



# **Functional Competencies And The Competitive Advantage Of Manufacturing Companies In South-East, Nigeria**

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## **ABSTRACT**

The study investigates the effect of functional competencies on the competitive advantage of pharmaceutical firms in South-East, Nigeria. The main objective of the study was to ascertain the effect of human resource management competency decision-making competency and production competency on the competitive advantage in pharmaceutical firms South-East. The related literature was reviewed under conceptual framework, theoretical framework, theoretical exposition and empirical review. The study is anchored on Competence theory. The study adopted a cross-sectional survey design. The study was carried out in South-East of Nigeria. The population for this study consists 5,394 employee of pharmaceutical firms located in the South-East of Nigeria. The sample size for the study is 1036 employees of the selected pharmaceutical firms in the South-East States of Nigeria determined through the application of a formula developed by Borg and Gall in 1973. A structured instrument questionnaire was designed to reflect the popular five (5) point Likert scale. Face and content validated was adopted. The reliability of the instrument was achieved through the application of test re-rest method and Cronbach Alpha value correlation coefficient. The analysis was carried out with the application of summary statistics of percentages, Pearson Correlation and Ordinary Least Squares (OLS) multiple regression analysis. The F-Statistic with a value of 18.624 showed that the model is statistically significant, valid and fit for predictions. Major findings from the study shows that decision-making competency had a significant positive influence on the competitive advantage of pharmaceutical firms. Human resource management had a significant positive influence on the competitive advantage of pharmaceutical firms in South-East and production competency has a significant positive effect on the competitive advantage of the pharmaceutical firms in South-East, Nigerian. The study concludes that functional competency had a significant positive influence on the competitive advantage of pharmaceutical firms in South-East, Nigerian. It was recommended among others that every organization should engage in training in all aspect of organization to develop the competency/capacity for production management so as to achieve competitive advantage; every organization needs to build the capacity of the organization in the area of fast business decision making.

**Keywords:** Human Resource Management Competency Decision-Making Competency, Production Competency and Firm Competitive advantage

## **INTRODUCTION**

In today highly competitive environment, business organizations need to act fast in order to secure their financial situations and their market positions. Firms are continuously striving for ways to attain a sustainable competitive advantage. The current business environment is facing so many challenges. These challenges have compelled companies to find out factors that influence their competitive advantage for them to take appropriate steps to initiate them (Abu- Jarad, Yusof & Nikbin, 2010). Functional competence influences competitive advantage of companies (Almajali, Alamro, & Al-Soub, 2012). They need to count more on their internal distinguished strengths to provide more added customer value, strong differentiation and extendibility of competitive advantage count more on their functional competences

(Hamel & Prahalad, 2014). Functional competencies are the base of all competitive advantage (Srivastava, 2005) Raven and Stephenson (2016) posits that functional competencies are basic skills and behaviour that are needed to do a job successfully. It can also be regarded as job-specific competencies that drive proven high competitive advantage, quality results for a given position.

Malaolu and Ogbuabor (2013) posit that companies that achieved competitive advantage employed strategies that took advantage of their functional competencies. These functional competencies included designing new products, installing new production technologies, adapting training programs, using quality control techniques, and improving supplier relationships. The functional competencies plays a key role in Nigeria pharmaceutical industry (due to its competitive advantage), generating jobs, contributing to social and political stability, and adding high value exports to help the balance payment of those pharmaceutical firms. Competitive advantage is a positional superiority based on the provision of superior customer value or the achievement of lower relative costs (Gitau, Mukulu & Kihoro, 2016). To survive and win, a firm has to gain advantage over its competitors and earn huge profit (Zeebaree & Siron, 2017). The authors explained competitive advantage as a process of strategies adopted by a firm to enjoy differentiation and low-cost resulting in an advantageous position to the firm over its competitors. A firm enjoys competitive advantage when it can create more economic value than its competitors (Barney & Hesterly, 2010). Eniola and Entebang (2014) argued that functional competencies of organization are prominent factors that help organizations to achieved competitive advantage over their competitors. Competitive advantage gives a firm an edge over its competitors and enjoys higher ability to generate greater value for the firm and its stakeholders (Uchegbulam, Akinleye & Ibidunni, 2015). Competitive advantages are formed by activities of an organisation that are better than their competitors. To survive and win, firm has to gain advantage over its competitors. Competitive advantage as defined by Rothaermel (2013) is a process by which a firm formulates and implements strategy that leads to superior competitive advantage.

