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DETERMINANTS OF COMPETITIVE ADVANTAGE AMONG MANUFACTURING PHARMACEUTICAL FIRMS IN KENYA

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ABSTRACT

There is high competition in the pharmaceutical industry in Kenya. Different firms are struggling to remain on top of the game as competition continues to grow in the industry. To develop competitive advantage is at the core of any business. The pharmaceutical industry in Kenya is facing stiff competition from MNC'S and companies that import drugs from Asia. The pharmaceutical manufacturing companies in Kenya face many challenges that make it difficult to compete effectively with the MNC's due to government regulations and inability to develop novel products. This motivated the researcher to investigate determinants of competitive advantage among pharmaceutical manufacturers in Kenya. The study sought find out to what extent organization's structure determines competitive advantage among pharmaceutical manufacturers in Kenya, to find out to what extent organization's culture determines competitive advantage among pharmaceutical manufacturing firms in Kenya, to investigate how innovation is a determinant of competitive advantage among pharmaceutical manufactures in Kenya and finally to examine the role of organizational resources as determinant for competitive advantage among manufacturing companies in Nairobi. The researcher used descriptive study. Primary data was obtained by use of questionnaires while secondary data was obtained from firms' financial reports. A population comprising of 16 pharmaceutical manufacturing companies 'census rather than sampling method was used. The unit of analysis was 16 and three questionnaires were given to each unit, which represented the top management, the middle managers and the supervisors, therefore the unit of observation was 48. According to descriptive and inferential statistics done, the findings of the study revealed that there was a positive relationship between the independent and the dependent variables. Organizational culture was found to determine competitive advantage. Organization's structure also determined competitive advantage. Competitive advantage was also affected by innovation positively and increase in organizations resources also was seen to increase competitive advantage.

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Key Words: *Organization's Structure, Culture, Innovation, Organizational Resources, Competitive Advantage*

INTRODUCTION

The market place globally has become very competitive in recent times. This can be attributed to globalization, rise in technology and more informed clients who insist on quality products and services at competitive price. This has made many companies to rethink about their strategies that will make them remain afloat and even thrive in spite of all the odds. Many industries have become very competitive forcing some firms to completely lose out to their competition that quickly came up with different ways to gain competitive advantage over their rivals. The pharmaceutical industry worldwide is no different. There has been stiff competition in the industry in the global scene with multinationals taking a great lead because of their ability to innovate and come up with novel products.

There are over three hundred pharmaceutical companies in Kenya. Kenya still does not have capabilities for R&D for discovering new active substances. It also does not have capabilities for production of pharmaceutical starting materials. However it has capabilities of production of formulations from pharmaceutical starting material and capabilities for repackaging of finished dosage formulations. In 2014 Kenyan market for pharmaceuticals reached USD 558.5 million with local production at USD 103 million. The value addition from the pharmaceutical sector generates around USD 62million which is 30% of GDP. In 2015 the pharmaceutical industry in Kenya was valued at USD73.74 billion

Aspects of the policy of Kenya pharmaceuticals industry included policy on selection of essential medicines, medicine financing, pricing, procurement, rational use of medicine, traditional medicine among others. The government is responsible for regulating promotion, or advertising of medicines. The provisions require pre- approval of medicines advertisements and promotional materials and direct advertising of prescription medicines to the public is prohibited. There are no legal or regulatory provisions affecting pricing of medicines. However the government runs a national medicines price monitoring system for retail patient pricing in public, faith based and private facilities (hospitals). There are no regulations mandating that retail medicine price information should be publicly accessible.

Competition from multinationals has not spared the local manufacturing companies. There is pressure for local manufacturing pharmaceutical companies to remain relevant and even gain market share in spite of their multinational counterparts and other generic companies from Asia which are quite competitive. The Kenyan pharmaceutical industry faces many challenges including high costs of production, inability to carry out bioequivalent tests and lack of funds and capability to come up with new products and formulations.

Competitive advantage can be defined as the ability of a firm to outdo the other firms in the same industry. Firms have been seen to employ different strategies in order to gain competitive advantage over others. Competitive strategies aim at establishing profitable and sustainable positions against forces that determine industry competition (Porter, 1980). Competitive advantage is also obtained when an organization develops or acquires a set of attributes or executes action that allows it to outperform its competitors (Wang, 2014).

