Special Economic Zones and Competitiveness of Foreign Direct Investment Manufacturing Firms in Kenya

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Special Economic Zones are designated areas within a nation's borders with the objectives of improving trade balance, attracting more investment, creating jobs, and enabling efficient administration. In Kenya, SEZs benefit from business-enabling policies and sector-appropriate on-site and off-site infrastructure and utilities. For the last 20 years, the Government of Kenya has been investing on Special Economic Zones as one among the innovative strategies geared towards enhancing competitiveness of Foreign Direct Investment firms in the manufacturing sector. While it is noteworthy that SEZs have somehow contributed to the increase in the inflow of FDIs in the manufacturing sector in Kenya, it is equally important to point out that such improvement is not commensurate with the size of Kenya's economy as well as the level of investment put in by the

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Government. In fact, in a more worrying trend, a good number of FDIs have ceased their manufacturing operations in the country to retain only the marketing and distribution functions of their businesses, a decision that has cut thousands of jobs. These FDIs have shifted focus to offshore manufacturing. Therefore, this paper is the product of the study carried out to establish the influence of SEZs on the competitiveness of FDI manufacturing firms in Kenya. Specifically, the study focused on the influence of; technology spillovers, labour availability, market accessibility and level of export, on competitiveness of FDI manufacturing firms in Kenya. A cross-sectional research design was used in the study. The unit of analysis was the management staff of 66 manufacturing FDIs who were members of Kenya Association of Manufacturers (KAM) in the Nairobi Metropolitan while the unit of observation comprised; human resource manager 1, finance manager 1, marketing manager 1, production manager 1 and CEO/GM/owner 1. Multistage sampling method was used in the study. Multistage Sampling is the probability sampling technique wherein the sampling is carried out in several stages such that the sample size gets reduced at each stage. At the initial stage, the study applied Yamane formula to determine the number of firms in each of the 9 categories for the study. From the selected firms, 5 members of management (1CEO and 4 Managers) were selected using purposive sampling technique. Lastly, Yamane formula was used to arrive at the final sample size. This resulted to a total population of 325 and a sample size of 283. Primary data was collected through a semi-structured questionnaire while secondary data involved analysis of statistical abstracts from published materials and reports. Data analysis was carried using the statistical package for social sciences (SPSS) software version 25 as well as descriptive and inferential statistics. Primary data was collected through a semi-structured questionnaire while secondary data involved analysis of statistical abstracts from published materials and reports. Data analysis was carried using the statistical package for social sciences (SPSS) software version 25 as well as descriptive and inferential statistics. In the overall the study found that special economic zones had influence on competitiveness of FDI manufacturing firms in Kenya, however the findings on some of the sub-variables calls for their review and relevant actions taken by the Government to ensure enhancement of competitiveness of FDI manufacturing firms. This is because about 37% of the respondents either moderately or never at all agreed that there was conducive business environment in their zones. Further, the study found that over 51.4 % either moderately or never at all agreed that other firms had acquired technology and skills from the FDI firms in the Zones. Consequently, the study recommends an evaluation of the policies and infrastructure that support SEZs in the Manufacturing sector in Kenya.

1. INTRODUCTION

Special Economic Zones are designated areas within a nation's borders with the objectives of improving trade balance, attracting more investment, creating jobs, and enabling efficient administration. The Government of Kenya established Special Economic Zones Authority (SEZA) with clear mandate to; designing, approving, establishing, developing, operating, promoting and regulating a Special Economic Zone (SEZ) [1]. SEZA also has responsibilities of issuing licenses and implements Government policies and programmes. Further, the Authority is in charge of determining the investment criteria and investment thresholds for the businesses in the zone and maintains records of the enterprises and residents operating in each zone [2]. The 2016 Special Economic Zones Regulations stated that SEZA must maintain an open investment environment to facilitate and encourage business via the setting up of "simple, flexible and transparent procedures for registration of the investor" [3,4]. The new regulations also sought to enable foreign investors to put up plants within the shortest possible time, as the SEZA would be required to establish a resident office that would help investors have all their architectural designs and environment impact assessment audits approved quickly (Wang, 2013).

When it comes to SEZ incentives, the tax shelters provided inside a SEZ are the main selling feature of SEZs in Kenya. SEZs are protected from taxes and other regulatory barriers that either directly or indirectly obstruct commerce since they are seen as operating outside Kenya's customs territory, especially from a tax standpoint. As a result, licensed SEZ

enterprises, developers, and operators are eligible for a number of tax breaks, including exemption from excise duty, customs duty, value added tax, and stamp duty as well as favorable corporate income tax rates and preferential withholding tax rates, particularly with regard to profit repatriation [5]. In this way, the Kenyan government anticipates that local industry participants would be given the chance to enter global markets in a competitive manner, in addition to encouraging foreign investors to invest in Kenya. Kenya's Vision 2030 highlighted Special Economic Zones as one of its flagship initiatives under the economic pillar in its first Medium Term Plan 2008–2012. The SEZs were supposed to address important issues that make Kenya less attractive as a location for investments. Infrastructure provision, the easing of corporate rules, value chain integration and clustering, increased market access for SEZ goods and services, and reduced taxation would all contribute to this. SEZs offer a specially designed vehicle via which other "Big Four Agenda" and Vision 2030 economic and social showpiece projects would be implemented. The main tool of policy to draw FDIs remains incentives in SEZ. The incentives have shown to be somewhat effective when paired with the zones' affordable labor and land expenses. In some cases, local businesses claim that the incentives granted to FIDs enhance their competitiveness to their disadvantage in the marketplace [6].

