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Research paper

ICT Use and Competitiveness of Nigerian Manufacturing Companies

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Manufacturing sector dominates world businesses and are estimated to be more than 95% of all businesses worldwide, providing over 60% employment in the private sector. In spite of their immense contributions, literature has established that the Nigerian manufacturing sector including the consumer goods sector have tottered over the years such that many of them find it difficult to compete at the local and global market. This situation could be due to limited use of ICT devices. While studies have linked ICT use to competitiveness of manufacturing firms, none has examined the influence of ICT use on the competitiveness of consumer goods manufacturing companies in Lagos state, Nigeria, hence, this study. Survey design was used. The population for the study was 14,572 employees of consumer goods manufacturing companies operating in Lagos State. The sample size of 394 staff was determined by using Taro Yamane formular. Multi-stage sampling technique was used to select 394 respondents across all the levels in the manufacturing companies investigated in the study. Data were collected with a validated structured questionnaire. Cronbach's Alpha coefficient for the major constructs in the instrument ranged from 0.90-0.93. A return rate of (99.0%) was achieved. Data were analyzed using descriptive and inferential (simple and multiple regression) statistics. Findings show that ICT use ($R2 = 0.059$, $t(378) = 4.933$, $p < 0.05$) significantly influenced competitiveness. ICT use had significant influence on differentiation ($R2 = 0.173$, $t(378) = 9.012$, $p < 0.05$) but had no influence on cost leadership ($R2 = 0.005$, $t(378) = 1.414$, $p > 0.05$). Findings also revealed that, on a scale of 3 points, level of competitiveness in the manufacturing companies was low (M =1.69). and overall, ICT use was considered to be 'sometimes' (M =2.94). The study concluded that ICT use played crucial role in enhancing competitiveness in manufacturing companies in Lagos state. The study recommends that manufacturing companies can improve on cost leadership and differentiation by sourcing capital at low cost and developing products that are tailored to customers' needs. They should adopt ICTs that can support product development and resource planning to enhance competitiveness

KEY WORDS: Information communication technology use, Cost Leadership, Differentiation Competitiveness, Consumer goods companies, Lagos state

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INTRODUCTION

Measuring firms' competitiveness is crucial to evaluate the level of performance, develop strategies to overcome challenges so as to achieve competitiveness and survive in the market. Various measures have therefore been used by different researchers as parameters for measuring competitive performance of manufacturing companies within the industry. Notta and Vlachvei (2012), Pedraza(2014); Claud (2018) cited financial measures of assessing organisation competitiveness to include sales growth, gross profit, productivity while Kotane and

Kuzmina-Merlino (2015); Salah(2014) ; Selcuk (2016) identified quality of goods and services, customers' satisfaction, innovation, market shares, employees' working condition, cost, quality, flexibility and delivery, on time product delivery as non-financial measure of competitiveness at the micro level. In addition, Allen and Helms (2016) identified cost leadership and differentiation measures of competitiveness advanced by Porter(1980) as the most popular, hence, used for this work. Cost leadership is the capability of an organisation to become the low cost firm in their operation while differentiation is the uniqueness in doing something that is sufficiently valued by customers to allow a price premium (Allen & Helms, 2016). Cost leadership is measured by an organisation's ability to offer price below its competitors, access low cost sources of capital, develop cost effective and innovative products as well as maintain efficient and low cost distribution channels while differentiation is measured by the ability of organisations to develop new products, differentiate products and services through innovative technologies, strong brand image identification as well as broad service products range and extensive strong branch network**.**

