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THE EFFECT OF INNOVATION PRACTICES ON MARKET PERFORMANCE IN THE BANKING SECTOR: EMPIRICAL STUDY OF 10 SELECTED BANKS IN GHANA.

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Abstract

Competition within the banking industry intensifies daily due to globalization, deregulation, increasing global and domestic competition, new technologies, and e-commerce. As a result, individuals and companies are beginning to evaluate and apply innovative strategies and entrepreneurial abilities to gain a competitive advantage. This paper aims to examine the impact of innovation on market performance in the Ghanaian banking sector. Self-administered questionnaires were used to collect the data from customers of 10 selected banks in Ghana. Out of the 1000 questionnaires, 712 were valid, accounting for 71.2% of the actual response rate, and regression analysis was adopted to analyze the final data. The result demonstrated a positive and significant relationship between innovation practices and market performance in the banking sector. The study reveals that service, process, marketing, and administrative innovation are essential factors affecting market performance in the banking sector. Therefore, banks should focus on mobilizing resources to ensure improvement in service delivery, service processes, marketing of service, and organizational structure.

Keywords: *Innovation, Innovation management, Market performance, Ghana, Banking sector.*

1. Introduction

Competition within the banking industry intensifies daily due to globalization, deregulation, increasing global and domestic competition, new technologies, and e-commerce. Firms compete for customers, market share, and long-term survival (Valmohammadi, 2017). Due to the challenging global competition, individuals and companies are beginning to evaluate and apply their innovative strategies and entrepreneurial abilities to gain competitive advantage (Hult & Ketchen Jr., 2001). Innovation assists firms to adapt to the global market and to provide customized solutions to consumers (Maldonado et al., 2019; Jimenez & Sanz-Valle, 2011).

Recent trends of pioneer organizations show that innovation is necessary for long-term success, growth, sustainable performance, and survival in every industry (Doyle, 1999; Patel, 1999; Cottam et al., 2001). Numerous studies have confirmed this assertion. For example, Bersali and Guermat (2014) revealed that only practical innovations positively correlate with customer loyalty. Totterdell, Leach, Birdi, Clegg, and Wall (2002) found a significant association between innovation and perceived customer benefits. Hu and Huang (2011) also opined that innovation capability positively affects customer satisfaction in Taiwanese air cargo services.

The concept of innovation has received a great deal of attention from scholars in the field of marketing. The concept has been investigated from many perspectives and examined in many ways, indicating its influence on firm performance. However, most studies focused on the manufacturing industry, most of which were in developed countries. This leaves a knowledge gap that needs to be filled (O'Cass & Ngo, 2007). Therefore, there is a need to determine the effect of innovation practices on market performance in the banking sector, especially in the Ghanaian banking sector. This study's findings can help management to better understand what dimensions of innovation drive market performance and what should be encouraged to improve market performance.

The rest of our research is arranged as follows; Section 2 reviews the theories and literature on relationship among understudy variables. Section 3 presents the methods used. The discussion of results and the conclusion of the paper are presented in Section 4 and 5 respectively.

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2. Literature review

2.1 Innovation

The extant literature on innovation indicates that every firm needs innovation to succeed (Maldonado et al., 2019; Jeng & Pak, 2016; Jimenez & Sanz-Valle, 2011; Damanpour, 1996;) and gain sustainable competitive advantage (Smith, 2017; Standing & Kiniti, 2011). Nemati, Khan and Iftikhar (2010) defined innovation as the creation, development and implementation of a new product, process or service with the goal of improving efficiency, effectiveness or competitive advantage. Innovation is also defined by the Oslo manual (OECD, 2005) as a product, process, marketing, method or organizational method that is new (or significantly improved) including products, processes and methods that firms develop and those that have been adopted from other firms or organizations.

Several scholars have identified key dimensions that have been theorized in the literature. These include business model innovations (Kirim, 2007), managerial innovations (Damanpour, 1991), organizational innovations (Huiban & Bouhsina, 1998), and marketing innovations (Higgins, 1995). Damanpour, (1991) classified innovation into two dimensions as technical innovation and administrative innovation. Technical innovations include products, marketing, services, the technology used to produce products, product sales, or render services directly related to the basic work activity of an organization. Administrative innovation pertains to organizational structure and administrative processes, indirectly related to the basic work activity of the organization and is more directly related to its management (Lin et al., 2010). This study adopts the frameworks proposed by Damanpour, (1991) to provide a blueprint for the implementation of innovation in the Ghanaian setting. Based on the literature the researchers hypothesize that innovation is a multi-dimensional concept consisting of four dimensions (service innovation, process innovation, marketing innovation, and administrative innovation) and they have been linked in this study to market performance.