1.1 Statement of the Problem

For the last 20 years, the Government of Kenya has been investing on Special Economic Zones as one among the innovative strategies geared towards enhancing competitiveness of Foreign Direct Investment firms in the manufacturing sector [7]. The goal of SEZ is, among other things, to draw in foreign and domestic direct investments where the new goods and services are typically viewed as being outside the customs territory in terms of import tariffs and taxes. They are increasingly and largely regarded as a crucial tool for economic development policy [8]. While it is noteworthy that SEZs have somehow contributed to the increase in the inflow of FDIs in the manufacturing sector in Kenya, it is equally important to point out that such improvement is not commensurate with the size of Kenya's economy as well as the level of investment put in by the Government UNCTAD [9]. In fact, in a more worrying trend, a good number of FDIs

have ceased their manufacturing operations in the country to retain only the marketing and distribution functions of their businesses, a decision that has cut thousands of jobs. These FDIs have shifted focus to offshore manufacturing [10]. According to Maru [11], with the window of opportunity presented by AGOA which provided the major market expected to close in 2025 and compounded by other challenges like the deterioration of the Kenyan infrastructure, port congestion, poor supply and cost of electricity, and high cost of labor, Foreign Direct Investment in apparel manufacturing industry in the Special Economic Zones are expected to exit the Kenyan market in very large numbers. Most studies carried out in Kenya have generally focused on FDI attractive strategies without paying particular attention to FDI competitiveness in the manufacturing sector and more so without regard to SEZs. Accordingly, this study filled the gap by focusing on establishing the influence of SEZs on the competitiveness of FDI manufacturing firms in Kenya.

1.2 Objective of the Study

The study objective was to establish the influence of SEZs on the competitiveness of FDI manufacturing firms in Kenya. Specifically, the study sought to establish the influence of; technology spillovers, labour availability, market accessibility and level of export, on competitiveness of FDI manufacturing firms in Kenya. Further, the study sought to establish the moderating role of energy cost on the relationship between SEZs and competitiveness of FDIs in Kenya.

2. THEORITICAL FRAMEWORK

The study approach was guided by the Theory of Comparative Advantage. The theory was developed by David Ricardo in 1817 to explain why countries engage in international trade even when one country's workers are more efficient at producing every single good than workers in other countries. Ricardo considered what goods and services countries should produce, and suggested that they should specialize by allocating their scarce resources to produce goods and services for which they have a comparative cost advantage. He identified two types of cost advantage – absolute, and comparative. Absolute advantage means being more productive or cost-efficient than another country whereas comparative advantage relates to how much productive or cost efficient one

country is than another. This theory supported innovation FDI strategy concerned with the establishment of SEZ. According to Ciera [12], SEZs offer a way to create special environments conducive to business in economies where governments otherwise face great difficulties doing so. Governments also use SEZs as a way to attract investments in sectors with no obvious comparative advantage, or as a way of increasing value added in export activities. In order to succeed in this new environment, a zone of any type must be adapted to the host country's specific situation, and must build on its comparative advantages. To be a catalyst for structural transformation, zones need the following: to have or to be linked to key elements of infrastructure (like ports, railways and highways) with good trade logistics and customs services; to be well-matched to local resources that leverage the nation or city's comparative advantages (e.g., agro-processing or electronics); to be part of the global value chain; to be focused not only on exports, but also on the domestic market.

The study identified the indicators of innovation strategies (IV) to include; Technology spillovers, labour availability, market accessibility and level of export. The indicators of competitiveness of FDI firms (DV) were identified to be profitability, productivity, sales and costs. The literatures reviewed also revealed the existence of energy costs as the moderator variable (MV) in the relationship. The indicators energy costs include; electricity and petroleum. The variables were arrived at after the extensive review of relevant literatures and reference to the theories upon which the study is grounded. Though not specific to the FDI manufacturing firms in Kenya, the literature cited herein points out a positive relationship between the IV and DV in the study ((SEZ Act, 2015), [13], (Otuki, 2014), [14] (Ahn, 2008), (Yatich, 2018), (Deperru, 2005)).

3. METHODOLOGY

The study adopted positivism research philosophy. This is because positivism adheres to the view that "factual" knowledge can only be trustworthy if it is acquired through observation, including measurement. A cross-sectional research design was used in the study. The unit of analysis was the management staff of 66 manufacturing FDIs who were members of Kenya Association of Manufacturers (KAM) in the Nairobi Metropolitan while the unit of observation comprised; human resource manager 1, finance

manager 1, marketing manager 1, production manager 1 and CEO/GM/owner 1. Multistage sampling method was used in the study. Multistage Sampling is the probability sampling technique wherein the sampling is carried out in several stages such that the sample size gets reduced at each stage. At the initial stage, the study applied Yamane formula to determine the number of firms in each of the 9 categories for the study. From the selected firms, 5 members of management (1CEO and 4 Managers) were selected using purposive sampling technique. Lastly, Yamane formula was used to arrive at the final sample size. This resulted to a total population of 325 and a sample size of 283. Primary data was collected through a semi-structured questionnaire while secondary data involved analysis of statistical abstracts from published materials and reports. Data analysis was carried using the statistical package for social sciences (SPSS) software version 25 as well as descriptive and inferential statistics.