Many firms are struggling to stay afloat by dealing with the increasing challenges of industrial competition which involves operating in tough economic conditions characterized by, high cost of ICTs, limited access to ICT use, lack of supporting infrastructure as well as lack of support from responsible agencies and inadequate power supply. The culmination of these forces has resulted in an external environment that is dynamic, unpredictable, demanding and often devastating to those organizations which are unprepared or unable to respond (Barret et al., 2015). Because of these changes, organizations need to reposition itself to satisfy consumers' needs. Nigeria, among other developing countries, is striving to compete with her products and services both at the local and global market. However, unlike in the developed countries of Europe, U.S., Japan and China, evidence from literature has shown that globalization, market liberalization and information technology, influence on customers' tastes, preferences and brand consciousness resulted to customers demand for superior products and services at lower prices, which majority of the companies could not afford (Akpan, Ikon & Chukwunonye, 2016). Consequently, the high level of unhealthy competition especially with the multi-national companies in the industry continues to endanger the survival of majority of the companies due to their inability to compete at the local and global market.

Recognizing the value of Manufacturing company's significant contribution to the Gross Domestic Product (GDP), numerous reforms and strategies have been implemented by Nigerian government and the manufacturing companies to provide support and re-position the sector towards producing quality products and render satisfactory services in the market. Few among such efforts were the formulated Policies on ICT was formulated policies on ICT and investment on ICT related projects embarked upon by stakeholders in the industry to accelerate broadband penetration and access, strengthen ICT security and standardization, enhance management and efficient utilization of spectrum and other scarce ICT resources, promote business process outsourcing industry and enhance efficiency in e-service and business. Added to the above was the investment in research and development, reduction of finished goods importation, saving foreign exchange by encouraging firms to produce some of the imported consumer goods items locally (CBN, 2017); creation of friendly and attractive business environment with incentives to attract foreign investors, incorporating economic agenda policies aimed at achieving greater global competitiveness in the production of consumer goods in vision 2020, introduction of trade liberalization scheme, which removes barriers to trade in goods originating from ECOWAS countries, land borders closure to protect the consumer goods manufacturing companies, liberalization of telecommunication services. In addition to the above was the granting manufacturing sectors duty free products, refunds for duties on imported raw materials as well as the four-year Economic Recovery and Growth Plan (ERGP) launched by President Buhari in 2016 to restore growth in the manufacturing sector and facilitate economic diversification, all of which has recorded no significant impact on the manufacturing sector success yet (Ekpo, 2014; Chete, Louis, Foluso, Adeyinka & Ogundele, 2018).

Evidence from literature has shown that most of the Nigerian manufacturing companies in the consumer goods sub-sector lack innovative technology to develop new products and differentiate products/services to reduce wastages, cost effective and innovative products capability is low, access to low cost source of capital is poor, brand image identification is unattractive, branch networking, innovation in marketing techniques and time to market are poor, which make the quality of their products and services to be low and still expensive (Bojnec, Malek, Papier & Shahzad, 2015). Consequently, the inability of majority of the consumer goods manufacturing companies to meet customers' constant changes in taste, preferences and brand consciousness continue to endanger their survival in the market. However, given the enormous potential of ICT use in the developed countries of Europe, U.S., Japan and China to impact on organizational innovation and assist in designing new products, manufacturing quality products that have high flexibility, reduce time (for products) to market and help to achieve competitiveness at the national and global market (Mihalic, Pranievic & Arneric, 2015), It becomes imperative for the consumer goods companies to integrate ICT use in their operations for promotion of healthy competition in the industry (Rhema & Saeed, 2015; Banga&Velde, 2018).The tremendous

increasing use of ICTs in the business sector has been vital in supporting the growth of the sector as wll as a good source of change (Gerguri-Rashiti, Ramadhani, Abazi-Alili, Leo-Paul, & Ratten, 2015). Understandably, various scholars refer to ICT use as drivers and enablers of the advancement of the business sector that is capable of giving competitive advantage (Franco and Garcia, 2017).

