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EFFECT OF STRATEGIC RESPONSES ON ORGANIZATIONAL PERFORMANCE OF PHARMACEUTICAL FIRMS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

The pharmaceutical industry plays a critical role in the provision of healthcare and contributes significantly in the realization of vision 2030. Despite the critical role played by pharmaceutical industry, it has faced challenges that have threatened its performance. The purpose of this study was to determine the effects of strategic responses on the performance of pharmaceutical firms in Nairobi County. The specific objectives of the study were to determine the effects of market development and information communication and technology integration on performance of pharmaceutical firms. This study adopted a descriptive research design. The survey unit of observation comprised of top managers from each organization translating to 119 top managers. Stratified random sampling was used to select 92 respondents from the target population. Data was collected using a self-administered structured questionnaire. Descriptive statistics and inferential statistics were used. The study concludes that strategic market segmentation has a positive and significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya. The study also concludes that strategic innovation has a positive and significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya. The study recommended that the management of pharmaceutical firms should ensure implementation of proper strategies for facilitating market penetration and promotion and advertising and market Channels and also ensure implementation of proper infrastructure, technical competence, data and information management and availability of ICT.

Keywords; *Strategic Market Segmentation, Strategic Innovation, Performance*

INTRODUCTION

The concept of organization performance is core to business because the major objective of business is to make profits. The key concern over time in strategic management has been differences in performance of organization in the same industry. There is no single explanation on the source of variation in performance. Differences in performance can be partly explained by a number of factors among them environment (Paulo et al, 2013), strategic responses (Noruzy et al., 2013) and resources (Dobre, 2013).Firm external environment consists of the conditions and forces that affect its strategic option and define its competition situation (Choudhary, Akhtar, & Zaheer, 2013). The external environment has an influence on firm performance because it provides both facilitating and inhibiting factors (Machuki &Aosa, 2011).

External environment can create opportunities and threats and successful strategies depend on the organization having the internal strategic capabilities that could be the resources or the way the resources are deployed (Shin, & Konrad 2017). Strategic responses involve changes in the firm's strategic behavior to ensure success in a transforming future environment. It is a reaction to what is happening or expected to happen in the environment (Odhon'g& Omolo, 2015). These responses take many forms depending on the firm's capability and environment in which it operates. Strategic responses can be at three levels, corporate, business and functional levels (Vishnu & Gupta 2014).

India is the dominant supplier of imported pharmaceuticals both raw materials and finished products accounting for almost 40% of Kenya's import. Other suppliers are Switzerland 10%, followed by Belgium, South Africa, United Kingdom, Denmark, Netherlands, France and United states all below 5% of Kenya's imports. The volume of output of the manufacturing sector grew by 4.9% in 2016 on account of increased production of tea, wearing apparel, pharmaceutical products and basic metals (Economic survey, 2017). Production of pharmaceutical products increased by 14.7 % in 2016 attributed to increase in production of capsules, tablets and syrups which went up by 15%, 14.9% and 11.8% respectively (Economy survey, 2017).

The Chinese pharmaceutical industry has been developing fast in market size and revenue volumes. However, the scale of Chinese pharmaceutical companies is relatively small, and the market concentration is low. Therefore, local pharmaceutical companies with higher R&D input are generally less profitable. Although there is increase in the number of patented drugs in the pharmaceutical industry in China, patents have made relatively low contribution to the industrial

values, and IP held by Chinese firms is less competitive compared with that of foreign companies. Most of the pharmaceutical enterprises in China still focus on generic drugs. Market regulation of the pharmaceutical industry in China is relatively strict, especially market entry and price control (Zhang & Morris 2014).

