Nigerian Journal of Management Studies
Vol. 18, No. 1, 2018, 12-25

Analysis of Consumer Brand Loyalty among Mobile Phone Users in Nigeria Higher Institutions: Markov Chain Approach (Case Study: University of Lagos)

By

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Abstract
This study examines the consumer brand loyalty of a mobile phone brands among the students of University of Lagos in Nigeria using Markov Chain techniques. The methodology of the article was designed by collecting data through a well-designed questionnaire and administered among 500 students of the institution. The analysis was performed using a statistical package for social science and R-Code software. The research finding shows that students have brand loyalty of 99% with Acer phone brand, but they will transit in future to Apple Iphone and Samsung products with about 48% and 28% respectively. This is due to the need for more quality phone, followed by latest phone model (28%) and the use of latest application features with 30% and 23% of the total respondents respectively. The study has established how brand mobile phones in relating to the ability of inbuilt features have influence on customer loyalty and transition to another brand of phone. Thus, existing phone manufacturers should increase focus on acquiring and retaining loyal customers in other to bring about repeat purchase, assured future revenue and protect the consumer based on the competition.

Keywords: Brand-Loyalty**,** Customer**-**Loyalty, Markov Chain

1.0 Introduction

In developing countries, the sales of telecommunication devices (Phone) have become extremely competitive due to liberalisation of telecommunication system to speed up the process of economic growth and its ability to bridge the technology and infrastructure gap that exists in the developing world (The University of Scranton, 2018). The mobile economy contributed an estimated $2.4 trillion to the international economy in 2013, representing about 3.6% of global gross domestic product. This number includes more than 10 million jobs created. Not only that, but the size of the mobile economy is growing at an aggressive pace, with estimates that it could contribute as much as 5.1% to global GDP by 2020 (GSMA, 2014). Nigeria, a developing country is not exempted as new phone products keep entering the market. The change of pattern and signs of market in transition are driving the mobile telecommunication devices sales efforts and intensifying competition between mobile companies. Mobile telecommunication devices producers are coming to a full realisation of the importance of a customer-oriented business strategy as a condition for sustaining their competitive edge and maintaining a stable profit level, and, indeed, for their survival (Cherroun, 2014). When the number of producers has reached its peak, creating and securing new customers is not only difficult but also costly in terms of marketing (Kima, Parkb, & Jeonga, 2004). Hence, it is becoming an industry-wide belief when considering the competitive marketing environment that the best core marketing strategy for the future is to try to differentiate them from another, and retain existing customers by heightening customer loyalty and customer value. This can be achieved through the delivery of high service quality.

The concept of consumer loyalty has been recognised as an important paradigm in the strategic marketing planning literature for at least four decades (Howard and Sheth, 1969). This offers an important basis for

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developing a sustainable strategy that can be realized through marketing efforts (Dick & Basu, 1994). In the past, companies mainly focused on trying to snatch customers from their competitors (Mark, Grahame & Kathy, 2003). But recently, marketing practitioners and scholars have shifted the focus towards keeping already existing customers instead of acquiring new ones. This is as a result of the fact that, acquiring a new customer is anywhere from 5 to 25 times more expensive than retaining an existing one (Gallo, 2014). The marketing practitioners do not have to spend time and resources going out and finding a new client, instead they keep the one they have happy.

Customers became a Centre for all marketing activities due to increased competition for greater market share (Arokiasamy, 2013). The achievement of a firm depends largely on its ability to attract the consumers towards its brands. Hence building loyalty with key customers is a core marketing objective that must be shared by key players in all industries catering to business customers (van Haaften, 2017). This can be achieved through the following strategic imperatives: focusing on key customers; proactively generate high level of customer satisfaction with every interaction; anticipating customer needs and respond to them before the competition does; Building closer ties with customers; and creating a value perception.

Customer loyalty in marketing is concerned about consumer repetitive or sequence purchasing of a product produced by the same company instead of a substitute product produced by a competitor. It is an active or proactive relationship with a customer (Ganiyu, Uche & Elizabeth, 2012) which can be achieved by passive customer condition (customer satisfaction). Customer loyalty is also viewed as unconditional commitment and a strong relationship with the brand, which is not likely to be affected under normal circumstances (Khan and Mahmood, 2012), and often based on perception as being the superior product among the choices available over certain period or long time. It is the extent to which customers buy or use a service and their future purchasing intentions (Jones, 1996; Yoo & Bai, 2013), and it is measured by taking into consideration customers' preference of a product, frequency of purchase, total amount of purchase, and propensity of switching brands (Yoo & Bai, 2013) according to a school of thought, using only one indicator –willingness to recommend (Reichheld, 2003).