Functional competencies have long been considered a significant factor in a firm's competitive advantage because they enable the firm to develop, combine, and transform resources (physical, financial and managerial) into value offerings (Doole, Grimes & Demack, 2011). Thus, competencies are not only an indicator of overall export capability; rather, they are a precursor of a firm's capacity to initiate and maintain regular exporting. Markland, Droge and Vickery (2013) revealed that there is a strong relationship between competitive advantage and functional competencies. Some studies also show that different competitive advantages have significant impacts on functional competencies results. However, most of these studies have been conducted in a developed countries context. Very few studies have been done for developing countries as well as in Nigeria. Hence this study was carried out in order to assess the effect of functional competencies on the competitive advantage of pharmaceutical firms in South-East, Nigeria

### **Statement of the Problem**

There is a general opinion that most organizations have failed to deliver on the purposes for which they were established. This is common in developing countries. Pharmaceutical companies operate in a challenging business environment. Some of the challenges are: difficult economic conditions, enlightened and demanding customers, lack of competent experts in financial markets and cut throat competition (Massele, Jonathan, Darroux, & Fengju (2015). Poor resource management and employees' inefficiency has been suggested by Adeoye (2016) as the twin issues that need to be addressed in the Nigerian pharmaceutical sector. A preliminary interview conducted randomly on top pharmaceutical officers to examine the problem of the study highlighted a perceived high level of inefficiency in some Nigerian pharmaceutical sectors which is evident by the weak infrastructure service provision, duplication and overlaps of duties, non-availability of quality goods and enormous investment in training without results. All the above shortcomings demonstrated the presence of incompetent workers in the pharmaceutical sector. This has produced waste of national resources, poverty in the face of abundance, unemployment and economic retardation that lead to competitive disadvantage for many companies. There is substantial literature on functional competence, firm- competitive advantage and the way they affect company competitive advantage. These challenges are poor production competency; poor marketing competency;

poor time management competency; poor human resource competency and poor decision-making competency which lead to competitive disadvantage of organizations.

There is a conflict finding on the functional competence and firm- competitive advantage. Empirically the issue of functional competence and firm- competitive advantage has not been resolved, some result shows significant positive effect while other shows negative effect with firm competitive advantage. However, since only few studies have been carried out in this direction in Nigeria which has created some obvious gaps in knowledge, to investigation of functional competencies and their effects on competitive advantage of pharmaceutical firms in Nigeria is therefore recommended to enable proper documentation of the relationship between the two variables in Nigerian pharmaceutical sector and the effect on the economy.

### **Objective of Study**

The main objective of this study is to examine the effects of functional competencies on the competitive advantage of pharmaceutical companies in South-East, Nigeria. The specific objectives are to:

1. Determine the influence of human resource competency on competitive advantage of pharmaceutical companies in South-East, Nigerian
2. Examine the effect of decision-making competency on competitive advantage of pharmaceutical companies in South-East, Nigerian
3. Access the effect of production competency on competitive advantage of pharmaceutical companies in South-East, Nigerian

### **Research Questions**

The following research questions were formulated to guide this research work.

1. What are the degrees of influence does human resource competencies influence competitive advantage of pharmaceutical companies in South-East, Nigerian?
2. What are the degrees of effect does decision-making competency have on competitive advantage of pharmaceutical companies in South-East, Nigerian
3. To what extent does production competency affect competitive advantage of pharmaceutical companies in South-East, Nigerian?

### **Hypotheses**

The research hypotheses for this research are as follows:

- H<sub>1</sub>: Human resource management has no significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian
- H<sub>2</sub>: Decision-making competency, has no significant positive effect on competitive advantage of pharmaceutical companies in South-East, Nigerian
- H<sub>3</sub>: Production competency has no significant positive effect on competitive advantage of pharmaceutical companies in South-East, Nigerian

## **REVIEW OF RELATED LITERATURE**

### **Conceptual Review**

#### **Functional competencies**

Functional competencies describe the knowledge, skill, and/or abilities required to fulfill required job tasks, duties or responsibilities. Hill & Jones (2010) asserted that a functional competency is unique strength that allows a company to achieve superior efficiency, quality, innovation, or customer responsiveness, and thereby to create superior value and attain a competitive advantage. A firm with a functional competency can differentiate its product or achieve substantially lower cost than its rivals. Consequently, it creates more value than its rivals and will earn a profit rate substantially above the industry average (Hill & Jones, 2010).

Functional competencies refer to “the set of professional skills, abilities, and technical knowledge which specifically deal with the technical aspects of the job, essential to carry out specific functional or task-related activities” (Janjua, Naeem, & Kayani, 2002,). According to Janjua et al., (2012), functional competencies include vocational and technical skills which are necessary for the accomplishment of task-related objectives of the job. Functional management competence covers the “understanding of and proficiency in managing specific functional tasks” (Katz, 1974, p.91). Therefore, functional competencies

encompass proficiency in technical tasks and areas appropriate to the specific job. Managers with functional competencies possess work planning skills and the ability to make decisions.

Sukboonyasatit and Thanapaisarn, (2011) pointed to functional areas of the firm as areas of competency. In the empirical studies of Akimova (2011), functional areas had been seen as source of competitive advantage. Core competencies of functional areas through the fusion of resources and capabilities are main source of source of competitive advantage (Snezana, 2015).