However, review of literature revealed that study on the influence of ICT use on competitiveness of manufacturing companies in Lagos State, Nigeria is very scanty. Besides, most of the literature that discussed related studies focused more on firms situated in the developed countries. Given the globally acclaimed importance of consumer goods manufacturing companies for driving economic growth and poverty alleviation (World Bank, 2016) and the strong positive impact identified in literature between ICT use and organizational ability to achieve competitiveness through ICT use (Franco & Matos, 2015); it becomes imperative to examine the influence of ICT use on competitiveness of consumer goods manufacturing companies operating in Lagos State, Nigeria. This becomes more important especially now that Nigerian government incorporated policies aimed at achieving competitiveness of consumer goods manufacturing companies as part of economic transformation agenda.

Research Questions

The research work was guided by the following research questions:

1. To what extent are manufacturing companies in Lagos State competitive?
2. How often do manufacturing companies in Lagos State use ICTs?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance

Ho_1: ICT use has no significant influence on the competitiveness of manufacturing companies in Lagos State

Ho_2: ICT use has no significant influence on cost leadership indicator of competitiveness.

Ho3: ICT use has no significant influence on differentiation indicator of competitiveness.

METHODOLOGY

The study adopted survey design. Descriptive survey research design which included the collection of primary data from the respondents was adopted for the study. Taro Yamane formular was used to determine the sample size of 394 from a population of 14,572. The study sample consisted of 394 management staff of 19 consumer goods manufacturing companies operating in Lagos state, Nigeria comprising 200 lower management staff, 134 middle management staff and 60 higher management staff respectively. The sources of data were both primary and secondary. The instrument used for data collection was a structured questionnaire which was validated using Cronbach's alpha test. The reliability values which ranged from 0.61-0.95 was considered adequate and of high level of inter-item consistencies in the instrument. Multi-stage sampling technique was used to select the respondents from nineteen companies. The data collected were presented and analyzed with descriptive statistic while the corresponding hypotheses were tested with Pearson's Correlation at 0.05 alpha level using Statistical Package for Social Science 15.0 version.

DATA ANALYSIS AND DISCUSSION

The data obtained from the field were presented and analyzed with descriptive statistics to provide answers for the research questions while the corresponding hypotheses were tested with Correlation coefficient at 0.05 alpha level

RESEARCH QUESTION ONE: To what extent are manufacturing companies in Lagos State competitive?

Table 1. Competitiveness of manufacturing companies in Lagos state

Cost Leadership My company …	Very High Extent 5	High Extent 4	Moderate Extent 3	Low Extent 2	Very Low Extent 1	Mean	Std. Dev.
outsources non-core functions	60(15.4)	105(26.9)	50(12.8)	80(20.5)	95(24.4)	2.89	1.43

Table 1. Continuation

offers lower prices of high quality products compared with the competitors.	06(1.5)	18(4.6)	50(12.8)	106(27.2)	210(53.8)	1.73	.96
develops cost effective services through advanced technology	10(2.76)	18(4.6)	30(7.7)	112(28.7)	220(56.4)	1.68	.98
has an efficient low cost distribution channels.	08(2.1)	25(6.4)	35(9.0)	76(19.5)	246(63.1)	1.65	1.02
acquires capital from low cost sources.	02(0.5)	05(1.3)	10(2.6)	102(26.2)	271(69.5)	1.37	.65
Group Mean = 1.71							
Differentiation							
maintains strong brand image identification that cannot be easily imitated.	21(5.4)	30(7.7)	50(12.8)	94(24.1)	195(50.0)	1.94	1.19
carries out innovation with superior technology to differentiate products.	16(4.1)	20(5.1)	52(13.3)	102(26.2)	200(51.3)	1.85	1.10
has strong branch network that is easily accessible as a differentiation strategy.	14(3.8)	25(6.4)	40(10.3)	116(29.7)	195(50.0)	1.84	1.08
customizes products to suit varied needs of consumers.	12(3.1)	15(3.8)	42(10.8)	113(29.0)	208(53.3)	1.74	1.00
uses superior technology frequently to develop new products.	05(1.3)	10(2.6)	15(3.8)	120(30.8)	240(61.5)	1.51	.80
Group Mean = 1.68 Competitiveness (Overall Mean = 1.69; Std. = 0.71)							