4. RESULTS AND DISCUSSION

4.1 Response Rate

The study population comprised of 325 management staff of the FDIs manufacturing firms in Kenya. 283 questionnaires were issued out of which 192 sets of questionnaires (n = 192) were completed and returned by 192 management staff. This represents 67.85 % rate of response of the study population and therefore, the size was considered to have contributed adequately in addressing the research hypotheses. The high response rate was attained because of the researcher's continuous contact with the respondents through calls and emails requesting the respondents to complete the filling of the questionnaires. The 67.85% questionnaire return rate was sufficient for data processing and analysis as per (Kothari and Garg, 2014).

4.2 Work Experience

The Respondents were asked to indicate the number of years they had served as management staff of the FDIs firms. According to the study findings Table 2, majority of the respondents had work experience of between 1 and 5 years and this was represented by about 41.1% percent of the respondents. This was followed closely by those who had work experience of between 5-to 10 years. In addition, those who had worked for more than ten years

Table 1. Response rate

Target respondents (Management staff for FDI)	Total questionnaires issued	Total questionnaire returned	Percentage of response
325	283	192	67.85

were 17% and lastly, minority represented by 7.3% of the respondents said they had worked for the FDI firms for less than 1year. This implied that in the last one year, the companies have not employed many of the workers.

Table 2. Distribution of respondents by work experience (N=192)

Period	Frequency (*n*)	Percentage
Less than 1 years	14	7. 3
1-5 Years	79	41.1
5-10 years	66	34.4
10 years and above	33	17.1
Total	192	100.0

4.3 Descriptive Findings

4.3.1 Descriptive findings for special economic zones and competitiveness of FDI manufacturing firms in Kenya

The study sought to determine the relationship between Special Economic Zones and the competitiveness of FDI manufacturing firms in Kenya. Various statements indicators were used to measure special economic zones on competitiveness of FDI manufacturing firms in Kenya on a Likert scale of 1-5; where 1 meant No extent (NE); 2 meant little extent (LE); 3 meant Moderate (M), 4 meant Great extent (GE) and 5 meant Very great extent (VGE). The findings on Table 3 indicate that, in terms of how Special Economic Zones influence Competitiveness of FDI manufacturing firms in Kenya with regards to the extent to which firms had acquired technology and skills from other firms within their zone, the response were as follows: 66.6% of the respondents agreed to a great extent that their firms had acquired technology and skills from other firms within their zone and this had influenced Competitiveness of FDI manufacturing firms in Kenya, followed by 26.7% moderately, and 6.7% very great extent that their firms had acquired technology and skills from other firms within their zone. This implied that the majority of the management staff of the FDIs felt to a great extent that their firms

had acquired technology and skills from other firms within their zone and this had influenced competitiveness of FDI manufacturing firms in Kenya (M = 3.80, SD =.54).

The level to which Special Economic Zones in terms of adequate and affordable labor within the zone influences competitiveness of FDI manufacturing firms in Kenya, the finding suggests that 57.8% of the respondents felt to a great extent that adequate and affordable labor within the zone influences competitiveness of FDI manufacturing firms in Kenya, followed by 25.6% who moderately felt that , adequate and affordable labor within the zone influences competitiveness of FDI manufacturing firms in Kenya. The rest of the results were as follows; 11.0% very great extent and 5.6% little extent. This implied that the majority 57.8% of the management staff of the FDIs felt to a great extent that adequate and affordable labor within the zone influences competitiveness of FDI manufacturing firms in Kenya. This was also supported by Mean of 3.74, and Standard Deviation of 0.73.

The finding further suggests 55.6% of the respondents felt to a great extent that from the time the FDI firms had moved into the zone, the markets of their products had increased both locally and abroad. This was followed by 20% who felt to a very great extent, 20% moderate extent, and lastly 4.4% felt to a little extent. This implied that the majority 55.6% of the management staff of the FDIs felt to a great extent that from the time the FDI firms moved into the zone, the markets of their products had increased both locally and abroad and this had influence on competitiveness of FDI manufacturing firms in Kenya (M = 3.91, SD =0.76). Similarly, concerning whether the FDI firms had conducive business environment in their zones because of the provision of adequate infrastructure; 48.4% of the respondents felt to a great extent that there was conducive business environment in their zones because of the provision of adequate infrastructure. This was followed by 34.8%, 14.6% and 2.2% who felt moderately, very great extent and little extent in that in that order. This implied that the majority at 48.4% of the management staff of the FDIs felt to

a great extent that the respondents had conducive business environment within their zone because of the provision of adequate infrastructure, hence competitiveness of FDI manufacturing firms in Kenya (*M* = 3.72, *SD* =0.78).

