Horizontal Integration Strategies and Competitiveness of Firms in EPZ Kenya

NJUGUNA, Naomi Njeri[1], Dr. Josphat Kwasira[2], Dr. Anne Kariuki[3]

[1]Post graduate student, Jomo Kenyatta University of Agriculture and Technology

[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

[3]Lecturer, Karatina University

ABSTRACT

Global challenges have given a rise in levels of competitiveness among industries that produce similar or related goods and services. One possible solution to this is the use of horizontal integration strategy to ensure efficient production. This study therefore intended to determine the influence of horizontal integration strategy on the competitiveness of EPZ firms. The study was guided by two theories, namely; the resource-based view theory and the transaction economic cost theory. The study adopted the use of a questionnaire. Both quantitative and qualitative approaches were used. Descriptive technique, specifically survey was used in the research design. The target population was all the 137 EPZ firms within Kenya and the sample was drawn from this population. The stratified random sampling technique was used. The EPZ firms are situated within the 74 gazetted zones. The quantitative data that was collected was analysed using the Statistical Package for Social Scientists. Further, the significance level of each independent variable was tested against the dependent variable at 95% level of confidence using ANOVA, regression and correlation techniques. The findings of this study indicated that horizontal integration had a positive and statistically significant relationship with the competitiveness of firms in EPZ Kenya. This study recommends the inclusion of horizontal integration in the strategic plans of the different EPZ firms. This will subsequently lead to an increase in employment opportunities, real-value added growth, and foreign direct investment (KNBS, 2022). In conclusion, from the analysis of findings, horizontal integration is significant for competitiveness of firms in EPZ Kenya.

Keywords: Export Processing Zones, Competitiveness, horizontal integration.

INTRODUCTION

Horizontal integration is a strategy where a firm seeks ownership of or increased control of its competitors (David & David, 2015). It takes place when a firm acquires a competitor in the same industry and it enables firms to sell their products in several markets, leads to economies of scale, economies of scope and a strong presence in the preference market (Bhalla, 2018). Mergers, hostile take overs and acquisions are the typical methods by which horizontal integration is achieved.

On the other hand, competitiveness is the ability of a firm to perform better than the other benchmark companies in relation to its profitability, sales or its market share (Akben- Selcuk, 2016). According to Atkinson (2013), competitiveness refers to the ability and performance of a firm, subsector or country to sell

and supply goods and services in a particular market, in comparison to the ability and performance of other firms, sub-sectors or countries within the same market. Increased competitiveness has led to the development of different strategies aimed at maintaining the market position of these manufacturing firms. One of these strategies is horizontal integration.

The size of a firm refers to the amount and variety of its production capacity and the ability that a firm possesses or the amount and variety of the services it can provide concurrently to its customers. Firm size is an important feature of business structure and entrepreneurial innovativeness and it greatly impacts on competitiveness (Csabay & Stehlikova, 2020). Different empirical studies discuss the role of firm size as an independent variable and also as a moderating variable. In this study, firm size is a moderating variable.

Within the EPZ firms in Kenya, manufacturing, commercial and service activities are some of the eligible activities that are carried out (Biketi et al., 2017). These zones are designed to attract export-oriented light manufacturing and within the country, thus providing the much-needed jobs and foreign exchange revenue. The EPZ firms are able to sell their products in the international market at competitive prices since their imports are duty free and they are exempted from the payment of excise duties, stamp duties on the execution of any instruments related to their business and the payment of income tax for the first ten years (GoK, 2020).

In order to attain competitiveness, manufacturing firms should meet the customers' demands for timely delivery of quality goods and services at lower prices. However, the EPZ firms are not always able to meet these conditions due to various obstacles. These include; challenges in the provision of raw materials such as textile, which is often in high demand at the zones or an over-reliance of the supply on foreign suppliers; a failure to meet the world market standards for price, quality, delivery terms and demand; and the fear of existing manufacturers to expand into new markets and face new risks (Schrank, 2001).

Mori and Tomotsune (2020) point out that Kenya is one of the most sought-after countries for mergers and acquisitions transactions. These mergers and acquisitions take place in the sectors of financial services, technology, renewable energy, fast moving consumer goods, retail and education. Mergers and acquisitions within the country are governed by the legal framework in The Competition Act; The Companies Act (No. 17 of 2015, Laws of Kenya) and The Capital Markets Act.

Due to the dynamic nature of the competitive environment within Kenya in the recent past, different EPZ firms have undertaken different horizontal integration activities. Examples include; the merging of Asante Capital EPZ limited with two Moringa Entities (Moringa SCA and Moringa Mauritius Africa); the acquisition of Insta Products (EPZ) and Nitro Manufacturing (EPZ) by Proparco and IFU; the takeover of Organic growers and Packers Limited by Freshpick Limited (EPZ); and the acquisition of De La Rue Kenya EPZ by HID corporation Limited. Prior to the merger, De La Rue faced significant financial distress and a sale of its Kenyan unit was a part of the firm's restructuring plan to stay afloat.

Statement of the Problem

Local and international competition makes firms to face rapid changes in customer needs as well as the market demands. The dynamic business environment in Kenya has led to increased competition among firms, thus reducing their profit levels. In order to remain in the market, there is a need for these firms to step out of their current competitive market and become pioneers in a new market environment.

The sessional paper no. 9 sets the base for increased growth rates, generation of enough employment opportunities and the integration of Kenya into the global economy through industrialization. This policy framework aims at making Kenya the most competitive and preferred location for industrial investment. One of the ways through which this is to be achieved is through the implementation of the export-oriented

policies.