Competitive advantage, according to Porter can be seen as growing out of the value a firm is able to create for its buyers and that value must exceed the firms' cost of creating it. Value can come out of offering lower prices than competitors for equal benefits, or providing unique benefits that more than offset a higher price. The value should be what buyers are willing to pay for. Competitive advantage is at the core of survival of any firm (Porter, 1980).Competitive advantage is an important concept because it defines the uniqueness of the firm when compared to its competitors (Zekiri & Nedelea, 2011).

A firm has competitive advantage whenever it has an edge over its rivals, securing customers and defending against its competitors. Barney states that, for competitive advantage to have meaning, customers must perceive a difference between a company's products or services and those of the competition, stating that firms should therefore concentrate on their key competencies, capabilities and focus resources in line with their strategies that will propel the firm above the competitive environment and competitors and hence deliver competitive advantage. Competitive advantage is the advantage that a company has over its rivals in the market by providing clients greater value that could be through lower rates or through added benefit that justify similar or higher rates (Wang, 2014).

The pharmaceutical industry is very important as it is responsible for development, production and availing of medications to the users who at the point of usage depend on it for their lives. In 2014 the total revenue worldwide in the pharmaceutical industry exceeded one trillion USD with the USA being responsible for the largest revenue. According to the Global pharmaceutical report in 2014 the leading companies in terms of revenue are from USA and Europe. The world's largest pharmaceutical company, Pfizergenerated52.8 billion USD, in pharmaceutical sales alone. Others including Johnson &Johnson; Merck,Norvatis and Roche from Switzerland; GSK and AstraZeneca from the UK and Sanofi from France are also among the top 10 companies in terms of revenue generation.

In Africa most of the pharmaceutical companies are generic. The value of the pharmaceutical market is expected rise to 45USD in 2022 due to increased chronic ailments; urbanization and increased budgetary allocation to healthcare sector by governments. Most of the African pharmaceutical companies are in the transition phase to obtaining WHO prequalification status for manufacturing. South Africa remains the best established country in the continent for manufacturing of pharmaceutical products in sub-Saharan Africa. East Africa seems to be growing at a much slower rate considering the big population. East African pharmaceutical market is USD 1.9 billion, and is dominated by MNC's. The region's pharmaceutical sector has been known for poor quality products and high prices. Currently, Kenya remains the largest producer of pharmaceutical products in COMESA region, supplying about 50% of the regions market since 2014.

There are over three hundred pharmaceutical companies in Kenya. Kenya has been the largest producer of pharmaceutical products in the COMESA region (Wilson, 2012) supplying over 50% of the region since 2014. Kenya still does not have capabilities for R&D for discovering new active substances. It also does not have capabilities for production of pharmaceutical starting materials. However it has capabilities of production of formulations from pharmaceutical starting material and capabilities for repackaging of finished dosage formulations. In 2014 Kenyan market for pharmaceuticals reached USD 558.5 million with local production at USD 103 million. The value addition from the pharmaceutical sector generates around USD 62million which is 30% of GDP. In 2015, the value of the pharmaceutical industry in Kenya wasUSD73.74 billion.

Statement of the Problem

Globalization and other industry factors have led to a lot of competition in the market place. The pharmaceutical industry globally also faces a lot of competition for an ever reducing market. In Kenya competition has become even more intense with many international players introducing their presence also. Multinational Corporations with ability to innovate and invent new pharmaceutical regimens seem to be taking over a larger share of the middle class because their status affords them. There were over three hundred pharmaceutical companies in Kenya. In 2014 Kenyan market for pharmaceuticals reached USD 558.5 million with local production at USD 103 million.

Local manufacturing companies still have to compete for the same market share despite the fact that they cannot come up with new regimens because of their limited resources to carry out R&D, government regulations and limited expertise in his area. Therefore the local pharmaceutical manufacturing firms have to find ways to not only survive but grow their market share and become more competitive by becoming more efficient, profitable, and flexible and grow their customer base with use of their resources however limited to gain competitive advantage. This study focused on determinants of competitive advantage among the local pharmaceutical manufacturing companies in Kenya.

Some of the studies on competitive advantage have focused ondifferentindustriesincluding determinants of Competitive advantage in the textile and apparel industry which found demand conditions, factor conditions, related and supporting industries(Mboya, 2015) to be the key determinants. Momassabiet al, (2015), researching on factors affecting competitive advantage among supermarkets in Kenya found that product innovation, information, managerial capacity and relationship with suppliers to determine competitive advantage. Research on competitive advantage among private universities in Kenya done by (King'oo, 2014)found that cost leadership, growth strategies, differentiation strategies, and market focus strategies as the main determinants.

