DETERMINANTS OF MANUFACTURING LOCATION CHOICE DECISIONS AMONG MANUFACTURING MULTINATIONAL CORPORATIONS IN KENYA

JAMES J. GATUNDU

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Gatundu, J., Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi Kenya

Dr. Wario, G., Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi Kenya

Abstract

Multinational corporations (MNCs) contribute significantly to the global economy and the internationalization and globalization of businesses. The last decade has witnessed increased relocation of manufacturing activities by MNCs from the Kenyan market. A key aspect of the strategic and logistical decision-making for manufacturing firms is the location of production facilities. Although a great deal of research literature is available on the determinants of manufacturing location choice decisions, research on factors influencing relocation of manufacturing activities for MNCs based in Kenya is limited. The purpose of this study is to identify determinants of manufacturing location choice decision for Kenyan-based manufacturing MNCs and provide insight on factors that are contributing to increased relocation of MNCs manufacturing activities out of Kenya. The study adopted a descriptive research design and use of semi-structured questionnaires, secondary data and computer-based data review as data collection methods. 27 firms representing 12.6% of the target population were considered for the study. Data was analyzed through use of descriptive and inferential statistical analysis. Results from the study indicate that production costs and infrastructure factors significantly influenced manufacturing location choice decisions.

1. Introduction

1.1 Background of the study

Multinational corporations (MNCs) contribute significantly to the global economy and the internationalization and globalization of businesses. Canel and Das (2002) argue that the constant pressure of globalization has created new competitive pressures on MNCs. Nthigah, Iravo and Kihoro (2014) observe that the greatest challenge MNCs are currently facing is the fierce market competition and changing business priorities in host countries. Over the past three decades, manufacturing entities' contribution to national output and employment has fallen markedly for many OECD countries as a result of relocation of manufacturing activities elsewhere in the global economy as manufacturing entities seek to remain competitive (Christopherson, Martin, Sunley, & Tyler, 2014). A key aspect of the strategic and logistical decision-making for manufacturing firms is the location of production facilities (MacCarthy & Atthirawong, 2003). In last ten years Kenya has witnessed increased relocation of manufacturing activities by MNCs from the country (Nthigah, Iravo, & Kihoro, 2014). Although a great deal of research literature is available on the determinants of manufacturing location choice decisions, there is limited research on factors influencing relocation of manufacturing activities for MNCs based in Kenya. This study purposes to identify the determinants of manufacturing location choice decisions for Kenyan-based MNCs.

Many global companies locate manufacturing facilities in countries with low labour costs in an attempt to attain competitive advantage through price competitiveness (Canel & Das, 2002). Although Kenya's global competitiveness improved from position 96 in 2012 to position 90 in 2013, environment changes characterized by reducing commodity prices and greater difficulties in accessing capital are some of the factors responsible for the declining growth prospects of the Kenyan economy (WEF, 2014). According to Kenya Institute of Public Policy Research and Analysis [KIPPRA], Kenya's manufacturing sector suffers from limited value addition and diversification, high cost of inputs and low competitiveness (KIPPRA, 2013).

1.2 Statement of the Problem

El-Khasawneh (2012) opines that manufacturing is extremely important for the modernization of any country. Kenya's Vision 2030 has identified manufacturing as one of the key drivers of economic growth due to its ability to stimulate the growth of other sectors and its high potential for employment creation and export expansion (RoK, 2014). However according to Owuor (2011) the country's industrialization program aimed at attracting additional multinational corporations for accelerated

industrialization is unlikely to be realized due to industry exits and relocation from Kenya by a number of manufacturing MNCs over the last 10 years. Further, according to KIPPRA (2013) Kenyan manufacturing entities have not been able to harness the opportunities provided by the African Growth and Opportunity Act [AGOA], with the share of manufacturing export trade standing at 0.8% against Angola's 20% and South Africa's 17%. Similarly Kenya's share of manufacturing exports to the global market continues to remain low at 0.02 per cent compared to South Africa's share of 0.3% (KIPPRA, 2013). Moreover, the manufacturing sector's contribution to GDP has declined from 9.6% in 2011 to 8.9% in 2013 with total wage employment between 2008 and 2012 declining from 13.9% to 12.9% (RoK, 2014).

