngugi (2018) studies found that innovation in product, process, market and strategies had a positive and significant influence on organizational competitiveness. Benadate and Kising'u (2019); Nisen, 2018) studies indicated that innovation in technology, product, process and marketing strategies had a significant influence on organizational output and growth.

Previous studies found that innovation influenced overall firm profitability and competitiveness. These studies however, do not bring out the role of innovation on horticulture exporters in Nairobi presenting conceptual gaps and contextual since they are conducted in different industries such as banking and manufacturing. Studies conducted in the horticulture sector present conceptual and

methodological gaps since they do not assess the variables under study and use case study methodology. In addition, there are limited studies on innovation and horticulture exporters in Nairobi Kenya. This study bridged this gap by examining strategic innovations and competitiveness of horticulture exporters in Nairobi County, Kenya It answered questions on how business model innovation, product innovation, market innovation, and technology innovation influence competitiveness of horticulture exporters in Nairobi County, Kenya

Objectives of the study

General Objective

The General objective of this study was to examine the influence of strategic innovations on competitiveness of horticulture exporters in Nairobi County, Kenya

Specific Objectives

- i) To establish how product innovation influence competitiveness of horticulture exporters in Nairobi County, Kenya
- ii) To assess how business model innovation influence competitiveness of horticulture exporters in Nairobi County, Kenya

Theoretical Framework

Resource-based Theory

Resource-based theory by Barney (1991) states that the possession of resources which is valuable, difficult to imitate, rare, and cannot be substituted is critical. The resource-based theory suggests that organizations should look inside the company to find the sources of competitive advantage through the use of their resources. A firm's competitive advantage evolves from the resources that the organization has to develop products and processes. Resource-based theory prescribes that organizations position themselves strategically based on their resources and capabilities. The theory holds that unique capabilities and resources are essential in creating ideal products for the firm in order to remain sustainable in a competitive environment. Therefore, an organization must have the capabilities to implement new products and technology. Organizations that wish to achieve competitive advantage should possess resources such as technology, human resource and financial capabilities critical for product development and innovation.

Having an ideal performance rate is as a result of the unique skills and resources a company utilizes in its operations (Day & Wensley, 2008). The theory supports product innovation variable under study. Executives who wish to achieve long-term competitive advantages should therefore place a premium on trying to nurture and develop their firms' resources to support new technology and product innovations. The theory demonstrates the link between product innovation and competitiveness.