Wambugu (2012) carried out a study on factors affecting competitive advantage of firms in the microfinance industry and found that, marketing strategies, network effects, strong R&D capabilities, cost leadership and defining customer value as the main factors. In the study on competitive strategies adopted by pharmaceutical companies operating in Kenya, (Mbayeh, 2012), found differentiation strategies and cost strategies as the main strategies pharmaceutical companies used, with focus strategy being rarely used. According to the research done by many scholars in Kenya on competitive advantage, most studies have been done on competitive strategies used by different companies and very few studies have been done on determinants of competitive advantage.

As seen above, some studies have been done on determinants of competitive advantage featuring different industries. However there is lack of adequate research on determinants of competitive advantage among pharmaceutical manufacturers in Kenya. The importance of this study cannot be over stated because the pharmaceutical industry is very important industry in the country and mostly known for its profitability and contribution to the GDP of the nation. The pharmaceutical manufacturing companies in Kenya play even a more important role in providing medicines that will be used for treatment of the vast population, they offer employment to the locals in big numbers since more workforce is needed in the factories and marketing compared to the firms that are importing drugs. In addition to this, medicines produced locally are usually more available to the users.

Objective of the Study

To find out the determinants of competitive advantage among the manufacturing pharmaceutical companies in Kenya. The specific objectives were:-

- To find out how organization’s culture determines competitive advantage among the pharmaceutical manufacturing companies in Kenya
- To examine how organizational structure determines competitive advantage among the pharmaceutical manufacturing companies in Kenya
- To investigate to what extent innovation determines competitive advantage among pharmaceutical manufacturing firms in Kenya
- To examine how organizational resources determines competitive advantage among pharmaceutical manufacturers in Kenya

LITERATURE REVIEW

Theoretical Framework

Institutional Theory

Institutional theory was formulated by Meyer and Rowan in 1977. It is used to analyze organizational phenomena that view the social world as made up of institutions which have rules practices and structures that set conditions for action. The theory states that institutions help in explaining the social world and they determine rules of variations, any contravention from the rules which comes with increased costs, risk demands reduced legitimacy and loss of resources. Institutional theory is also used to explain organization's structure (Meyer &Rowanna, 1977).

Institutional analysis reveals that organization's culture persists even when individuals come and go. Institutionalism also argues that culture create regulator for human behavior for peaceful and effective system. According to Selznick, (1957), institutionalization involves relating a structure with value and not just structures for structure's 'sake. The degree of individualism in an institution represents the degree of institutionalization of the organization. Other aspects like congruency of the institution is used to determine to what extent relationships within institutions fit the social relations they are supposed to regularize. Incongruent institutions cannot survive or be effective. Exclusive institutions happens where there is or little competition and the institution survives long term but where there are multiple institutions attempting to perform the same tasks then some institutions will have to terminate. In this study the theory is used by the researcher to relate to organizational culture as an independent variable and how it affects competitive advantage.

Contingency Theory

Contingency theory emphasizes was postulated by Joan Woodward in 1958. It emphasizes that a tighter match between structure and context is bound to increase organizations performance and survival chances. The theory further states that that there is no best way to organize, and therefore the best way to organize is dependent on the environment. Dobak (2012), states that contingency factors are features that under different circumstances, provide different solutions, which may always prove effective toward a desired goal. Mechanistic, bureaucratic, centralized forms suit quiet, predictable and stable environment with abundant resources. Informal, structures fit turbulent, uncertain, complex, unstable, resource scarce environment. Structural contingency theory hypothesizes that complex structures of organizations' core production and information technologies play significant role in hindering internal division of labor and performance. In this study the theory is used by the researcher to relate to organizational structure independent variable.

Innovation Theory of Profits

Innovation theory of profits was first postulated by Joseph Schumpeter in 1962. According to the theory the entrepreneur gets profit by introduction of innovation. The entrepreneur has the primary responsibility to introduce innovation in the production process to get profits. Entrepreneurs introduce innovation in order to increase the gap between costs of production and price which will lead to profits. These innovations include implementing and introducing new products and processes, improvement of managerial techniques, utilization of new materials in the production process and effecting change in quantity and quality of the production in addition to introduction of new marketing methods. These according to Schumpeter will keep entrepreneur in a better position than the enterprises that do not and this will fetch more profits. According to Schumpeter there will be relationships between changes in economy and profits. The theory states that profit is a necessary reward for introducing innovations. This theory helps to explain how innovation relates to competitive advantage in the study.