According to Pun (2005), rapid technological changes, product variety proliferation, World Trade Organization and other international trade agreements have resulted in industries worldwide facing intense global competition that has forced industries to continually seek to implement best practices in strategies and technologies. To attain competitive goals, a firm's manufacturing strategy should be aligned to its competitive strategy as it is the competitive strategy that drives the manufacturing strategy (Amoako-Gyampah & Acquaah, 2008). Stiff competition for

developing countries' manufacturing enterprises has come from emerging economies such as Chinese, Indian and Brazilian manufacturing entities (El-Khasawneh, 2012). According to Zvirgzde, Schiller, and Diez (2013) location choice of an MNC is of strategic importance as factors that attract firms to certain locations determine the firms' competitiveness in the long run. Several studies have been carried out on competitive strategies adopted by MNCs in Kenya. Ogutu and Samuel (2012) focused their study on strategies adopted by MNCs in coping with competition while Nthigah, Iravo, and Kihoro (2014) focused on strategic responses on competitive intensity. These studies have concentrated on the effects of competitive intensity on performance of MNCs but have not considered the determinants of manufacturing location choice decisions for manufacturing MNCs in Kenya.

The aim of this study is to identify determinants of manufacturing location choice decision for Kenyan-based manufacturing MNCs and provide insight on factors that are contributing to increased relocation of MNCs manufacturing activities out of Kenya.

1.3 Objectives of the Study

The objective of the study is to identify the determinants of manufacturing location choice

decisions for multinational manufacturing entities based in Kenya.

1.4 Research Hypothesis

This study aims to test the following hypotheses

H_1 Kenya's manufacturing multinational corporations' production costs reduction does not influence manufacturing location choice decisions.

H_2 Infrastructure factors do not influence manufacturing location choice decisions for Kenya manufacturing multinational corporations.

2. Literature Review

The issue of manufacturing facilities location has received widespread attention among researchers. Canel and Das (2002) opine that many global companies in their attempt to remain price competitive locate manufacturing facilities in countries with low labour costs thereby gaining competitive advantage in global markets. Levitt (1983) argues that in the face of competitive pressure created by globalization, companies must ignore superficial regional and national differences and learn to operate as if the world is one big market in an attempt to remain competitive. According to Turner (2012), the international environment has been characterized by rapid changes and often unpredictable market conditions that have seen many firms with global presence, in an effort to cope with shifting contingencies, seeking to build flexibility into their international strategies. Shah et al. (2012) argues that global efficiency can be enhanced either through increased revenue generation or lowering costs and that productivity, economies of scale, labour, learning-curve effects and capital intensity are some of the factors influencing global efficiency. MNCs seek to achieve efficiency in their global operations by ensuring identification and utilization of every possible source of competitive advantage.

2.1 Independent Variable: Production costs

Porter (1985) introduced the value chain model suggesting that companies must perform their primary activities more efficiently and effectively than their competitors in order to attain competitive advantage with the location of these facilities playing a critical role to the business success. According to Porter (1985) the term value chain describes a two-level generic taxonomy consisting of a series of value-adding activities. Primary activities are directly linked to creation of value to the customer while secondary activities support primary activities and are concerned with value delivery to the customer.

Figure1. Value Chain Model
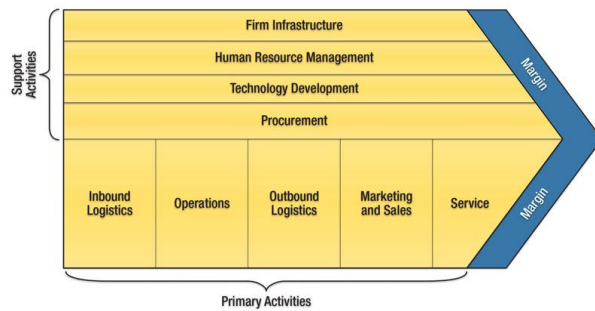
Source: Porter, M. E. (1985) Competitive Advantage: creating and sustaining superior performance. New York. The Free Press; pp 198

Porter (1985) proposes five generic primary categories of the value chain model mainly inbound logistics (activities associated with material handling and warehousing), operations (activities associated with transforming inputs into final product or manufacturing process), outbound logistics (activities associated with order processing, storing and distribution of product to customers), marketing and sales (activities associated with communication, pricing and channel management) and service (activities associated with providing installation, repair and other services to enhance or maintain the value of the product). He identifies four generic support activities mainly: procurement (activities related to purchasing of raw materials, supplies and other consumables items and assets), technology development (activities associated with know-how, technological inputs and efforts aimed at improving products and processes),human resource management (activities of

recruitment, selection, training and development, rewards and performance management and employee relations) and firm infrastructure (activities of general management, planning, finance, legal, government affairs and quality management). In Porter's view understanding how customer value is created is the key to improving firm performance.

