



The Role of Information Technology in Enhancing Intensive Growth Strategies in the Nigerian Banking Industry

1. Edward N. Idigo Ph.D*; 2. GogoniusOnwudiwePh.D

1 (LinkTaP Research, Nigeria.)

2 (Dept of Banking & Finance, Ebonyi State University, Nigeria.

(Corresponding Author: Edward Idigo)

ABSTRACT: This study aims at examining the role of information technology in enhancing intensive growth strategies in the Nigerian banking industry. It investigated whether information technology enhances the market penetration, market development and product development strategies of organisations in the Nigerian banking sector. A descriptive survey research design was used to conduct this study. All the 24 commercial (money deposit) banks in Nigeria constitute the population of this study out of which a sample of 20 commercial banks were selected for the study. The source of data for this study is primary data obtained through structured questionnaire which was administered to 200 respondents across the departments in the selected 20 out of the 24 banks. The data collected was analysed and presented by the use of descriptive methods. The Analyses of Variance (ANOVA) and the regression analyses models are the statistical techniques used. The tests of hypotheses were done using regression coefficients. The findings based on statistical evidences showed that information technology plays a significant role in enhancing intensive growth strategies in the Nigerian banking industry. In particular, information technology is used in achieving market penetration, market development and product development strategies. The study concludes that information technology is strongly and positively related to the achievement of intensive growth strategies in the Nigerian banking industry. Therefore, this implies that banking organisations should deploy adequate information technology capabilities and integrate same into their marketing strategies to achieve and maintain growth as well as remain competitive in today's banking industry environment.

KEY WORDS: Information Technology, Strategy, Intensive Growth, Market Penetration, Market Development, Product Development, Banking industry.

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I. INTRODUCTION

1.1 Background

Information technology is a major aspect of technology development that has continued to impact on business organisations. It plays various roles in organisations. According to Dennis and Walsh (2015) information technology is seen as a critical enabler and driver to achieving long-term business goals. Specifically, information technology has become essential in achieving competitive advantage. For Nikoloski (2014), information technology is used in implementing a variety of competitive strategies ranging from lowering costs, differentiation of products and services, developing alliances, innovation and growth. Kihara et al., (2016), maintain that information technology is used to develop products, services and capabilities to give organisations strategic advantages over competitors in the market place. According to them, organisations need to align their business operations and processes with information technology and their strategy and goals to achieve overall business success.

Information technology is also perceived as a necessity to pursue the rationalization and cost management due to intensified competition in the financial sector (DeBandt and Davis, 2000). According to Burgelman and Rosen-Bloom (1989), new and innovative technological competencies are needed for survival in a highly competitive environment. Further to this, Chung et al. (2012) underscored the importance of information

technology in implementing customer relationship management strategy and concluded that there is a positive relationship between information technology and strategy implementation.

Against the background of its importance in the organizational strategy process, information technology plays key roles in facilitating intensive growth strategies towards achieving competitive advantage and organizational success. Intensive strategies are typologies of organizational grand strategies. Grand strategies define the overall plans and activities that indicate how the long-term goals and objectives of organisations are achieved (Pearce and Robinson, 2013). Specifically, intensive growth strategies are strategies dealing with current and new product market. The main objectives are how to penetrate the market as well as find ways to develop products commensurate with market development. Intensive strategies are used to gain market share and competitive advantage in an industry. They include strategies for market penetration, product development and market development.

In the banking industry, information technology continues to play key roles in the corporate strategy process and in the implementation of intensive strategies to enhance their potentials for growth (Piciu & Chitiga, 2011) and achieve the needed competitive advantage. Its importance cannot be over-emphasised. For instance, banks require information technology to coordinate enormous volumes of information (David-West, 2005) and to streamline the back-office operations by improving both efficiency and cost reduction as well as influencing the way banks services are delivered with the aim of making it more convenient for customers (Ringim, et al., 2015). Buhriani (2012) emphasized that technology is one factor that has led to improved services in banks. In this regard, Woherem (2000) advised that banks must apply information and communication technology to their operations in order to survive and prosper in the industry. According to him, banks service and delivery systems must be positioned properly within the framework of information and communication technology; and in particular, banking industry's products and market growth strategies should be anchored on technology and technology applications. It is in this respect that this paper focuses on how Nigerian banking organisations deploy information technology in implementing various intensive strategies to achieve market growth and competitive advantage.