Hill and Jones (2010) asserted that competencies at functional-level can be sources of competitive advantage through assessing the four factors of competitive advantage efficiency, quality, innovation, and customer responsiveness. Functional-level strategies are strategies directed at improving the effectiveness of basic operations within a company. They include primary functions (e.g. production, marketing, research and development) and support functions (e.g. information system, human resources, and infrastructure).

It is generally seen as a cluster of related knowledge, skills, and attitudes that affects a major part of one's job (a role or responsibility), that correlates with competitive advantage on the job, that can be measured against well-accepted standards, and that can be improved via training and development" (Özçelik & Ferman, 2016). Dingle (2005) adds awareness to this definition. According to Dingle, functional competence is a combination of knowledge, skill and awareness.

### **Competitive advantage**

Competitive advantage is perhaps the most widely used term in strategic management, yet it remains poorly defined and operationalized (Ismail, Che Rose & Abdullah, 2010). Alderson (1965) was one of the first to recognize that firms should strive for unique characteristics in order to distinguish themselves from competitors in the eyes of the customers. He argued that differential advantage might be achieved through lowering prices, selective advertising appeals, and/or product improvements and innovations. Mooney (2007) defined Competitive advantage as a "capability or resource that is difficult to imitate and valuable in helping the firm outperform its competitors. A competitive advantage is an advantage over competitors which is gained when an organization is able to provide greater services, benefits and values at higher prices or providing the same value as its competitors but at lower prices (Riley, 2012). Rungwitoo (2012) defined the competitive advantage as "the integration between competitive advantage and capability to create superior value for a customer better than competitors." Porter (1985) defined competitive advantage it is at the heart of a firm's competitive advantage in competitive markets thus competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it. Dranove et al. (2016) said when a firm earns a higher rate of economic profit than the average rate of economic profit of other firms competing within the same market, the firm has a competitive advantage in that market. Barney (2013) tried to define competitive advantage with strategy view. He stated "a firm is said to have a competitive advantage when it is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors". Porter (1985) asserted that competitive advantage comes from the value that firms create for their customers that exceeds the cost of producing that value. The key concern for a business is to capture that value which is greater than its cost.

## **Theoretical Framework**

### **Competence Theory**

Competence theory was propounded by Bain (1968). Competence theory is actually the most tangible and reasonable alternative to dominant strategic model of industrial organization. Introduced at a pioneering level by Bain (1968) and successively developed by Porter (1985). They argue that by concentrating excessive attention on product market strategies, the Porter framework neglects the cost of developing the basis of and implementing those very strategies. Resources must be acquired or built before a product market strategy may be implemented. Again, instead of an exclusive outward orientation toward market niches and advantageous cost-revenue combinations, the competence-based perspective also puts emphasis on building up resources and organizational routines within the firm itself. Organization and production are emphasized, as well as the market. Porter and Kramer (2006) posit that competence theory

proposes to bring, to the strategic reflection, new answers to the “longitudinal problem”, which consists of the individualization of the conditions that permit a firm to reach and hold on to a favourable competitive position over time. This problem, however, cannot be separated from the “cross-sectional problem”, aimed at understanding the causes at the base of the firm’s superior competitive advantage at a precise instance in time.

Montgomery and Collis (2009) believe that the industry or business must remain the principal unit of analysis, as the possession of determinate resources or competencies should be, in any case, compared with those of the competitors: it follows that the firm profitability depends both on the attractiveness of the industry in which the firm competes and on its relative position in that industry. Then, if the essence of strategy is choosing to perform activities differently than rivals do the core competencies enable the choice of diversity to be followed, furthermore firms are able to carry out activities at a lower cost or in such a way as to create a greater value for the customer lies in that which Porter calls “drivers” (Porter 1996).

Competence-based approaches have been applied to strategic management. It is, however, possible to identify some cardinal themes. There is recognition of learning-by-doing as a source of endogenous growth. This emphasis on learning and growth means that individuals themselves are in a process of development, in contrast to static and equilibrium-based approaches and recognition of the role of radical uncertainty and other chronic problems pertaining to information and knowledge in the firm. So, firms need, according to the analogy made by Porter (2006), to be “capabilities predators”, means to move rapidly from one business to another, copying capacities, developing them so as to assume the role of leader, and this is possible with the aid of flexible human resources and transversal management of the firm.

### **Empirical Review**

Mahmood, Hee, Yin and Hamli (2018) examined the relationship between training functions and employee competitive advantage and also to examine the mediating effects of employee competency on the relationship between training functions and employee competitive advantage. A quantitative survey method was employed in this study coupled with factor analysis, descriptive analysis, correlation analysis and hierarchical regression analysis to analyse the collected data. The results show that training need analysis and training effectiveness were positively associated with employee competitive advantage. It was discovered that employee competency is a partial mediator between training functions and employee competitive advantage. The findings of this research will facilitate municipal councils and other local authorities in Malaysia to prioritize training need analysis and training effectiveness as part of the process in planning and implementing training programs since it has an impact on employee competency and employee competitive advantage

Subramanian, Kamalesh and Strandholm (2020) examined the role of organizational competences in the market-orientation-competitive advantage relationship: An empirical Analysis. The purpose of this paper is to examine the specific ways in which market orientation of an organization contributes to the creation of organizational competences that lead to superior competitive advantage. Survey data from 159 acute care hospitals were statistically analyzed to test 35 the research hypotheses. The findings show that the Market orientation makes a significant contribution to the creation of a number of organizational competences which, in turn, lead to superior competitive advantage in the areas of cost containment, growth in revenue, success in retaining patients, and success of new services.