Krugman (1995) opines that one of the most important aspects of the international economy is the international fragmentation of the corporate value chain. Colovic and Mayrhofer (2011) further argue on the visibility of such fragmentation in MNCs that choose to locate their value chain activities in different regions noting that the distribution of these activities is what is referred to as the global value chain. Several studies have identified production costs as a key factor in manufacturing location choice for multinational corporations. Mayer and Mucchielli (1999) suggested that production costs were a key determinant of location choice. McCarthy and Atthirawong (2003) in their study on factors affecting location decisions in international operations observe that cost of production was a major motivator for manufacturing outside national borders and suggest that production costs consist of sub-factors such as transportation costs, wage rates and trends in wages, energy costs and other manufacturing costs. Similarly Canel and Das

(2002) identify labour and other production costs as factors that most commonly influence establishment of manufacturing facilities in other countries. Studies on internationalization of firms find that location advantages such as labour costs advantages in low-wage countries are an important motive for relocation of production facilities to such countries (Dunning, 1980, 1988; MacCarthy and Atthirawong, 2003).

Results from Kinkel (2012), show China as one of the most attractive relocation destination accounting for 27% of production relocation activities post 2007 global financial crisis. According to Kinkel companies pursuing price leadership strategy are more active in production relocation activities than those pursuing a differentiation strategy. For manufacturing organizations operating in a globalized environment, production costs are an important driver for manufacturing relocation decision. Therefore, we propose the following hypothesis regarding the factors influencing manufacturing relocation activities for MNC operating in Kenya.

H_1 *Kenya's manufacturing multinational corporations' production costs influence manufacturing location choice decisions.*

2.2   Independent Variable: Infrastructure

Srinivasu and Rao (2013) opine that investment in infrastructure is an important driving force for economic development. They argue that presence of sufficient infrastructure facilitates expansion of local manufacturing industries and enlargement of markets. According to MacCarthy and Atthirawong (2003) infrastructure consists of the existence of modes of transport (airports, railroads and sea ports); quality and reliability of modes of transport; quality and reliability of utilities (e.g. power supply, water supply) and telecommunication systems. In his framework of ownership, location and internationalization advantages (OLI-framework) Dunning (1988) identifies four main types of foreign direct investments (FDI) for multinational corporations which are resource seeking, market seeking, efficiency seeking and strategic asset seeking. MNCs will therefore make investment decisions based on their motives in relation to types of foreign direct investments and the type of advantages they are seeking. According to Dunning (1988), physical infrastructure resources are a motive for MNCs seeking efficiency in production and would be attracted to a location that provides them such an advantage.

In their study on trends and determinants of FDI inflows in Africa, Anyanwu and Erhijakpor (2004) posit that telecommunications

infrastructures economic growth, openness and significantly increase FDI inflows to Africa. Results from Anyanwu (2011) identifies information communication technology infrastructure as the major factor positively influencing FDI inflows into Africa and that availability of new technology offers potential for greater efficiency, lower costs, and extended outreach. Kinda (2010), using firm-level data across 77 developing countries, finds physical infrastructure problems, financing constraints, and institutional problems as constraints that discourage FDI. Research by Quazi (2007) indicates that better infrastructure significantly boosts FDI inflows to nine Latin American countries.

The pressure to reduce product delivery times to markets coped with higher levels of quality and reliability demands by customers is as a result of today's intensive competition in the global business environment. Adequate modes of transport are crucial for delivery of raw materials from suppliers to manufacturing plants and to take products to markets as efficiently and reliably as possible. Achieving cost efficiency in transportation can be a source of competitive advantage. For this reason therefore firms may seek to locate their production facilities in countries having good, adequate and reliable facilities including utilities (MacCarthy and Atthirawong (2003). This

therefore leads us to our second proposed hypothesis:

H_2 *Infrastructure factors influence manufacturing location choice decisions for Kenya manufacturing multinational corporations.*

3. Research Methodology

3.1   Research Design

According to Morgan and Smirch (1980), the nature of the social phenomena to be explored determines the choice of research method to employ. The positivism research paradigm emphasizes the model of natural science in the creation of knowledge and is more closely associated with the idea of positivism and qualitative method of analysis (Noor, 2008). The research study adopted an explanatory research design to determine the factors affecting manufacturing location choice decisions for MNCs in Kenya. According to Kothari (2009) explanatory research attempts to clarify why and how there is a relationship between two or more aspects of a situation or phenomenon and is therefore suitable for this kind of study.