Customer loyalty is important for several reasons. It reduces marketing costs and create benefits such as reducing the cost of production because the sales volume is higher (Chaudhuri and Holbrook, 2001), It also increases business profitability by using premium pricing that will increase profit margins (Kabiraj and Shanmugan, 2011), increased market share (Gounaris and Stathakopoulos, 2004), create competitive advantage in the market (Iglesias et al, 2011), and recommendation of the products by loyal customers to member of the public they like. Customer loyalty plays an important role in the profitability of an organisation; it can lead to a significant improvement in the profitability of a business with a little increase in loyal customers (Reichheld & Sasser, 1990).

Building customer loyalty is no longer a choice for product manufacturers but vey essential. It is the only way to build sustainable competitive advantage as marketing competition becomes fiercer (Narteh & Kuada, 2014; Bansal & Gupta, 2001). It can only continue as long as the customer feels they are receiving better value than they would obtain from another supplier McIlroy and Barnett (2000). According to Kandampully and Duffy (1999), a customer's interest in maintaining a loyal relationship is depended on the firm's ability to anticipate customer's future needs and offering them before anyone else. Hence, businesses and marketing practitioners have to put-forth significant effort to facilitate customer loyalty in other to succeed in the competitive market. Efforts must also be made by product producers to understand the needs of their customers and try to satisfy those needs to retain the loyalty of their customers. They need to persuade potential customers that their product has a significant advantage over other products to justify consistent procurements of the product, and also attempt to influence brand loyalty developed for a product to other products offered by the company. The hope is to create brand loyalty for as many products as possible.

Keeping the right customers is valuable, and can be measured using customer churn rate metrics in order to evaluate the underlying health of a firm, and also to understanding whether the company is retaining customers or not. When a consumers switch from one brand to another, it established a picture of likely

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brand switching behaviour. If the consumer's tendency of switching is known, the market can be modeled to indicate future market share and the relative positioning of the competing brands (Rajkumar & Chaarlas, 2012).

Today, the consumer's tendency to switch among brands in the market of product brand cannot be known in advance. This has created a great problem for management of the manufacturing firm in order to determine their product brand share in the market. Two approaches to the study of brand loyalty have dominated marketing literature. The first is an instrumental conditioning approach, which view consistent purchasing of one brand over time as an indication of brand loyalty. Repeat purchasing behavior is assumed to reflect reinforcement as a strong stimulus to response link. This approach uses probabilistic models of consumer learning to estimate the probability of a consumer buying the same brand again, given a number of past purchases of that brand. This is a stochastic model rather than a deterministic model of consumer behaviour, as it does not predict one specific cause of action. Rather, the prediction is always probabilistic in nature.

The second approach is based on cognitive theories. Some researchers believe that behaviour alone does not reflect brand loyalty since loyalty implies commitment to a brand that may not be reflected by just measuring continuous buying behaviour pattern. Several researchers have made distinction between brand loyalty (in terms of repeat purchasing), and brand commitment (implying some degree of high involvement). Therefore, this study consider the observed behaviour of repeating purchase of the same brand by applying an operation research tool for examining the transition movement or forecasting long term behavior of objects over time (Markov Chains) so as to determine the intensive transitional probabilities of customer brand loyalty from one brand of mobile phone to another. The study also determines the market share of the mobile phone brand in the market among its competitor. These probabilities will assist marketing management in strategic marketing planning by comparing the intensiveness gained in a certain period of time with product life cycle, and also make the situation under control by taking corrective action.

2.0 Literature Review

Customer loyalty has been extensively researched in various industries in the marketing literature. Several studies have looked at customer loyalty across several industries (Rasheed & Abadi, 2014**),** some study linkage between customer satisfaction and customer loyalty in the manufacturing sector (Tweneboah-Koduah & Duweh Farley, 2016), while there seems to be a low study regarding telecommunication devices (Mobile Phones) in Nigeria on this concept.