Resource Dependency Theory

The Resource dependency theory, (RDT) which was postulated by Pfeffer, (1982), has been revised by a number of scholars. In their journal, Hillma , Withers & Collins, (2009), state that RDT recognizes thatexternal factors influence the organization, and that resources being an internal factor in the organization affects competitive advantage. They argue that the theory rests on the assumptions that the organizations depend on resources. These resources originate from the environment which contains other organizations as well. Further the theory states that there is no self- sufficient organization at all and that organizations will always obtain resources from their environment.

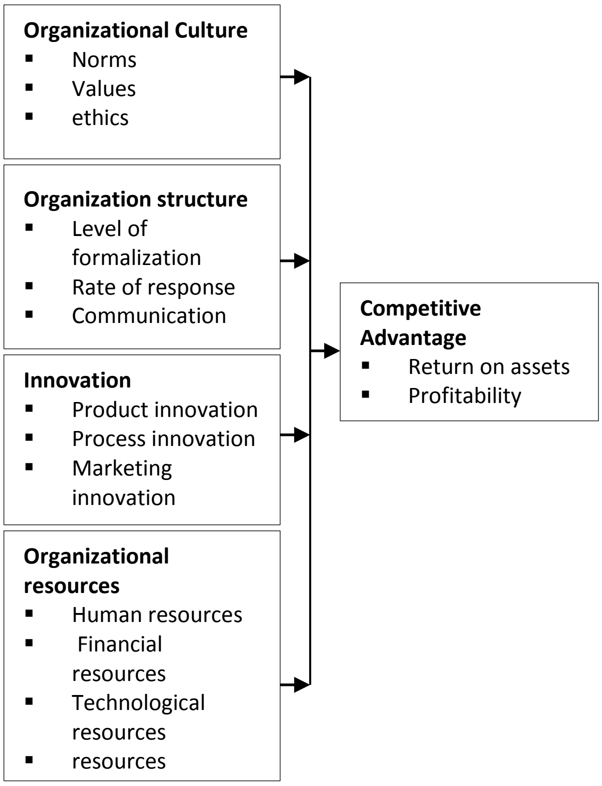
Resources that one organization requires are already in the hand of another organization, and that they are a basis for power. Power and resources are therefore linked. Power originates from socio-economic exchanges that occurs among organizations. Organizations that seek to acquire vital resources but avoid dependence on organizations that supply these resources gain power over these organizations. Another urgument rests on the fact that an organization is made up of internal and external coalitions which come from exchanges that influence and control behavior.

Game Theory

Game theory is defined as a study of strategy which deals with competitive situations where the outcome of a participant's choice of actions depends critically on the actions of the other participants. The theory was postulated by John Von Neumann in 1928. An important aspect about game theory is that businesses are interdependent and when one firm makes a competitive move like reducing price because of low demand, others are likely to do the same.

Game theory explains that a firm may take steps that offers it higher payoffs than any other firm in the industry irrespective of the choice made by the other organizations. The theory explains things that a firm would do to gain competitive advantage over othrs. This may include changing the culture, structures of the organization increasing resources or pursuing innovation.Every firm looks for a dominant strategy in the game in order to have advantage over the other players. A firm in the same game is complementary if the customer values the products of their competitor less and a competitor if the customer values their products more. Further, a firm is a competitor if it is more inclined to supply resources to rivals and complementary if it is less attractive to supply resources to the competitor. Game theory helps relate competitive advantage that firms adapt to the independent variables.

Conceptual Framework



Independent variables   Dependent variable

Figure 1: Conceptual Framework

Organization's Culture

Culture is defined as learned values, beliefs, and assumptions that become shared. Organizational culture according to Schein 2004 is made up of rules, beliefs, and behaviors that make one organization different from another. Organizational culture refers to a way of defining relationships among employees within an organization. It can be defined as norms, values and behaviors in the organization (Madu, 2011). The culture could be clan type which is defined as a friendly work place where people are free to share a lot about them. Adhocracy is defined as an entrepreneurial and creative workplace. Market culture is defined by result orientation where leaders are hard driving directive and competing. Hierarchical culture is defined by good structures that are well defined with processes that govern what people do and with the leaders being well organized and good coordinators (Cameron.,& Quinn, 1999).