3.2   Sample and Sampling Procedure

The target population consisted of Kenyan manufacturing MNCs and members of the Kenya Association of Manufacturers (KAM). According to KAM's directory of Kenya

manufacturers and exporters total number of MNCs operating in Kenya is 214 (KAM, 2014). The target respondents were officers in-charge corporate strategic or their equivalents some of who were chief finance officers, head of manufacturing and corporate strategy officers. These persons were considered a suitable unit of analysis since as persons responsible for corporate strategy and organizational performance they were better to provide insight into the determinants of manufacturing location choice decisions within their organizations. Stratified sampling technique was used to group the manufacturing MNCs into two categories; locally-owned MNCs and foreign-owned MNCs and further categorization into the various industrial sectors as per Kenya Association of Manufacturers (KAM) classification. Firms that have relocated there manufacturing operations from Kenya and those that imported some of their products from other locations were included in the sample. Simple random sampling was then applied to draw the sample of the study from each stratum. According to Kerlinger (1986) a sample size of 10% of the target population is large enough as long as it allows for reliable data analysis and allows testing for significance of differences between estimates. From the initial list of 214 multinational corporations registered with Kenya Association of Manufacturers 27 firms representing 12.6% of

the target population were chosen. MNCs not engaged in manufacturing activities were not included in the study.

3.3 Research Instruments and Data Collection and Analysis

Semi-structured questionnaires were used as the research instrument for the collection of data for this study. Secondary sources and computer-based review were also used to further inform the researcher on the subject of study. Data collection consisted of use of electronic emailing of the questionnaires to the identified respondents and the inclusion of an introductory letter to the respondents explaining the purpose for the study. A few of the respondents who were not accessible through electronic means had their questionnaire personally administered by the researcher. In order to improve the response rate for electronic questionnaires, telephone calls were made to the identified persons or their equivalents to request for their collaboration in the study. The entire data collection took two weeks.

A total of 15 completed surveys were received representing a response rate of 55.6% of total questionnaires sent out to the selected manufacturing firms. Unavailability of the targeted persons and lack of interest to participate in the study are some of the reasons for the response rate. Four firms representing

14.8% of targeted firms declined to participate in the research. The questionnaires received were coded and edited for completeness and consistency. After the process was completed, the data from the survey was coded and processed using the statistical package for the social science (SPSS) data analysis software. Data analysis was carried out by use of descriptive and inferential statistical data analysis. To summarize the quantitative data descriptive statistics such as means and standard deviation were used. Gupta and Gupta (2005) state that descriptive statistics enables presentation of quantitative descriptions in a manageable form.

In order to establish whether a relationship exists between the independent and dependent variables, a correlation analysis was carried out. According to Sekaran and Bougie (2013), Pearson's moment correlation denoted by **r** is a measure that is used to determine whether a relationship exists between two variables and to indicate the strength and direction of the relationship. This measure was used determine whether a relationship exists between the two independent variables production costs reduction and infrastructure factors and the dependent variable manufacturing location choice decisions. Analysis of variance was carried out in order to test the two hypothesis which was done at 5% level of significance while regression analysis was carried out to test

whether the independent variables predict the dependent variable.

4. Results and Discussion

The survey recorded a response rate of 55.6% of total questionnaire sent out was recorded. Results from Baruch and Holtom (2008) indicate that the average response rate for studies that utilize data collection from individuals at 52.7% and that from organizations at 35.7%. The value of the response rate is critical in assessing the value of the research findings and researcher always aim at achieving higher response rates. According to Baruch and Holtom (2008) concerns of low response rate can be mitigated by use other specific tactics such as the drop and pick mode or representativeness of the sample. Mugenda and Mugenda (2003) opine that a 50% response rate is adequate, 60% good and above, while 70% rated very good. Due to the heterogeneousness of the sample, the response rate achieved for this study is considered adequate.

The pictorial presentation depicted that 30% of MNCs in the study being in the motor assembly and accessory sector 20% in either metal and allied or chemical and allied sectors while 10% being in leather and foot wear, food and beverages and building mining construction and manufacturing sectors respectively. The motor

accessories sector had the highest number of respondents. Further 50% of the firms were Kenya MNCs while 50% were subsidiaries of foreign MNCs.
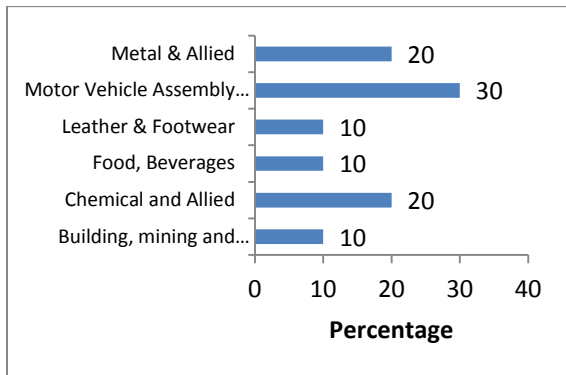
Figure 4.1: Industry Sector

On average the MNCs surveyed have been operating in Kenya for 49.5 years with the oldest firm having been operational for 81 years and the youngest have operated for 24 years. This implies that most of the firms operating in Kenya have been in operation for more than 20 years therefore they have stabilized in their operations owing to their historical performance.