The need for this study is relevant. This is because studies are replete with the role of technology, and in particular, information technology in enhancing organizational strategy and performance (Ringim et al., 2015; Kihara et al., 2016; Gichana et al., 2016; Durowoju, 2017; and Sibanda and Ramathan, 2017). However, research outcomes are still scanty on the roles of information technology in enhancing specific intensive growth strategies especially in a competitive economic environment like Nigerian banking industry. This study is therefore undertaken to partially fill this gap. It discusses and highlights the specific role of information technology in facilitating the successful implementation of the intensive growth strategies of market penetration, market development and product development strategies in the Nigerian banking industry. It is carried out in the banking industry given the pivotal role of the banking sector in the Nigerian economy and the importance of information technology and strategic management approach to improving organizational performance (Idowu et al., 2002) especially in the banking industry.

1.2 Objective of the Study

The objective of this study is to examine the role of information technology in enhancing intensive growth strategies in the Nigerian banking industry.

1.3 Hypothesis

Ho: Technology does not enhance market penetration strategies in the Nigerian banking industry

Ho: Technology does not enhance market development strategies in the Nigerian banking industry

Ho: Technology does not enhance product development strategies in the Nigerian banking industry

II. LITERATURE REVIEW

2.1 Theoretical Framework

The theoretical construct of this study is the resource-based view (RBV) theory. The resource-based view theory deals with the determination of the strategic resources a firm can exploit to achieve sustainable competitive advantage. It focuses on the resources and capabilities of organisations (Teng and Cummins, 2002) and proposes that the resources and capabilities available to an organization are significant in gaining competitive advantage and achieving greater organizational performance. The resource-based view explains that organizational resources and capabilities generate competitive advantages rather than the activities of the product market (Oghojafor et al., 2014). Thus, the development of superior capabilities and resources by organisations result in the achievement of sustainable competitive advantage over competitors.

Barney (1991) espoused the resource-based view and focused attention on the internal resources of the organisation to identify those assets, capabilities and competencies that can deliver superior competitive

advantages. According to him, an organization is said to have competitive advantage when it is implementing a value-creation strategy not simultaneously being implemented by any current or potential competitors. To sustain these advantages, Bharadway et al (2000) opined that organisations must guard against the erosion of their competitive advantages by competitors. Organisations therefore should obtain, uphold and develop their resources and capabilities in a way that will preserve their competitive advantage (Knott, 2003).

The resource-based view proposes that firms are heterogeneous because they possess heterogeneous resources, meaning firms can have different strategies because they have different resource mixes. In explaining this further, Barney (1991), held that for resources to hold potential as sources of sustainable competitive advantage, such resources must be valuable, rare, imperfectly imitable and not substitutable. The resource-based view suggests that organisations must develop unique, firm-specific core competencies that will allow them to outperform competitors by doing things differently.

Technology being a strategic resource and capability is therefore seen as one of the most important resource elements of organisations in achieving sustainable competitive advantage over competitors (Coombs and Bierly, 2006). Zollo & Winter (2002) view technology as a strong dynamic capability that is embedded in firm's practices and is essential in determining the competitiveness and performance of a firm in a dynamic and turbulent environment. According to Teece (2014), organisations with strong dynamic capabilities exhibit technological and market agility, are able to create new technologies, differentiate and maintain superior processes and modify their structures and business models in a way that ensures they stay ahead of the competition. Technology has provided an altogether new way of interacting and providing service to bank customers rather than merely replicating activities of the bank employees (Godse, 2005).

2.2 Information Technology

Information technology is a critical aspect of technology. Daintith (2009) defined information technology as the use of computers to create, process, store, retrieve, and exchange all kinds of electronic data. In other words, information technology can be taken to be the management of information systems which includes computers, hardware, software, network etc. used to automate and support business tasks and decision making (Nikoloski, 2014).

The importance of information technology to business organisations cannot be overemphasized. As a major organizational resource and capability, deployment of information technology is expected to result in substantial competitive advantages for organisations, especially for banking organisations. Various studies suggest that information technology capabilities provide the basis for gaining competitive advantage and enhancing organizational performance (Bhatt and Grover, 2005; Santhanam and Hartono, 2003). The proponents of this position argue that information technology has enabled organisations to operate efficiently and profitably and to develop innovative products for existing and new markets as well as to enter new markets.