2.1.1 Service innovation

The organization's commitments in different innovative activities to promote customer satisfaction are after sale services, keeping method instructions, systems to accept orders and innovation in services (Gyedu et al., 2021). With regard to the specifications of services part, institutions should take into account some considerations to increase their opportunity for success. Institutions should involve customers from the beginning and approach such a service modeling as possible. Martin and Home (1995) state that direct and increasing participation of customers in general process of development and using of information related to the customer increase the success capabilities in special stages (Lin et al., 2010).

2.1.2 Process Innovation

Process innovation involves creating and improving the method of production, and the adoption of new elements (e.g. input materials, task specifications, information flow, and equipment) to the firm's production process (Damanpour, 1996). This includes significant changes in techniques, equipment and/or software (e.g. installation of new or improved manufacturing technology, such as automation equipment or real-time sensors that can adjust processes, computer-aided product development). Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Fagerberg, Mowery, & Nelson (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a hazier effect.

2.1.3 Marketing innovation

Marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD Oslo Manual, 2005). Atalaya, Anafarta and Sarvanc (2013) assert that marketing innovations is targeted at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing a firm's sales. Marketing innovations are strongly related to pricing strategies, product package design properties, product placement and promotion activities along the lines of four P's of marketing (Kotler, 1991).

2.1.4 Administrative innovation:

Administrative innovation refers to changes in organizational structure or administrative processes, such as the recruitment of personnel, the allocation of resources, and the structuring of tasks, authority, and rewards (Damanpour, 1992). The difference between the administrative innovation and bureaucratic changes is that administrative innovation is the implementation of a new administrative method which has not been used in an organization before, given that these innovations are the results of organizational decisions which are chosen by managers (Gyedu et al., 2021; Jalali & Sardari, 2015).

2.2 Market performance

Despite the increased number of studies that have been concerned with market performance, there is no uniformly accepted conceptualization and operationalization of the construct (Sousa, 2004). In the broader sense marketing performance (marketplace) has been seen as referring to the relative measurement of a firm's product success in the marketplace. Indeed, market share is deemed a measure of firm's product performance, as product success is created with high market share (Keller & Lehmann, 2003). Similarly, sales volume is also a measure of performance as it reflects the level of direct earnings from customers. This measure is also widely used in the marketing literature (Bronnenberg & Sismeiro, 2002; Julian & O'Cass, 2004; Weerawardena et al., 2006). Indeed, when one focuses on a firm's specific products and examines its market share, sales volume and sales growth, one tends to concentrate on a level more attuned to marketing or marketplace performance as opposed to organizational performance and more in line with the result of creating a

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customer, as the customer buys the firm's products (O'Cass & Ngo, 2007). The notion of firm performance resides in the marketplace strength of a firm achieving the established objectives in the marketplace for its products as evidenced in total sales, profitability, market share, and the like (O'Cass & Weerawardena, 2009). Specifically, total sales and profitability are considered key financial performance indicators, while market share is treated as a non-financial or operational performance indicator that is widely used in strategic marketing (Baker & Sinkula, 1999). For example, total sales are firm's performance indicator as it reflects the level of direct earnings from customers so much so that firms with a high level of customer equity are argued to possess strong brands.

2.3 Hypothesis development

The key reason for innovativeness is the desire of firms to obtain increased business performance and increased competitive edge (Tuan et al., 2016). Companies achieve improved competitive advantage and market share as a result of the level of importance they attach to innovations, which are vital factors for companies to build a reputation in the marketplace and to increase their market share. Metcalfe, (1998) stated that when the flow of newness and innovations desiccates, firms' economic structure settles down in an inactive state with little growth. Therefore, innovation plays a significant role in creating the differences of performance and competition among firms, regions and even countries. For instance, the study by Fagerberg, Mowery and Nelson (2004) revealed that innovative countries had higher productivity and income than the less-innovative ones. OECD reports pointed out that companies that developed innovations in a more decisive way and rapidly, had also more qualified workers, paid higher salaries and provided more conclusive future plans for their employees. In fact, the effects of innovations on firm performance differ in a wide spectrum from sales, market share and profitability to productivity and efficiency (OECD, 2005).