To achieve this, a competitive strategy should rest on an understanding of industrial structures and the way they change (Bruijl,2018). The decision to integrate horizontally provides firms with a competitive strategy while also helping to reduce the respective transaction costs of the internal and market organization.

The aim of this study will be to investigate the influence of horizontal integration strategy on the competitiveness of firms in EPZ Kenya. While prior studies have discussed the effect of horizontal integration strategies on firms in both the financial and non-financial sectors, this study will only focus on the Kenyan export processing zones. Studies indicate mixed findings on the relationship between horizontal integration and firm competitiveness. Besides, the measurement of horizontal integration poses many theoretical and practical problems that make it difficult to study the degree of horizontal integration at the firm and industry level.

LITERATURE REVIEW

Theoretical Review

(a). The Resource-based view

Different economic theories have explained the phenomenon of horizontal integration. This study discusses the resource-based view theory and the transaction economic cost theory in relation to the horizontal integration strategy.

The resource-based view (RBV) of the firm was first proposed by Wernerfelt (1984) and it was later developed by Barney (1986,1991), Teece, Pisano and Shuen (1997) and Barnet, Ketchen and Wright (2011) who renamed the resource-based view to resource-based theory (Lujan-Salazar, 2017). This theory advocates that horizontal integration gains competitive advantages for the firm (Monsur & Yoshi, 2012). It asserts that resources are what help a firm to exploit opportunities and neutralize threats and that the internal resources of a firm are more important than its external factors in obtaining and sustaining a competitive advantage (David & David, 2015). This view expresses the diversity of competitiveness based on the assumption that direct competitors differ in their resources and capabilities in ways that are important to the firm (Bhalla, 2001). The view can be used to study the competitive advantage concept of the firm (Naliaka & Namusonge, 2015). Chigara (2021) seeks to assert that resources influence the competitiveness of the Algerian small and medium enterprises (SMEs).

In this study, the resource-based view facilitates the understanding of the competitiveness of EPZ firms in Kenya in relation to horizontal integration. It is an important framework for identifying the relationship between the two variables as well as the magnitude of their association. Besides, RBV posits that boundary expansion through horizontal integration is undertaken for strategic use in return for sustainable return on invested capital, a common measure of competitive advantage, (Tey & Arsil, 2021).

(b). Transaction cost Economics Theory

The transaction cost Economic (TCE) theory considers the firm and the market as two alternative models whose objective is the coordination of production. (Hamdauoui & Bouayad, 2019). Transaction cost theory (Williamson 1979, 1986) posits that the optimum organizational structure is one that achieves economic efficiency by minimizing the costs of exchange. The theory suggests that each type of transaction produces coordination costs of monitoring, controlling and managing transactions. The theory explains the scope and boundaries of the firm indicating the activities to be integrated within the same ownership (Cainelli & Laccobucci, 2009). It focuses on market failure and the ways in which firms can reduce opportunism as they

integrate their activities (Williamson, 1999). A higher degree of internal transfers that occur in a horizontally integrated organization will reduce transaction costs and it leads to an improvement in information exchange throughout the different stages of production.

In this study, this theory is relevant because it supports horizontal integration of firms since when firms integrate, an optimal organization structure is attained and hence savings are realized in the transaction costs. This theory requires that the EPZ firms minimize on their transaction costs while maximizing on the possible contracts in order to attain competitiveness.

(c.). The Theory of Constraints

This theory was developed by Eliyahu Goldratt in the mid-1980s. It is a management philosophy which is focused on the weakest ring in the chain to improve the performance of systems (Simsit et.al., 2014). According to this theory, every system must have at least one constraint. If it were not true, then a real system such as a profit making organization would make unlimited profit. A constraint is therefore anything that limits a system from achieving its goal.

According to the theory of constraints, a small number of constraints prevents any management system from achieving more of its goals. There is always at least one constraint, and the theory of constraints uses what is called a focusing process to identify that constraint, and then restructures to address it. That applies to processes, organizations and individual team members. Managers should also explore ways to increase the effective capacity utilization at bottlenecks, without experiencing the higher costs and poor customer service usually associated with maintaining output rates at peak capacity (Rahman et.al., 2018).

In this study, the moderating variable analyses the influence of the size of the firm on the dependent and independent variables. This theory is relevant to the study because it helps to establish whether the size of the EPZ firms is a constraint and whether firms need to restructure in order to address it. Further, It explains the role of the moderating variable in determining the level of influence between the dependent and independent variables.

EMPIRICAL LITERATURE REVIEW

In this study, the reviewed literature shows that horizontal integration practices have been identified as possible enablers of firm competitiveness. However, there exists less empirical studies that have sought to explore the relationship between horizontal integration strategies and competitiveness of firms in the Export Processing Zones, which are found in most parts of the world.

In addition, a number of studies that have been carried out are limited to operational performance, organizational performance and financial performance of firms. These studies have ignored the key drivers of horizontal integration which are; supply certainty/uncertainty, delivery reliability and increased liquidity. For example, The study by Sun (2022) discusses the effect of takeovers on the performance of acquirer companies in Australia indicating a positive growth after the acquisition, The study by Ejoor et al. (2018) on the Nigerian banking sector indicates that mergers had a positive and significant effect on the growth of banks within the country, while Ombaka & Jagongo (2018) discuss the influence of mergers and acquisitions on the financial performance of commercial banks in Kenya by reviewing the operational synergy, differential synergy, risk diversification and market share development as indicators for mergers and acquisitions.