Based on the above position, it is therefore important for organisations to develop capabilities and competences in the area of information technology which is known as IT capability. The concept of IT capability was introduced by Ross et al. (1996) who defined it as the firm's ability to assemble, integrate and deploy information technology-based resources. Bharadwaj (2000) also explained IT capability as the ability of a firm to mobilize and deploy IT based resources in combination with other resources and capabilities which include technical and managerial IT skills; intangible IT-enabled resources such as knowledge, assets, customer orientation; and synergy- the sharing of resources and capabilities across organizational divisions.

Further to the significant benefits of information technology as a resource capability, Floyd and Wooldridge (1990) opined that IT capabilities enhance service reliability, reduce transaction errors and increase consistency in performance. It also enhances service quality through better customized or individualized services, and in creating knowledge links for identifying and sharing organizational expertise (Quinn et al., 1994). For Tippins and Sohi (2003) information technology capabilities and competencies improve performance through elimination of inefficiency, reduction of long-term cost, improvement in service reliability and reduced transaction errors. All these not only accentuate the importance of information technology but indeed infer that information technology has become virtually indispensable in the management of today's organisations.

2.3 Information Technology and Organisational Strategy

As noted earlier, information technology plays critical roles in the organizational strategy process, and specifically in the formulation, implementation and control of organizational strategies. In defining the role of information technology in organisations and their strategies, Nikoloski (2014) noted that most organizations in all sectors of industry, commerce and government are fundamentally dependent on their information technologies. According to Adeniran et al (2020) organisations can no longer create value nor achieve competitive advantage without adopting information technology. In concurring with this position, Church et al (2002) pointed out the increasing dependence of organizational functional activities and strategy on technology, and especially on information technology. This underscores the critical role information technology plays in

organizational strategy and the need to develop adequate information technology capabilities and competences. This is because a high level of information technology capability enables organizations to be innovative in their service delivery and cost containment strategy that would enhance performance as well as meet customer requirement (Bhatt and Grover, 2005).

The importance of technology and its pivotal role in the strategy process has given rise to the concept of technology strategy. Technology strategy, including information technology strategy refers to the overall plan which consists of objectives, principles and tactics relating to use of technologies to achieve organizational objectives (Mistik et al., 2012). It is a formal vision that guides the acquisition, allocation, and management of information technology resources to achieve the set strategies of organisations (Senft and Gallegos, 2010). In essence, the goal of technology strategy is to outline and specify how technology should be used to support overall corporate strategy. In the same vein, information technology strategy aims at developing the information technology capability to drive the strategies of the organization to achieve competitive advantage among other objectives.

2.4 Intensive Strategies

Organizational strategies are the expression of the direction and scope of an organisation over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations (Johnson et al., 2008). For Porter (2016) the essence of strategy is choosing to perform activities differently than rivals do. According to him, strategy is the creation of a unique and valuable position, involving a different set of activities.

Organisation's major strategies are known as grand strategies. Pearce (1982) defined grand strategy as a comprehensive general plan of major actions through which a firm intends to achieve its long-term objectives. An organisation's grand strategies form the basis of coordinated and sustained strategic management efforts (Pearce et al., 2015). Intensive strategies are part of the grand strategies that organizations formulate and implement to achieve their objectives. Intensive strategies are those strategies, which demand further intensive efforts to improve the performance of existing products in the market. Intensive strategies are usually considered when an organisation struggles to improve its competitive position with current products and to achieve further growth of existing products and markets. Typically, intensive growth strategies are classified into three intensive strategies: market penetration, market development and product development. These strategies are also called organic growth strategies.

2.4.1 Market Penetration

Market penetration is the most popular type of intensive growth strategy. Market penetration is the strategy by which organizations take increased share of existing markets with existing product range (Johnson et al., 2008). A market penetration strategy focuses on the organisation's existing product in its existing market. According to Timothy et al. (2013) market penetration is a market growth strategy which aims to get bigger share in the market with available products. It directs the resources of the organization to the profitable growth of existing products in its current markets. Market penetration strategies are achieved by organisations in three ways. Firstly, by increasing the sales volume of an organisation's current products in its current markets by encouraging existing customers to buy more of its products and services. Secondly, it is also achieved by pulling customers away from using competing products through the use of price tactic and other methods, whilst at the same time keeping its own customers intact. Finally, converting and getting non-users of a product to start using the product in order to increase sales volumes is also another method of market penetration. In essence, market penetration aims at increasing market share for present products in current markets through increased marketing efforts such as more intensive distribution, aggressive advertising and sales promotion, employment of skilled sales force, competitive pricing etc. (Dugguh et al., 2018). Market penetration remains a very popular strategy for many organisations. Its popularity as an intensive strategy lies in the fact that it builds on existing strategic capabilities and does not require the organization to go into either new markets or new products. However, its popularity as a strategy engenders greater and stiffer competition for organisations. In concurring with this, Johnson et. al (2008) noted that organisations implementing market penetration strategies may face retaliation from competitors which is likely to intensify industry rivalry from competitors defending their market share especially in low-growth markets where any gains in volume will be at the expense of other organisations. According to them, organisations seeking market penetration would need strategic capabilities that give clear competitive advantages over others.