***Decision Rule: ***Decision Rule: If mean falls between 1.0-2.33 = Low; 2.34-3.67 = Moderate; 3.68-5.0 = High**
Source: Field Survey, 2020

Table 1 shows the descriptive statistic result for research question one. The result showed that the extent of competitiveness of manufacturing companies in Lagos state, was very low, based on the overall mean score (1.69). Manufacturing competitiveness was divided into two dimensions namely cost leadership and differentiation. The group mean for each of the competitiveness components were also calculated. Of the two dimensions of competitiveness, cost leadership was higher (group mean = 1.71) while differentiation was lower (group mean = 1.68) in the manufacturing companies. However, the group mean scores indicated low extent of both cost leadership and differentiation in the manufacturing companies. This situation could be due to the fact that manufacturing companies in Lagos performed very poorly in areas such as acquiring capital from low cost sources and using superior technology frequently to develop new products. These results suggest the need for manufacturing companies in the study area to enhance their competitiveness by adopting better sources of funding to acquire capital and superior technology to develop new products.

Research Question Two: How often do manufacturing companies in Lagos State use ICTs?

Table 2. Frequency distribution of ICT use by employees of manufacturing companies

My company uses	Always 5	Often 4	Once in a while 3	Rarely 2	Never 1	Mean	Std. Dev.
mobile telephone to communicate	40(10.3)	250(64.1)	90(23.1)	10(2.5)	00(0.0)	3.82	0.64

Table 2. Continuation

E-mails to communicate with stakeholders such as the employees, customers, suppliers and allied institutions.	80(20.5)	180(46.2)	110(28.2)	20(5.1)	00(0.0)	3.82	0.81
Intranet to facilitate easy communication among employees within the company.	75(19.2)	84(21.6)	116(29.7)	65(16.7)	50(12.8)	3.18	1.28
Internet to place order for her products.	30(7.7)	80(20.5)	180(46.2)	75(19.2)	25(6.4)	3.04	0.98
Internet to receive orders for products.	28(7.2)	72(18.5)	195(50.0)	65(16.7)	30(7.7)	3.01	0.97
Internet to search for information about new products designs.	10(2.6)	20(5.1)	250(64.1)	98(25.1)	12(3.1)	2.79	0.70
Internet to search for information about competitors.	08(2.1)	15(3.8)	264(67.7)	68(17.4)	35(9.0)	2.73	0.76
Computer aided design (CAD) to develop new products.	25(6.4)	46(11.8)	65(16.7)	150(38.5)	104(26.7)	2.33	1.17
Organizational website to showcase her products.	15(3.8)	35(9.0)	70(17.9)	175(44.9)	95(24.4)	2.23	1.04
Computer aided manufacturing (CAM) to produce quality products.	20(5.1)	34(8.7)	50(12.8)	185(47.4)	101(25.9)	2.20	1.08
Social media to advertise her products.	20(5.1)	30(7.7)	70(17.9)	145(37.2)	20(5.1)	2.17	1.12
Decision Support System (DSS) for improved decision making.	16(4.1)	32(8.2)	50(12.8)	168(43.1)	124(31.8)	2.10	1.07
Supply Chain Management (SCM) to manage supply activities from raw materials through finished goods to end user	20(5.1)	30(7.7)	56(14.4)	134(34.4)	150(38.5)	2.07	1.14
Management Information System (MIS) for information flow within the organization.	20(5.1)	35(9.0)	55(14.1)	120(30.8)	160(41.0)	2.06	1.17
Enterprise Resources Planning (ERP) to integrate all business functions so as to reduce data duplication.	08(2.1)	30(7.7)	85(21.8)	120(30.8)	147(37.7)	2.06	1.04
Customer Relationship Management (CRM) to gather intelligence information about customer preferences.	10(2.6)	35(9.0)	75(19.2)	100(25.6)	170(43.6)	2.01	1.10
Product Development Process (PDP) to monitor production of quality goods.	10(2.6)	25(6.4)	65(16.7)	130(33.3)	160(41.0)	1.96	1.03
Closed circuit television (CCTV) to monitor employees' activities for improved quality services.	15(3.8)	25(6.4)	50(12.8)	135(34.6)	165(42.3)	1.95	1.07
Expert System (ES) to provide expert advice.	10(2.6)	20(5.1)	70(17.9)	125(32.1)	165(42.3)	1.94	1.02
Resource Planning System (RPS) for efficient resources utilization at the operational section.	08(2.1)	24(6.2)	70(17.9)	108(27.7)	180(46.2)	1.90	1.03
Radio Frequency Identification (RFI) to track the flow of raw materials all the way to the end users.	08(2.1)	16(4.1)	35(9.0)	85(21.8)	246(63.1)	1.60	0.96
ICT Use (Overall Mean = 2.94; Std. = 0.71)							