Besides, the existing literature is largely based on firms in the USA and Europe; (White, 2004); Kennedy et al. (2011) and (Conclaves, 2014). Examples of these firms include the acquisition of Exxon by Mobil, the acquisition of Pixar animation studios by Walt Disney and the acquisition of Instagram by Facebook among

others. This study addressed this gap by analyzing horizontal integration strategies within firms of different sizes in the export processing zones, in Kenya. This study also adds to the existing literature on horizontal integration strategies in Kenya that is carried out by; Irungu (2021); Mutura (2015); Gachango (2021) and Masese et al. (2019).

Further, the studies carried out on horizontal integration strategies among firms in Kenya analyzed the companies largely based on their performance. For example, Masese et al. (2018) evaluated the role of horizontal integration on the performance of public organisations. The findings of their study indicated that horizontal integration had a positive and significant relationship with the performance of these firms. This study however, discusses competitiveness as the dependent variable (it looks at the product demand, customer numbers and the market position) and firm size as the intervening variable. This study clearly gives a new dimension to the study of horizontal integration strategies.

Notably, mergers occur between similar-sized companies and they combine two organisations into one (Kennedy et al., 2020). Firms may merge in order to remove unnecessary competition between them, to combine and harmonise their resources and also to reduce their operational costs (Morden, 2007). They often result in cost synergies which lead to price reduction (Federgruen & Pierson, 2011). Ritson (2011) observed that mergers are defensive in nature and points out that they are not easy to be successfully established by firms. In addition, they can be either incorporative or consolidative (Kudelko et al. 2015) and the mergers between direct competitors are more likely to create efficiencies than mergers between unrelated businesses (David & David, 2015).

Patrick et al. (2022) discuss the role of mergers and acquisitions in the profitability of commercial enterprises financial performance and conclude that mergers and acquisitions have a positive impact on the financial institutions net income. Further, Malik et al. (2014) outline the benefits that are obtained by firms undertaking mergers and acquisitions. Studies show that acquisitions fail when management lays too much focus on acquiring other firms or when there is too much acquisition done by the firm (David & David, 2015). Firms may acquire other companies in their value chain to give them more control within the industry (Kennedy et al., 2020).

An acquisition takes place when a large organization purchases a smaller firm. When this happens, the acquiring company takes the ownership of the company it has purchased while the company it has bought losses its independent identity (Morden 2007). Acquisitions can be used to attain diversification and it is desired by both firms. Most acquisitions make the acquirer bigger (White, 2004) and they allow for increased economies of scale and enhanced transfer of resources and competencies. Acquisitions also increase the market power of a firm. To be able to finance new acquisitions, firms sometimes sell the less profitable divisions and then they purchase the more profitable divisions within other firms. This leads to increased competitiveness of the firm.

A takeover happens when a merger or acquisition is not desired by both parties (David & David, 2015). It involves the reallocation of assets between owners and the restructuring of resources within and across the firms. A company may become a target of a takeover when it loses value due to its management's lack of vigilance (Kennedy et al. 2015). A takeover activity improves the company's production efficiency and it enables important innovations to take place within the firm. A takeover also leads to a firm's expansion and growth, diversification and a competitive position.

METHODOLOGY

Research design

This study adopted the quantitative research design. According to Saunders et al. (2012), quantitative

research examines relationships between variables, which are measured numerically and analyzed using a range of statistical techniques. The study was also a cross-sectional explanatory survey research design. This design was useful in obtaining an overall picture as it was at the time of the study and it involved only one contact with the study population (Kumar, 2011). The target population of this study composed of 137 firms in the Kenya Export processing zones. These zones are managed and promoted by the export processing zones authority.

Target Population

Sauders et al., (2012) describe population as the complete set of cases or group members. The target population of this study composed of 137 firms in the Kenya Export processing zones. These zones are managed and promoted by the export processing zones authority. From this target population, a sample of 402 employees was drawn. This was composed of 3 staff from each firm, mainly the manager, accountant and Human Resource Officer. The target population for this study was the 15 sub-sectors in the EPZ which are further broadly categorized as Agriculture, Manufacturing and other sectors. The top managers were targeted because strategic management issues are mostly handled at that level within organizations. This study as a result specially selected top management including the accountants and human resource officers from the EPZ firms on the basis that they were more knowledgeable about strategic issues and they undertake strategic responsibilities in the organization.

SAMPLING AND SAMPLE SIZE

Sampling

This study used stratified random sampling techniques. This technique is used to obtain a representative sample when the population does not constitute a homogenous group (Kothari, 2004). The random sampling was then applied within each stratum independently. This improved the representativeness of the sample by reducing the sampling error since each item in the population stood an equal chance of being included in the sample (Stanley & Smee, 2007).

Sample Size

The sample size for any study depends on the acceptable level of significance; power of the study; expected effect size; underlying event rate in the population and the standard deviation in the population. Some more factors that can be considered while calculating the final sample size include the expected drop-out rate, an unequal allocation ratio, and the objective and design of the study. The sample size depends on the study purpose and the population that is being scrutinized (Cohen et al., 2007).

The following formula was used:

$n = N/1 + N (0.05)^2$

$n = 411/1 + 411(0.05)^2$

$n = 202.7 » 203$

Where:

N = size of population

n = size of sample

DATA COLLECTION

In this study, structured and non-structured questionnaires were used. The structured questionnaire contained definite, concrete and direct questions, whereas the non-structured questionnaire consisted of partially completed questions or statements. The questionnaire used in this study used a Likert scale. Likert scales were developed by utilizing the item analysis approach. This study used a questionnaire with a diverse set of questions for the respondents to answer. All questionnaire items were anchored on a five point scale with 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree and 1 = strongly disagree.