Organization's Structure

Organizational structure is used to define hierarchy within an organization. It helps to establish the relationship among all persons working in the organization their job and roles functions and hierarchical distribution. The organizational levels have been arranged for efficiently running of the organization, they are either functional, divisional or matrix which a combination of the two. Structures could be centralized or decentralized. Centralization is a right hierarchical structural orientation where power is centered at the upper ranks of the organization while in decentralization power is distributed (Greenberg, 2011).

Organization structure is described as the framework around the systems that support the work being done in an organization. This includes hierarchical levels and starts from responsibility, roles and position. Organizational structures could be, bureaucratic, functional, divisional and matrix. Bureaucratic is traditional based on hierarchy, functional is suited for people working together to achieve a common task and holding the same position, divisional structure is divided along some criteria for example geographical locations, or products while matrix provides both functional and divisional alternatives(Galbraith, 1987).

Innovation

Joseph Schumpeter defines innovation as an activity which leads to a new practice, function or new product and goes to further state that innovation can be as a product, process and organizational changes that do not necessarily originate from scientific discoveries. Firms innovate to define their competitive position or seek new ones. Innovation may be reactive or proactive. Reactive innovation seeks to protect its market share while proactive seeks to get new or expand the market share (OECD, 2005). Innovation may be as a result of employees' creativity in an organization and should always be targeted at meeting customer needs and value addition. Innovation is the process that is defined by a new product new process new services or business practices and it is made up of enhanced products, processes, and methods of marketing.

Innovations can be divided into three types namely, product innovation, process innovation and market innovation. Product innovation can involve improvement of the product by increasing new ideas execution focused on enhancing features and functionalities of an already existing product in order in order to enhance its quality (Noorani, 2014). Process innovation is a phenomenon of innovation described as the introduction of a new technique or methods for accomplishing a task that makes a company stay competitive and fulfilling customer need (Michel, 2014).

Organization's Resources

An organizational resource is a term used to refer to tangible or intangible resources that organizations need to run smoothly. Resources of the organizations include financial resources, human resources, technological resource, and knowledge resources among others. It also includes assets and capabilities, unique attributes, information and knowledge that a firm controls, which will help the firm come up with strategies that will improve its efficiency and effectiveness giving it superior performance.

Empirical Review

Organizational Culture

Corporate culture consists of values beliefs and standards affecting thoughts and behavior of people in enterprises. It is a set of concepts beliefs, attitudes and values and opinions creating informal standards behavior in organizations which have a positive effect. Organizational culture according to Madu 2011 is one of the important elements for sustaining performance and competitive advantage. To create culture, leaders have to promote ethical practices and values in the organization. Successful organizational cultures helps maintain organizational growth, provide good services to customers address problems within the organization and between members, hence out compete rivals.

Consistent in behavior of leaders for example, paying attention to operating efficiencies, encouraging subordinates to be innovative and be creative would make an organization gain low cost advantage over rivals ((Thompson, Strickland, Gamble, 2005). According to Schein, (2004) employees easily accept contradictory messages because leaders at the top assume the right to be inconsistent and act too powerful to be confronted. Organizations with good corporate culture are usually more successful than organizations with lack of corporate culture (Stacho, Stachova, 2013). Hitka,Vetrakova, Balazova, Danihelova, 2015, state that culture offers either positive or negative sources of competitive advantage of enterprise.

Organizational Structures

Organization structure is defined as an anatomy of an organization that affects behavior of employees. According to Poormina & Nair , (2015) organization structure is a system used to define hierarchy within an organization and its aim is to establish relationship among all persons working in the organization. It helps to identify jobs, roles and functions and hierarchical distribution.

A well-defined organization structure is capable of helping an organization implement their objectives and goals smoothly. Success of an organization depends on the structure. Flexible structures are more common and have been seen to give autonomy to employees. A good structure helps in building confidence in the staff and hence boosts their motivation, performance and commitment to the organization which eventually creates a firms' competitive advantage. Organizations strategy must find good functional structure in place for a firm to realize its objectives.