Hagstrom, Tomas and Goransson (2017) studied sustainable competence: a study of a bank”. The purpose is to study how the staff members in a bank perceive a company culture and how this perception is related to background aspects (gender, age, etc.), and engagement in regular, regulating activities decided by the company. An “abductive” approach inspired by action-, adult developmental-, complexity- and “holon” theory comprise a frame of reference applied on a multi-methodological case study in progress, within which a survey distributed in the whole bank in Sweden has been analyzed in terms mainly of a multiple linear regression analysis. Results indicate strong integration in the company culture related to active engagements in regular and regulating activities. The regression analysis clearly indicates that the cultural

integration is more influenced by those activities than by individual background variables. However, results also show more critical attitudes towards the culture. This may reflect both an individual developmental aspect and a generational aspect.

Ljungquist (2018) studied specification of core competence and associated components: A proposed model and a case illustration". This study aimed to outline a core competence model by exploring links between core competence and the associated concepts of competences, capabilities, and resources, and by proposing refinements to the characteristics of these concepts. A case study based primarily on personal interviews. The findings suggest that competences, capabilities, and resources are all linked to core-competences; the first two continuously, and the third intermittently; motivate refinement of the competence concept, by adding adaptation competence as governing customer loyalty, and transfer competence as managing transcendental integration; and motivate refinement of the capability concept, by adding capacity as a quality characteristic, and communication as a characteristic that can actively initiate organizational change.

Chen and Wu, (2017) studied an empirical analysis of core competence for high-tech firms and traditional manufacturer". The samples used in this study are the management levels of two H-T firms and three T-Ms in Taiwan. The authors collected a company-wide opinion through questionnaires to examine the core competence, including strategic planning, production process innovation, supply chain management, logistics management, quality management and R&D. The major findings are summarized as follows: through path analysis, it is found that the model of core competence for the H-T firms is different from that of the model for T-Ms. R&D capability is regarded as the most important source for core competence both by H-T firms and T-Ms. Strategic planning in H-T firms is regarded as an important dimension in constructing core competence.

Hafeez and Essmail, (2017) studied organization core competences and associated personal competences using analytical hierarchy process". This study seeks to introduce an integrated framework to determine the relationships between organization core competences and associated personal competences. At first, organization core competences are determined by conducting internal and external benchmarking exercises, respectively, employing the collectiveness and "uniqueness" measures using key capabilities as a basis. Subsequently, a pair wise comparison using the Analytic Hierarchy Process (AHP) is conducted to assess related personal competences using the Chartered Institute of Personnel and Development list of competences. The study shows how these individual competences are crucial to the overall organizational core competences. The framework is tested for a construction company, where five management directors are interviewed to develop an overall picture regarding the strengths and weaknesses of the company's key capabilities. Overall, the results show that despite being a construction company, the composition of its organizational capabilities is dominantly governed by intangible assets' contributions. The AHP prioritization analysis confirmed that with regard to Innovative solutions, organizational core competence, Customer focus, and Team orientation are the most related personal competences.

Mahmood, and Hamli, (2017) examined the mediating effects of employee competency on the relationship between training functions and employee competitive advantage. The training functions of this study were referred to training need analysis and training effectiveness. The respondents of this study consist of executives and assistant executives from a municipal council in Johor, Malaysia. A quantitative survey method was employed in this study coupled with factor analysis, descriptive analysis, correlation analysis and hierarchical regression analysis to analyse the collected data. The results show that training need analysis and training effectiveness were positively associated with employee competitive advantage. It was discovered that employee competency is a partial mediator between training functions and employee competitive advantage. The findings of this research will facilitate municipal councils and other local authorities in Malaysia to prioritize training need analysis and training effectiveness as part of the process in planning and implementing training programs since it has an impact on employee competency and employee competitive advantage.

Rantesalu, Mus and Mapparenta (2016), The Effect of competence, motivation and organizational culture on employee competitive advantage: the Mediating Role of Organizational Commitment. The research

was conducted at the Institute of Education and Training of South Sulawesi province with a population of 513 employees and based on Slovin formulation; sample set as many as 224 employees. Research hypothesis was tested by using Structural Equation Models (Analysis of Moment Structures, AMOS version 18). The study found that the competence and organizational culture has a positive and significant effect on organizational commitment. Work motivation has a negative and insignificant effect on organizational commitment. Competence, organizational culture and organizational commitment have a positive and significant effect on employee competitive advantage. Work motivation has a negative and insignificant effect on employee competitive advantage.