In this study, secondary data covering diverse fields was easily available. Examples of secondary data used in the study include; published printed sources, books, journals, periodicals, magazines and newspapers, published electronic sources and unpublished personal records.

DATA ANALYSIS, PRESENTATION AND DISCUSSION

In this study, a pilot study was carried out in order to ascertain the validity and reliability of the questionnaire. The subjects participating in the pilot study were not included in the final study to avoid research fatigue and response biasness. To test data reliability the study employed Cronbach's alpha coefficient whose value falls between .7 to .8 (Field, 2009). All the items tested for reliability posted a score above the recommended 0.7 an indication that there was internal consistency in the questions. Therefore, the research questionnaire met the reliability threshold with all the constructs recording a Cronbach's alpha coefficients > 0.7. Table 1 shows the reliability test results.

(a). Descriptive Statistics Results

The study analysed the views of the respondents in respect to Horizontal Integration strategies and competitiveness of firms in EPZ. Table 1.1 shows the results of the analysis.

Table 1.1. Descriptive Statistics for horizontal l Integration strategies

	N	S.D (%)	D (%)	N (%)	A (%)	S.A (%)	Min	Max	Mean	Std. Dev
Supply uncertainty reduces competitiveness of the EPZ firms in Kenya	**337**	4.2	7.8	21.4	35.3	31.4	1	5	3.74	1.283
Combining resources within a firm promotes competitiveness of the EPZ firms in Kenya.	**337**	4.2	11.6	17.2	40.9	26.2	1	5	3.69	1.212
Delivery reliability increases competitiveness EPZ firms in Kenya	**337**	0.0	6.3	5.9	62.3	25.5	2	5	3.99	1.032
Revenue generation is an indicator of competitiveness of the EPZ firms in Kenya.	**337**	5.9	11.9	20.8	36.5	25.0	1	5	3.42	1.325

Working capital signifies competitiveness of the firms in EPZ Kenya.	**337**	0.0	11.9	29.1	32.9	26.1	2	5	3.65	1.186
Increased liquidity creation is an indicator of competitiveness of firms in EPZ Kenya.	**337**	8.0	16.1	13.1	45.3	17.5	1	5	3.40	1.386
Increased financial strength signifies competitiveness of the firms in EPZ Kenya.	**337**	8.0	8.0	8.0	45.4	30.6	1	5	3.62	1.382
Weighted mean	**3.64**									
Valid N (Listwise)	**337**									

The findings in **Table 1.1** reveal that the respondents were in agreement (Mean = 3.74; Std Dev = 1.283) that Supply uncertainty reduces competitiveness of the EPZ firms in Kenya. This is in agreement with the findings by Karani (2022) on a study of all the manufacturing companies in Kenya. The study revealed that supply chain strategies are important contributors of manufacturing firm's performance.

The respondents in this study also agreed (Mean = 3.69; Std Dev = 1.212) that Combining resources among the chain partners promotes competitiveness of the EPZ firms in Kenya. These findings are supported by Gachango (2021) who observed that banks which form joint ventures or merge with other banks experience an improvement in their performance.

These findings also indicate that respondents agreed (Mean = 3.99; Std Dev = 1.032) that Delivery reliability increases competitiveness EPZ firms in Kenya. The study by Kimitei et.al. (2019) on 750 manufacturing firms registered with the Kenya Association of Manufacturers supports these findings. This study established that there was a positive significant influence of logistic service reliability on the performance of firms in Kenya. In the study, R squared =0.6421, $p < 0.05$.

The respondents in this study further agreed with (Mean = 3.42; Std Dev = 1.325) that Revenue generation is an indicator of competitiveness of the EPZ firms in Kenya. It is also indicated through these findings that the respondents agreed (Mean = 3.65; Std Dev = 1.186) that Working capital signifies competitiveness of the firms in EPZ Kenya. This is in line with the findings by Tobias et al. (2020) on a study of 449 Swedish Listed firms which indicates that companies can enhance the firm competitiveness by managing their working capital more efficiently.

Additionally, the respondents from these findings agreed (Mean = 3.40; Std Dev = 1.386) that Increased liquidity creation is an indicator of competitiveness of firms in EPZ Kenya. This is in agreement with the findings by Adede et.al. (2022) on a study of 708 firms in Kenya, which revealed that liquidity as a current ratio has a positive significant association with the growth of a firm.

Finally, the respondents in these findings agreed (Mean = 3.62; Std Dev = 1.382) that increased financial strength signifies competitiveness of the firms in EPZ Kenya. These findings are supported by Liu (2016) who observed that mergers in the pharmaceutical industry and other vertically integrated industries led to increased financial strength in these firms and subsequently increased competitiveness.

(b.) Descriptive statistics results on Firm competitiveness

The study analysed the views of the respondents in respect to Competitiveness. Table 1.2 shows the results of the analysis.

Table 1.2: Descriptive Statistics for Competitiveness

	N	S.D (%)	D (%)	N (%)	A (%)	S.A (%)	Min	Max	Mean	Std. Dev
Product demand determines firm competitiveness.	**337**	0.0	0.0	6.3	34.4	59.3	3	5	4.13	.957
Number of customers determine the customer base	**337**	2.1	4.1	6.2	48.7	38.9	1	5	4.25	.829
The market position of a firm determines its competitiveness	**337**	2.1	4.1	6.2	48.7	38.9	1	5	4.03	1.016
Weighted mean	**4.14**									
Valid N (Listwise)	**337**									

The findings in **Table 1.2** indicate that the respondents agreed (Mean = 4.13; Std Dev = .957) with the statement that Product demand determines firm competitiveness. The study by Kimantiria (2014) supports these findings. In the study, the researcher concluded that product competitiveness was used as a tool to measure a supply chain management practices by the national government ministries in Ruiru Sub-county.