Table 4.1: Years of Operation in Kenya

	N	Minimum	Maximum	Mean	Std. Deviation
Years of operations in Kenya	10	24	81	49.5	18.644

Reasons for Relocation of Manufacturing Facilities out of Kenya

The study findings show that 50% of the respondents had manufacturing facilities in Kenya while 50% had no manufacturing facilities in Kenya having relocated their manufacturing operations from Kenya between 1997 and 2014. Majority of the respondents (50%) reported that high production cost such as labour costs, energy costs and other manufacturing costs influenced their firms' relocation decision to a great extent. With regard to infrastructure factors, 60% of the respondents considered these factors as not having significant influence on manufacturing facilities relocation decisions. The results of the study are consistent with findings from a number of studies that note the significance of costs factors such as production costs in manufacturing location choice decisions (MacCarthy and Atthirawong, 2003; Colovic and

Mayrhofer, 2014). Asked to state their opinion on Kenya's suitability as a manufacturing location, 60% of the respondents indicated that Kenya is a good location for manufacturing while 40% felt that Kenya is not a good manufacturing location. From the foregoing study findings and considering Kenya Government's desire for the country to attain full industrialization by the year 2030 there is need for the government through policy interventions and provision of incentives to mitigate the manufacturing firm's nomadism from Kenya. Introduction of subsidies to reduce energy costs to the manufacturing sector and carrying out labour market reforms to address labour cost are some of the strategies that can be used to make Kenya an attractive location for manufacturing.
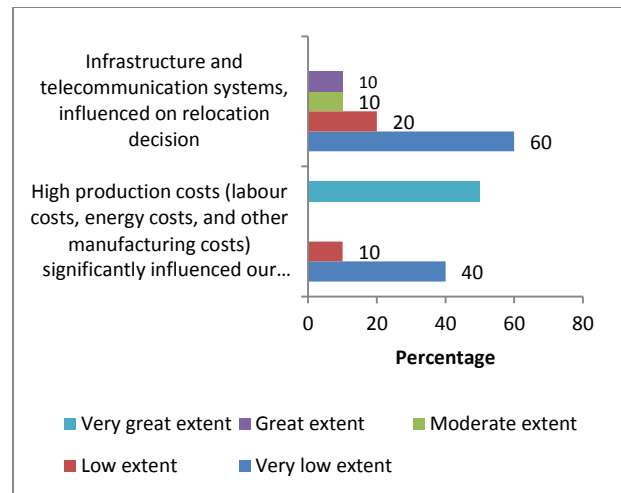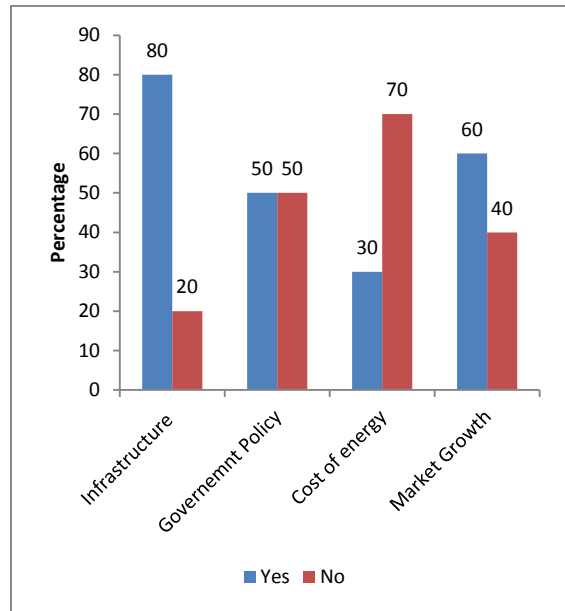

Figure 4.2: Reasons for Relocation of Manufacturing Firms out of Kenya

Reasons for Retaining Manufacturing Facilities in Kenya

The study findings depict that 80% of the respondents classified Kenya as a good manufacturing location because of infrastructure, while 50% of the respondents feel that government policies in the country are generally favourable to business. 70% of the respondents indicate that the cost of energy contributes significantly in production costs and hence contributes to making Kenya an undesirable location for manufacturing compared to other countries in the Common Market for East and Southern Africa. On market growth opportunities, 60% of the

respondents indicate that Kenya offers opportunities for market growth.