*****Decision Rule: If mean falls between 1.0-2.33 = Rarely; 2.34-3.67 = Sometimes; 3.68-5.0 = OftenSource: Field Survey, 2020.**

Respondents were asked to indicate their ICT use in manufacturing companies. The result in Table 2 shows that the overall ICT use by employees of manufacturing companies was considered to be 'average', as indicated by the overall mean score (2.94), on a five-point scale. Average ICT utilization could be based on the reason that manufacturing companies 'rarely' use ICT in areas such as product development process to monitor production quality (mean =1.96),

CCTV to monitor employees' activities for quality services (mean =1.95), expert system to provide expert advice (mean =1.94), resource planning system for efficient resources utilization (mean =1.90) and 'never' use radio frequency identification for tracking the flow of raw materials (mean =1.60). This result suggests that manufacturing companies in the study area should improve ICT utilization in the identified areas to boost competitiveness.

TEST OF HYPOTHESES.

Hypothesis One: ICT use has no significant influence on the competitiveness of manufacturing companies in Lagos State

Table 3. Simple linear regression analysis of the influence of ICT use on competitiveness

Predictors	Unstandardized Coefficients	Standardized Coefficients (β)	T	Sig.
(Constant)	.975		6.534	.000*
Use of ICT	.243	.243	4.933	.000*
Dependent Variable: Competitiveness				

Source: Field Survey Results, 2020
R^2 = .059, R^2 = .057, Adjusted, F = 24.336, DF = 1, 388, P < .05

Findings revealed that 5.9% of the variation in the dependent variable (competitiveness) is explained by the independent variable (ICT use). The result indicates that ICT use (β=0.243, p <0.05) significantly influenced competitiveness of manufacturing companies in Lagos State (F (1, 388) = 24.336, p < 0.05). The null hypothesis is therefore rejected. Hence, manufacturing companies that fail to integrate ICT into their organizational practices will be less competitive based on the fact that they did not utilize ICT in their daily activities, operations and practices. Therefore, this result suggests that ICT use should be adopted and adequately utilized across departments and social media platforms of manufacturing companies to gain superior competitive business advantage and remain globally competitive, based on the fact that ICT use will support consumer goods manufacturing companies to design and produce new quality products that have high flexibility to the satisfaction of customers, showcase and share products information with customers and suppliers, diversify market and generate intelligence reports about the market.

Hypothesis Two: ICT use has no significant influence on cost leadership indicator of competitiveness of manufacturing companies in Lagos State.

Table 4. Influence of ICT use on cost leadership

Predictors	Unstandardized Coefficients	Standardized Coefficients (β)	T	Sig.
(Constant)	1.422		6.906	.000
Use of ICTs	.096	.072	1.414	.158
Dependent Variable: Cost leadership				

Source: Field Survey Results, 2020
R^2 = .072, R^2 = .005, Adjusted, F = 1.999, DF = 1, 388,P= > .05

Table 4 revealed that independent variable (ICT use) accounted for 7.2% of the variation in the dependent variable (cost leadership). The result indicates that ICT use (β=0.072, p<0.05) has no significant influence on cost leadership of manufacturing companies in Lagos State (F (1, 388) = 1.999, p> 0.05). Thus, ICT use does not contribute to cost leadership of manufacturing companies in Lagos State, despite the enormous potential of ICT to impact on manufacturing companies' cost leadership and improve performance at the national and global market.