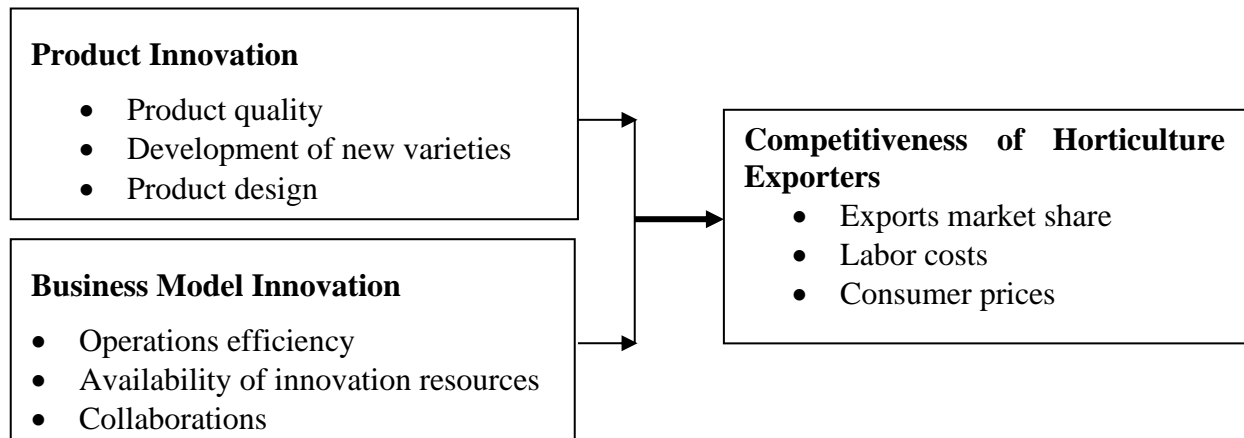
Dynamic Capabilities Theory

Teece et al. (1997) define dynamic capabilities as 'the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments. Dynamic capabilities approach attempt to bridge these gaps by adopting a process approach by acting as a buffer between firm resources and the changing business environment. Dynamic resources help a firm adjust its resource mix and thereby maintain the sustainability of the firm's competitive advantage which otherwise might be quickly eroded. Dynamic capabilities theory emphasizes resource development and renewal. According to Wade and Hulland (2004), resources may take on many of the attributes of dynamic capabilities, and thus may be particularly useful to firms operating in rapidly changing environments. As such, a firm has to possess a dynamic capability, which besides increasing firm's opportunities to survive, often provide organizations with the

potential for growth (Helfat et al., 2007). Dynamic capabilities are the outcome of experience and learning within the organizations. This theory supports this study by indicating the need for business model innovation to develop a firm's capabilities, which can be done through operational efficiency and collaborations to adapt to changing environment.

Conceptual Framework

A conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). It is linked with the concepts, empirical research and important theories used in promoting and systemizing the knowledge espoused by the researcher (Peshkin, 1993)



Independent Variables

Dependent Variable

Figure 2. 1: Conceptual Framework

Product Innovation

Product innovation is improvement in design and functionality of a product. Product innovation involves improving existing products and developing new products. It is crucial in meeting market needs, adhering to changes in the market place and enhancing compliance with market standards and requirements. Product innovation involves research, development, and the adoption of new technology (Hutapea, 2021).

Enhancement in Product Quality Reduces product rejection rates by 15% in international quality checks within one year. Product innovation isn't just about new products; it's also about improving the quality of existing products. This sub-variable aims to measure the effectiveness of innovation in enhancing product standards. The reduction in rejection rates at international checkpoints can serve as a quantifiable metric, indicating an improvement in quality due to innovation efforts

According to Brancati et al. (2022) product innovation has the potential of creating and developing new export markets. Product innovation provides a key driver for market penetration and sustainability. Due to increased competition in the global export markets, providing innovative products is crucial in developing an organization's competitive advantage. Wallace and Kilika (2021) assert that product innovation involves improving the quality, functionality and design of products.

Business Model Innovation

Business model innovation is the improvement of business processes to enhance service delivery. It involves use of technology in production processes, introduction of new production techniques in development of products and services. Business model innovation enhances quality of products

and service, which leads to competitive advantage (Muogbo, 2018). Technology use increases effectiveness and efficiency of business processes. Business model innovation leads to reduced production costs, ensures quality standards are met enhancing the competitiveness of an organization.

According to Ogochi (2018) changes in technology and market conditions requires changes in the business operations. Changes in customer expectations, quality standards, economic and legislations play a key role in changes in business models. Ogochi (2018) assert that these changes compounded by increased competition require organizations to have flexible and innovative business models that can adapt to constant changes in the external business environment.

Empirical Framework

Product Innovation

Brancati et al. (2022) examined the drivers of firm competitiveness among organizations in Italy. The study established that product innovation plays a crucial role in the firms' competitiveness. Product innovation had a significant influence on the firms' achieving competitive advantage. The study established that product innovation capabilities improved a firm's productivity and eventually its competitiveness.

Karakara and Osabuohien (2020) assessed information and communication technology adoption among firms in West Africa. The study conducted a comparative assessment among firms in Ghana and Nigeria and established that firms that has innovated on basis of new product or product improvement experienced positive impact on their productivity and competitiveness. The study recommended adoption of product innovation through new ideas an improvement on existing products to achieve competitiveness.