The sales value in the Egyptian pharmaceutical sector from January 1st, 2015 to December 31st, 2015 according to the Egyptian stock market magazine report issued on March 9th, 2016, was 4.1 billion U.S. dollars with a 4% growth from the previous year. The report discovered that 20 pharmaceutical firms accounted for almost 55% of the pharmaceutical market share in Egypt. Of those 20 firms, 11 are multinational firms and 9 are Egyptian firms. Moreover, the report indicated that of those 20 pharmaceutical firms the first 10 firms on the list control 38% of the market share while the other 10 firms control 17% of the market share. This is due to the increase in the value of the U.S. dollar against the Egyptian pound and the stability of the prices of pharmaceutical products which in turn led to the erosion of corporate profitability (Mohamed & Ahmed 2016).

Nigeria pharmaceutical industry contributes about 5% to GDP or US$7.396 billion (N 1.109 trillion PPP) compared to a GDP contribution of about 8.5% in South Africa. The industry worth was about US$ 600million in 2009 and was projected to grow substantially at about 12% annually to reach US$ 717 million by 2011 (UNIDO, 2011). Eight (8) out of 71 companies registered as active members of the Pharmaceutical Manufacturing Group (PMG) in 2010 and are listed on the Nigerian Stock Exchange. With a Nigerian population estimated at 168 million and an average annual growth rate of 3%, there is increased demand for improved, adequate and efficient healthcare (Elemuwa et al., 2013).

The pharmaceutical industry in Kenya comprise of companies which can be categorized into three distinct groups (Ngari, 2014) which are manufacturers, distributors and retailers. The sector consists of thirty licensed concerns which include: one, the manufacturing companies which import raw materials or the concentrates of drugs, manufacture finished products and sell in Kenya and sometimes in neighboring countries. Most of these are local companies and examples of these are Dawa Limited, Universal Corporation Limited, and Cosmos limited, while others are subsidiaries of multinationals like Beta healthcare International limited and GlaxoSmithKline.

The second group is the distributors which involve multinational companies which import the finished research-based drugs (original brand) from their parent company base or their

manufacturing sites. They then undertake the activities of pricing promotion and distribution in Kenya and sometimes other surrounding regions depending on the company's market demarcations. Some of them though do the marketing while distribution is done by local distributors. Many multinationals companies which sell their brand drugs either directly or through local partners, interestingly, prefer to work under local distributors so as to cut down on operational costs and allow local agents to do importation and marketing functions for them. Examples of these companies are Novo Nordisk, Johnson & Johnson and Merck which are under Phillips pharmaceuticals, or Abbott which is under Sridham and Phillips Health care Technologies.

Statement of the Problem

The pharmaceutical industry plays a critical role in the provision of healthcare and contributes significantly in the realization of vision 2030. The sector contributes 2% of the GDP and production of pharmaceutical products increased by 14.7 % in 2016. (Economy survey, 2017). The per capita medicine expenditure in 2012 was US $ 10.6 while pharmaceutical expenditure as a percentage of GDP was 1.15% below global average (BMI 2012). Kenya supplies nearly half of the COMESA and 50% of EAC (Kenya pharmaceutical export 2014). Despite the critical role played by pharmaceutical industry, it has faced challenges that have threatened its performance. The industry is experiencing major problem of counterfeit and substandard products (UNIDO, 2010). BMI estimates spending on counterfeits to range between US$65 to US$130 million a year and has ranked Kenya 22nd in risk and reward report due to counterfeiting and regulatory deficiencies. Strategic responses enable firm to cope with environmental challenges such as the ones mentioned above. Studies on strategic responses adopted by firms in response to environmental changes have been conducted and results documented. In Kenya studies by Murungi (2013), focused on strategic responses adopted in various organizations and how they are implemented and were majorly case studies, industry specific and did not link strategic responses adopted to performance. Other studies by Mutisya (2015) established that there was positive correlation between performance and strategic responses while studies by Mutindi (2017) showed no relationship or inverse relationship between strategic responses and performance. The studies cited are inconclusive and cannot be generalized. The current study is undertaken to advance knowledge in this area and used descriptive cross section survey method, and while Nthigah (2015) adopted strategic responses as dependent variable and Kimutai (2014)

as intervening variable, the current study adopted strategic responses as independent variable. This study sought to establish the effect of strategic responses on the performance of pharmaceutical firms in Nairobi County, Kenya.