To establish the extent to which the respondents felt that profit had gone up since they had moved into the zone, the response was as follows; 50% responded to a great extent, 30% responded to a moderate extent, 16.7% responded to a very great extent 3.3% responded to a little extent and 0.0% respondent to a no extent. The overall mean and standard deviation were 3.80 and 0.75 respectively clearly showing that the respondents were in agreement to a great extent that profits had gone up since they had moved into the zone. Lastly, on whether other firms had acquired technology and skills from the FDI firms in the Zones; 46.4% of the respondents said to a great extent, followed by 41.4% of the

Table 3. Descriptive analysis of special economic zones and competitiveness of FDI manufacturing firms in Kenya. (N=192)

STATEMENTS	NE	LE	M	GE	VGE	Mean	Std. dev
Our firm has acquired technology and skills from other firms within our zone	0.00%	0.00%	26.7%	66.7%	6.7%	3.80	0.54
There is adequate and affordable labour in the zone	0.0%	5.6%	25.6%	57.8%	11.0%	3.74	0.73
From the time we moved into the zone, the markets for our products have increased locally and abroad	0.0%	4.4%	20.0%	55.6%	20.0%	3.91	0.76
We have a conducive business environment in the zone because of provision of adequate infrastructure	0.0%	2.2%	34.8%	48.4%	14.6%	3.72	0.78
Since we moved into the zone our profits have considerably gone up	0.0%	3.3%	30.0%	50.0%	16.7%	3.80	0.75
Other firms have acquired technology and skills from us	1.1%	8.9%	41.4%	46.4%	2.2%	3.37	0.73
Overall Mean						3.72	0.72

Table 4. Descriptive statistics on moderating role of energy costs (N=192)

STATEMENTS	NE	LE	M	GE	VGE	Mean	Std dev
The cost of electricity influences firm's decision to stay or quit business	3.3%	17.3%	32.5%	36.7%	11.1%	3.91	0.75
The cost of petroleum influences a firm's decision to stay or quit businesses	7.8%	2.2%	20%	62.2%	10.0%	3.92	0.82
Government should intervene to manage the cost of electricity and petroleum for firms to continue being in business	6.0%	14.3%	28.4%	15.3%	34.0%	3.76	0.79
The Government should reduce the rate of taxation on electricity and petroleum for firms to continue with business	4.5%	10.1%	35.9%	34.5%	15.1%	4.33	0.84
Firms should be trained on energy efficiency practices for them to continue with business	1.1%	28.1%	20.3%	38.1%	14.1%	3.42	1.21
Overall Mean						3.87	0.86

respondent who said moderate, 2.2% of the respondents said very great extent and 8.9% of the respondents said little extent while 1.1% of the respondents said no extent. This implied that the majority 46.4% of the management staff of the FDIs felt to a great extent that other firms had acquired technology and skills from the FDI firms in the zone and therefore this contributed to influence on the competitiveness of FDI manufacturing firms in Kenya (*M* = 3.37, *SD* =0.73). Based on this finding the overall conclusion is that special economic zones had influence on competitiveness of FDI manufacturing firms in Kenya. This finding is corroborated with the case of India. The introduction of Special Economic Zones (SEZs) in India has injected hope for augmented economic growth in recent future. India has been among the top ten recipient of FDI along with China in the last 20 years and the quantum of FDI has increased comparatively faster in the post-reform period. It is important to see what is driving this increased flow of FDI in India.

A panel data analysis based on 16 states over the period from 2001-02 to 2005-06 showed that the social, physical and educational infrastructure does not have any significant influence on FDI inflows of Indian states. The main reason why there are sustained inflows of FDIs in India is because of profitability and risk factors which have worked positively to spur their competitiveness in the SEZs.

4.3.2 Moderating effect of energy costs on the relationship between SEZs and competitiveness of FDI manufacturing firms in Kenya

The study sought to examine the moderating effect of energy costs on the relationship between special economic zones and competitiveness of FDI manufacturing firms in Kenya. The level of energy costs as a moderator of various innovative strategies on competitiveness of FDI manufacturing firms in Kenya was assessed by use of Likert scale of 1-5. The data was based on a sample size of 192 respondents. For the first statement on the cost of electricity, 3.3% of the firms strongly disagreed, 17.3% disagreed, 32.5% were neutral, 36.7% agreed, and 11.1% strongly agreed that the cost of electricity influenced their decision to stay or quit business. This implies that majority of the respondents agreed to the

statement that the cost of electricity influences the relationship between SEZs and FDI manufacturing Firms in Kenya. This was supported by mean score of 3.81, with a standard deviation of 0.65.

For the second statement on the cost of petroleum, 7.8% of the firms strongly disagreed, 2.2% disagreed, 20% were neutral, 62.2% agreed, and 10.0% strongly agreed that the cost of petroleum influenced their decision to stay or quit business. Overwhelming majority of 62% agreed with the statement that the cost of petroleum influences the relationship between SEZs and FDI manufacturing Firms in Kenya. The mean score was 3.98, with a standard deviation of 0.62. For the third statement on government intervention, 6.0% of the firms strongly disagreed, 14.3% disagreed, 28.4% were neutral, 15.3% agreed, and 34.0% strongly agreed that the government should intervene to manage the cost of electricity and petroleum for firms to continue being in business. Majority of 34% strongly agreed that the government should intervene to manage the cost of electricity and petroleum for FDI firms to be competitive. This was justified by a mean score of 3.76, with a standard deviation of 0.69.