Kyongo (2016) examined the effects of management competence, firm-level institutions, and human resource management (HRM) bundles on the competitive advantage of companies listed on the Nairobi Securities Exchange (NSE). Four hypotheses corresponding to the specific objectives of the study were formulated and tested. The study targeted HR. managers of each of the 64 companies listed on the Nairobi Securities Exchange as at December 2014 and 34 of them responded. Statistical tests of hypotheses conducted included normality and linearity tests, multicollinearity test and Levine test. Research findings from the tests of hypotheses established that management competence positively and significantly affected company competitive advantage, firm-level institutions and HRM bundles moderate the relationship between management competence and company competitive advantage, and the combined effect of management competence, firm-level institutions and HRM bundles on company competitive advantage was different from the individual effect of management competence.

Ezenwafor and Enemuo (2016) conducted a research on the marketing and management competencies required for successful pharmaceutical as perceived by officers of employment generation agencies in South-East, Nigeria. A population of 1624 senior staff who have worked for not less than ten years were studied without sampling. The study adopted descriptive survey design and a five (5) point Likert scale instrument was used to elicit information from the respondents. Findings of the study indicate that management and marketing competencies are highly needed for success in pharmaceutical and the agents at NDE differed significantly in their mean ratings on the extent the competencies are needed whereas the NDE agents needed more, those of NAPEP thought otherwise. The study concludes that acquisition of relevant competencies in the two broad areas by practicing and prospective pharmaceutical will enhance their effectiveness and reduce the mortality rate of business enterprises in Nigeria.

## **METHODOLOGY**

The study adopt cross-sectional survey design because a sample of the population of interest was collected, analyzed and the result generalized for the entire population of interest. information, facts, attitudes, practices and opinions of the respondents. The study was carried out in South-East geo-political zone of Nigeria, comprising Abia, Anambra, Ebonyi, Enugu and Imo States. The researcher collected the necessary data from the target population located in the States mentioned above. The population for this study consists of selected pharmaceutical firms located in the South-East States of Nigeria. The pharmaceutical firms have been identified through the directory of domiciled in the ministry of commerce and industry of each state in the study. Also, a pilot study will commissioned by the researcher to identify the enterprises which were not found in the directory but were found to be in existence on ground. They were used to complement what was amicable in the directory. The following figures were identified for each state in the study respectively: Abia State – 1,352; Anambra State – 1,231; Ebonyi State – 793; Enugu State – 1,003 and Imo State – 1,015. Therefore, the total population for the study is estimated to be 5,394 employee of pharmaceutical companies in the zone. The data for the study as mentioned earlier was primary source through the administration of questionnaire instrument.

The sample size for the study was determined through the application of a formula developed by Borg and Gall in 1973. Thus, the sample size estimated for the study is 1036 employees of the selected pharmaceutical firms in the South-East States of Nigeria. A structured instrument questionnaires was designed to reflect the popular five (5) point Likert scale of strongly agree, agree, disagree, strongly disagree and undecided, would be used by the researcher to elicit information from the respondent. The

instrument was face and content validated. Test re-test and Cronbach Alpha method was carried out to achieve reliability.

**Method of Data Analysis**

The data generated in the study was analyzed in two main sections which are answer to the research questions and test of hypotheses. Accordingly, the research questions were analyzed through the application of summary statistics of percentages were presented in a Likert scale format which was used in the determining whether the data contained multicollinearity or orthogonal relationship. On the other hand, the hypotheses will be verified through the application of ordinary least squares (OLS) multiple regression analysis. All tests will be conducted at 0.05 level of significance.

**DATA PRESENTATION AND ANALYSIS**

The data generated in this study were presented and analyzed in three main sections namely, demographic data of the respondents, answer to the research questions and test of hypothesis. In doing the analysis, frequency tables and simple summary statistics were used to analyze the demographic characteristics of the respondents and the research questions which were structured to take the format of the Likert scale Pearson Correlation and Ordinary Least Squares (OLS) multiple regression analysis were used to test and verify the various null hypotheses formulated to guide the objectives of the study and strengthen the analysis. 1052 copies of the questionnaire were issued out, 1021 were completed and returned thus showing a response rate of 97 percent were return. The table also shows that 1021 Copies of valid questionnaire were return. 32 copies of questionnaire were invalid showing 3 percent response rate.

**RESULTS**

**Research Question One**

This research question sets out to establish whether the development of business decision-making competency leads to competitive advantage or not. The responses obtained from the respondents on this are presented in Table 1.