Figure 4.3: Reasons for Relocation

Regression and Correlation Analysis

Correlation Analysis

Correlation analysis was carried to determine the strength of the relationship between the location of manufacturing firms and cost reduction as well as availability of infrastructure. Results of the Pearson's correlation coefficient depicts that there is a significant positive relationship between location and cost reduction (rho = 0.750, p-value <0.05). Therefore, a decrease in cost of

production is associated with increased chances of firm moving its manufacturing plant to Kenya. Secondly, the study depicts that there is a significant positive relationship between location and governance availability of infrastructure (rho = 0.4, p value <0.05). This implies that an increase in infrastructure increases the chances of manufacturing firms locating in Kenya by 40%.

Table 4.2: Correlation Analysis

		Location	Cost	Infrastructure
Location	Pearson Correlation	1	.750*	0.4*
	Sig. (2-tailed)		0.012	0.038
	N	10	10	10
Cost	Pearson Correlation	.750*	1	-0.202
	Sig. (2-tailed)	0.012		0.576
	N	10	10	10
Infrastructure	Pearson Correlation	0.4*	-0.202	1
	Sig. (2-tailed)	0.038	0.576	
	N	10	10	10

* Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis

Regression analysis was carried out to determine the nature of the relationship between location of manufacturing firms and cost as well as availability of infrastructure.

Model Summary

The coefficient of determination (R^2) of 0.88 shows that 88% of the location of multinational manufacturing can be explained by cost reduction and availability of infrastructure jointly. The adjusted R square of 84.6% depicts that all the independent variables in exclusion of the constant variables explained the change in choice of location by 84.6% the remaining percentage can be explained by other factors excluded from the model. The R shows the correlation coefficient of the combined effects of all the two independent variables, an R = 0.938 shows that there is a strong positive relationship between location of multinational manufacturing firm and production cost reduction as well as availability of infrastructure. The standard error of estimate (=0.95884) shows the average deviation of the independent variables from the line of best fit.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.938a	0.88	0.846	0.95884

a Predictors: (Constant), Infrastructure, Cost

ANOVA

The F statistics is used as a test for the model goodness of fit, in Table 4.4 (F=25.65, p value <0.05) shows that there is a significant relationship between location of manufacturing firms and independent variables (cost reduction and availability of infrastructure) and at least one of the slopes (β coefficient) is not zero. The regression sum of squares shows the sum of the squared deviation from the line of best fit to the respective observed variables, residual sum of squares shows the sum of squared deviations which cannot be explained by the model while the total sum of squares shows the sum of squared deviations which has been explained and unexplained by the regression model. The degrees of freedom for the regression model were 2 corresponding with the number of independent variables (cost reduction and availability of infrastructure) and 9 in overall corresponding with the response rate minus 1 while the degrees of freedom for residual were 7(9-2). The F statistics is the ratio between

regression mean sum of square and residual sum of squares.

Table 4.4: ANOVA

Model		Sum of Squares	df	Mean Square	F	P value
1	Regression	47.164	2	23.582	25.65	.001 b
	Residual	6.436	7	0.919		
	Total	53.6	9			

a Dependent Variable: Location

b Predictors: (Constant), Infrastructure, Cost

Regression Coefficients

The regression results were used to test the two study hypothesis. The first hypothesis H_1, stated that Kenya's manufacturing multinational corporations' production costs reduction does not influence manufacturing location choice decisions. The study findings depicted that there is a significant positive relationship between cost reduction and choice of location of manufacturing firm (β=0.829 and P value<0.05). Since the P value was less than 0.05 there was enough evidence to warrant the rejection of the null hypothesis and acceptance of the alternative hypothesis which stated that Kenya manufacturing MNCs production cost reduction influences choice of location.

Therefore, a unit decrease in production cost leads to an increase in chances of multinational location in Kenya by 0.829.

The second hypothesis H_2, stated that infrastructure factors do not influence manufacturing location choice decisions for Kenya manufacturing MNCs. The study findings depicted that there is a significant positive relationship between infrastructure and choice of location of manufacturing firm (β=0.650 and P value<0.05). Since the P value was less than 0.05 there was enough evidence to warrant the rejection of the null hypothesis and acceptance of the alternative hypothesis which stated that the availability of infrastructure has an influence on the choice of multinational location. Therefore, a unit increase in availability of the required infrastructure leads to an increase in chances of multinational location in Kenya by 0.650.