Respondents also agreed with (Mean = 4.25; Std Dev = .829) that Number of customers determine the customer base. These findings are supported by the study carried out by Ronald (2021) which indicated that a focus on the customers leads to increased firm competitiveness.

The respondents in this study also agreed with (Mean = 4.03; Std Dev = 1.016) that the market position of a firm determines its competitiveness. These findings are supported by the study carried out by Naeini et al. (2017). They discuss the positive role of market position in influencing the brand identity, brand loyalty and the brand equity.

(c .) Descriptive statistics results on Firm Size

The study analysed the views of the respondents in respect to size of the firm. Table 1.3 shows the results of the analysis.

Table 1.3: Descriptive Statistics for Firm Size

	N	S.D (%)	D (%)	N (%)	A (%)	S.A (%)	Min	Max	Mean	Std. Dev
Resource-based firms in the EPZ with large branch networks have an increased revenue.	**337**	0.0	0.0	6.3	34.4	59.3	3	5	4.47	.866
The production capacity in the sector of the EPZ is determined by the size of the firm	**337**	2.1	4.1	6.2	48.7	38.9	1	5	4.14	1.018
Weighted mean	**4.31**									
Valid N (Listwise)	**337**									

The findings in **Table 1.3** indicate that the respondents agreed (Mean = 4.47; Std Dev = .866) with the statement that firms in the EPZ with large branch networks have an increased revenue. The Standard Deviation of 0.866 implied that the data was distributed around the mean. This also meant that majority of the respondents shared similar opinions regarding this statement. This findings agree with the study by Irungu (2015) who observed that there was a significant positive relationship between firms with large branch networks and horizontal integration in the study on market channel choice among smallholder dairy farmers in Lower Central Kenya. Green (2016) also notes that an increase in the size of a firm led to an increase in the market share and power.

Respondents also agreed with (Mean = 4.14; Std Dev = 1.018) that The production capacity in the sector of the EPZ is determined by the size of the firm. The Standard Deviation of 1.018 implied that the data was distributed around the mean. This also meant that majority of the respondents shared similar opinions regarding this statement. These findings are supported by Chican et al. (2021) in their study on the Hungarian Industry. This study analyses the capabilities of the production area and concludes that the production capacity impacts on the competitiveness of manufacturing firms. Further, Schrank (2001) agrees that the size of the relevant market determines whether the export processing zones fit into the world market. The study indicates that the manufacturers from large economies are able to compete more easily in the world markets as compared to those from small economies.

EXPLORATORY FACTOR ANALYSIS

(a). Principal Component Analysis for Horizontal Integration

To describe the variability among the observed variables Factor analysis was carried out and also to check for any correlated variables with the aim of reducing data that would otherwise have been considered unusable. Traditionally, statements scoring more than 30% and above were included (Hoque, & Awang, 2016). Factor analysis on Horizontal Integration on Competitiveness. **Table 1.4** shows the results of the component matrix for horizontal integration.

Table 1.4: Component Matrix for horizontal Integration

Component Matrix[a]	
	Component
	1
Supply uncertainty reduces competitiveness of the EPZ firms in Kenya.	.76
Collaboration among supply chain partners promotes competitiveness of the EPZ firms in Kenya.	.70
Delivery reliability increases competitiveness EPZ firms in Kenya.	.79
Revenue generation is an indicator of competitiveness of the EPZ firms in Kenya.	.65
Working capital signifies competitiveness of the firms in EPZ Kenya.	.83
Increased liquidity creation is an indicator of competitiveness of firms in EPZ Kenya.	.76
Increased financial strength signifies competitiveness of the firms in EPZ Kenya.	.76

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.86

Bartlett's Test of Sphericity	Approx. Chi-Square	1048.64	
	Df	21	
	Sig.	.00	

Extraction method: Principal Component Analysis

a.   1 Component extracted

The results in Table 1.4 shows the extract of the seven statements attributed to the variable horizontal integration. The results indicated that the higher the extract value the more the factor contributes to the variable. Thus most of the respondents agreed with the statements put across in reference to their organizations' Horizontal Integration strategies to >30% (Jovic et al. 2017) and hence none was viable for dropping. The results also showed Kaiser-Meyer-Olkin Measure of Sampling Adequacy of .86 at p = .000 < 0.05. The results also showed F statistic of 1048.64 at p = 0.000.

(b). Correlation Analysis between Horizontal Integration and Competitiveness

The correlation between Horizontal Integration and Competitiveness of firms in EPZ Kenya was examined and results presented in Table 1.5.

Table 1.5: correlation analysis between horizontal integration and competitiveness		
		Competitiveness
Horizontal Integration	Pearson Correlation	.415[**]
	Sig. (2-tailed)	.000
	N	337
**. Correlation is significant at the 0.01 level (2-tailed).		

The results from Table 1.5 indicate that there is a positive and statistically significant correlation between Horizontal Integration and Competitiveness (r = 0.415, p = 0.000) at 0.01 level of significance. This implies that Horizontal Integration influences Competitiveness of firms in EPZ Kenya. Further, a positive increase in Horizontal integration strategies at the firm would result in corresponding increase in firm competitiveness.