Benadate and Kising'u (2019) conducted a study on organizational innovation and competitive advantage among companies in Nairobi County, Kenya. The study established that organizational innovation such as product innovation had a positive and significant effect on the competitive advantage of the firms. The study recommended increased organizational innovation among firms to attain competitive advantage.

Business Model Innovation

Arruda (2019) examined competitiveness among firms in Brazil. The study examined the techniques embraced by business to survive in rapidly changing business environments. It found that firms continually adopted innovations in their business models such as operational efficiency to cope with high competition. The study recommended that firms should embrace innovation in their business models to achieve competitiveness.

Hutapea (2020) examined firm innovation and competitiveness of organizations in Indonesia. The study established that organizational business model innovation was crucial for change readiness and improving competitiveness. Firms that adopted innovations in their operations experienced improvement in performance. The study recommended flexibility in business models enable businesses adopt innovation for competitiveness.

Nduati (2019) assessed innovations and competitive advantage among firms in Nairobi County, Kenya. The study established that increased competition and dynamic business environments have led to business model innovations among many firms. Adoption of business model innovations had positive effect on performance and competitiveness. The study recommended creation of business model innovations to improve operations and achieve competitive advantage.

RESEARCH METHODOLOGY

Research Design

The study used a descriptive design. The purpose of a descriptive research design is to describe the state of affairs as it is in the present (Render et al. 2012). According to Flick (2011), a descriptive design is a process of collecting data in order to test hypothesis or answer questions concerning the status of the subjects in the study, the purpose of a descriptive research is to determine and report the way things are done. This research design was suitable since the study focused on the state of affairs as it is in the present.

Target Population

The target population was 658 horticulture exporters in Nairobi County, Kenya According to the Horticulture and Crop Directorate (2021), there are 658 licensed horticulture exporters in Nairobi County, Kenya. The unit of analysis was the horticulture exporters in Nairobi County, Kenya. The unit of observation was one operations manager from each firm.

Sampling Frame, Technique and Sample Size

The sampling frame for this study consists of a list of 248 operations managers from 248 horticulture exporters in Nairobi County, Kenya

The study used simple random sampling technique where all respondents had an equal chance of being selected. It was simple and avoided bias. The study used Yamane 1967 formula to calculate the sample size in each stratum where: $n = \frac{N}{1 + N(e)^2}$

n= sample Size, N= Total Population (220), e= 0.05 significance

$$n = \frac{658}{1 + 658(0.05)^2}$$

$$n = \frac{658}{2.645}$$

n=248

Data Collection Instruments

The instrument for data collection was questionnaires. According to Kothari (2014), a questionnaire is a schedule containing various items on which information is sought from respondents. According to Kowalczyk (2015), questionnaires are free from any interviewer's bias and errors, which may undermine reliability and validity of the results emerging from the survey. The researcher developed a questionnaire to collect data from the horticulture exporters. The use of questionnaires made it easier to approach the respondents since they did not have any distribution bias as they did not show any particular preference or dislike for a certain individual.

Pilot Study

According to Seltman (2014), a pilot study is necessary for testing the reliability of data collection instruments. Pilot study is thus conducted to test the weakness in design, a test is considered reliable if the same result is gotten repeatedly (Flick, 2011). According to Render et al. (2012), a pretest sample ranges from 1-10% depending on the sample size. Twenty-four questionnaires were administered to respondents, which will not be included in the final study sample. Twenty-four questionnaires represent 10% of the population. The pilot study was conducted among fresh vegetables and fruits exporters since they made the largest volumes of export in Kenya. Simple random sampling was used to pick the respondents.

Data Analysis and Presentation

Quantitative data was analyzed using descriptive statistics that included means, frequencies, percentages, and standard deviation. The data from the completed questionnaires was cleaned, re-coded, and entered into the computer using SPSS for Windows version 25.0 for analysis. Inferential statistics were used which include regression and correlation analysis. Data was presented in form of tables and diagrams prepared from SPSS.