For the fourth statement on reducing taxation rates, 4.5% of the firms strongly disagreed, 10.1% disagreed, 35.9% were neutral, 34.5% agreed, and 15.1% strongly agreed that the government should reduce the rate of taxation on electricity and petroleum for the FDI firms to be competitive. Majority of the respondents at 35.9% took a neutral position on this matter. The mean score in this case was 4.33, with a standard deviation of 0.84, which is notably high. For the fifth statement on energy efficiency practices, 1.1% of the firms strongly disagreed, 28.1% disagreed, 20.3% were neutral, 38.1% agreed, and 14.1% strongly agreed that firms should be trained on energy efficiency practices for them to continue with business. Majority of the respondents at 38.1% agreed with the statement that energy efficiency practices influence the relationship between SEZs and FDI firms' competitiveness. In this case, the mean score was 3.42, with a standard deviation of 1.21. In summary, the data suggest that the cost of electricity and petroleum does influence FDI firms' competitiveness and the decision to stay or quit business, and that many firms believe government intervention and training on energy efficiency practices could help them stay in

Table 5. Descriptive statistics for competitiveness of FDI manufacturing firms in Kenya

		SD	D	N	A	SA	Mean	Std	No
1	Our Sales Growth rate is higher than others	5.6%	5.7%	6.9%	38.1%	42.7%	4.28	0.939	192
2	Our Customer Acquisition Cost (CAC) is lower than others	6.6%	6.1%	6.9%	32.1%	54.3%	4.43	0.723	192
3	Our Customer Lifetime Value (CLV) is higher than others	1.1%	2.9%	13.7%	40.6%	41.7%	4.19	0.860	192
4	Our Customer Churn Rate is lower than others	0.6%	3.4%	8.6%	42.3%	45.1%	4.28	0.807	192
5	Our Lead Conversion Ratio is higher than others	0.0%	2.9%	24.0%	35.4%	37.7%	4.08	0.854	192
	SALES						4.25	0.841	192
1	The average number of tasks performed by each staff member is higher than others	3.0%	4.6%	12.6%	42.1%	37.7%	4.16	0.815	192
2	The speed of new products introduction is higher than others	4.6%	5.1%	6.9%	33.1%	50.3%	4.23	0.905	192
3	New products introduced in a specific time is higher than others	6.1%	7.9%	13.7%	35.6%	36.7%	4.02	0.867	192
4	Number of improvements made in a specific time is higher than others	2.6%	8.4%	8.6%	40.3%	40.1%	4.08	0.831	192
5	Average innovation ideas initiated by our staff members is higher than other	4.0%	5.9%	17.0%	35.4%	37.7%	4.06	0.894	192
	PRODUCTIVITY						4.11	0.862	192
1	Our labor costs are lower than others	0.6%	2.3%	12.6%	44%	40.6%	4.22	0.794	192
2	Our capital costs are lower than others	4.6%	7.4%	22.3%	38.3%	26.9%	3.76	1.072	192
3	Our intermediate input costs) are lower than others	1.7%	9.7%	25.1%	38.3%	25.1%	3.75	0.995	192
4	Our total costs per unit of output are lower than others	2.3%	3.4%	16.6%	50.3%	27.4%	3.97	0.887	192
5	Our utility costs are lower than others	1.7%	7.4%	12.0%	58.9%	19.4%	3.76	1.072	192
	COSTS						3.89	0.964	
	Overall Mean								

business. The overall mean supporting this position was 3.87 and standard deviation was 0.86. However, opinions are divided on the effectiveness of reducing taxation rates. This finding supports the outcome of a study carried out in South Africa 'the impact of electricity prices and supply on attracting FDI to South Africa'. The study found that that indeed electricity supply is a positive contributor to inward and retention of FDI, ceteris paribus, and that electricity prices are a negative contributor to inward and retention of FDI, ceteris paribus [15]. In Kenya, Ateng' and Arunga carried out a study on the 'constraints to foreign direct investment inflows to kenya: stakeholders' perspective' and found that Kenya is an expensive location for doing business because of the high costs of energy among other things.

4.3.3 Descriptive statistics for competitiveness of FDI manufacturing firms in Kenya

In this section, we are concerned with a descriptive analysis of the dependent variable (Competitiveness of FDI manufacturing firms in Kenya). The respondents were asked to state their level of agreement on the following items as far as the competitiveness of FDI manufacturing firms in Kenya was concerned. The findings were as follows: On whether the FDI firms' sales growth rate is higher than others, 38.1% of the respondents agreed and 42.7% strongly agreed, 7.9% were neutral, 5.7% disagreed and only 5.6% of the respondents strongly disagreed. An average score rate of 4.28 was recorded with a standard deviation of 0.939. This suggests that the majority of the respondents agreed that the

sales growth rate was higher than others. Concerning whether the respondents' customer acquisition cost (CAC) was lower than others, the majority of the respondents strongly disagreed at 49.3%, 32.1% agreed, 6.9% were neutral, 6.1% agreed and 0.6% strongly disagreed. This also indicates that the majority of the respondents were in disagreement that customer acquisition cost (CAC) is lower than others as supported with an overall mean rate of 4.43 and standard deviation 0.723.

