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INNOVATION AND CUSTOMER RETENTION IN THE GHANAIAN TELECOMMUNICATION INDUSTRY

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ABSTRACT

The competition within the telecommunication sector is increasing day by day in Ghana and therefore requires the telecom operators to be more adept in their strategic approach to meet the growing demands of customers. Effective innovation is believed to be key in the approach of wining and maintaining customers. This paper examines the effect of innovation on customer retention in the telecommunication industry in Ghana. Data were collected using self-administered questionnaires to 365 customers of 6 telecommunication companies in Accra, Ghana. Descriptive statistics and multiple regression were employed to examine the relationship between the independent and dependent variables. The result shows that there is positive and significant relationship between innovation and customer retention. The study also discloses that service innovation, process innovation, and marketing innovation were the key determinants of customer retention. The study found service innovation to be a significant chief driver of customer retention. The study recommends that telecommunication companies who desire to improve upon the level of customer retention should invest much in service innovation, process innovation, and marketing innovation.

Keywords: Relationship; Customer; Innovation; Customer Retention; Telecommunication Sector; Ghana.

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INOVAÇÃO E RETENÇÃO DE CLIENTES NA INDÚSTRIA DE TELECOMUNICAÇÕES EM GANA

RESUMO

A competição no setor de telecomunicações está aumentando dia a dia em Gana e, portanto, exige que os operadores de telecomunicações sejam mais adeptos em sua abordagem estratégica para atender às crescentes demandas dos clientes. Acredita-se que a inovação efetiva seja fundamental na abordagem de ganhar e manter os clientes. Este artigo examina o efeito da inovação sobre a retenção de clientes na indústria de telecomunicações em Gana. Os dados foram coletados por meio de questionários auto-administrados a 365 clientes de 6 empresas de telecomunicações em Accra, Gana. Estatística descritiva e regressão múltipla foram empregadas para examinar a relação entre as variáveis independentes e dependentes. O resultado mostra que existe uma relação positiva e significativa entre inovação e retenção de clientes. O estudo também revela que a inovação de serviços, inovação de processos e inovação de marketing foram as principais determinantes da retenção de clientes. O estudo considerou a inovação de serviços como um importante motor principal de retenção de clientes. O estudo recomenda que as empresas de telecomunicações que desejam melhorar o nível de retenção de clientes devem investir muito em inovação de serviços, inovação de processos e inovação de marketing.

Palavras-chave: Relacionamento; Cliente; Inovação, Retenção de Cliente; Setor de Telecomunicação; Gana.

INTRODUCTION

Competition within telecommunication industry is getting harder day by day due to globalization, deregulation, increasing global and domestic competition, new technologies, and e-commerce. The firms are competing to each other for customers, market share and long-term survival. Customers are becoming more sophisticated, segmented and demanding, and expect more in terms of customization, newness, quality and price (Stark, 2011). In order to survive in current conditions of market, firms within the industry must enhance their innovation capabilities in order to satisfy market demands and customer preferences to maintain a long-term competitive advantage (Panayides, 2006).

Innovation assists firms to adapt to the global market and to provide customized solutions to consumers. A glance at recent trends of pioneer organizations show that innovation is a necessity for long-term success, growth, sustainable performance, and to survive as the firm's industry (Doyle, 1999; Patel, 1999; Cottam et al., 2001).

Numerous studies have confirmed this assertion. For example, Tidd et al (1997) showed that producers having innovation in higher products and services capabilities could achieve profit two times more than the producers who don't use of innovation.

A handful of studies have tackled the relationship between innovation and customer outcomes, but not customer retention specifically. Among the studies that came close to studying this relationship is Bersali and Guermat (2014), who found that only effective innovations are positively associated with customer loyalty.

Totterdell et al. (2002) found a significant association between innovation and perceived customer benefits. Hu and Huang (2011) also found that innovation capability has a positive effect on customer satisfaction in Taiwanese air cargo services.

However, research on the effect of innovation on customer retention requires further inroads and contributions (Marshall, 2004). In addition, while it is generally agreed that innovation contributes to customer retention, relatively little is known about what dimensions of innovation drive customer retention.

Again, 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 of the studies focused on manufacturing industry and most of these in foreign countries. This leaves a gap in knowledge which needs to be filled. Therefore, there is a need to determine the effect of innovation practices on customer retention in the service industry, especially in telecommunication industry in Ghana. Findings can help the management to better understand what dimensions of innovation drive customer retention and what should be encouraged with a view to increasing customer retention.

Theoretical reference framework

Innovation

The innovation means the creation, development and implementation of a new product, process or service with the goal of improving efficiency, effectiveness or competitive advantage. Innovation had better be capable of being started small, requires first little money, few people and only a small limited mark.