2.4.2 Market Development

Market development is the second type of intensive growth strategy. It is about finding and developing new uses and new usage areas for an organisation's products (Kocoglu, 2012). Essentially, market development attempts to develop new markets and new channels of distribution for an organisation's current

products. Typically, market development strategies can be achieved by adding new distribution channels to expand the consumer reach of the product. It can also be achieved by entering new market segments such as new geographical and new demographic markets, and by finding and promoting alternate uses for the existing products. According to Dugguh et al., 2018, market development strategies are used when a regional business wants to expand, or when new markets are opening up, or when a new use is found for the existing product. In essence, in market development strategy, a firm seeks to increase the sales by taking its product into new markets. For market development to be achieved, Johnson et al (2008) advised that it is essential that market development strategies are based on products or services that meet the critical success factors of the new market.

2.4.3 Product Development

Product Development Strategy is the third variant of intensive growth strategies. Product development, refers to product improvement and innovation (Johnson, Scholes & Whittington, 2008). Durmaz and Ilham (2015) explained that product development provides organization with growth by developing new products for existing markets. In other words, it entails the development and selling of new products to existing customers in current markets. Product development aims at the growth of market through substantial modification of existing products or creation of new but related products that can be marketed to current customers through established channels. Fundamentally, product development can be achieved in three ways: by expanding sales through new products or services; by creating different quality variants of an organisation's products; and by developing additional models and sizes of the product to suit the varied preference of the customers. In other words, organisations can implement product development by improving its products and services or introducing new features into their products and services. However, according to Johnson et al., (2008) product development can be expensive and risky as it would require the development of new strategic capabilities and mastering new technologies that may be unfamiliar to the organization. Thus, product development typically involves heavy investments and high risk of project failures.

III. METHODOLOGY

The research design employed in this study is the descriptive survey design. Mouton and Maraise (2012) opined that descriptive research aims at describing a process or relationship and providing specific details about variables. This study provides specific information about the use of information technology to achieve intensive growth strategies among Nigerian banking organisations. Data for this study was gathered from primary sources. The primary source of data used in this study is the questionnaire.

A sample size of 200 respondents comprising 10 respondents from each of the 20 out of the 24 banking organisations in Nigeria was used for this study. The 20 selected banking organisations represent about 83% of the about 24 deposit money banking organisations operating in Nigeria as at the time of this study. The banks chosen are the regular commercial banks and do not include the non-interest banks. The questionnaires were distributed to the banks by the researcher through a combination of personal visits and use of established contacts in the various banks. The questionnaires were randomly given to identified relevant departments as electronic banking, IT, commercial and retail banking through the use of quota and judgmental sampling techniques. Out of the 200 questionnaires distributed, 179 questionnaires were returned and in which 5 questionnaires were rejected on account of being wrongly filled. Thus, 174 questionnaires representing 87% of the distributed questionnaires were used for this study.

Descriptive methods of data analyses were used to examine and evaluate the data based on a 5 point Likert scale and weighted mean scores and percentages. The data consists of single dependent and multiple independent variables. Results were generated using the analysis of variance (ANOVA) and the regression analyses. The hypotheses were tested through the regression coefficients to determine the role of the independent variable (IT) in enhancing the dependent variables (intensive growth strategies).

The questionnaire instrument was tested for validity through reviews and pre-testing of 30 questionnaires on respondents drawn from three banks which showed valid responses. The inclusion of the detailed intensive growth strategies of market penetration, market development and product development attested to the content validity of the questionnaire.

Variables	No of Items	Cronbach's Alpha
- Role of IT in Market Penetration	3	0.97
- Role of IT in Market Development	6	0.96
- Role of IT in Product Development	2	0.97

The questionnaire used as the major research instrument was tested for reliability and internal consistency. Cronbach's alpha was then used to test reliability of the variables. The variables obtained an alpha

of 0.97, 0.96 and 0.97 respectively. These are above the acceptable level of alphas as a measure of reliability of instrument which lies in between 0.70 – 1.0. The results obtained from these tests indicated that the questionnaire used in this study were internally consistent, reliable and valid.