Innovation

According to (Tidd, Bessaj, Pavvit, 2010) innovation contributes to achieving competitive advantage in several aspects. There is a strong relationship between new products and market performance. Study by (Urbancova, 2013)), shows that innovating play an important role in competitive advantage. The study shows that innovation is seen as a critical driver of performance. Montez, Moreno, Fernandez, (2004), agree that organizations embracing innovations in reaction to environmental alterations and create new opportunities that will assist in attaining greater performance which will lead to success. Product innovation, according to (Leipoman & Helfat, 2011)is described as having either the two objectives of developing a new fresh product for the market or enhancing of prevailing products.

Solinar, (2008), found that innovation was a driver of sustainable competitive advantage in Australia. Mathenge, (2013), found that financial innovation Impacted competitive advantage (Aruda, 2015)found that product innovation in m-pesa business contributes significantly to competitive advantage. Innovation involves introduction of new products new ways of accomplishing business operations (Quinn , Mckitterick, McAdam, Brenvein, 2005)Innovation is coming up with ideas and bringing them to be profitable to the organization. (Robert &Tucker, 2008). According to OECD, (2005) the focus of product innovation as enhancing performance by attaining competitive advantage and managing competitive advantage process innovation is the development of favorable changes in production process.

Organizational Resources

Barney, (2008), states that all resources are firm-specific, and that they lead to competitive advantage. Wernerfelt, (2013), concluded that resources like technology and human capital lead to higher performance. Certain resources owned and controlled by a company have potential to bring about competitive advantage which leads to a firms' superior performance. Resources like a firm's reputation, product reputation, brand-name, and manufacturing experience have been seen to lead to superior performance.

Prior studies have shown that firms' resources provide potential for competitive advantage. Firm that uses its resources well will become more effective and efficient. Othman et al 2014 affirming Wernerfelt's view that idiosyncratic, imitable, strategic resources owned and controlled by a firm contributes to competitive advantage. Resources, both tangible and intangible, can create competitive advantage in firms.(Immyxai & Takahashiy, 2010), posit that firm's physical resources, together with sophisticated technology are expected to increase service, operations, and production. Othman et al found that in line with resource based view, organization's resources is generated from within the organization and it is the main source of competitive advantage especially those that are rare, valuable and hard to substitute.

METHODOLOGY

The study adopted descriptive design and used survey technique. Orodho, (2012), defines survey design as made up of a cross sectional design whereby data are collected by use of a questionnaire or structured interviews to a sample of individuals. The target population in this study comprised of 16 pharmaceutical manufacturing companies in Nairobi County. Three questionnaires were issued to the three levels of management in the companies namely the directors, middle managers and the supervisors. The unit of analysis was 16; therefore the unit of observation was 48. Multiple regressions model below was used to test the combined influence of variables.

$Y=B_0+B_1X_1+B_2X_2+B_3X_3+B_4X_4+\varepsilon$

Where: Y= Competitive Advantage; X_1 = organizational culture; X_2=Organization's Structure; X_3=Innovation; X_4=Organization's Resources; B_0= Constant

ε = ERROR, B_1=1=1, 2, 3, 4 the coefficients represents the various independent variables

RESULTS

Regression Analysis

Regression analysis sought to establish the relationship between independent and dependent variables. The dependent variable was competitive advantage, determined by Return on Assets (ROA) and profitability. The dependent variables were organization's culture, organization's structure, innovation and organization's resources.

Table 1: Coefficients of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.868[a]	.754	.727	.45807

a. Predictors: (Constant), Organization's culture, Organization's Structure, Innovation and organization's resources.

The table above the value of r = 0.868 which showed a positive correlation between determinants of competitive advantage and competitive advantage the determinants being organizational culture, organizational structure, innovation and organizations resources represented the correlation coefficient which indicates the relationship between the independent and dependent variables in the model. In this research, R was 0.868 indicating very strong positive correlation. R squared which was the coefficient of determination was 0.754. This indicated that 75.4%

of variation in Competitive Advantage is explained by independent variables. Only 24.6% is explained by other factors. Therefore, the model used in this study was satisfactory.

Table 2: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.166	4	5.792	27.601	.000[b]
	Residual	7.554	36	.210		
	Total	30.720	40			

a. Dependent Variable: Competitive Advantage
b. Predictors: (Constant), organizations culture, Organization's Structure, innovation and organizations resources.

Table 2 presented analysis of variance which described significance of the overall model. From the results, the F statistic was 27.601. *P value* was 0.000 smaller than the critical p value 0.05. Therefore, the model was significant at 95% confidence level and thus there is at least one significant independent variable.