**Table 1: Business Decision-making Competency and Firm competitive advantage**

S/N	Items of the Questionnaire	Alternative Responses					Total
		SA	A	D	SD	UND	
1.	Many businesses have crashed due to wrong business decision-making.	505 (49.5)	439 (43.0)	33 (3.2)	24 (2.4)	20 (2.0)	1021 (100.0)
2.	Business decision-making is one of the most crucial factors to organization success in today's competitive business environment.	441 (43.2)	503 (49.3)	35 (3.4)	24 (2.4)	18 (1.8)	1021 (100.0)
3.	Failure in business occurs most times because the organization does not have the necessary capacity to take the right decisions.	511 (50.0)	426 (41.7)	30 (2.9)	29 (2.8)	25 (2.4)	1021 (100.0)
4.	An incompetent entrepreneur finds it difficult to take the right decision when alternatives or opportunities are many.	457 (44.8)	481 (47.1)	39 (3.8)	30 (2.9)	14 (1.4)	1021 (100.0)
5.	An entrepreneur who is not endowed with abilities to take right decisions can be trained to acquire the right skills.	409 (40.1)	537 (52.6)	40 (3.9)	20 (2.0)	15 (1.5)	1021 (100.0)
Total		2323 (45.3)	2386 (46.7)	177 (3.5)	127 (2.5)	92 (1.8)	5105 (100.0)

Note: (SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree and UND = Undecided).

From Table 1, it could be that on the average, 45.5 percent of the respondents strongly agreed with all the statements of the items, 46.7 percent agreed but not strongly, 3.6 percent of them disagreed, 2.5 percent strongly disagreed and 1.8 percent were indifferent on all the issues raised. From the analysis, it could be seen that 92.2 percent agreed that development of business decision making competency by the organization will lead to competitive advantage. The table shows also that apart from the averages, respondents opinions vary across the items.

**Research Question Two**

Research question five sought to determine the effect of human resource competencies on competitive advantage. Accordingly, the opinions of the respondents are presented in Table 4.10

**Table 2: Human Resource Competencies and Competitive Advantage**

S/N	Items of the Questionnaire	Alternative Responses					Total
		SA	A	D	SD	UND	
1.	HRM competencies function can help an enterprise create more value	439 (43.0)	321 (51.0)	30 (2.9)	20 (2.0)	11 (1.1)	1021 (100.0)
2.	HRM competencies unction ensures that the company has the right mix of skilled people to perform its value creation activities effectively	457 (44.8)	461 (45.2)	45 (4.4)	35 (3.4)	23 (2.3)	1021 (100.0)
3.	HRM competencies function ensure that people are adequately trained, motivated, and compensated to perform their value creation tasks	501 (49.1)	457 (44.8)	25 (2.4)	20 (2.0)	18 (1.8)	1021 (100.0)
4.	HRM competencies have effects on organizational competitive advantage, larger than the individual practices	457 (44.8)	461 (45.2)	45 (4.4)	35 (3.4)	23 (2.3)	1021 (100.0)
5.	HR. practices are combined to form competencies, their effects on organizational competitive advantage are higher than when the practices are used individually	481 (47.1)	450 (44.1)	31 (3.0)	30 (2.9)	29 (2.8)	1021 (100.0)
Total		2335 (45.7)	2350 (46.0)	176 (3.4)	140 (2.7)	104 (2.0)	5105 (100.0)

Note: (SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree and UND = Undecided).

From Table 2, it could be seen that 45.7 percent on the average strongly agreed with all the statements of the item, 46 percent merely agreed, 3.4 percent disagree, 2.7 percent strongly disagreed and 2 percent were undecided. The fact that 91.7 percent agreed on the aggregate is an indication that the acquisition of communication competency is highly desirable by the organization.

**Table 3: Production Competency and Competitive Advantage**

S/N	Items of the Questionnaire	Alternative Responses					Total
		SA	A	D	SD	UND	
1.	Production competencies enable firms to develop, combine and transform resources into value creating	459 (45.0)	500 (49.0)	30 (2.9)	20 (2.0)	12 (1.2)	1021 (100.0)
2.	Production competencies are a precursor of a firm's capacity to meet export market demand	441 (43.2)	493 (48.3)	36 (3.5)	31 (3.0)	20 (2.0)	1021 (100.0)
3.	Production competencies increasing competition, fast changing consumer needs and wants, and shorter product life cycles	457 (44.8)	478 (46.8)	45 (4.4)	21 (2.1)	20 (2.0)	1021 (100.0)
4.	Production competencies entail a portfolio of skills relevant to new product development or modification of existing products	461 (45.2)	500 (49.0)	25 (2.4)	20 (2.0)	15 (1.5)	1021 (100.0)
5.	Production competencies extent to skills pertinent with adoption of new methods and ideas in the production and pharmaceutical processes	458 (44.9)	501 (49.1)	31 (3.0)	19 (1.9)	12 (1.2)	1021 (100.0)
Total		2276 (44.6)	2472 (48.2)	167 (3.3)	111 (2.2)	79 (1.5)	5105 (100.0)

Note: (SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree and UND = Undecided).

It could be seen from Table 2 that on the average, 44.6 percent of the respondents strongly agreed with all the statements of the item, 48.2 percent also agreed but not strongly, 3.3 percent disagreed, 2.2 percent strongly disagreed and 1.5 percent of them had no opinion on the issues raised. It can therefore be said that about 92.8 percent of the respondents agreed that production competencies enable firms to develop, combine and transform resources into value creating. But apart from the averages as presented above, there are equally variations across the items depending on the perception of the respondents. For instance, whereas 44.8 percent and 46.8 percent strongly agreed and merely agreed with item 3, 43.2 percent and 48.3 percent did so for item 2 respectively.