Objectives

The general objective of the study was to determine the effect of strategic responses on performance of pharmaceutical firms in Nairobi County, Kenya.

The specific objectives of the study were;

- To establish the effect of strategic market segmentation on the performance of pharmaceutical firms in Nairobi County, Kenya
- To establish the effect of strategic innovation on the performance of pharmaceutical firms in Nairobi County, Kenya

Theoretical Review

Product Life Cycle Theory

The product life cycle (PLC) is an economic theory developed by Raymond Vernon in 1966.Raymond Vernon divided products into categories based on their stage in the product life cycle and how they behave in the international market. As per P.L.C, there are five phases in an item life. These stages are Introduction, development, development and decay. Presentation stage begins when another item is first propelled, it requires some investment and deals development is low, benefits are negative or low on account of low deals and high appropriation and advancement costs. Advancement spending is moderately high to educate purchasers regarding the new items and get them to attempt.

The second stage in development stage is the place interest for the item expands deals. New contenders will enter the market pulled in by open doors for benefits and will present new item includes. Number of wholesaler outlet increment. Benefits increment as advancement costs are spread over huge volume as unit fabricating cost come up short. The third stage is development stage where item deals lull and represents the best test to promoting chiefs. The fourth stage is decrease where deals plunge because of mechanical changes, move in buyer tastes and expanded rivalry. As per Kotler and Armstrong (2006), firm utilize diverse showcasing blend over the four phases. At development stage firm uses a few techniques to continue development.

It improves quality and includes item includes, enters new market sections and new circulation channels, shifts promoting from building item attention to building item conviction and buys. At

development stage firm attempts to build utilization of current items by searching for new market portions, reposition the brand, expanding use by ebb and flow clients, changing item highlights or style to pull in new clients and to move more use, cut costs, dispatch better publicizing effort, utilize forceful deals advancement and offer improved administrations. At decay stage, firms may choose to gather, drop or keep up the items.

Contingency theory

Burns and Stalker (1950) Joan Woodward (1958) and Aston group (1960) were the founders of the contingency theory approach system. The framework approach features the unpredictability of the reliant parts of association inside complex condition. A possibility approach expands on analytic characteristics of framework approach so as to decide the most suitable hierarchical structure and the board style for a given situation (Cole, 2004). As per the hypothesis hierarchical structures and control framework that directors pick rely upon (that is are dependent upon) the attribute of outer condition wherein the association works. The methodology stresses situational suitability as opposed to adherence to general head.

A few creators have added to the possibility way to deal with the executives. Lawrence and Lorsh (1967) were worried about structure and condition as the two key factors in their investigation. The significant accentuation of their investigation was on the conditions of separation and mix. in associations. They gave a precise comprehension to what conditions of separation and combination are identified with powerful execution under various natural conditions and reasoned that there was nobody most ideal approach to arrange. Consumes and stalker (1950) were additionally worried in how the board frameworks could change because of requests of a quickly evolving condition.

They thought of unmistakable ideal kinds of the executives framework: unthinking and natural frameworks. They focused on that they didn't support either yet what was significant was to accomplish the most fitting framework for a given arrangement of situation, an ideal articulation of possibility approach. Joan Woodward (1958) study concentrated on the connection between association structure and execution. A connection among structure and execution just surfaced by presenting an additional variable, the sort of innovation. This hypothesis educated free factor regarding ICT where a firm may incorporate ICT in light of natural difficulties to improve execution. Further Joan (1958) found out that technologies directly determine differences in

organization attributes like centralization of authority, span of control and formalization of rules and procedures

Conceptual Framework

In this study strategic responses were conceptualized as independent variable and performance as dependent variable.