The analysis of variance (ANOVA) was used to check the overall model significance. A multiple regression analysis was used to determine the relationship between competitiveness and the variables of the study. Multiple regression analysis was used to make a prediction of a dependent variable in relation to the independent variables, and determine the relationship between one dependent variable and one or more independent variables.

RESEARCH, FINDINGS AND DISCUSSION

Descriptive Statistics Analysis

Product Innovation and Competitiveness of Horticulture Exporters

The first specific objective of the study was to establish how product innovation influence competitiveness of horticulture exporters in Nairobi County, Kenya. The respondents were requested to indicate their level of agreement on statements relating to product innovation and competitiveness of horticulture exporters in Nairobi County, Kenya. The results were as presented in Table 4.1.

From the results, the respondents agreed that the organization has established innovative techniques for product quality improvement. This is supported by a mean of 3.943 (std. dv = 0.981). In addition, as shown by a mean of 3.926 (std. dv = 0.850), the respondents agreed that the organization uses technology in product development. Further, the respondents agreed that the organization provides new products in the market. This is shown by a mean of 3.911 (std. dv = 0.914).

The respondents also agreed that the organization uses innovative farming techniques. This is shown by a mean of 3.896 (std. dv = 0.947). With a mean of 3.889 (std. dv = 0.856), the respondents agreed that production has been automated. The respondents agreed that product innovation techniques have improved organizational competitiveness. This is supported by a mean of 3.876 (std. dv = 0.694).

Table 4. 1: Product Innovation and Competitiveness of Horticulture Exporters

	Mean	Std. Deviation
The organization has established innovative techniques for product quality improvement	3.943	0.981
The organization uses technology in product development	3.926	0.850
The organization provides new products in the market	3.911	0.914
The organization uses innovative farming techniques	3.896	0.947
Production has been automated	3.889	0.856
Product innovation techniques have improved organizational competitiveness	3.876	0.694
Aggregate	3.898	0.873

Business Model Innovation and Competitiveness of Horticulture Exporters

The second specific objective of the study was to assess how business model innovation influence competitiveness of horticulture exporters in Nairobi County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to business model innovation and competitiveness of horticulture exporters in Nairobi County, Kenya. The results were as presented in Table 4.2.

From the results, the respondents agreed that the organization has efficient business operations. This is supported by a mean of 3.968 (std. dv = 0.905). In addition, as shown by a mean of 3.859 (std. dv = 0.885), the respondents agreed that there is availability of adequate resources for innovation. Further, the respondents agreed that the organization has allocated a budget for innovative business solutions. This is shown by a mean of 3.840 (std. dv = 0.605). With a mean of 3.835 (std. dv = 0.981), the respondents agreed that organizational processes use information systems.

As shown by a mean of 3.821 (std. dv = 0.832), the respondents agreed that the organization collaborates with other organizations to develop their markets and resources. Further, the respondents agreed that the organization implements new innovations in the industry. This is shown by a mean of 3.819 (std. dv = 0.834). With a mean of 3.808 (std. dv = 0.903), the respondents agreed that there is flexibility in production and operations to accommodate changes in technology and new market demands.

Table 4. 2: Business Model Innovation and Competitiveness of Horticulture Exporters

	Mean	Std. Deviation
The organization has efficient business operations	3.968	0.905
There is availability of adequate resources for innovation	3.859	0.885
The organization has allocated a budget for innovative business solutions	3.840	0.605
Organizational processes use information systems	3.835	0.981
The organization collaborates with other organizations to develop their markets and resources	3.821	0.832
The organization implements new innovations in the industry	3.819	0.834
There is flexibility in production and operations to accommodate changes in technology and new market demands	3.808	0.903
Aggregate	3.819	0.867

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (product innovation and business model innovation) and the dependent variable (competitiveness of horticulture exporters in Nairobi County, Kenya) dependent variable. Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 4. 3: Correlation Coefficients