Results tabulated in table 3 presents the coefficients, t values and significance levels of variables under study. The constant had a coefficient of 0.481 significant at 95% confidence level (p value = 0.003 < 0.05).

Table 3: Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.481	.282		1.704	.003
	Organizational culture	.002	.166	.002	.010	.011
	Organization's Structure	.004	.172	.004	.026	.031
	Innovation	.467	.163	.455	2.874	.007
	Organization's Resources	.393	.140	.461	2.808	.008

a. Dependent Variable: Competitive Advantage
b. Independent variables: Organization’s culture, organization’s resources, Innovation, Organizational resources

Organization’s culture had a coefficient of 0.002 indicating that, an increase in organization’s culture would lead to an increase in competitive advantage. This relationship was significant at 95% confidence level (p value = 0.011 < 0.05), hence it significantly predicted competitive advantage at 5% significance level. Similar findings were also obtained by (Lee & Yu 2004) on effects of culture on competitive advantage. In addition, findings obtained by (Oduol, 2015) on effects of organizational culture on performance, found that culture affected performance. Contrary findings about organizational culture’s effect on competitive advantage were obtained by (Schein, 2004) who found that strong organizational culture was associated with demise of companies and whole industries.

Organization's Structure had a positive coefficient of 0.004 significant at 95% confidence level (p value = 0.031 < 0.05). Therefore, Organization's Structureis a predictor of competitive advantage; its increase contributes to an increase in competitive advantage while its decrease will result to a decline in competitive advantage. Similar findings were obtained by (Ng'enoh, 2013) showing structure affected performance of individuals and hence competitive advantage of the organization. (Jamniez, & Sans , 2011), found similar findings that innovation affected competitive advantage. Naziri 2012 found weak and insignificant relationship between structure and competitive advantage

Innovationalso had a positive coefficient of 0.467 and p value of 0.007 < 0.05. Thus, Firm’s innovation can predict competitive advantage at 95% confidence level since its p value is less than p critical (0.05).Research done by (Muthoni, 2017)obtained similar results that market product and process innovation led to increased sales and revenue while process innovation increased efficiency.

Organization's resources as a variable can predict competitive advantage at 95% confidence level. This was inferred from the coefficient results where organization's resources had a positive coefficient of 0.393 and p value of 0.008 < 0.05. This implied that, an increase in organization's resources will resort to an increment in competitive advantage and vice versa.Similar findings by Barney, (2011) link firm resources to competitive advantage. Results obtained by (Othman, Arshad , Abdul & Arif., 2014) show that tangible resources affected firm performance.

Fitting Regression Model

The regression model used in this study was

$Y= \beta0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4 + \mathcal{E}$

Where:

Y= Competitive Advantage; β0 = Constant term; X_1= Organization's culture; X_2 = Organization's Structure; X_3 = Innovation; X_4 = Organization's Resources; Ɛ= Error term

Therefore, the fitted regression model became;

$\mathbf{Y=0.481 + 0.002X_1+ 0.004X_2+ 0.467X_3+ 0.393X_4+ \mathcal{E}}$

The regression model above showed that when a unit of organizational culture increased by one unit it increased competitive advantage by 0.002 units. In addition, an increase on organizational structure by one unit increases competitive advantage by 0.004 units. Further, increase in innovation by the organization by one unit, increased competitive advantage by 0.467 units and finally an increase of organizations resources by one unit, increases 0.393 units of competitive advantage.

SUMMARY FINDINGS

The study sought to establish the determinants of competitive advantage among pharmaceutical manufacturing companies in Kenya. Descriptive and correlation research designs were adopted. The study established that organizational culture, organizational structure, innovation and organizational resources determine competitive advantage among pharmaceutical manufacturing companies in Kenya.

From the descriptive and correlation analysis, the study found that there was a positive and significant relationship between culture and competitive advantage**.** In this study descriptive statistics showed that organizational culture determines competitive advantage. With a coefficient of 0.002 showing that increase in one unit of organizational culture would increase competitive advantage by 0.002 and hence increase in organizations culture positively determines competitive advantage among pharmaceutical manufacturing firms in Kenya.

Aspects like team work, rewarding of personal efforts based on performance were seen to be incentives that promoted performance and motivated staff to work harder and hence increasing the overall competitive advantage of the organization. Organizational culture was seen to promote achievements of goals.