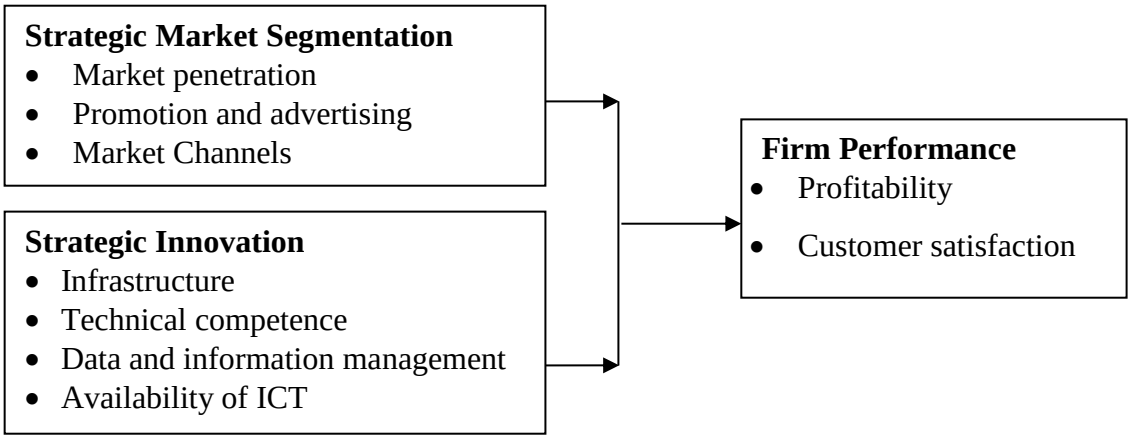

Figure 1: Conceptual Framework

Empirical Review

Mbui (2016) revealed that the Kenya tea sub sector has not been adequately practicing strategic management practices such as market promotion that would help grow export tea value addition. The correlation results indicate that there was positive and significant relationship between market promotion and export value addition (β=0.602, ρ=0.000) while regression results indicate that market promotion explain 35.9% of variations in export value addition. The study recommends that the Kenya government help the Kenya tea players (producers, tea packers, and exporters) in adopting some the strategic management practices, which could be expensive for individual firms to adopt.

According to Frost and Sullivan report (2010) the pharmaceutical market is segmented into patented, generic and over the counter (OTC) markets. The market can also be segmented according to therapeutic segments. These segments include cardiovascular, respiratory, central nervous system (CNS), anti-infective, oncology and diabetes. Generic market growth will be driven by low pricing, public preference of generic medication, higher demand for pharmaceutical exports to surrounding countries and social health insurance schemes, which encourage their use. Patented market growth will be driven by great focus on niche market such

(CNS), oncology and fertility and increase in brand awareness among prescribes as many suppliers undertakes aggressive promotional activities (Frost & Sullvian, 2010).

Dave and Saffer (2016) examined the impact of DTCA on pharmaceutical prices and demand. His study investigated the separate effects of non-broadcast and broadcast DTCA on price and demand in four major therapeutic classes and found that DTCA positively impacts own sales and prices with elasticity of 0.10and 0.04 respectively on broad cast DTCA has smaller impact on sales 0.05 and price elasticity of 0.02. Further expansion in Broadcast DTCA may have been responsible for about 19 percent of the overall growth in prescription drug expenditure with two thirds of this impact being driven by increase in demand because of DTCA expansion. The study found out that DTCA has an effect of raising own brand demand leading to prescription of that brand and raising demand for prescription in the therapeutic class.

Conley et al (2017) studied four heartburn drugs to find out whether marketing of prescription heartburn drugs leads to future spill over benefits to their OTC version. They found out that DTCA marketing of prescription drugs spill over into higher OTC sales for later entrants into the OTC market, but not for earlier prescription to OTC switch. They also found out that there was positive effect of DTCA marketing of the OTC drugs on own market share with elasticity becoming larger for later entrants. They did not find such own effects for DTCA marketing of the prescription drugs. Prescription drugs spill over into higher OTC sales for later entrants into the OTC market, but not for earlier prescription to OTC switch.