The traditional explanation for the positive relationship between firm level innovation and firm performance rests on Schumpeter (1934)'s work. He argued that when innovative new products are first introduced to the market, they encounter limited direct competition and, as a result, allow firms to enjoy relatively high profits. Over time, these high profits are likely to erode due to imitation and competition, but firms that continue introducing innovative new products may be able to achieve high profitability for a sustained period (Sharma & Lacey, 2004). Like many other scholars, Varis and Littunen, (2010) argued that the ultimate reason for firms to engage in innovative activities is to improve firm performance and success. The impact of innovation on firm performance is also emphasized in Oslo Manual (OECD and Eurostat, 2005). There are few studies in the literature on the relationship between innovation and firm performance. The number of studies based on the classification of innovation according to the Oslo Manual (OECD and Eurostat, 2005) is even fewer. This study aimed to fill this gap in the literature by testing this relationship in the banking sector.

From all theoretical foundation above, we assume a positive relationship between innovation and market performance in the banking sector. The higher the level of innovation activities the greater the level of market performance. And to specify the conceptual framework more clearly, figure 1 shows the analytical framework of this study which is the detailed model of the relationship between innovation and market performance. The analytical framework consists of 1 branch with 4 hypotheses:

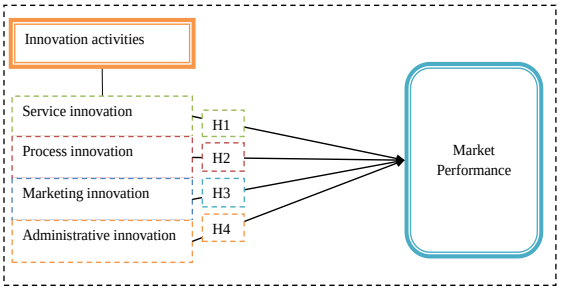
Hypothesis H1: The higher the level of service innovation, the greater of the market performance improvement

Hypothesis H2: The higher the level of process innovation, the greater of the market performance improvement.

Hypothesis H3: The higher the level of marketing innovation, the greater of the market performance improvement.

Hypothesis H4: The higher the level of administrative innovation the greater of the market performance improvement.

Figure 1: Hypothesis development of the effects of innovation on market performance



Source: ***Developed for the study by the authors***

3. Research methodology

3.1 Data and sample

Quantitative research method was employed to determine the relationship between innovation and market performance in the Ghanaian banking sector. A cross-sectional data was collected from 712 customers of 10 banks with universal banking license in Ghana at the time of this study. Convenience sampling technique was employed for the study since it was practically impossible to obtain the sample frame of all customers of 10 banks in Accra, Ghana (Tongco, 2007).

Self-administered questionnaires were used to collect the data from respondents. By using a self-administered questionnaire, respondents could easily respond with the researcher's limited aid. The use of this kind of questionnaire also facilitated data collection. The distribution and collection process lasted for one month. In all, 1000 respondents were approached and 730 participated but 712 valid questionnaires representing 71.2% were used for analysis. The sample size met the requirements suggested by Hair et al. (1999) that a sample size of 200 may be required to ensure appropriate use of maximum likelihood estimation, to generate valid fit measures and to avoid drawing inaccurate inferences.

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Data was collected using a structured questionnaire based on Likert-style five-point rating scale ranging from 5 (strongly disagree) to 1 (strongly agree), which sought to elicit information on innovation and market performance. All the items intended to measure innovation (independent variables) were adapted from previous literature (Lin, Chan, and Chiu, 2010). The dependent variable (market performance) was adapted from (O'Cass & Weerawardena, 2009).

3.2 Data Analysis

3.2.1 Reliability analysis

Cronbach's alpha is a common measure of internal consistency (reliability) of a test or scale. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inner-relatedness of the items within the test (Tavakol & Dennick, 2011). According to George and Mallery (2003), an acceptable reliability score should be 0.7 or higher. Nevertheless, lower thresholds are sometimes used in the literature (Reynaldo & Santos., 1999). In this research, scales which have Cronbach's alpha coefficient greater than or equal to 0.7 were accepted.