An 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) to the firm, including products, processes and methods that firms are the first to develop and those that have been adopted from other firms or organizations. Innovation in a customer-firm context can be viewed as a new product or services created by the service provider specifically for its customers (Bersali & Guermat, 2014).

Innovation is classified into two types as technical innovation and administrative innovation (Damanpour, 1991). Technical innovations include products, marketing, services, and the technology used to produce products, product sales, or render services directly related to the basic work activity of an organization (Damanpour & Evan, 1984; Daft, 1982).

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 (Damanpour & Evan, 1984). Besides these types, several scholars have identified key dimensions that have been theorized in innovation literature. For example, business model innovations (Kirim, 2007), managerial innovations (Damanpour, 1991), organizational innovations (Huiban & Bouhsina, 1998), and marketing innovations (Higgins, 1995).

Some scholars also discriminate technological innovations covering process and product types from non-technological innovations covering marketing and organizational innovations (Jaskyte, 2011; Elci, 2007).

However, Lin, Chen and Chiu, (2010) proposed the five key dimensions of innovation capability such as product innovation, process innovation, marketing innovation, service innovation and administrative innovation. This study adopts the frameworks proposed by Lin, Chen and Chiu, (2010) 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 five types (product innovation, process innovation, marketing innovation, service innovation and administrative innovation) and they have been linked in this study to customer retention.

Product innovation

Product innovation is the development and introduction of a new product to the market or the modification of existing products in terms of function, quality consistency, or appearance (Liao et al., 2007). Product innovations can utilize new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies.

Product innovation is a difficult process driven by advancing technologies, changing customer needs, shortening product life cycles, and increasing global competition. For success, it must involve strong interaction within the firm and further between the firm and its customers and suppliers (Akova et al., 1998).

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 et al. (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 more hazy effect.

Marketing innovation

A 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 target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing 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).

Service innovation

The organization commitments in different innovative activities to promote the customer satisfaction are after sale services, keeping method instructions, systems to accept orders and innovation in services. With regard to the specifications of services part, the managers should take into account some considerations to increase their success opportunity. The managers should involve the customers from the beginning and approach such a service modeling as possible.

Martin & 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.

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; Gopalakrishnan & Damanpour, 1997). The difference between the administrative innovation and bureaucratic changes is that administrative innovation is the implementation of a new administrative method which hasn't been used in the organization before, given that these innovations are the results of organizational decisions which are chosen by managers (Jalali & Sardari, 2015)

Customer retention

Customer retention is incredibly important for growing a sustainable business in an extensively competitive environment. Marketers are becoming more aware that it is more cost effective to make sure customers never get on the exit path to competitors in the first place and are implementing retention strategies (preemptive and proactive). Preemptive strategies are strategies employed by marketers before the recognition of defection signals from customers and proactive strategies are those applied when the recognition of initial defection signals appears; such as complaints in service and reduced usage of services.

Research has revealed that, organizations that succeed in this ever growing competitive environment are those who carefully manage their customer base by augmenting their basic products with added-value services. Thus businesses succeed by getting, keeping and growing customers because customers are the only reason why business exists.

Research has proven that higher retention results to higher market share, which in turn results to higher revenues. Numerous studies have confirmed this assertion. For example, (Ndubisi, 2003; Rosenberg & Czepiel, 1983) have shown that the cost of serving one loyal customer is five to six times less than the cost of attracting and serving one new customer.

Getting new customers by taking them away from a competitor is usually costly than retaining current customers by really satisfying their needs. Also, Reichheld & Sasser (1990) found that when a company retains just 5 per cent more of its customers, profits could increase by 25 per cent to 125 per cent. Furthermore, Kim and Cha (2002) assert that by reducing customer defections by 15 per cent firms can improve their profitability by 25 to 85 per cent. Due to these, many organizations have focused on their most valuable customers.

METHOD

Quantitative research method was employed to determine the relationship innovation and customer retention in the Ghanaian telecommunication sector. A cross sectional data was collected from 365 mobile phones users in Accra, 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 mobile phones users in Accra, Ghana (Tongco, 2007).

Self-administered questionnaires for mobile phones users were used to collect 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 two weeks. In all, 500 respondents were approached and 400 participated but 365 valid questionnaires representing 73% 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.

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 capability and customer retention. All the items intended to measure innovation capability (independent variable) were adapted from previous literature (Lin, Chan, and Chiu, 2010). The dependent variable (customer retention) was adapted from Ndubisi, (2007).

The data was analyzed using descriptive statistics such as mean and frequencies, correlation and multiple regressions. The correlation and multiple regressions were used to analyze the relationship between innovation and customer retention.