Table 4.5: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-4.966	1.594		-3.11	0.02
Cost reduction	0.829	0.128	0.866	6.48	0.00
Infrastructure	0.65	0.151	0.575	4.30	0.00

$Y = -4.966 + 0.829 x_1 + 0.650 x_2$

y = Location of Manufacturing Firm

α = constant.

x_1 = Cost reduction

x_2 = Infrastructure

5. Conclusion and Recommendations

The main objective of the study was to investigate the determinants of manufacturing location decision among manufacturing multinational firms. To achieve this objective data was collected from primary cross-sectional data was collected through the use of questionnaires. Data collected was then analyzed using both descriptive and inferential statistics. Correlation design was adopted to explain the causal relationship between the determinants and location of manufacturing

multinational corporations. Overall the statistics indicated that production cost reduction and availability of infrastructure explained 88% of the manufacturing location choice of MNCs based in Kenya.

Both regression and correlation analysis depicted that there is a significant positive relationship between production cost reduction and choice of location and between availability of infrastructure and location choice. It is clear that the reduction of the production costs influences MNCs manufacturing facilities relocate decisions. Results from the study shows that location choice decisions for Kenyan manufacturing MNCs is influenced by production cost reduction and availability of infrastructure. Although, the independent variables explain 88%, of the manufacturing location decision 12% of these decisions are explained by other factors not considered by the study's conceptual framework. A close scrutiny of the independent variables depicts that the most significant was production cost reduction since it had the highest t statistic

(t=6.48). Therefore, manufacturing firms should engage the providers of raw materials on cost cutting strategies as such minimize their total production cost. Since economic and political cost may hinder the attainment of optimal cost minimization strategies there is need for measures to be taken geared towards the reduction of costs associated with the location of multinational manufacturing firms.

Since the study findings depicted that there is a significant positive relationship between availability of infrastructure and location of manufacturing MNCs.

5.1   Recommendation

Kenya's Vision 2030 has identified manufacturing as one of the key drivers of economic growth due to its ability to stimulate the growth of other sectors and its high potential for employment creation and export expansion (RoK, 2014). For the country's industrialization program to be realized, the Kenya Government needs to put in place measures that will address the challenges faced by manufacturing MNCs. Efforts should be put in place to reduce the cost of doing business in Kenya so as to improve manufacturing MNCs competitiveness. Introduction of subsidies to reduce energy costs to the manufacturing sector and carrying out labour market reforms to address labour cost are some of the strategies that can be used to make Kenya an attractive location for manufacturing

Secondly, the study has revealed a positive significant relationship between availability of infrastructure and chances of MNCs locating their manufacturing facilities in Kenya. Public private partnership in provision of the necessary infrastructure should be encouraged in order to upgrade the country's infrastructure as a means of increasing the country's manufacturing location attractiveness.

5.2   Suggestion for Future Research

The present study was conducted on the determinants of manufacturing location decisions among manufacturing MNCs in Kenya. This research only considered manufacturing

MNCs hence there is a need for other studies to be done on the determinants affecting location choice for non-manufacturing MNCs such as those engaged in provision of service. Since the current study applied correlation and regression analysis to determine the influence of the factors on manufacturing location choice decisions future studies should consider using logistic regression analysis and determine the odds of locating in Kenya or use of structural equation modeling and consideration of other determinants deemed of manufacturing location choice decisions not considered in this study.

References

Amoako-Gyampah, K., & Acquaah, M. (2008). Manufacturing strategy, competitive strategy and firm performance: An empirical study in a developing economy environment. International Journal of Production Economics, 11(1), 575-592. Available at www.sciencedirect.com.

Anyanwu, J. C. (2011). Determinants of foreign direct investment Inflows to Africa, 1980-2007. Working Paper Series 136.African Development Bank, Tunis, Tunisia

Anyanwu, J. C and Erhijakpor, A. E. O. (2004), Trends and Determinants of Foreign Direct Investment in Africa. West African Journal of Monetary and Economic Integration, Second Half, 21-44.

Baruch Y. and Holtom B. C. (2008). Survey response rate levels and trends in organizational research. Human Relations, 61 (8), pp. 1139-1160. Sage Publications. DOI: 10.1177/0018726708094863.

Canel, C., & Das, S. R. (2002). Modeling global facility location decisions: Integrating marketing and manufacturing decisions. Industrial Management and Data Systems, 102(2), 110-118. Emerald Publishing Limited. DOI: 10.1108/02635570210419654.

Christopherson, S., Martin R., Sunley P., & Tyler, P. (2014). Reindustrialising regions: rebuilding the manufacturing economy. Cambridge Journal of Regions, Economy and Society. 7, 351-358.