		Firm Competitiveness	Product Innovation	Business Model
Firm Competitiveness	Pearson Correlation		1	
	Sig. (2-tailed)			
	N	228		
Product Innovation	Pearson Correlation	.836**	1	
	Sig. (2-tailed)	.002		
	N	228	228	
Business Model Innovation	Pearson Correlation	.856**	.185	1
	Sig. (2-tailed)	.000	.078	
	N	228	228	228

From the results, there was a very strong relationship between product innovation and competitiveness of horticulture exporters in Nairobi County, Kenya ($r = 0.836$, p value = 0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Brown and Hyer (2016) who indicated that there is a very strong relationship between product innovation and organization competitiveness.

The results also revealed that there was a very strong relationship between business model innovation and competitiveness of horticulture exporters in Nairobi County, Kenya ($r = 0.856$, p value = 0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Zimmermann, *et al* (2015) who revealed that there is a very strong relationship between business model innovation and organization competitiveness

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (product innovation and business model innovation) and the dependent variable (competitiveness of horticulture exporters in Nairobi County, Kenya)

Table 4. 4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.940	.884	.885	.582

a. Predictors: (Constant), product innovation and business model innovation

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r -squared for the relationship between the independent variables and the dependent variable was 0.884. This implied that 88.4% of the variation in the dependent variable (competitiveness of horticulture exporters in Nairobi County, Kenya) could be explained by independent variables (product innovation and business model innovation).

Table 4. 5: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.027	2	6.014	104.069	.000 ^b
1 Residual	6.568	225	.029		
Total	18.595	227			

a. Dependent Variable: competitiveness of horticulture exporters

b. Predictors: (Constant), product innovation and business model innovation

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 104 while the F critical was 2.412. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of product innovation and business model innovation on competitiveness of horticulture exporters in Nairobi County, Kenya.

Table 4. 6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.311	0.082		3.793	0.003
	Product Innovation	0.387	0.091	0.388	3.593	0.003
	Business Model Innovation	0.392	0.102	0.393	3.843	0.001

a Dependent Variable: Competitiveness of horticulture exporters

The regression model was as follows:

$$Y = 0.311 + 0.387X_1 + 0.392X_2 + \varepsilon$$

According to the results, product innovation has a significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya ($\beta_1=0.387$, p value= 0.003). The relationship was considered significant since the p value 0.003 was less than the significant level of 0.05. The findings are in line with the findings of Brown and Hyer (2019) who indicated that there is a very strong relationship between product innovation and firm competitiveness.

In addition, the results revealed that business model innovation has significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya ($\beta_1=0.392$, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Zimmermann, et al (2020) who revealed that there is a very strong relationship between business model innovation and organization competitiveness.

Conclusions

The study concludes that product innovation has a positive and significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya. Findings revealed that

product quality, development of new varieties and product design influence competitiveness of horticulture exporters in Nairobi County, Kenya

The study also concludes that business model innovation has a positive and significant effect on competitiveness of horticulture exporters in Nairobi County, Kenya. Findings revealed that operations efficiency, availability of innovation resources and collaborations influence competitiveness of horticulture exporters in Nairobi County, Kenya.

Recommendations

This study recommends that to enhance their competitiveness further, horticulture exporters in Nairobi County, Kenya, should invest in advanced research and development (R&D) for continuous product innovation. This investment should focus on developing new and differentiated horticultural products that cater to emerging market trends and consumer preferences, such as organic produce, exotic varieties, and value-added products (e.g., pre-packaged or ready-to-eat offerings).

Horticulture exporters in Nairobi County, Kenya, should adopt a dynamic business model innovation approach that focuses on enhancing operational efficiency, securing innovation resources, and fostering strategic collaborations. This approach should involve rethinking their business models to integrate more efficient operational processes, such as lean management and agile practices, to reduce waste, optimize resource use, and respond quickly to market changes.

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