RESULT ANALYSIS

Descriptive Statistics

Table 1 presents descriptive statistics of the respondents. According to the result, 51.5% of the respondents were males whiles 48.5% were females. Fifty point seven percent (50.7%) of the respondents were between 15-24 years, 31.2% were between the ages of 25-34 years, 10.4% were between the ages of 35-44 years, 3.8% were between the ages of 45-54, and 3.8% were between the ages of 55 and above. The implication is that the telecommunication companies have a lot of young people who may continue to mine business for a long.

With regard to the educational background of the respondents, 22.5% of the respondents were either Secondary/High school leavers or holds a diploma certificate. On the other hand, 62.5% representing 229 respondents were first degree holders, while 54 of the respondents were postgraduate degree holders. The mobile phone users have varied qualification indicating that the result of the study represents various levels of education.

Concerning the telecommunication company that each respondent subscribe to, the result reveals that 128 of the respondents subscribe to MTN. 92 of the respondents use Tigo, 85 of the respondents use Vodafone, 36 of the respondents use Airtel, 12 of the respondents use Glo, and 12 of the respondents use Expresso. The majority of the respondents use MTN, this is not shocking revelation because MTN is the market leader of the Ghanaian Telecommunication industry.

Table 1. Background information of mobile phone users

Background information	Frequency	Percentage (%)
Gender mobile phone users		
Male	188	51.5
Female	177	48.5
Total	**365**	**100.0**
Age of mobile phone users		
15-24	185	50.7
25-34	114	31.2
35-44	38	10.4
45-54	14	3.8
55 and above	14	3.8
Total	**365**	**100.0**
Educational background		
Secondary and Diploma	82	22.5
Degree	229	62.7
Postgraduate	54	14.8
Total	**365**	**100.0**
Mobile network used by respondents		
MTN	128	35.1
Tigo	92	25.2
Vodafone	85	23.3
Airtel	36	9.9
Glo	12	3.3
Expresso	12	3.3
Total	**365**	**100.0**
Source: Field data, 2017		

Relationships between innovation and customer retention

An attempt was made to determine the relationship between innovation and customer retention. A regression analysis of ANOVA was calculated, customer retention as a dependent variable and innovation as independent variable. Table 3 gives the picture of what was obtained. It can be seen from the table that, with a significance of 0.000 ($P \leq 0.000$), an F-statistic value of 89.415 was obtained implying that there is a significant relationship between innovation and customer retention. In other words, innovation of the telecommunication companies influenced customer retention.

To buttress this argument, Pearson Correlation test was conducted and the results are shown in Table 2. It is explicit from the table that, testing at 1% level of significance, a strong positive Pearson correlation coefficient of 0.700 was obtained between innovation and customer retention. This implies that an increased attention paid to innovation could significantly increase customer retention.

Table 2: Correlation between innovation and customer retention

	Pearson Correlation ®	Sig
Innovation	0.708	0.000
Source: Field data, 2017		

A regression model was also computed to determine how the five dimensions on innovation impact on customer retention. The results are depicted in Table 3. An R2 of 0.555 was obtained indicating that all five dimensions of innovation jointly determine 55.5% of customer retention. Similarly, an attempt was made to estimate how the individual variables contribute to customer retention. The findings revealed that amongst the five dimensions of innovation, service innovation is the chief driver of customer retention, followed by process innovation, and marketing innovation respectively. The other variables such as product innovation and administrative innovation appear not to exert too much significance in determining retention.

Table 3 - Coefficients (Innovation capability and Customer retention)

Model		Unstandardized Coefficients		Standardized Coefficients	t	
		B	Std. Error	Beta		Sig.
1	(Constant)	-0.206	0.650		−0.316	0.752
	Product	0.022	0.027	0.039	0.816	0.415
	Process	0.231	0.055	0.235	4.213	0.000
	Administrative	0.067	0.046	0.080	1.449	0.148
	Marketing	0.112	0.047	0.115	2.365	0.019
	Service	0.339	0.046	0.397	7.360	0.000
R		0.745				
	R Square	0.555				
F–Value		89.415				
	P-Probability	0.000				
	No. of Observation	365				
	Source: Field data, 2017					

DISCUSSIONS

The purpose of the study is to determine the effect of innovation on customer retention in the Ghanaian telecommunication industry. The result shows that there is positive and significant relationship between innovation and customer retention. In other words, the study found innovation to be a key determinant or antecedent for customer retention. The resultant regression indicated a strong relationship between innovation and customer retention. In other words, 55.5% of the retention levels of the customers were explained by innovation of the firms. The results showed the overall consistency of findings with the model and previous studies conducted on related topics (Simon & Yaya, 2012; Rosli & Sidek, 2013; Atalay, Anafarta & Sarvan, 2013; Therrien et al., 2011; Gunday et al., 2011; and Artz et al., 2010).