3.2.2 Exploratory factor analysis

Exploratory factor analysis is a statistical technique which is used for data reduction and summarization. The primary objectives of an exploratory factor analysis are to determine (1) the number of common factors influencing a set of measures; (2) the strength of the relationship between each factor and each observed measure states (Decoster, 1998). Initially, it is necessary to test the sampling adequacy of factor analysis based on Kaiser-Meyer-Olkin (KMO) measure. When the value of the KMO ranges between 0.5 and 1.0 and Sig. is smaller than 0.5, factor analysis is more appropriate. When the value of the KMO is smaller than 0.5 or Sig. is greater than 0.5, it indicates that factor analysis may not be appropriate.

3.2.3 Regression analysis

Regression analysis is a modeling technique for analyzing the relationship between a real-valued dependent variable Y and one or more independent variables X1, X2, X3,…., Xk (Ragsdale, 2007). The goal in regression analysis is to identify a function that describes the relationship between these variables therefore assessing the impact of each independent variable on dependent variable as well as predicting the change in dependent variable when there is any change in independent variables. In this study, regression analysis was used to establish the relationship between innovation practice and market performance

4. Results and discussion

4.1 Reliability analysis

After reliability analysis, the Cronbach's Alpha coefficients of four dimensions of innovation activities (service innovation, process innovation, administrative innovation, and marketing innovation) and marketing performance are followed by table 1 through reliability analysis, all scales are accepted (which are higher than 0.7). Therefore, they are continued forward the exploratory factor analysis.

Table 1: Reliability analysis (results)

Scale	Cronbach's Alpha
Service Innovation	0.845
Process Innovation	0.745
Administrative Innovation	0.860
Marketing Innovation	0.783
Market Performance	0.738

Source: Field data, 2024

4.2 Exploratory factor analysis

All the KMO values of the innovation activities and market performances are higher than 0.05 with Sig. of 0.00. Therefore, the validity of data for exploratory factor analysis is confirmed. For innovation activities, those scales comprise of 16 variables. After the reliability analysis, one item of process innovation scale was not reliable, therefore, it was rejected. Exploratory factor analysis was conducted with these 15 variables to measure convergence of variables along with components, extracted into 4 components, namely service; process; marketing and administrative.

Table 2: Exploratory factor analysis for innovation activities

	Component			
	1	2	3	4
Service 3	.895			
Service 2	.805			
Service 1	.775			
Service 4	.739			
Marketing 1		.881		
Marketing 3		.771		
Marketing 2		.768		
Marketing 4		.671		
Administrative 4			.787	
Administrative 3			.782	
Administrative 1			.745	
Administrative 2			.616	
Process 3				.761
Process 4				.718
Process 2				.540

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Cumulative%	49%	58%	65%	72%

Rotation converged in 9 iterations.

For the dependent variable, market performances include 3 observed variables, extracted to 1 component

Table 3: Component matrix of market performance

	Component
	1
Market Performance 2	.915
Market Performance 1	.911
Market Performance 3	.880

Extraction Method: Principal Component Analysis.

4.3 Regression analysis

The four dimensions of innovation activities – including service innovation, process innovation, administrative innovation, and marketing innovation are considered as independent variables while market performance is a dependent variable. After the regression analysis, innovation activities explained 55.8% of the variance in market performance, and there is a positive impact of the innovation activities on market performance. More specifically, all the four dimensions of innovation activities (service innovation, process innovation, administrative innovation, and marketing innovation) statistically impacts on market performance for which service innovation contributes the greatest proportion then process innovation, marketing innovation and administrative innovation at the second, third and fourth proportion rate, respectively. Therefore, it is concluded that **H1, H2, H3** and **H4** are accepted.

Table 4. Regression analysis results

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.324	.460		-.704	.482
	Service	.331	.033	.387	10.142	.000
	Process	.273	.037	.272	7.375	.000
	Administrative	.069	.033	.081	2.111	.035
	Marketing	.120	.033	.122	3.667	.000
R Square		.561				
Adjusted R Square		.558				
F−Value		225.661				
P-Probability		.000				

Dependent Variable: Market Performance

4.4 Discussion of findings

The study aims to determine the effect of innovation on market performance in the Ghanaian banking sector. The result shows a positive and significant relationship between innovation and market performance. More specifically, the higher the level of innovation activities, the greater the market performance, which means the more influential the level of service, process, marketing, and administrative innovation activities are, the higher the level of market performance is likely to be. The results showed the overall consistency of findings with the model and previous studies conducted on related topics (Tuan et al., 2016; Simon & Yaya, 2012; Rosli & Sidek, 2013; Atalay et al., 2013; Therrien et al., 2011); Gunday et al., 2011; and Artz, Norman, Hatfield, & Cardinal, 2010). It is argued here that innovation is still crucial for firms to remain competitive. The lack of innovation at the firm level will result in firms losing market opportunities, market share, and earnings potential.