Table 1.6: Correlation Between Size of The Firm and Firm Competitiveness

		Competitiveness
Size of the Firm	Pearson Correlation	.730[**]
	Sig. (2-tailed)	.000
	N	337
**. Correlation is significant at the 0.01 level (2-tailed).		

The results from Table 1.6 indicate that, there is a positive and statistically significant correlation between Size of the Firm as a moderating variable and Competitiveness (r = .730, p = 0.01). This implies that Size of the Firm was linearly correlated with Competitiveness. Further, a positive increase in firm size at the firm would result in corresponding increase in firm competitiveness. This is a clear indication that when Size of the Firm indicators increases there is likelihood of Competitiveness increasing. It thus implies that Size of the Firm is very crucial when it comes to Competitiveness of EPZs in Kenya and therefore the EPZ should pay keen attention to the Size of branch networks and also production capacity of these EPZs.

(c). Regression Analysis

The objective of this study was to establish the influence of horizontal integration strategies on the competitiveness of EPZ firms in Kenya. The study predicted that horizontal vertical integration strategies had no significant statistical effect on the competitiveness of firms in EPZ Kenya.

A simple regression model was used to determine the relationship between horizontal integration and firm competitiveness. The model that tested the hypothesis was as follows:

$Y = b0 + b_1X_1 + e$

Where Y-Firm competitiveness

      b0-Constant (Coefficient of intercept)

      X1-horizontal integration strategies

     e – The error term

Table 1.7: Regression Model Summary for Horizontal Integration

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.415[a]	.172	.170	.733	.172	69.738	1	335	.000
2	.468[b]	.219	.215	.713	.047	20.113	1	334	.000
a. Predictors: (Constant), Horizontal Integration									
b. Predictors: (Constant), Horizontal Integration*Firm Size									

From **Table 1.7**, the results show a positive relationship between Horizontal Integration and Competitiveness (R = 0.415, R^2 = 0.172) and (F (1,335) = 69.738, p = 0.000). The R of 0.415 represents the simple correlation between horizontal integration and competitiveness. The R square explains the variations in the Competitiveness as explained by the Horizontal Integration as a strategy. R^2 of 0.172 indicates that 17.2% of the variations in the Competitiveness can be accounted for by Horizontal Integration. The adjusted R^2 of 0.170 shows that in the regression model constructed, the independent variable Horizontal integration strategy accounts for 17% of the variance in the dependent variable firm competitiveness. This value shows that there may be a number of variables which can have impact on competitiveness at EPZ firms.

The results yet again shows **Model 2** which displays the results after the interaction of independent variable and the moderating variable i.e (Horizontal integration* Firm Size). The results show a positive relationship between the moderated variable term and Competitiveness. An R squared value of 0.219 indicates that 21.9% change in the Competitiveness of firms in EPZ Kenya as can be influenced by the interaction between Horizontal Vertical Integration and Firm Size that is (Horizontal Integration* Firm Size).

Table 1.8: ANOVA[a] of the Horizontal Integration

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	144.086	8	18.011	80.228	.000[h]

1	Residual	73.635	328	.224	
	Total	217.721	336		
a. Dependent Variable: Competitiveness					
b. Predictors: (Constant), Horizontal Integration					

In **Table 1.8**, the ANOVA model showed model fitness on the influence of horizontal integration strategies on competitiveness of firms was statistically significant (F=80.228 P<0.05). This means that there is less than 0.5% chance that an F-ratio this large would be obtained if the null hypothesis were true (Field, 2009).

These findings indicate that horizontal integration strategies is a significant predictor of firm competitiveness. Hence, the null hypothesis was rejected and it was concluded that horizontal integration strategies had a significant effect on competitiveness of firms.

These findings are supported by the study on horizontal integration in the profitability of Malaysian broiler firms (Tey & Arsil, 2021). Other studies which indicate that horizontal integration leads to firm competitiveness are by Ombaka & Jagongo (2008) and Fiocco (2014).

Table 1.9: ANOVA^a of the Size of the Firm

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	144.086	9	16.010	71.099	.000^h
	Residual	73.635	327	.225		
	Total	217.721	336			
a. Dependent Variable: size of the firm						

In **Table 1.9**, The ANOVA model shows that the model fitness on the influence of firm size on competitiveness of firms was statistically significant (F=71.099 P<0.05). Given that the calculated F=71.099, while the Fcritical = 1.88 Then $F_{cal} \geq F_{critical}$ α0.05. These findings indicate that firm size is a significant predictor of firm competitiveness.. Hence, the null hypothesis was rejected and it was concluded

that firm size had a significant effect on competitiveness of firms.

Table 1.10: Significance Test Results for Horizontal Integration						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.840	.160		17.710	.000
	Horizontal Integration	.356	.043	.415	8.351	.000
a. Dependent Variable: Competitiveness						

Table 1.10 indicates that the relationship between Horizontal Integration and Competitiveness was positive and significant (b1 = 0.356, p = 0.000, Beta = 0.415). For every unit increase in Horizontal Integration, Competitiveness is predicted to increase by 0.356 at p = 0.001.

From the study, the beta of 0.415 means that for every one standard deviation unit change in the independent variable, Horizontal integration, the dependent variable, firm competitiveness will rise by 0.415(41.5%) of one standard deviation unit. The results are also highly statistically significant since the significance column indicates 0.000 reporting a significance level stronger than 0.001. ($p < 0.001$).