IV. PRESENTATION OF DATA

4.1 Role and Importance of IT in the Banking Industry

Table 4.1: Assessment of the role and importance of IT in the banking industry

S/N	Description	Very Low 1	Low 2	Average 3	High 4	Very High 5	Mean Scores
	Role and importance of IT in the banking industry	0 (0.00%)	1 (0.57%)	4 (2.30%)	80 (46.17%)	89 (50.96%)	4.48 (89.50%)

Table 4.1 shows the respondents scores on the role and importance of IT in the banking industry. A Likert scale of 5 points shows an overall mean score of 4.48 or 89.5% of the respondents indicating a highly significant role and importance of IT in the Nigerian banking industry. This basic position finds support in the works of Thyaga (2016) that technology has continuously played an important role in the working of banking institutions and the services provided by them.

4.2 Role of Technology in Enhancing Market Penetration Strategies

Table 4.2.1 The Role of Technology in Enhancing Market Penetration Strategies in Nigerian Banks

S/N	Description	Strongly DisAgree 1	Dis Agree 2	Undecided 3	Agree 4	Strongly Agree 5	Mean Scores
1	Our bank uses IT to get existing customers to increase their use of our current products and services	3 (1.72%)	12 (6.90%)	9 (5.17%)	91 (52.30%)	59 (33.91%)	4.10 (81.95%)
2	Our bank uses IT to innovate and create additional uses for our existing banking products for our current customers	0 (0.00%)	4 (2.30%)	17 (9.77%)	97 (55.75%)	56 (32.18%)	4.18 (83.56%)
3	Our bank uses IT to get users (new customers) of competing products to start using our products and services	2 (1.15%)	13 (7.47%)	21 (12.07%)	83 (47.70%)	55 (31.61%)	4.01 (80.23%)
	Total Scores	2 (0.96%)	10 (5.56%)	16 (9.00%)	90 (51.92%)	57 (32.57%)	4.10 (81.92%)

Source: Field Survey, 2022

Table 4.2.1 shows that on a weighted Likert scale of 1 to 5 points, the use of information technology to get existing customers to increase their use of current banking products and services is 4.10 or 81.95%. The use of information technology to innovate and create additional uses for existing banking products for customers indicated 4.18 (83.56%), whilst the use of information technology to get new customers and users of competing products to start using their products and services recorded 4.01(80.23%). The overall mean score of 4.10 indicates 81.92% affirmation of the use of information technology to enhance market penetration strategies and intensive growth in the Nigerian banking industry.

Table 4.2.2 Regression Statistics Analysis of Information Technology and Market Penetration

<i>Regression Statistics</i>	
Multiple R	0.747808
R Square	0.559217
Adjusted R Square	0.556654
Standard Error	0.574685
Observations	174

Table 4.2.2 shows the regression statistics explaining the relationship between information technology and market penetration in Nigerian banking organisations. The Multiple R confirms the correlation coefficient at 0.74 (74%) indicating a strong positive linear relationship between information technology (predictor variable) and strategy formulation (outcome variable). The R-Square denoting the coefficient of determination is shown as 0.55 (55%) represents the percentage of proportion of variation in the strategy formulation process (outcome variable) that is explained by the role of information technology (predictor variable). The Adjusted R-Squared at

0.55 indicates about 55% in real and adjusted variation attributed to the role of information technology in enhancing market penetration in Nigerian banking industry.

Table 4.2.3 ANOVA of Information Technology and Market Penetration

	df	SS	MS	F	Significance F
Regression	1	72.06828	72.06828	218.2146	2.05E-32
Residual	172	56.80529	0.330263		
Total	173	128.8736			

Table 4.2.3 shows the Analysis of Variance (ANOVA) between information technology and market penetration. The SS of 72.1 denotes the sum of squares explained by the regression as against the SS of 56.2 being the residual sum of squares due to random forces outside the model. The ANOVA value at (F = 218.2, p < 0.05) at 1 degree of freedom indicates that information technology (predictor variable) is significant in explaining market penetration (outcome variable).