Banks should highly concentrate on service innovation since service innovation has been found in this study to be a chief driver of market performance. More specifically, the more excellent the service innovation, the greater the level of improvement in market performance. This means customers can feel the value of quality service and service innovation from their providers. This finding confirms the findings of prior studies conducted by Dotzel, Shankar, and Berry (2013) about service innovativeness and market performance. It is suggested that firms continuously innovate to build their competence and win sustainable advantage if they hope to be market leaders and satisfy customers even more.

Again, process innovation, as revealed by the findings, had a significant connection with market performance. More specifically, the higher the level of process innovation, the more significant the improvement in market performance. This confirms earlier findings by Valmohammadi (2017).

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Therrien et al., (2011), Gunday et al., (2011) Artz et al., (2010). Process innovation increases sales revenue, market share, efficiency, customer loyalty, and a firm's profitability. It is recommended that management should pursue a strategy to provide incentives for technology transfer from more developed economies in order to promote the adaptation of world-class banking innovations, which will boost process innovations that improve service delivery in the banking sector (Valmohammadi, 2017; Anafarta & Sarvan, 2013).

Furthermore, marketing innovation proved to be a strong determinant of market performance. The existence of a link between marketing innovation and market performance is supported by several authors who believe that marketing innovation is easily perceived by customers, making firms more willing to invest in it (Gordon, 2006). It is suggested that managers adopt innovative marketing strategies to enhance market performance, especially optimizing perceived service quality to meet and exceed customers' expectations. The management of firms must also adopt m-marketing, e-commerce, and e-marketing to improve market performance (Gyedu et al., 2021; Lin et al., 2010).

Lastly, as revealed by the findings, administrative innovation showed a positive relationship with market performance. More specifically, the higher the administrative innovation level, the more significant the market performance improvement. It is suggested that management should ensure that the climate and communication among employees are correctly handled to ensure that the organization's objectives are aligned with those of employees. Managing these internal aspects in the organization can make employees aware of their role in the process of continual improvement of formalized service quality, innovation, and customer service, leading the organization to total quality management and business excellence (Gyedu et al., 2021; Lin et al., 2010).

5. Conclusions

This study has demonstrated that the dimensions of innovation can predict market performance, at least in the Ghanaian banking sector. Service, process, marketing, and administrative innovation activities, respectively, have a significantly positive impact on market performance. More specifically, the higher the level of innovation activities, the greater the market performance, which means the more significant the level of service, process, marketing, and administrative innovation activities are, the higher the level of market performance is likely to be. To improve market performance, banking firms should highly concentrate on service, process, marketing, and administrative innovation activities. These findings have the following implications for academic practitioners and policymakers.

5.1 Research implications

This research confirmed the positive impact of innovation on market performance. It provided empirical evidence of the relationship between innovation and market performance. The study has also widened the scope of applicability of the concept of innovation. Most previous studies concentrated mainly on the manufacturing industry. This study has provided evidence that innovation also works in the service sector. Service innovation, process innovation, marketing innovation, and administrative innovation are critical factors affecting market performance. Therefore, firms should focus on and mobilize resources to improve service delivery, service processes, marketing, and organizational structure. Management should also consider viable innovation basics in science, research, development, and technology. Management should provide continuous training on innovation and new strategies in this area to raise the degree of efficiency of the workforce in the field of marketing. Management should also encourage the spirit of creative risk and not stand against innovation attempts in any of the elements of the marketing mix.

5.2 Limitations and suggestions for future research

This research was conducted in a banking setting excluding Telecommunication, Insurance, Hospitality and Supermarkets. Therefore, it would be helpful to replicate this study in other service institutions. Again, this study examined the effect of innovation on market performance from customer's perspectives. Therefore, future research could examine the effect innovation on market performance from both management and customer's perspectives.

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