Further, the effect of horizontal integration was more than 8 times the effect attributed to the error. This was indicated by the t-test value=8.351. Based on these results, the following simple linear regression model was derived.

$$Y = 2.840 + 0.356X_1$$

The research findings are consistent with the study findings of Tey & Arsil (2021), Federgruen & Pierson (2011), Chege et al. (2019), Masese et al. (2019) and Ombaka & Jagongo (2018) who agree that horizontal integration leads to increased firm competitiveness.

Table 1.11: Coefficients using the moderator Firm size

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.682	.312		15.019	.000
Horizontal Integration*firm size	.455	.348	.432	4.183	.000
a. Dependent Variable: Competitiveness					

From the results in **table 1.11**, it is evident that Vertical Integration Strategies are significant in influencing the competitiveness of these firms in EPZ Kenya. It is also evident that when the moderating variable Firm Size is interacted with the independent variables, there is a significant influence of the interactive variable on the competitiveness of these firms in EPZ Kenya.

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The objective of this study was to analyze the influence of horizontal integration on the competitiveness of firms in EPZ Kenya. Regression and correlation results indicated that horizontal integration strategies significantly influence competitiveness of firms in EPZ Kenya. The influence was positive and significant. The study results exposed that the respondents agreed with high mean scores. In general, among the horizontal integration variables that influence competitiveness in EPZ firms, the statement suggesting that delivery reliability increases competitiveness of firms in EPZ Kenya was rated the highest while the item rated the least was that which stated that increased liquidity creation is an indicator of competitiveness of firms in EPZ Kenya.

Conclusions

The study findings revealed that there was a positive and significant relationship between horizontal integration strategies and competitiveness of firms in EPZ Kenya. This was indicated by a high mean score in collaboration among supply chain partners, liquidity creation and delivery reliability.

The study further concludes that horizontal integration is a very crucial aspect for competitiveness of EPZ

firms and that this strategy is important in ensuring the gradual change of firms in EPZ Kenya regarding the vertical integration status. The study confirms that horizontal integration represents a useful compromise between desires to control adjacent businesses and the need to retain strategic flexibility.

Recommendations

The study recommends the management of EPZ firms in Kenya to review the underlying aim of using vertical integration strategies as a tool for gaining competitiveness and that the horizontal integration strategies should be included in the EPZ firms strategic plans. Further, the study recommends that the EPZ Authority should come us with policies and procedures that may assist the EPZ firms in arranging successful horizontal integration strategies by laying out competent guidelines.

REFERENCES

1. Adede, A.A., Namusonge, G., & Sakwa, M. (2022). Effect of liquidity on growth of manufacturing firms in Kenya. The strategic Journal of Business and Change Management, 9(4), 494-509.
2. Bhalla, P. (2018). Principles and practices of management. Excel books private limited.
3. Bhalla, P. (ed.). (2001). Principles and practice of management. Excel Books Private Limited. New Delhi.
4. Biketi, F., Nzulwa, J., & Kwena, R. (2017). Determinants of project performance in export processing zones in Kenya: A case of Athi River export processing zone. The Strategic Journal of Business and Change Management, 4(3), 103-115.
5. Cainelli, G., & Iaccobucci, D. (2012). Agglomeration, related variety & vertical integration. Economic Geography, 88(3), 255-277.
6. Cohen, L., Manion, L., & Morrison, K. (2007). Research Methods in Education (6th ed.). USA.
7. Csabay, M., & Stehlikova,B. (2020). Firm size distribution and the effects of ownership type. Journal of Competitiveness, 12(4), 22-38. https://doi.org/10.7441/joc.2020.04.02.
8. David, F. R., & David, F.R. (2015). Strategic Management: Concepts and Cases: A competitive Advantage Approach (15th Ed.), England: Pearson Education Limited.
9. Eckbo, B.E. (2013). Corporate takeovers and economic efficiency, finance working paper n.391/2013. November 2013. Dartmouth College – Tuck school of Business. European Corporate Governance Institute.
10. Ejoor, F.W., Okechukwu, E.U., & Iroegbu, F.N. (2018). Mergers and acquisitions as a growth strategy in business organisations: A study of Nigeria banking sector. European Journal of Business and Management, 10(6), 58-69.
11. Federgruen, A., & Pierson, M. (2011). The impact of horizontal mergers and acquisitions in price competition models, Working paper 12-031. October 27,2011.
12. Field, A. (2009). Discovering statistics using SPSS (And Sex and Drugs and Rock 'n' Roll) (3rd ed.). SAGE. USA.
13. Fiocco, R. (2014). The strategic value of partial vertical integration. University of Mannheim Discussion paper No. 455.
14. Gachango, S.N. (2021). Integration strategies and performance of commercial banks in Nairobi city county, Kenya. MBA Thesis. Kenyatta University.
15. Government of Kenya, (May 2020), Export Processing Zones program annual performance report, 2019. Research, Planning and Innovation Department.
16. Gulbrandsen, B., & Haugland, S.A. (2016). Explaining vertical integration: Transaction cost economics and competence considerations. Working paper no. 77/00. Foundation for research in economics and business administration, Bergen.
17. Hair, J., Black, W., Babin, B., & Anderson, R. (2010). Multivariate Data Analysis (7th ed.). Upper Saddle River, New Jersey: Prentice Hall Inc.
18. Hoque, A. S. M. M., & Awang, Z. (2016, April). Exploratory factor analysis of entrepreneurial

marketing: Scale development and validation in the SME context of Bangladesh. In Proceedings of the International Social Sciences and Tourism Research Conference, (pp. 22-38).

19. Jovic, M., Sforza, M., Jovanovic, M., & Jovic, M. (2017). The Acceptance of Cosmetic Surgery Scale: Confirmatory factor analyses and validation among Serbian adults. Current Psychology, 36(4), 707-718.