Jajjaet al (2014) examined the impact of IT on organization performance in quantitative terms of Pakistan's manufacturing and banking sector. The survey involved in-depth interviews with 24 companies in manufacturing (12 foreign and 12 local) and 24 companies in the banking sector (12 foreign and 12local). The results revealed that IT has positive impact on income of all banks and an increase in expenditure on IT significantly increases the income of these banks. Further, a trend analysis was carried out and it was noted that there was an increase in income with proportional increase in IT expenditure of all banks. Analysis for all local manufacturing companies showed that IT has positive impact on income of all the local companies the regression coefficient for these companies is positive which indicates the decisive impact of IT on income. For foreign manufacturing companies' IT had no impact on income.

Uzel (2015) found out that there was a significant and positive relationship between ICT and hotel performance in Kenya. Regression results showed that ICT had moderate explanatory

power on hotel performance with R^2 = 0.353 and there was statistically linear relationship between ICT and hotel performance (β=0.517, ρ-0.000). The measures for ICT were customer purchase data, customer psychographics, customer demographics, customer contact platform, and customer feedback, cross selling data, external data, internal financial records, supplier data and employee data. Factor analysis results showed that factor 1 consisting of customer data had an average mean of 3.62 while factor 2 consisting of employee data had an average of 3.72. Thus, customer demographics, customer contact platform and customer feedback were left for further analysis since factors that had contributed much to hotel performance had been catered in the other variables.

Chemutai and Nzulwa (2016) examined strategic responses adopted by local manufacturing pharmaceutical companies in Kenya and found out that pharmaceutical firms have been able to deal with counterfeits through technology, where packing is made with special logos and symbols, which cannot be imitated by counterfeits. Further, through technology firms have been able to manage their stocks and process customer order faster leading to improvement of performance. Further ICT has improved productivity of employees at Kenyan airports. Automation has led to attraction of business at the airport and has enabled customers to use self-service. Monitoring and surveillance, provision of real time information and complaint-handling system has been enhanced by ICT.

Paulo and Syed (2013) established that strategic responses, competitive pressures due to globalization, marketing and financial performance varied by sector in Brazilian business-to-business (B2B) firms. In the telecommunication sector, globalization increased competitive intensity and pressure and market growth potential. In terms of strategic response, firms focused on price penetration strategy, intensive distribution, increasing customer satisfaction through better service delivery, withdrawing from markets that were non- profitable and increasing R&D expenditures to develop new products. Marketing and financial performance were positive. In the business equipment sector, globalization increased competitive pressure and intensity and market growth potential.

Nthigah (2015) studied the role of competition in determining choice of strategic response of multinational corporations (MNC) in Kenya. Concluded that industry competition is quite intense in Kenya market and plays a pivotal role in determining the choice of organization strategy. Cost leadership, product differentiation, market differentiation were the preferred

responses to competition pressure, with a number of MNC employing relocation and deterrence strategies. The study recommended that multinationals in Kenya and other prospective ones should understand the competitive nature of the markets in the host countries so that they can employ competitive strategies that would enhance performance.

Mutindi (2017) studied strategic responses to interest rate capping by commercial banks in Kenya. The study found out that banks were responding to interest rate caps by adopting modern technology in bank operations to enhance efficiency, expanding to new markets, reducing staff expenses, innovation of new products and services and diversifying to other products .The findings on whether strategic responses were effective in addressing the challenges posed by the interest caps were inconclusive. Some respondent indicated that strategic responses were effective to a moderate extent, some indicated that they were not effective, while others reported that the strategies that they had put in place were still under implementation and it was not clear if they were effective.