Table 4.2.4 Regression Coefficients and Test of Hypothesis 1

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.93573	0.342355	-2.73321	0.006928	-1.61149	-0.25997	-1.61149	-0.25997
IT ROLE	1.120432	0.075848	14.77209	2.05E-32	0.97072	1.270145	0.97072	1.270145

From the analysis of the regression coefficients in table 4.2.4, the coefficient of 1.12 indicates the direction of the relationship between information technology and market penetration. It indicates that a unit of positive change in technology (predictor variable) would result in 112% of positive impact on strategy formulation. The t-Statistic further indicates the degree by which the coefficient of the dependent variable (strategy formulation) differs from the null. Thus, the t-Statistics of 14.7 which is above 2, rejects the null hypothesis that information technology does not enhance market penetration strategies in Nigerian banking organisations. Resultantly, the alternate hypothesis that information technology plays significant role in enhancing market penetration in Nigerian banking industry is accepted.

4.3 Role of Technology in Enhancing Market Development Strategies

Table 4.3.1 Role of Technology in Enhancing Market Development Strategies in Nigerian Banks

S/N	Description	Strongly DisAgree 1	Dis Agree 2	Undecided 3	Agree 4	Strongly Agree 5	Mean Scores
1	Our bank uses IT to create new channels of distribution for our banking products	0 (0.00%)	4 (2.30%)	17 (9.77%)	97 (55.75%)	56 (32.18%)	4.16 (83.10%)
2	Our bank uses IT to enter and reach new markets (serve new geographic and demographic market segments)	2 (1.15%)	9 (5.17%)	11 (6.32%)	85 (48.85%)	67 (38.51%)	4.26 (85.29%)
3	Our bank uses IT to find and promote alternate uses for our existing products and services	1 (0.57%)	7 (4.02%)	6 (3.45%)	94 (54.02%)	66 (37.93%)	4.10 (82.07%)
	Total Scores	1 (0.57%)	7 (3.83%)	11 (6.51%)	92 (52.87%)	63 (36.21%)	4.17 (83.49%)

Source: Field Survey, 2022

Table 4.3.1 shows that on a weighted Likert scale of 1 to 5 points, the use of information technology to create new channels of distribution for banking products is 4.16 or 83.10%. The use of information technology to enter and reach new markets or serve new geographic and demographic market segments indicated 4.26 (85.29%), whilst the use of information technology to find and promote alternate uses for our existing products and services recorded 4.10 (82.07%). The overall mean scores of 4.17 indicate 83.49% affirmation of the use of information technology to enhance market development strategies and intensive growth in the Nigerian banking industry.

Table 4.3.2 Regression Statistics Analysis of Information Technology and Market Development

Regression Statistics	
Multiple R	0.780605
R Square	0.609344
Adjusted R Square	0.607073
Standard Error	0.485921
Observations	174

Table 4.3.2 shows the regression statistics explaining the relationship between information technology and market development in Nigerian banking industry. The Multiple R confirms the correlation coefficient at 0.78 (78%) indicating a strong positive linear relationship between technology (predictor variable) and strategy implementation (outcome variable). The R-Square denoting the coefficient of determination is shown as 0.61 (61%) represents the percentage of the proportion of variation in the strategy implementation process (outcome variable) that is explained by technology (predictor variable). The Adjusted R-Square is 0.607 indicating about 61% in real and adjusted variation attributed to the impact of technology on strategy implementation.

ANOVA of Information Technology and Market Development.

	df	SS	MS	F	Significance F
Regression	1	63.3473	63.3473	268.2854	6.08E-37
Residual	172	40.61247	0.236119		
Total	173	103.9598			

Table 4.3.3 shows the Analysis of Variance (ANOVA) between technology and market development. The SS of 63.3 denotes the sum of squares explained by the regression as against the SS of 40.6 being the residual sum of squares due to random forces outside the model. The ANOVA value at (F = 268.2, p < 0.05) at 1 degree of freedom indicates that information technology (predictor variable) is significant in explaining market development (outcome variable).

Table 4.3.4 Regression Coefficients and Test of Hypothesis 2

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.50175	0.289476	-1.73331	0.084833	-1.07313	0.069631	-1.07313	0.069631
IT ROLE	1.050456	0.064133	16.37942	6.08E-37	0.923867	1.177044	0.923867	1.177044

From the analysis in table 4.3.4 the regression coefficient of 1.050 indicates the direction of the relationship between information technology and market development. It means that a unit of positive change in technology (predictor variable) would result in 1.050 units (105%) of positive impact on market development. The t-Statistic further indicates the degree by which the coefficient of the dependent variable (market development) differs from the null. The t-Statistics of 16.3 is above 2 and thus rejects the null hypothesis that information technology does not enhance market development strategies in the Nigerian banking industry. Resultantly, the alternate hypothesis that information technology plays significant role in enhancing market development in Nigerian banking industry is accepted.