**Test of Hypotheses**

The hypotheses were set mainly to determine the effect of various competencies on competitive advantage of pharmaceutical companies. Answers to the research questions have already shown that the acquisition of the said competencies are quite necessary to successful organization but the hypothesis aspect is still very necessary to confirm whether the answers are statistically significant or whether they occurred by chance.

**Table 4: Summary of Regression Results**

Model	R	R.Square	Adjusted R-Square	Standard Error of the Estimate
I	0.857	0.741	0.709	0.69527

a. Predictor: (constant), PC, DMC, HRMC

As could be seen from Table 4, regression coefficient represented by 'R' has the value of 0.857 and it means that 85.7 percent relationship exists between the dependent and the independent variables. Similarly, the coefficient of determination represented by 'R<sup>2</sup>' has the value of 0.741 and it means that 74.1 percent of the variation in the dependent variable can be explained by the independent variables in

the model. The  $R^2$  being the explanatory power of the model shows that the changes in competitive advantage can be accounted for by the production competency, decision-making competency and human resources management competency.

**Table 5: Coefficients of the Predictor Variables, t-values and the Significant Level**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	-.187	.207	-	-.741	.454
Production competency	.717	.053	.711	11.203	.000
Decision-making competency	.563	.078	.688	2.873	.000
HRM competency	.513	.065	.525	3.715	.001

a. Dependent Variable: Competitive Advantage

Table 5, presents the coefficients of the respective variables as well as the t-values and the probability levels. As could be seen from the table also, many of the predictors have high coefficients. For instance, production competency, marketing management competency, time management competency, decision-making competency and human resources management competency are quite high in predicting the dependent variable, competitive advantage. It is also worthy of note that all the expected signs the a priori, obeyed the theoretical expectations.

**Re-Statement of the Study Hypotheses**

The formulated hypotheses we re-stated in this section of the analysis to ensure that the objectives as well as the research questions are well located in the hypotheses which we are testing to establish that the answers to the research questions did not occur by chance but with statistical significance. All tests were conducted at 0.05 level of significance. That being the probability at which we were willing to risk type I error.

H<sub>0</sub>: Human resource management has no significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian

H<sub>1</sub>: Human resource management has a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian

H<sub>0</sub>: Decision-making competency, has no significant positive effect on t competitive advantage of pharmaceutical companies in South-East, Nigerian

H<sub>1</sub>: Decision-making competency, has a significant positive effect on competitive advantage of pharmaceutical companies in South-East, Nigerian

H<sub>0</sub>: Production competency has no significant positive effect on competitive advantage of pharmaceutical companies in South-East, Nigerian

H<sub>1</sub>: Production competency has a significant positive effect on the competitive advantage of pharmaceutical companies in South-East, Nigerian

The estimated functional equation (model) can be written as follows:

$$Y = -187 + 0.711PM + 0.688DMC + 0.525HRMC$$

(-.741)    (11.203)    (2.873)    (3.715)  
 (0.454)    (0.000)    (0.000)    (0.001)

**Interpretation of Regression Results**

In interpreting the regression results, we considered the value of the coefficients (X), t-statistic and the significance level.

From Table 4.15, the values of the regression coefficients, shows that relative contributions in predicting the dependent variable which is this case is competitive advantage. The decision rule about the significance of the coefficient or otherwise was based on the interpretation of the results.

Starting with the coefficient of the decision-making competency, the coefficient is represented by X<sub>1</sub> in the model and it has the value of .754 which means that when decision-making competency is increased by one unit, firm competitive advantage will increase by 7.5 percent if other variables in the model are not allowed to vary. The t-value of 2.873 and the probability level .000 corresponding to the coefficient

shows that the coefficient is positive and significant because .000 is less than 0.05 level of significance set for the study.

**Decision Rule I**

At 0.05 level of significance and t-value of 2.873, the coefficient is positive and significant. Consequently, we rejected the null hypothesis given the weight of evidence against it while the alternative hypothesis which suggests that decision-making competency has a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian was accepted.

Human resources management competency represented by  $X_2$  in the model, has a value of .525 and this means that when the human resources management competency is increased by one unit, competitive advantage will increase by 5.3 percent if other variables are held constant. The t-value of 3.715 and the significance level of .001 corresponding to the coefficient, shows that the coefficient is significant because .001 is less than 0.05 level of significance set for the study.

**Decision Rule II**

At 0.05 level of significance and t-value of 3.715, the coefficient is positive and significant. Consequently, given the weight of evidence against the null hypothesis, it was rejected while the alternative hypothesis which suggests that Human resource management has a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian was accepted.

the coefficient of production competency which is represented by  $X_1$ , the value is .711 which means that when production competency is increased by one unit, competitive advantage would increase by 7.1 percent if other variables in the functional equation are held constant. The t-value of 11.203 and the probability level of .000 corresponding to the coefficient show that it is significant. This is because the probability level 0.000 is less than 0.05 level of significance set for the study.