It is argued here that innovation is still important 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. Again, inadequate innovation will likely experience a declining competitive position in the market and, ultimately, weakening performance (Auken & Madrid-Guijarro, 2008). Auken and Madrid-Guijarro, (2008) also asserted that firms that develop innovative practices will be better positioned against their competiors in the market and have the opportunity to achieve strong customer retention.

The result also disclosed that process innovation, marketing innovation and service innovation were significant in explaining retention of the customers of the mobile telecommunication operators. Telecommunication should highly concentrate on service innovation since service innovation has been found in this study to be a chief driver of customer retention. This means customers can feel the value of quality service and service innovation from their providers. Service innovation has a direct effect on customer retention when the innovation was applied to enhance the quality of service.

This finding confirms the findings of prior studies conducted by Dotzel, Shankar and Berry, (2013) about service innovativeness and customer retention. The findings of the study add to findings of who established that service innovation was oriented toward improving the features and functionality of existing services or creating wholly new services and in this way firm can reinforce their competitiveness and increase their profitability. It is suggested that firms must innovate their service continuously to build the competence and win sustainable advantage if they hope to be leaders in market and satisfy customers even more.

Marketing innovation also proved to be a strong determinant of customer retention. The existence of a link between marketing innovation and customer retention is supported by several authors who believe that marketing innovation is easily perceived by customers, therefore, making firms more willing to invest in it (Gordon, 2006).

It is suggested that managers should adopt innovative marketing strategies to enhance customer retention, especially with regard to optimizing perceived product and service quality to meet and exceed customers' expectations. The management of the firms should also adopt m-marketing, e-commerce and e-marketing to improve the firm's performance in the market.

Process innovation, as revealed by the findings, had a significant connection with customer retention. This confirms earlier findings by Therrien et al., (2011), Gunday et al., (2011) Artz et al., (2010); Cho and Pucik, (2005), Calantone et al., (2002), Robert, (1999), Han et al., (1998) and Geroski et al., (1993). Thatcher and Oliver (2001) believed that investments in technology that reduce fix costs lead to higher profits and improve the productivity of the firm.

Laforet and Tann, (2006) also established that process innovation contributes to increase in sales revenue, market share, efficiency, customer loyalty and firm's profitability. It is recommended that the management should pursue a strategy to provide incentives for technology transfer from more developed economies in order to promote adaptation of world class telecommunication innovations which will boost the process innovations that improve service delivery in the telecommunication sector.

Product innovation and administrative innovation, as revealed by the findings, showed a rather negative relationship with customer retention. This means that respondents do not consider product innovation and administrative innovation as a primary factor in determining customer retention. These are not surprising effects taking into account some results found by Pan and Zinkhan (2006) who found that the willingness to innovate of a company did not necessarily turn into positive customer satisfaction and customer retention results. However, the importance of product innovation and administrative innovation should not be degraded while not emphasizing them as a primary factor contributing to customer retention.

It is suggested that management should ensure that the climate and communication among employees are dealt properly in order to ensure that the organization's objectives are aligned with those of the employees. Managing these internal aspects in the organization can make employees aware of their role in the process of continual improvement of formalized product quality, innovation and customer service, leading the organization to total quality management and business excellence.

CONCLUSION

This study has demonstrated that the dimensions of innovation can predict customer retention, at least in the Ghanaian telecommunication sector. Therefore, this study has proved that customer can be retained by paying a close attention to issues of process innovation, marketing innovation and service innovation.

Moreover, the objectives of the research have been achieved. The study revealed that there is a positive and significant relationship between innovation and customer retention. In short, the study found process innovation, marketing innovation and service innovation to determine the retention of the customer.

The positive sign of the estimates shows that the greater the extent of these variables, the higher the level of customer retention. To sum up, telecommunication companies that invest much in process innovation, marketing innovation and service innovation would enhance the level of customer retention.

Theoretically, the outcome of this research provides empirical evidence for the effect of innovation on customer retention in telecommunication sector. This study adds value to the literature by empirically linking a more comprehensive list of determinants to the dependent variable. The study has also widened the scope of applicability of the concept of innovation, most of past studies concentrated mostly on common manufacturing industry, this study has provided evidence that innovation also works in service sector.

As for the managerial implications, management of telecommunication companies who desire to improve on customer retention should invest much of the company's resources into process innovation, marketing innovation and service innovation. This research was conducted in a telecommunication setting excluding Banking, 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 customer retention from customer's perspectives. Therefore, future research could examine the effect innovation on customer retention from both management and customer's perspectives. Studies could also be conducted in other regions or cities in Ghana, and lager sample sizes could be considered.

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