4.4 Role of Technology in Enhancing Product Development Strategies

Table 4.4.1 The Role of Technology in Enhancing Product Development Strategies in Nigerian Banks

S / N	Description	Strongly DisAgree 1	Dis Agree 2	Undecided 3	Agree 4	Strongly Agree 5	Mean Scores
1	Our bank uses IT to improve on existing products features, variants and models for our customers	4 (2.30%)	7 (4.02%)	11 (6.32%)	88 (50.57%)	64 (36.78%)	4.18 (83.56%)
2	Our bank uses IT to create related products and services for our customers	5 (2.87%)	5 (2.87%)	7 (4.02%)	79 (45.40%)	78 (44.83%)	4.18 (83.68%)
3	Our bank uses IT to create new products and services to suit changing customer needs and	3 (1.72%)	12 (6.90%)	9 (5.17%)	90 (51.72%)	60 (34.48%)	4.25 (84.94%)

preferences						
	4 (0.57%)	8 (3.83%)	9 (6.51%)	86 (52.87%)	67 (36.21%)	4.20 (84.06%)

Source: Field Survey, 2022

Table 4.4.1 shows that on a weighted Likert scale of 1 to 5 points, the use of IT to improve on existing products features, variants and models for our customers is 4.18 or 83.56%. The use of IT to create related products and services for our customers indicated 4.18 (83.56%), whilst the use of IT to create new products and services to suit changing customer needs and preferences recorded 4.25 (84.94%). The overall mean scores of 4.20 points indicate 84.06% affirmation of the use of IT to enhance market development strategies and intensive growth in the Nigerian banking industry.

Table 4.4.2 Regression Statistics Analysis of Information Technology and Product Development

Regression Statistics	
Multiple R	0.780628
R Square	0.60938
Adjusted R Square	0.607109
Standard Error	0.561502
Observations	174

Table 4.4.2 shows the regression statistics of the role of information technology in product development. It explains the relationship between information technology and product development in Nigerian banking organisations. The Multiple R confirms the correlation coefficient at 0.78 indicating a strong positive linear relationship between information technology (predictor variable) and product development (outcome variable). The R-Square denoting the coefficient of determination is shown as 0.61 (61%) represents the percentage of the proportion of variation in the strategy evaluation and control process (outcome variable) that is explained by technology (predictor variable). The Adjusted R-Squared is 0.61 which indicates about 61% in real and adjusted variation attributed to the impact of information technology on strategy evaluation and control.

ANOVA Information Technology and Product Development					
	df	SS	MS	F	Significance F
Regression	1	84.59873	84.59873	268.3255	6.03E-37
Residual	172	54.22885	0.315284		
Total	173	138.8276			

Table 4.4.3 shows the Analysis of Variance (ANOVA) between information technology and product development. The SS of 84.5 denotes the sum of squares explained by the regression as against the SS of 54.2 being the residual sum of squares due to random forces outside the model. The ANOVA value at (F = 17.3, p < 0.05) at 1 degree of freedom indicates that information technology(predictor variable) is significant in explaining product development (outcome variable).

Table 4.4.4 Regression Coefficients and Test of Hypothesis 3

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-1.26239	0.334502	-3.77394	0.000221	-1.92265	-0.60213	-1.92265	-0.60213
IT ROLE	1.213935	0.074108	16.38064	6.03E-37	1.067657	1.360213	1.067657	1.360213

From table 4.4.4 the regression coefficient of 1.21 indicates the direction of the relationship between information technology and product development. It means that a unit of positive change in information technology (predictor variable) would result in 121% of positive impact on product development. The t-Statistic further indicates the degree by which the coefficient of the dependent variable (strategy evaluation and control) differs from the null. The t-Statistics of 16.3 is above 2 and thus rejects the null hypothesis that information technology does not enhance product development in Nigerian banks. Resultantly, the alternate hypothesis that technology plays significant role in enhancing product developmentstrategies in the Nigerian banking industry is accepted.

V. DISCUSSION OF FINDINGS

It is the basic finding of this study that information technology plays a significant and important role in the Nigerian banking industry. An overall mean score of 4.48 on a Likert scale of 5, or 89.5% of the respondents indicate the significant role and overall importance of information technology in the Nigerian banking industry.