In addition to that, question was asked to establish whether the respondents agreed that customer lifetime Value (CLV) is higher than others, 40.6% of the respondents agreed, 41.7% strongly agreed, 13.7% were neutral 2.9% disagreed and 1.1% strongly disagreed. An average score rate of 4.19 was recorded with a standard deviation of 0.86. This also indicated that the majority of respondents agreed that customer lifetime Value (CLV) is higher than others. The Respondents were asked whether their Customer Churn Rate was lower than others, 42.3% of respondents agreed, 45.1% strongly agreed, 8.6% were neutral but 3.4% disagreed and 0.6% strongly disagreed. An average scale of 4.28 out possible 5 and standard deviation of 0.807 was recorded. This means that the respondents were in agreement that their Customer Churn Rate was lower than others.   To find out whether the respondent's Lead Conversion Ratio was higher than others, the majority of the respondents at 35.4% agreed, 37.7% strongly agreed, 24.0% were neutral but 2.9% disagreed and 0.0% strongly disagreed. Mean score of 4.08 out of 5 and standard deviation of 0.854 was recorded. At this point, it was established that the majority of the respondent agreed that sales is a great influencer of competitiveness of FDI manufacturing firms in Kenya. This was supported by the overall mean of 4.11 and standard deviation of 0.862.

The other aspects of measurement with respect to the competitiveness of FDI manufacturing firms in Kenya were mainly pegged on productivity. Various items were used to measure productivity in relation to competitiveness and the findings were as follows: to investigate the extent to which the respondents agreed that the average number of tasks performed by each of their staff member was higher than others, 42.1% of respondents agreed, 37.7% strongly agreed, 12.6% were neutral but 3.6% disagreed and 3.6% strongly disagreed. An average scale of 4.16 out of possible 5 and standard deviation of 0.815 was recorded so the respondents were therefore in agreement that the average number of tasks performed by each of their staff members was higher than others. Further analysis indicated that the respondents were in agreement that the speed of new product introduction was higher than others and this was backed by the following results; 50.3% of respondents agreed, 33.7% strongly agreed, 6.9% were neutral but 5.1% disagreed and 4.6% strongly disagreed. An average scale of 4.23 out of possible 5 and standard deviation of 0.905 was recorded and with regards to these findings, the respondents agreed that the speed of new product introduction was higher in their firms than others. Similarly, to investigate the extent to which the respondents were in agreement that new products introduced in a specific time were higher than others, the results suggest that the majority at 36.7% of the respondent strongly agreed, 35.6 agreed 13.7% were neutral, 7.9% of the respondents disagreed while 6.1% of the respondents strongly disagreed. An average scale of 4.02 out of possible 5 and standard deviation of 0.867 was published clearly demonstrating the respondent were in agreement with the statement.

To find out if the respondent were in agreement that the number of improvements made in a specific time was higher than others.   The majority of the respondents at 40.3% agreed, 40.1% strongly agreed, but 8.6% were neutral, 8.4% disagreed and 2.6% strongly disagreed. The average score rate was 4.08 out of 5 and standard deviation of 0.831 was recorded. This also indicates that the respondents were in agreement that the number of improvements made in a specific time was higher than others. On whether the average innovation/improvement ideas initiated by the respondents' staff members were higher than others, 35.4% of the respondents agreed and 37.7% strongly agreed, 17.0% were neutral, 5.9% disagreed and only 4.0% of the respondents strongly disagreed. An average score rate of 4.06 was recorded with standard deviation of 0.894. This indicates that the majority of the respondents agreed that the average innovation/improvement ideas initiated by the respondents' staff members were higher than others. Again, with all these findings, it was concluded that the respondents were in agreement with all items associated with productivity as far as competitiveness is concerned. This was confirmed by the overall

Table 6. Regression analysis for special economic zones and Competitiveness of FDI manufacturing firms in Kenya with no moderator

Model	R	R Sq.	Adjusted R Sq.	Std. Error of the Estimate	Durbin-Watson
1	.316[a]	.100	.095	.29948	2.175

a. Predictors: (Constant), Special Economic Zones and Competitiveness of FDI manufacturing firms in Kenya

Analysis of Variance						
Model		Sum of Sq.	Df.	Mean Sq.	F	Sig.
1	Reg	1.890	1	1.890	21.069	.000[b]
	Residual.	17.041	190	.090		
	Total	18.930	191			

a. Dependent Variable: Competitiveness of FDI manufacturing firms in Kenya.
a. Predictors: (constant), Special Economic Zones

Overall regression coefficients							
	Un Std Coeff		Std Coeff	t	Sig.	Collinearity Statistics	
	B	Std. Er	Beta			Tolerance	VIF
(Constant)	3.964	.107		37.018	.000		
Special Economic Zones	.130	.028	.316	4.590	.000	1.000	1.000

Table 7. Rregression analysis for special economic zones and competitiveness of FDI manufacturing firms in Kenya. with no moderator

Model	R	R Sq.	Adjusted R Sq.	Std. Error of the Estimate	Durbin-Watson
1	.455[a]	.207	.199	.28182	2.168

a. Predictors: (Constant), Special Economic Zones

Analysis of Variance						
TExModel		Sum of Sq.	Df.	Mean Sq.	F	Sig.
Dicu1	Reg	3.919	2	1.960	24.672	.000[b]
	Residual.	15.011	189	.079		
	Total	18.930	191			

a. Dependent Variable: Competitiveness of FDI manufacturing firms in Kenya.
a. Predictors: (constant), Special Economic Zones*Z

Overall regression coefficients							
	Un Std Coeff		Std Coeff	t	Sig.	Collinearity Statistics	
	B	Std. Er	Beta			Tolerance	VIF
(Constant)	3.521	.134		26.369	.000		
Special Economic Zones	.140	.027	.339	5.223	.000	.995	1.005
Special Economic Zones*Z	.101	.020	.328	5.055	.000	.995	1.005

means score of 4.11 and standard deviation of 0.862.