**Decision Rule III**

At 0.05 level of significance and t-value (11.203), the coefficient is positive and significant. Consequently, we reject the null hypothesis and accept the alternative which suggests that production competency has a significant positive effect on competitive advantage of pharmaceutical companies in South-East, Nigerian.

**Post-Estimation Tests**

It is traditional to carry out post-estimation tests in all regression analysis. The tests are deemed necessary to ascertain whether the data conforms to certain criteria that are necessary for such analysis to be adequate. In many occasions, unfit data or model have produced spurious statistical results which can be very misleading in meaning and value. In this present exercise therefore, we carried out post-estimation tests to verify whether the data used for the analysis contain multicollinearity or orthogonal relationships and also to determine the robustness of the regression model.

**Table 6: Eigen Values, Condition Index and Variables Proportion**

Model	Eigen Value	Condition Index			Variance Proportion	
		Constant	PC		DMC	HRMC
1.	4.812	1.002	0.00	0.00	0.00	0.00
2.	0.105	6.458	0.12	0.07	0.22	0.45
3.	0.047	10.109	0.56	0.18	0.25	0.39
4.	0.036	11.431	0.34	0.69	0.26	0.30

a. Dependent Variable: Competitive Advantage

Conditions: Eigen values that are close to zero indicate dimension which explains presence of little variance. For the condition index however, when the values are more than 15 for any of the variables, it indicates a possibility of presence of multicollinearity. From the above table, the values of 2, 3, 4, 5 and 6 in the model are close to zero thereby meaning that only very little variance exists and it did not violate any rule. Concerning the condition index, the values are in the range between 1.002 and 11.431 which is not in anywhere near 15 which is the danger zone. The implication of the result is that the model does not contain any condition of multicollinearity or arthogonal relationships between the dependent and independent variables. The result shows further that the eigen values and the condition index values

indicate that the model is very stable and robust and that probability of long term relationship between and among the variables exist.

**Table 7: Multicollinearity Diagnosis between the Dependent and Independent Variables**

Variables	Tolerance	Variance Inflation Factor (VIF)
1 (Constant)	-	
Production Competency	0.457	2.476
Decision Making Competency	0.578	1.268
HRM Competency	0.793	2.267

Table 6 is the presentation of multicollinearity statistics. The specification is that tolerance value less than 0.20 or 0.10 is an indication of presence of multicollinearity problem in the model (O'Brien and Robert, 2007). But from the data presented in the table, the tolerance values of the independent variables have 0.457 as the least value thus showing no presence of multicollinearity. Also, the reciprocal of the tolerance known as the variance inflation factor (VIF) shows there was no presence of multicollinearity because none of the values is up to 5. Therefore, the results of the post-estimation tests confirmed stability and robustness of the model hence it is recommended for any predictions.

**Summary of Findings**

1. Decision-making competency had a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian. Decision-making competency, coefficient t-value of 2.873 and the probability level .000 corresponding to the coefficient shows that the coefficient is positive and significant because .000 is less than 0.05 level of significance set for the study.
2. Human resource management had a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian. Human resources management competency represented has a t-value of 3.715 and the significance level of .001 corresponding to the coefficient, shows that the coefficient is significant because .001 is less than 0.05 level of significance set for the study.
3. Production competency had a significant positive effect on the competitive advantage of pharmaceutical companies in South-East, Nigerian. Production competency has a t-value of 11.203 and the probability level of .000 corresponding to the coefficient show that it was significant.

**CONCLUSION**

This study examined the effect of functional competencies and competitive advantage in Nigeria, using pharmaceutical companies in the South-East, Nigeria as the study area. Based on the result of the analysis the study concludes that functional competency had a significant positive influence on competitive advantage of pharmaceutical companies in South-East, Nigerian.

**RECOMMENDATIONS**

Based on the results of the analysis of data from this study and the conclusions made above, the following recommendation/policy dialogue was made:

1. Decision making competency was equally found to have positive and significant effect on competitive advantage of pharmaceutical companies in Nigeria. Every organization needs to build the capacity of the organization in the area of fast business decision making. This is because decision making is a core factor in business venture. Many have not been able to bring their beautiful business ideas to the market because they lack the capacity to take decision.
2. Effective human resources competencies in organizations is more important now than ever due to the advent of information and communication technology (ICT) which should be step up to monitor competitive advantage. Organizations should braze up with the new technology if they must remain relevant in the business environment. They must undergo the necessary training to acquire the human resources competency to enable them manage the company competitive advantage.
3. Production competency is very crucial to the success of any business undertaken whether small or large business organization. Every organization should engage in training in all aspect of organization

to develop the competency/capacity for production management so as to achieve competitive advantage.

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