The importance of customer satisfaction and customer loyalty cannot be estimated in today's competitive business environment (Tweneboah-Koduah & Duweh Farley, 2016) especially in marketing telecommunication devices (phones) in Nigeria. Hoffman and Bateson (2002) found that customers' perception of service quality is very important for managers to compete in the market, and also the key to increasing service quality according to customers' expectations in the marketing sector (Zairi, 2000). Hence, service quality shows the organization's ability to meet customers' desires and needs (Hanson, 2000). However customer satisfaction alone cannot achieve the objective of retaining customers; since satisfaction is a passive customer condition; whereas, loyalty is an active or proactive relationship with a customer (Ganiyu, Uche, & Elizabeth, 2012) as cited in Tweneboah-Koduah & Duweh Farley, (2016). Satisfaction alone is not necessarily a guarantee of loyalty according to Storbacka and Lentinen (2001) and does not assure repurchase from a customer, but plays a very important role in achieving customer loyalty (Yuen & Chan, 2012). Loyal customers have a tendency to buy more of the product, stay longer with the manufacturer, and encourage others to become customers (Bain Brief, 2016). Highly satisfied customers show stronger signs of loyalty through their behaviour and attitude.

Jones, Motherbaugh & Betty (2002) introduce switching barrier as a factor for customer loyalty in their study when they realised that the customer satisfaction is not enough in some cases to influence customer

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loyalty. They realised that switching barrier plays the role of an adjustment variable in the interrelationship between customer satisfaction and customer loyalty (Lee & Cunningham, 2001).

Oliver (1999) proposed four categories of customer loyalty based on the assumption that the consumers first process information to form beliefs, use those beliefs as the basis for attitudes and then make behavioural decisions based on relative attitude strengths.

Customer loyalty was viewed in some studies from three schools of thought (Bove, Pervan, Beatty & Shiu, 2009): attitudinal (an emotional commitment towards a brand) and measures loyalty in terms of consumer's strength of affection towards the brand (Brunner, Stocklin & Opwis, 2008); behavioral (based on what the consumer does instead of customer thinking) (Dick & Basu 1994), and measures customer loyalty in terms of actual consumption, repeat purchase, duration, frequency, proportion of market share, and word-of-mouth recommendations (Jones, 1996); and composite (combination of both attitudinal and behavioural variable), which implies that loyalty cannot be described by just considering only behavioural or attitudinal loyalty (Yoo & Bai, 2013). Reichheld (2003) in his study stated that loyalty can be measured using only one indicator –willingness to recommend, instead of taking into consideration customers' preference of a product, frequency of purchase, total amount of purchase, and propensity of switching brands according to this school of thought (Yoo & Bai, 2013).

In the study conducted by Reichheld and Sasser (1990), it was found that a 5% increase in customer retention resulted in a 12.5% increase in profitability, which implies that a little increase in loyal customers can lead to a significant improvement in the profitability of a business.

As cited in Tweneboah-Koduah & Duweh Farley (2016), factors influencing customer loyalty are identified to be cultural anthropology (Schouten & McAlexander 1995) and consumer socialization (Olsen, 1993), and are categorized into two groups: internal factors (including the products, service quality, promotion mix, and costs), and external factors (including switching costs, situational factors, perceived value, satisfaction, commitment, and trust (Yoo & Bai, 2013). They emphasis that, a product that creates value or extraordinary experience for customers becomes a loyalty enabling brand. The cost refers to the sacrifice the customers have to make to acquire a product or service.

Ahmed &Buttle (2000) are of the opinion that a defensive strategy which strive to retain existing customer is more important than an aggressive one which expands the size of the overall market by inducing potential customer. This can assist the company to maintain a stable profit level when the subscription level has reached the peak, the market is measure, and the competition is fierce.

2.1 Brand as Chain

A brand chain behave as a Markov chain in which states space (brands) and the transition matrix (transition probabilities) represent the likelihood of consumers changing from one brand to another. The common noticeable indicator of consumer brand loyalty to a product(s) is the consumer repetitive of purchase pattern. A probability tree in Fig 1 gives pictorial sample representation of consumer(s) repetitive purchasing pattern among products. In the tree diagram, the market consists of three products identified as P, Q and R, at period I, all consumers are in one of three positions; and the second period (period II), and consumers in position P have the option of continuing with the same brand or switching to brands Q or R. Similarly for consumers in position Q, they also have options of continuing with the same brand or switch among brand R or P, and so on. The transitional movement from period I to II is represented by probability tree-branch process below.