Hypothesis Three: ICT use has no significant influence on differentiation indicator of competitiveness of manufacturing companies in Lagos State.

Table 5. Influence of ICT use on differentiation

Predictors	Unstandardized Coefficients	Standardized Coefficients (β)	T	Sig.
(Constant)	.528		4.028	.000*
Use of ICTs	.390	.416	9.012	.000*
Dependent Variable: Differentiation				

Source: Field Survey Results, 2020
R^2 = .173, R^2 = .171, Adjusted, F = 81.220, DF = 1, 388, P < .05

According to the result of Table 5, the independent variable (ICT use) accounts for 17.3% of the variation in the dependent variable (differentiation). The result shows that ICT use (β=0.416, p < 0.05) significantly influenced differentiation of manufacturing companies in Lagos State (F (1, 388) = 81.220, p< 0.05). Hence, integration and utilization of ICT into manufacturing operations and practices has substantial impact on manufacturing companies' differentiation. Thus, not utilizing ICT for manufacturing activities such as developing of new products, gathering intelligence information about customer preferences use and decision making is dangerous to differentiation of Lagos state manufacturing firms. Therefore, this result suggests that ICT use should be continuously, deliberately and daily utilized to differentiate manufacturing firms in Lagos.

DISCUSSION OF FINDINGS

The results presented show that a larger percentage of the Nigerian Consumer Manufacturing Companies did not make use ICT devices such as ERP, CAD, CAM, Websites. Besides, most of the computers being used are limited to internet access. The study agrees with Papa et al.'s .(2018) study which revealed that ICT use such as CAD assisted manufacturing companies to design new products where production and assembly systems double the rate of production and also help in making quick shifts of the product line to move from one product to another. The study also shows that the use of ICT devices such as CAM supports manufacturing companies in adapting to the changing needs of customers, increasing flexibility and shortened time to the market. Papa et al.'s study also revealed that ERP use aided integration of all business activities and gives organisations competitive advantage. The study of Grazzi and Jung (2015) also argued that ICT use helped in maximizing the efficiency of internal process, increasing working collaboration, putting together inter-firm gaps and association with the worldwide markets. Grazzi and Jung also emphasized that non-integration of ICT use into manufacturing company's operations will slow down product production and have negative effect on manufacturing companies' competitiveness. Similarly, the study of Eze and Chinedu-Eze (2018) supported Papa et al. findings that utilizing ICT devices allows free flow of information that ties manufacturing companies' production network together, increases productivity and global competitiveness. The authors stressed further that high cost of ICTs, limited access to ICT use while lack of supporting infrastructure as well as responsible agencies and inadequate power supply hindered most organisations from deploying ICT devices to gain competitive advantage like their counterparts in the developed countries of Europe, U.S., China AND Japan. Mwantimwa's (2019) study supported the above by arguing that manufacturing companies in Nigeria lacked modern ICT devices that can manufacture affordable quality products and supports from institutions such as the banking sector due to high lending rates.