Colovic, A. & Mayrhofer U. (2011). Optimizing the location of R & D and production activities: trends in the automotive industry. European Planning Studies, 19 (8) pp. 1481-1498, DOI: 10.1080/09654313.2011.586175

Dunning, J.H. (1980). Towards an eclectic theory of international production: some empirical tests. Journal of International Business Studies, 11 (1), pp. 9-31.

Dunning, J.H. (1988), Explaining International Production, Harper Collins, London.

El-Khasawneh, B. S. (2012). Challenges and remedies of manufacturing enterprises in developing countries. Journal of Manufacturing Technology, 23(3), 328-350. Emerald Publishing Limited. DOI: 10. 1108/17410381211217407.

Gupta S. P. & Gupta M. P. (2005). Business statistics. 14th edition. Sultan Chand & Sons. New Delhi.

Kenya Association of Manufacturers (2014). Kenya manufacturers and exporters directory.

Kenya Institute of Public Policy and Research Analysis (2013). Kenya economic report 2013: creating an enabling environment for stimulating investment and competitive and sustainable counties. Nairobi

Kerlinger, F. (1986). Foundations of behavior research, 3rd edition. New York: Holt,

Rinehart, and Winston.

Kinda, T. (2010), "Investment Climate and FDI in Developing Countries: Firm-Level Evidence", World Development, 38, (4) pp. 498–513.

Kinkel, S. (2012). Trends in production relocation and backshoring activities. International Journal of Operations & Production Management, 32 (6) pp. 696 – 720. Emerald Publishing Limited. DOI: 10.1108/01443571211230934

Kothari C. R. (2009). Research methodology: methods and techniques. 2nd edition, New Delhi, New Age International Publisher.

Krugman, P. (1995). Development, geography and economic theory. Cambridge, MA, MIT Press

Levitt, T. (1983). The globalization of markets. Harvard Business Review, 61(3), 93-102.

MacCarthy, B. L., & Atthirawong, W. (2003). Factors affecting location decisions in international operations: A Delphi study. International Journal of Operations & Production Management, 23(7), 794-818. Emerald Publishing Limited. DOI: 10.1108/01443570310481568.

Mayer, T. & Mucchielli, J. L. (1999). La localisation à l'étranger des entreprises multinationales. Une approche d'économie géographique hiérarchisée appliquée aux entreprise japonaises en Europe. Economie et Statisque, 326 (326-327) pp.159 – 167.

Morgan, G. & Smircich, L. (1980). The case for qualitative research. Academy of Management Review 5 (4) pp491-500.

Mugenda, O. M & Mugenda, A.G (2003). Research methods: Quantitative & qualitative approaches. Nairobi, ACTS Press.

Noor, K. B. M. (2008). Case study: a strategic research methodology. American Journal of Applied Sciences, 5 (11) pp. 1602-1604. Science Publications.

Nthigah, P. M., Iravo, M., & Kihoro, J. (2014). Influence of competition intensity on strategic response of multinational corporations: a study of multinational corporations in Kenya. Global Business and Economic Research Journal, 3(5), 1-14.

Porter, M. E. (1985). Competitive advantage. New York: Free Press.

Pun, K. F. (2005). An empirical investigation of strategy determinants and choices in manufacturing enterprises. Journal of Manufacturing Technology, 16(3), 282-301. Emerald Publishing Limited. DOI: 10.1108/1741038051053608.

Quazi, R. M. (2007), "Investment Climate and Foreign Direct Investment: A Study of Selected Countries in Latin America", Global Journal of Business Research, 1, (2) pp. 1-13.

Republic of Kenya. (2014). Economic survey. Nairobi, Kenya: Kenya National Bureau of Statistics. .

Sekaran, U. & Bougie, R. (2013). Research methods for business: A skill building approach (6th ed.).United Kingdom: John Wiley and Sons.

Shah, F. A., Yusaff, R., Hussain, A., & Hussain, J. (2012). A critical review of multinational companies, their structures and strategies and their link with international human resource management. Journal of Business and Management, 3(5), 28-37. www.iosjournals.org.

Srinivasu B. & Rao P. S. (2013). Infrastructure development and economic growth: prospects and perspectives. Journal of Business Management and Social Sciences Research, 2 (1). ISSN No. 2319-5614.

Turner, C. (2012). Strategic flexibility and the emergence of virtual global strategies. European Business Review, 24(3), 272-286. Emerald Group Publishing Limited. DOI: 10.1108/09555341211222512.

World Economic Forum. (2014). The global competitiveness report 2014 – 2015. Available at www.weforum.org/gcr.

Zvirgzde, D., Schiller, D., & Diez, R. (2013). Location choices of multinational companies in transition economies: A literature review. European Commission 7th Frame Program. Available at www.ub.edu/searchproject/wp.