In this study the researcher found that there was also a positive and significant relationship between organizations structure and competitive advantage. Increase in organizational structures affected positively competitive advantage. According to the response given flatter structures promoted quicker communication and prompt response and therefore increasing customer satisfaction in terms of processing orders and providing information and hence increasing competitive advantage. Ability of employees and managers to make decisions without necessarily involving top management was also seen to reduce lead times and hence efficiency which leads to increase in competitive advantage compared to organizations where top managers were involved in day to day decision making processes in the organization. Too much formalization undermined decision making affecting competitive advantage negatively while less formalization improved performance. Structure was seen to affect service delivery to customers, and compliance to regulations.

There was a positive and significant relationship between innovation and competitive advantage. In this study innovation had a positive coefficient of 0.467 showing that increase in innovation increased competitive advantage by 0.467 units. The study shows that introducing product innovation majorly to competitive advantage. Improvement in processes also had a major contributor of competitive advantage among pharmaceutical manufacturing companies in Kenya. Market innovation was also seen to contribute to competitive advantage among pharmaceutical manufacturing companies by increasing sales due to products being more prominent and available in the market

The study concluded that pharmaceutical manufacturing companies in Kenya that innovate were more likely to increase profitability and return on assets that the organizations that do not and therefore the companies that innovate will always have a competitive edge over pharmaceutical manufacturing companies that do not embrace innovation.

In the study there was a positive and significant relationship between organizations resources and competitive advantage. In the findings the researcher found positive relationship between firm resources and competitive advantage. Increase n firm resources positively increased competitive advantage. Firm resources like financial resources assisted marketing team to carry out effective marketing and hence increased sales. Technological resources improve on processes and therefore improving efficiency and providing cost advantage. Good human resources aided in better performance of duties and hence improving overall performance of staff which translated to quality work saving on wastage. In these study organizations resources had a positive coefficient of 0.393 indicating he in increase in one unit of organizational resources affected by increasing 0.393 units of competitive advantage. Organizational resources were that main source of competitive advantage according to their study. Resources that are very rare, immutable, and rare are major contributors to competitive advantage.

CONCLUSION

From the study was concluded that competitive advantage among pharmaceutical manufacturing companies was determined by organizational culture, organizational structure, innovation and organizations ‘resources**.** Organizational culture had a positive and significant relationship with competitive advantage among pharmaceutical manufacturing companies. These manufacturing companies had to invest their efforts in building strong and positive cultures in the organizations.

Organizations structure also had an effect on competitive advantage of pharmaceutical manufacturing firms therefore managers should have structure that would enhance communication and decision making on the levels of management

Since there was a strong and significant relationship between innovation and competitive advantage among manufacturing firms manufacturing companies should make sure that they always focus on innovation in their products, processes and also put much effort on market innovation.

The researcher also concluded that the management of these manufacturing companies should set aside resources which is a major determinant for competitive advantage among pharmaceutical manufacturing firms in Kenya.

RECOMMENDATIONS

The researcher recommended that pharmaceutical manufacturing firms invested more on innovation and developing firm resources in order to be more competitive. Innovation includes improving process, product and marketing innovation. New effective products will boost sales while better and enhanced processes will improve efficiency. Market innovation will make product to be more prominent in the market and hence easily accepted by customers. The researcher also recommended more finances set aside for marketing and recruitment of qualified employees to improve on performance. Marketing of pharmaceutical products is mainly done by marketers to the customers who are either doctors of retailers and little advertisement is done. Therefore recruiting well qualified marketers who will be able to face the doctors and retailers is important and thereafter paying the well and facilitating their marketing processes will boost performance. Modern technology in pharmaceutical manufacturing firms if implemented will improve company performance and hence boosting competitive advantage. Positive organizational culture should also be developed. Positive culture that embraces and rewards performance and teamwork will also improve competitive advantage. Finally organizations structure that is flatter with less formalization will improve efficiency and speed up communication and decision making hence improve firm's competitive advantage.

Suggestions for Further Studies

Since the study featured pharmaceutical manufacturing companies, the researcher suggests that future studies be done on determinants of competitive advantage on pharmaceutical industry as a whole. Within the pharmaceutical industry are also different levels where firms may compete including distribution, retailing where future research may be focused. Future research may also be done on other industries in Kenya that experience a lot of competition.

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