Kibuga (2015) found out that micro and small enterprises (MSE) adopted different strategies to improve performance. The correlation analysis results revealed that there was positive and significant relationship between performance and strategic responses adopted by (MSE) in Kenya. Further the regression analysis showed that 76.9% of the changes in organization performance were attributed to strategic responses adopted. Strategic partnership, restructuring, diversification affected business performance to a great extent while differentiation affected business to a moderate extent. 51% of the respondents indicated that strategic responses increased sales while 39% of the respondents indicated that strategic responses increased profitability.

METHODOLOGY

This study adopted the use of a descriptive research design. This research design is appropriate because it presents an opportunity to use both quantitative and qualitative data that was generated by the study. The target population was categorized into organizational population and respondent population. Organizational population consisted of all the 119 pharmaceutical firms in Nairobi County as per the Kenya medical directory 2018-2019. The survey unit of analysis comprised of top managers from each organization translating to 119 top managers. Stratified random sampling was used to select pharmaceutical companies. Data was collected using a self-

administered structured questionnaire. Descriptive statistics and inferential statistical analysis were utilized.

FINDINGS

Descriptive Statistics Analysis

Strategic Market Segmentation and the Performance of Pharmaceutical Firms

From the results, the respondents agreed that their company has introduced new distribution channels. This is supported by a mean of 4.210 (std. dv = 0.981). In addition, as shown by a mean of 3.964 (std. dv = 0.817), the respondents agreed that their company has lowered prices to attract new customers. Further, the respondents agreed that their company has converted non-users of their products to users. This is shown by a mean of 3.964 (std. dv = 0.967). The respondents also agreed that there has been increased share of customer spending on their products. This is shown by a mean of 3.947 (std. dv = 0.892).

With a mean of 3.938 (std. dv = 0.809), the respondents agreed that their company has opened additional international market. Further, with a mean of 3.928 (std. dv = 0.925), the respondents agreed that their company has opened additional national markets. The respondents also agreed that their company has opened additional regional market. This is supported by a mean of 3.842 (std. dv = 0.821). In addition, the respondents agreed that they follow their products all the way to retail outlets/Chemist for merchandising. This is shown by a mean of 3.789 (std. dv 0.876). With a mean of 3.736 (std. dv = 0.708), the respondents agreed that their company has a marketing budget. Further, with a mean of 3.639 (std. dv = 0.633), the respondents agreed that their company has developed product versions to appeal to different market segments. With a mean of 3.631 (std. dv = 0.904), the respondents agreed that their company has changed advertisement to attract new customers. Further, with a mean of 3.596 (std. dv = 0.937), the respondents agreed that they have medical representatives/sales people in all our markets

Table 1: Strategic Market Segmentation and the Performance of Pharmaceutical Firms

	1	2	3	4	5	Mean	Std. Deviation
Our company has a marketing budget	10.5	10.5	19.3	14.0	45.6	3.736	0.708
Our company has opened additional national markets	13.3	5.1	14.0	40.5	27.0	3.928	0.925
Our company has opened additional	7.0	7.0	19.3	28.1	38.6	3.842	0.821

regional market							
Our company has opened additional international market	9.8	8.1	21.1	40.5	40.5	3.938	0.809
Our company has introduced new distribution channels	3.5	7.0	7.0	29.8	52.6	4.210	0.981
Our company has converted non-users of our products to users	10.5	3.5	7.0	36.8	42.1	3.964	0.967
There has been increased share of customer spending on our products	3.5	7.0	19.3	31.6	38.6	3.947	0.892
Our company has lowered prices to attract new customers	27.0	23.5	10.5	23.9	15.1	3.964	0.817
Our company has changed advertisement to attract new customers	7.0	10.5	22.8	31.6	28.1	3.631	0.904
We have medical representatives/sales people in all our markets	10.5	7.0	19.3	38.6	24.6	3.596	0.937
We follow our products all the way to retail outlets/Chemist for merchandising	7.0	10.5	7.0	47.4	28.1	3.789	0.876
Our company has developed product versions to appeal to different market segments	10.5	7.0	15.8	42.1	24.6	3.639	0.633
Aggregate						**3.842**	**0.865**