Another important finding to note from this study is the extent at which mobile phone was used to support business processes, which was found to be statistically insignificant across all firms. The devices have penetrated all types of firms where they support diverse business activities. The explanations for this are threefold: firstly, mobile phone prices are dwindling; secondly, the tools contain multiple useful functionalities; and finally, the technology is user friendly and easy to learn compared to computers which are more knowledge and skills demanding (Mwantimwa, 2019).When it comes to the most important ICT devices accessibility in supporting diverse innovations, laptop, mobile phones and e-mail are highly rated by respondents while software applications and websites were rarely used. This is an indication that not all types of ICT devices are available in the manufacturing companies and hence, might find it difficult to manufacture quality products and compete the products both nationally and globally. The finding further contradicts a study by OECD (2015) which revealed that CAD, CAM, ERP, ES, PDP, MIS and DDS were used in all sizes of firms. This could be attributed to the fact OECD (2015) study area were the developed

countries where situation is likely to be different from what exists in developing countries such as Nigeria. Similarly, other studies (Apiyo & Kiarie, 2018; Ssewanyama & Busler, 2007) argued that computer, telephone/mobile phone, CCTV and e-mail are highly deployed in all the companies as against websites and modern software applications such as CAD, CAM ERP, CRS, MIS, DSS, DRP,MRP and RFID that are rarely or in some cases never used to promote competitiveness. In conclusion, findings of this study have revealed that the extent of deployment of ICT applications such as CAD, CAM, PDP, ERP, DSS and MIS in the manufacturing companies was low. However, the major findings from the study are as follows:

1. The extent of competitiveness of manufacturing companies in Lagos State was very low. Out of the two dimensions of competitiveness, cost leadership was higher while differentiation was lower in the manufacturing companies. However, the mean scores indicated very low extents of both cost leadership and differentiation in the manufacturing companies.

2. The overall ICT use by employees of manufacturing companies was considered to be sometimes. In most of the companies under study, ICTs was found to be rarely used in areas such as computer–aided design to develop new products, computer-aided manufacturing to produce quality goods, product development process to monitor production of quality goods, consumer relation management to gather intelligence information about the market, CCTV to monitor employees' activities, expert system to provide expert advice, resource planning system for efficient resources utilization and radio frequency identification to track movement of companies' resources.

3. ICT use significantly influenced competitiveness of manufacturing companies in Lagos State. Nine percent (9%) of the variation in competitiveness is explained by ICT use.

4. When regressed against the components of competitiveness of manufacturing companies in Lagos State, the use of ICTs has no significant influence on cost leadership of manufacturing companies in Lagos State. However, ICT use significantly influenced differentiation of manufacturing companies in Lagos State, accounting for 17.3% of the variation in differentiation.

CONCLUSION

The finding of this study revealed that ICT use played crucial role in enhancing competitiveness of manufacturing companies in Lagos state. The study identified ICT use as significant predictors of competitiveness of manufacturing companies in Lagos state. However, the study found low extent of both cost leadership and differentiation in the manufacturing companies investigated. The study also revealed that ICT use in the manufacturing companies was considered to be sometimes, which suggests that the manufacturing companies under investigation may not be using ICTs to their advantage. The study also established that ICT use showed a significant influence on competitiveness of manufacturing companies in Lagos state. Lastly, the study revealed a statistically significant influence of ICT use on competitiveness of manufacturing companies in Lagos state. The study also established that unlike the manufacturing sectors in the developed countries , most of the manufacturing companies in Lagos state, Nigeria do not use information communication technologies (ICTs) such as CAD, CAM, ERP, CRM and SCM to assist in achieving competitive advantage.

RECOMMENDATION

In view of the above findings, the following recommendations are suggested for policy intervention:

1. It is imperative for manufacturing companies in Lagos state to improve on cost leadership and differentiation by improving on cost leadership and differentiation by sourcing capital at low cost and developing products that are tailored to consumers' needs to improve competitiveness

2. Managements of manufacturing companies should also adopt ICTs that can support product development and resource planning to enhance competitiveness.

3. Management of the manufacturing companies should take some urgent steps to stem low ICT utilizations in the identified areas such as computer–aided design to develop new products, computer-aided manufacturing to produce quality goods, product development process to monitor production of quality goods, consumer relation management to gather intelligence information about the market should be improved upon to enhance competitiveness.

4. In addition, consumer goods manufacturing companies need to build capacity for their human resources to enable them deploy ICT use optimally to gain competitive advantage for the company.

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