The respondents were asked to rate the extent to which they agree or disagree that their labour costs were lower than others. 40.6% strongly disagreed, 44% disagreed 12.6% were neutral, 2.3% agreed and 0.6%strongly agreed. An average score rate of 4.22 was recorded with standard deviation of0.794. This suggests that majority of the respondents were in disagreement that their labour costs were lower than others. With regards to knowing the extent to which the respondents agreed that their capital costs were lower than others, 31.0% strongly agreed, 32.8% agreed 15.9% were neutral extent, 6.6% disagreed and 13.7% strongly disagreed. An average score rate of 3.76 was recorded with standard deviation of 1.072. This suggests that the respondents were in agreement that their capital costs were lower than others.

To establish the extent to which the respondents agreed or disagreed that their intermediate input costs (cost of goods and services used in the

production process) were lower than others: 25.1% strongly agreed, 38.3% agreed 25.1% were neutral, 9.7% disagreed while 1.7% strongly disagreed. Mean rate of 3.75 was recorded with standard deviation of 0.995. This suggests that the respondents agreed that their intermediate input costs (cost of goods and services used in the production process) were lower than others. Concerning whether the respondents agreed that their total costs per unit of output are lower than others: 30.6% strongly disagreed, 3.4% disagreed 16.6% were neutral, 50.3% agreed and 27.4% strongly agreed. Mean rate of 3.97was recorded with standard deviation of 1.026. This suggests that respondents were in agreement that their total costs per unit of output were lower than others. To find out if the respondents were in agreement that their utility costs in a specific time is higher than others , the results were as follows: - 58.9% agreed, 7.4% disagreed 12.0% were neutral, 19.4% strongly agreed and 1.7% strongly disagreed. Mean rate of 3.76 was recorded with a standard deviation of 1.072 indicating that their utility costs are higher than others. In the overall, a mean of 3.89 a standard deviation of 9.64, suggesting that costs influence competitiveness of FDI firms. Therefore, the findings suggest that respondents were generally in agreement with the items related to sales, productivity, and costs apart from disagreements in lower labour costs and lower customer acquisition cost (CAC), with regard to influencing competitiveness of FDI manufacturing firms in Kenya. This finding is consistent with Takahiro (2004) in his study; 'International Competitiveness of Manufacturing Firms in sub-Saharan Africa'. In an interview conducted by the author, managers of FDI exporting firms stressed that smooth clearance of customs, reliable transportation and stable power supply are crucial to satisfy the short lead time required by buyers, and consequently they affect the productivity. However, Export Processing Zones (EPZ), where most exporting firms were located, provide far better infrastructure and public service than other region, for instance electricity is exclusively provided in the EPZ. Musyoka and Ocharo [16] reinforces that competitiveness (ease of doing business) has a positive and significant influence on foreign direct investment retention and inflows to Kenya. The duo further emphasized that based on their study results the most significant factor affecting FDI inflows and retention was competitiveness, followed by interest rates and then exchange rate. Table 5 shows the details of the finding.

4.4 Regression Analysis

The regression analysis was carried out to determine the relationship between the independent variables and the dependent variable. A simple regression was conducted involving running the least square regression model and interpreting the R^2values to test the proportion of the variance in dependent variable from the independent variable and F values to measure coefficients and the suitability of the model confirm or reject the research hypotheses. The strength of the relationship was measured using correlation coefficient (R) or coefficient of determination R- square. The R-square is a value which shows how well the model fits the data and R- square value which is nearer to 1.0 suggest that the dependent variable entirely depends on the independent variables while a value nearer to 0 indicates no relationship at all between the explanatory variables and the dependent variable (Ming'ala, 2002). The F test was used to determine the level of significance of the model by comparing the F value with the overall level of significance and P values [17].

4.4.1 Regression analysis for special economic zones and competitiveness of FDI manufacturing firms in Kenya

The study was to analyse the relationship between special economic zones and level of competitiveness of FDI manufacturing firms in Kenya. The null hypothesis states that there was no significant relationship between Special Economic Zones and competitiveness of FDI manufacturing firms in Kenya against the alternative that there was a positive significant relationship between special economic zones and competitiveness of FDI manufacturing firms in Kenya. The hypothesis was tested by conducting linear regression, preliminary findings reveal that there was significant positive relationship between special economic zones on competitiveness of FDI manufacturing firms in Kenya.

As per the regression analysis between special economic zones and competitiveness of FDI manufacturing firms in Kenya output presented in Table 6, it was observed that the of R- square value was 0.100 and 0.207 implying that 10.1% and 20.7% of competitiveness of FDI manufacturing firms in Kenya was explained by Special Economic Zones with no moderator and with moderator respectively. Besides that, the fitness of the model was also indicated by F-

Statistics value of 21.069 and 24.672 with p-value of 0.000 which was less than 0.05 and 0.000<0.05 with no moderator and with moderator. These findings implied that there was a significant relationship between special economic zones and competitiveness of FDI manufacturing firms in Kenya. This means that special economic zones significantly affect competitiveness of FDI manufacturing firms in Kenya.