In particular, this study finds that information technology plays significant role in enhancing market penetration strategies in the banking industry. A mean score of 4.10 points on a Likert scale of 5 or 81.9% of the respondents confirm the strong role of information technology in enhancing market penetration. The outcomes of the statistical regression analysis of the role of information technology in enhancing market penetration and information technology in the banking industry showed a Multiple R or correlation coefficient at 0.74 implying a strong positive linear relationship between information technology and its role in enhancing market penetration. The regression coefficient indicates about 55% of positive impact on market penetration by a unit of increase in information technology. This finds support in the earlier study of Thanvi (2017) that through the prologue of information technology related products like online banking, mobile banking, automated teller machines (ATMs), fund transfers, automated clearing services etc., banks now can provide more varied services to their increasing customers even with less manpower. Surjanarayana et al. (2021) further upheld that information technology is used as a strategy by the banking sector to attract and retain customers in their markets; thus, further confirming the strong role of information technology in enhancing market penetration in the banking industry. This finding has a lot of policy implications for market penetration and intensive growth strategies in the banking industry. The greater application of information technology will more likely increase greater penetration into targeted markets and facilitate growth for banking organisations as well as improve financial inclusion in the economy.

In terms of market development, an overall mean score of 4.17 on a Likert scale of 5 or 83.49% response scores by the respondents affirm the significant role of information technology in enhancing market development strategies in the banking industry. Statistical regression analyses carried out supported this with a correlation coefficient at 0.78 (78%) indicating a strong positive linear relationship between information technology and market development; whilst the regression coefficient indicates a 61% of positive effect on market development by a unit of increase in information technology. This finding is in accord with the position of Dangolani S. K. (2011) that information technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry and of which online electronics banking, mobile banking and internet banking are just a few examples. The implication of this is that banking organisations can expand and grow its markets by using information technology to create new distribution channels, create more markets and serve geographically-distant markets without necessarily establishing more physical branches.

Finally, with respect to product development, an overall mean score of 4.18 on a Likert scale of 5 representing 83.56% respondents' responses validate the influencing role of information technology in enhancing product development. The correlation coefficient at 0.78 confirm another strong positive linear relationship between information technology and product development, and the regression coefficient indicates about 61% of positive impact on strategy formulation by a unit of increase in information technology. This means that banking organisations deploy various technologies in the development and delivery of their banking products. This finding concurs with the works of Thyaga (2016) that information technology provides creative support for new products development for banks. It also agrees with the views of Gupta (2008) that information technology through electronic banking is changing the banking and financial sector in terms of the nature of core products or services and the way these are packaged, suggested, delivered and consumed, also support this finding. The ICT products development in banks include e- banking programs (deposit taking, lending, and accounts management, provisional of financial advice, e- bill payments, ATMs, telephone banking, smartcards and others (Mulira, 2003 & Muwanga, 2002). A major policy implication of this finding is that banking organisations need to make significant investment in information technology to achieve adequate information technology-based product design, development and delivery not only for improving on existing product features but for effective identification and transformation of market opportunities into creating new products to suit the increasing and changing needs of their customers.

VI. SUMMARY CONCLUSION AND RECOMMENDATION

6.1 Summary

The findings of this study confirm that information technology plays significant and important roles in enhancing intensive growth strategies in the Nigerian banking industry. Firstly, information technology is used to intensify greater use of banking organisation's existing products in their existing markets by their customers. Secondly, information technology is used to find and develop new markets and new channels of distribution for banks current products. Finally, banks use information technology to improve on product features and create related and new products and services to suit customers changing needs. Generally, the policy implication of

increased application of information technology in banking is greater impersonalisation and paradigm shift from the traditional banking to innovation.

6.2 Conclusion

Based on the findings and statistical evidences of this study it is concluded that there is a strong positive and significant correlation between information technology and the achievement of intensive growth strategies in the Nigerian banking industry. This implies that information technology is a strong and important variable in the intensive and overall corporate strategy process the Nigerian banking industry.

6.3 Recommendation

Based on the findings and conclusions of the role and importance of information technology in the banking industry, this study recommends the need for banking organisations and indeed other organisations to invest significantly in information technology and integrate same into their strategic management processes to enhance the intensification of their growth strategies and business expansion in their markets. For better performance of information technology on banking, the management of banking sector should adopt better policies to encourage users to adopt information technology in the banking industry.

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