Strategic Innovation and the Performance of Pharmaceutical Firms

From the results, the respondents agreed that use of ICT has enabled their company reduced administrative costs. This is supported by a mean of 4.277 (std. dv = 0.873). In addition, as shown by a mean of 4.105 (std. dv = 0.981), the respondents agreed that use of ICT has improved our product quality. Further, the respondents agreed that use of ICT has improved their stock management. This is shown by a mean of 3.959 (std. dv = 0.916). The respondents also agreed that use of ICT enabled their company to detect sub-standard products. This is shown by a mean of 3.938 (std. dv = 0.809).

With a mean of 3.859 (std. dv = 0.885), the respondents agreed that use of ICT has increased accuracy of information. Further, with a mean of 3.842 (std. dv = 0.821), the respondents agreed that use of ICT has enabled our company to detect counterfeit products. The respondents also agreed that use of ICT has reduced delivery times of their products. This is supported by a mean of 3.768 (std. dv = 0.905). In addition, the respondents agreed that use of ICT has improved their customer relationship management. This is shown by a mean of 3.700 (std. dv 0.605).

Table 2: Strategic Innovation and the Performance of Pharmaceutical Firms

	1	2	3	4	5	Mean	Std. Deviation
Use of ICT has reduced delivery times of our products	6.9	9.0	11.0	52.4	20.7	3.768	0.905
Use of ICT has increased accuracy of information	8.3	13.8	17.2	29.0	31.7	3.859	0.885
Use of ICT has improved our customer relationship management	9.7	12.4	7.6	37.2	33.1	3.700	0.605
Use of ICT has improved our product quality	2.8	9.0	27.6	41.4	19.3	4.105	0.981
Use of ICT has enabled our company reduced administrative costs	5.5	4.1	20.0	40.0	30.3	4.277	0.873
Use of ICT has improved our stock management	4.1	5.5	29.7	23.4	37.2	3.959	0.916
Use of ICT has enabled our company to detect counterfeit products	7.0	7.0	19.3	28.1	38.6	3.842	0.821
Use of ICT enabled our company to detect sub-standard products	9.8	8.1	21.1	40.5	40.5	3.938	0.809
Aggregate						**3.999**	**0.867**

Performance of Pharmaceutical Firms in Nairobi County, Kenya

From the results, the respondents rated the firm's market share growth as better. This is supported by a mean of 3.929 (std. dv = 0.851). In addition, as shown by a mean of 3.928 (std. dv = 0.563), the respondents rated market share as better. Further, the respondents rated overall

Performance as better. This is shown by a mean of 3.842 (std. dv = 0.633). The respondents also rated sales growth as better. This is shown by a mean of 3.807 (std. dv = 0.831).

With a mean of 3.701 (std. dv = 0.935), the respondents rated firms profit as better. Further, with a mean of 3.684 (std. dv = 0.997), the respondents rated firms sales as better. The respondents also rated profitability as better. This is supported by a mean of 3.645 (std. dv = 0.738).

Table 3: Performance of Pharmaceutical Firms in Nairobi County, Kenya

	1	2	3	4	5	Mean	Std. Deviation
Sales	10.5	7.0	7.0	54.4	21.1	3.684	0.997
Sales growth	7.0	10.5	12.3	35.1	35.1	3.807	0.831
Market share	10.4	28.1	10.5	10.5	40.5	3.928	0.563
Market share growth	7.0	10.5	7.0	33.3	42.1	3.929	0.851
Profits	10.5	10.5	12.3	31.6	35.1	3.701	0.935
Profitability	16.3	13.9	15.8	17.0	37.0	3.645	0.738
Overall Performance	10.5	7.0	12.3	28.1	42.1	3.842	0.633
Aggregate						**3.749**	**0.818**

Correlation Analysis

The study used Pearson correlation analysis to determine the strength of association between independent variables (strategic market segmentation and strategic innovation) and the dependent variable (the performance of pharmaceutical firms in Nairobi County, Kenya).