20. Karani, A.M. (2022). Effect of supply chain strategies on the performance of manufacturing firms in Kenya. Dphil. Thesis. Jomo Kenyatta University of Agriculture and Technology.

21. Kennedy, R., Jamison, E., Simpson, J., Kumar, P., Kemp, A., Awate, K., & Manning, K. (2020). Strategic Management. Virginia Tea Publish working in association with Pamplin College of Business, USA.

22. Kimantiria, D.K. (2014). Supply chain management practices and competitiveness in the National government of Kenya. A case study of Ruiru subcounty. MBA Thesis. University of Nairobi.

23. Kimitei, E., Lagat, C., Chepkwony, J., & Sang, J. (2019). Influence of logistic service reliability capability on firm performance in Kenya. Journal of Business Management and Economic Research, 3(9). 34-46. https://doi:10.29226/TR1001.2019.156.

24. Kothari, C. R. (2014). Research Methodology: Methods and Techniques (2nded.) New Delhi: New Age International.

25. Kudelko, J., Wirth, H., Bachowski, C., & Gracek, J. (2015). Horizontal Integration in the development strategy of mining companies. Mining Science, 22(1), 97-114. https://doi:10.5277/msc152209

26. Kumar, R. (2011). Research Methodology: A step-by-step guide for beginners (3rd ed.). SAGE publications.

27. Liu, X. (2016). Vertical integration and innovation. International Journal of Industrial Organisation, 47. 88-120. https://doi.org/10.1016/j.ijindorg.2016.02.002.

28. Lujan Salazar, L.M. (2017). The resource-based view and the concept of value: The role of emergence in value creation. Mercado y Negocios, 35, 26-38.

29. Makori, D., & Jagongo, A. (2013). Working capital management and firm profitability: Empirical evidence from manufacturing and construction firms listed on National Securities Exchange, Kenya. International Journal of Accounting and Taxation, 1(1), 1-14.

30. Malik, F., Anuar, M.A., Khan, S., & Khan, F. (2014). Mergers and acquisitions: A conceptual review. International Journal of Accounting and Financial Reporting, 1(1), 520.

31. Masese, E.K., Omari, S., & Ngacho, C. (2019). Empirical evaluation of the role of horizontal and vertical integration on performance of public organisations. International Journal of Research and Innovation in Applied Science, 49(10), 9-14.

32. Monsur, S.M.T., & Yoshi, T. (2012). Improvement of firm performance by achieving competitive advantages through vertical integration in the Apparel industry of Bangladesh. Asian Economic and Financial Review, 2(6), 687-712. https://archive.aeerssweb.com/index.php/5002/article/view/925.

33. Morden, T. (2007). Principles of Strategic Management (3rd ed.). Ashgate Publishing Company. USA.

34. Mori, A. & Tomotsune (2020). Overview of mergers and acquisitions activity in Kenya. Lexology. https://www.lexology.com

35. Naeini, A.B., Mosayebi, A., & Hamidi, A. (2017). A study of brand identity and its impact on brand loyalty and brand equity. International Journal of Contemporary Applied Sciences, 4(3), 90-104.

36. Naliaka, V., & Namusonge, G. (2015). Role of inventory management on competitive advantage among manufacturing firms in Kenya: A case study of Unga Group Ltd. International Journal of Academic Research in Business and Social Science, 5(5), 87-104.

37. Njuguna, V.N., Kwasira, J., & Orwa, G. (2018). Influence of vertical integration strategy on performance of non-financial firms listed at the Nairobi Securities Exchange, Kenya. International Journal of Strategic Management, 7(5). 169-195.

38. Ombaka, C., & Jagongo, A. (2018). Mergers and acquisitions on financial performance among selected commercial banks, Kenya. International Academic Journal of Economics and Finance, 3(1), 1-23.

39. Patrick, M.K., Makolo, Y.O., & Kamau, C.G. (2022). Mergers and acquisitions and their effects on firm objectives: African Perspective. African Journal of Commercial Studies, 1(2). 27-38.
40. Ritson, N. (2011). Strategic management. Neil Ritson & Ventus Publishing APS.
41. Ronald, E.M. (2021). The influence of competitive strategies on service delivery among logistics firms in Nairobi city county, Kenya. MBA Thesis. University of Nairobi.
42. Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. New York: Pearson education.
43. Stanley C., & Smee, B. (2007). Strategies for reducing sampling errors in exploration and resource definition drilling programmes for gold deposits. Geochemistry Exploration Environment Analysis, 7(4), 329-340. https://doi:10.1144/1467-7873/07-128.
44. Sun, B. (2022). The effect of takeover on the performance of acquirers in Australia based on the economic value added method. Advances in Economics, Business and Management Research, 219(1). 79-82.
45. Tey, Y.S. & Arsil, P. (2021). Vertical and horizontal integration in the profitability of Malaysian Broiler firms. Tropical Animal Science Journal, 44(1), 115-122. https://doi.org/10.5398/tasj.2021.444.115
46. Wekesa, C. (2019). Effect of liquidity corporate governance and competitiveness on financial performance: An empirical analysis of the sugar firms in Kenya. The International Journal of Business and Management. https://doi.org/10.24940/theijbm/2019/v7/i7/BM1907-053.
47. White, C. (2004). Strategic Management. Palgrave Macmillan: USA.
48. Williamson, O.E. (1999). Strategy research: Governance and competence perspectives. Strategic management Journal 20, 1087-1108.