Similarly based on the same regression Table 6, t- test was also used to test the relationship between the predictor variable special economic zones and competitiveness of FDI manufacturing firms in Kenya and there was significance relationship between the two variables with p-value 0.000 < 0.05 for the model. The regression equations between Competitiveness of FDI manufacturing firms in Kenya and special economic zones for the model can be expressed as; $Y= 3.964 + 0130X_1$ without moderator and $Y=3.521+ 0.140X_1+0.101X_1*Z$ with moderator. The models indicated that for every unit of Special Economic Zones, the value of competitiveness of FDI manufacturing firms in Kenya changes by 0.130 in the absence of moderator and 0.140 and 0.101 in the presence of moderator. Based on the findings, it was demonstrated that the best model was when the moderator was present. In addition to these findings, preliminary conclusion was that the null hypothesis was rejected and the implication was that a unit increase of special economic zones leads to an increase in the value of competitiveness of FDI manufacturing firms in Kenya therefore special economic zones had significant positive influence on competitiveness of FDI manufacturing firms in Kenya.

5. CONCLUSION

The findings revealed a greater influence of special economic zones on competitiveness of FDI manufacturing firms in Kenya. This implies that Special Economic Zones are necessary for ensuring competitiveness of FDI manufacturing firms in Kenya. MfF However, the findings have also raised points of concern in regard to business environment and technology acquisition. In connection with business environment, 48.4% and 14.6 agreed to a great and very great extent respectively, that there was conducive business environment in their zones because of the provision of adequate infrastructure. This implies that about 37% of the

respondents either moderately or never at all agreed that there was conducive business environment in their zones because of the provision of adequate infrastructure. Another important finding to take note of in this variable is that 46.4% and 2.2% agreed to a great extent and very great extent, respectively that other firms had acquired technology and skills from the FDI firms in the Zones. This implied that over 51.4 % either moderately or never at all agreed that other firms had acquired technology and skills from the FDI firms in the Zones These findings are consistent with Hsu and Lai (2013) revelation that the strategic resources of clusters in special economic zones are indeed key factors that influence the relationship with industry clusters and also enhance enterprise competitive advantage. The duo also proved that the resources and relationships associated with industry clusters have impacts on company performance and can enhance company competitiveness. The findings are further corroborated with the case of India. The introduction of Special Economic Zones (SEZs) in India has injected hope for augmented economic growth in recent future. India has been among the top ten recipient of FDI along with China in the last 20 years and the quantum of FDI has increased comparatively faster in the post-reform period. It is important to see what is driving this increased flow of FDI in India. A panel data analysis based on 16 states over the period from 2001-02 to 2005-06 showed that the social, physical and educational infrastructure does not have any significant influence on FDI inflows of Indian states. The main reason why there are sustained inflows of FDIs in India is because of profitability and risk factors which have worked positively to spur their competitiveness in the SEZs.

The regression analysis between special economic zones and competitiveness of FDI manufacturing firms in Kenya was carried out in order to further understand the relationship between the two variables. It was observed that the of R- square value was 0.100 and 0.207 implying that 10.1% and 20.7% of competitiveness of FDI manufacturing firms in Kenya was explained by Special Economic Zones with no moderator and with moderator respectively. Besides that, the fitness of the model was also indicated by F-Statistics value of 21.069 and 24.672 with p-value of 0.000 which was less than 0.05 and 0.000<0.05 with no moderator and with moderator. These findings implied that there was

a significant relationship between special economic zones and competitiveness of FDI manufacturing firms in Kenya. This means that special economic zones significantly affect competitiveness of FDI manufacturing firms in Kenya.

6. RECOMMENDATIONS

While in the overall it is appropriate to conclude that special economic zones had influence on competitiveness of FDI manufacturing firms in Kenya, the findings on some of the sub-variables calls for their review and relevant actions taken by the Government to ensure enhancement of competitiveness of FDI manufacturing firms. In this regard, cases in point are business environment and technology acquisition. In connection with business environment, 48.4% and 14.6 agreed to a great and very great extent respectively, that there was conducive business environment in their zones because of the provision of adequate infrastructure. This implies that about 37% of the respondents either moderately or never at all agreed that there was conducive business environment in their zones because of the provision of adequate infrastructure. Another important finding to take note of in this variable is that 46.4% and 2.2% agreed to a great extent and very great extent, respectively that other firms had acquired technology and skills from the FDI firms in the Zones. This implied that over 51.4 % either moderately or never at all agreed that other firms had acquired technology and skills from the FDI firms in the Zones. Accordingly, the study recommends that the Government should carry out a comprehensive review of the capacity of both hard and soft infrastructure components in the special economic zones with a view to enhancing competitiveness of Firms in the Zones. Soft infrastructure to be reviewed should include institutional components such as education, healthcare and human capital, whereas hard infrastructure is the physical ones such as roads, bridges, and telecommunications. Furthermore, the finding calls for an evaluation of technology and skills acquisition or transfer, among the firms in the special economic zones. SEZs have played an important, catalytic role in the industrial upgrading and technology transfer. The Government should use the results of the evaluation in order to enhance skills upgrading, technology transfer and innovation among the firms in SEZs.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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