Table 4: Correlation Coefficients

		Firm Performance	Strategic Market Segmentation	Strategic Innovation
Firm Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Strategic Market Segmentation	Pearson Correlation	.899**	1	
	Sig. (2-tailed)	.000		
Strategic Innovation	Pearson Correlation	.915**	.279	1
	Sig. (2-tailed)	.000	.074	

	N	85	85	85

**. Correlation is significant at the 0.01 level (2-tailed).

The results revealed that there is a very strong relationship between strategic market segmentation and the performance of pharmaceutical firms in Nairobi County, Kenya (r = 0.899, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level).The findings are in line with the findings of Ndege (2016) that there is a very strong relationship between strategic market segmentation and firm performance.

The results also revealed that there was a very strong relationship between strategic innovation and the performance of pharmaceutical firms in Nairobi County, Kenya (r = 0.915, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Chia-chi Chang *et al* (2017) who revealed that there is a very strong relationship between strategic innovation and firm performance.

Regression Analysis

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942	.887	.862	.10582

a. Predictors: (Constant), Strategic Market Segmentation And Strategic Innovation

The r-squared for the relationship between the independent variables and the dependent variable was 0.887. This implied that 88.7% of the variation in the dependent variable (the performance of pharmaceutical firms in Nairobi County, Kenya) could be explained by independent variables (strategic market segmentation and strategic innovation).

Table 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.027	4	43.007	524.48	.000[b]
	Residual	6.568	80	.082		
	Total	178.595	84			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Strategic Market Segmentation And Strategic Innovation

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 524.48 while the F critical was 2.486. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as

a good fit for the data. Therefore, the model is statistically fit to predict the influence of strategic alliance, strategic diversity, strategic market segmentation and strategic innovation on the performance of pharmaceutical firms in Nairobi County, Kenya.

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.134	0.039		0.872	0.001
	Strategic Market Segmentation	0.379	0.104	0.380	3.663	0.002
	Strategic Innovation	0.454	0.088	0.452	5.057	0.000

a Dependent Variable: performance

The results revealed that strategic market segmentation has significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya, β1=0.379, p value= 0.002). The relationship was considered significant since the p value 0.002 was less than the significant level of 0.05. The findings are in line with the findings of Ndege (2016) that there is a very strong relationship between strategic market segmentation and firm performance.

In addition, the results revealed that strategic innovation has significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya, β1=0.454, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the results of Chia-chi Chang *et al* (2017) who revealed that there is a very strong relationship between strategic innovation and firm performance.

Conclusions

Further, the study concludes that strategic market segmentation has a positive and significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya. Findings revealed that strategic market segmentation (market penetration and promotion and advertising and market Channels) influence the performance of pharmaceutical firms in Nairobi County, Kenya. This implies that a unit improvement in strategic market segmentation (market penetration and promotion and advertising and market Channels) leads to improvement in the performance of pharmaceutical firms in Nairobi County, Kenya.

The study also concludes that strategic innovation has a positive and significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya. Findings revealed that strategic innovation (infrastructure, technical competence, data and information management and availability of ICT) influence the performance of pharmaceutical firms in Nairobi County, Kenya. This implies that a unit improvement in strategic innovation (infrastructure, technical competence, data and information management and availability of ICT) leads to improvement in the performance of pharmaceutical firms in Nairobi County, Kenya.

Recommendations

This study recommends that the management of pharmaceutical firms should ensure implementation of proper strategies for facilitating market penetration and promotion and advertising and market Channels.

The study also found that strategic innovation has a positive and significant effect on the performance of pharmaceutical firms in Nairobi County, Kenya. This study therefore recommends that the management of pharmaceutical firms should ensure implementation of proper infrastructure, technical competence, data and information management and availability of ICT.

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