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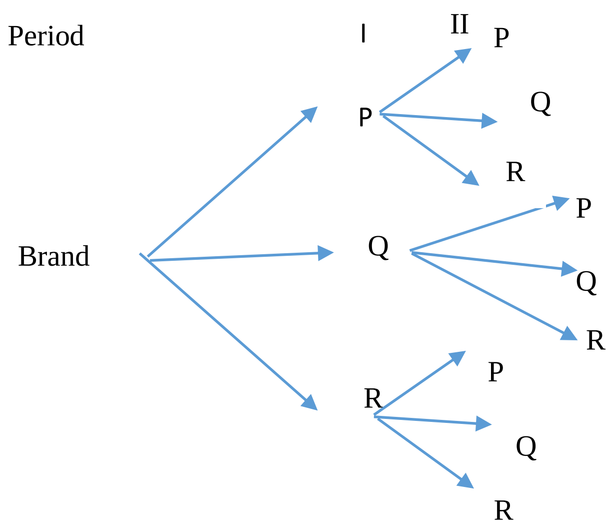

Figure 1: Branch tree transition probabilities of customer brand

3.0 Materials and Method

3.1 Data for the study

This study was conducted among the undergraduate and postgraduate students in University of Lagos, Lagos, Nigeria. A representative adaptive questionnaire separated into section A and B were developed through which information on the satisfaction derived from the features attached to each type of the mobile phone are gathered. The section A contains information about demographic, status, educational level and income level and allowances description while section B is furnished with 15 questions (open-ended and closed-ended questions) relating to awareness of mobile phone brand, brand features, current usage, substitute, reason for switching, future usage, and some important information's relating to the study. The features of each of this mobile phone are clearly stated for easy description and recognition of the phone. These special features of each of the mobile phone are attracted with different weight for proper evaluation of the phone product. The questionnaires were randomly distributed for administering among university of Lagos students (undergraduate and post-graduate students) in some strategic areas of faculties and at the student hostels. The student loyalties are examined towards their mobile phones brand using stratified sample method. This gives the phone users the opportunity to express their trade-offs among the product features. Owing to the large number of students involved, cost effect, accessibility, region, and time constraint, the study employed a survey design with a sample of 500 respondents in order to obtain a well-represented population result that is sufficient to provide reliable information about the phone users and the phone products. After administering the questionnaires, market research rules of thumb were applied with regard to statistical sample size and accuracy. A number of preference response which reflect the trade-offs of each respondent were derived from the survey data. These responses was captured onto SPSS file for analysis and further analysis was carried out with the use of R-Code statistical software to transformed the data into transitional matrix that formed the basis of the Markov Chain process model. The results were used to measure how buyers of the mobile phone choose among the competing products and how their choices are expected to change as product features and/or prices varied.

3.2 Method

Markov chain

A discrete time Markov Chain is a sequence of random variables $X_0, X_i, \ldots, X_t$ characterized by the Markov property also known as memoryless property. This Markov property states that the distribution of the

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forthcoming state X_{t+1} depends only on the current state X_t and not on the previous state $X_0, X_i, \dots, X_{t-1}$. Consider customer repeated-purchase power experiment in market-research of a brand product, if the probabilities of the outcomes of the customer purchase the same brand or brand jumping depends only on the brand purchase today's (currently purchase brand) and not on past brand purchase then the customer behavior is Markov chain. The Markov-chain given below

$$P(X_{t+1} = x_{t+1} \backslash X_0 = x_0, X_1 = x_1, \dots, X_t = x_t) =$$

$$P(X_{t+1} = x_{t+1} \backslash X_t = x_t); \qquad (t = 0,1, \dots)$$

Is a chain that has Markovian property and the Markovian property stress that given the present (or preceding) state, the conditional probability of the next state is independent of the past state. The conditional probabilities are named as transitional probabilities of Markov chain model and represent as $P_{ij}^{(n)}$; explain the process that i state will be in j state at n-step transition. Below is the transitional probabilities matrix at n-step, $S = \{S_n, S_1, \dots, S_m\}$; known as the state space variables of Markov-chain.

$$P^{(n)} = \begin{array}{cccccc} & S_0 & S_1 & \cdots & S_m \\ S_0 & P_{00}^{(n)} & P_{01}^{(n)} & \cdots & P_{0m}^{(n)} \\ S_1 & P_{10}^{(n)} & P_{11}^{(n)} & \cdots & P_{1m}^{(n)} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ S_m & P_{m0}^{(n)} & P_{m1}^{(n)} & \cdots & P_{mm}^{(n)} \end{array}$$

and this hold: $\sum_{j=0}^{m} P_{ij}^{(n)} = 1 \qquad i = 1,2, \dots; n = 0,1, \dots$

Each entry $\{P_{ij}\}_{i=1,j=1}^{i=10,j=10}$ represent the probabilities of students switching from one brand of mobile phone to another brand that constitute to brand loyalty. The probability of the steady-states (long run term behavior) can be determined using the expression below:

Let v be a vector probability, where $v = \{v_i, v_2, v_3, \dots, v_{10}\}$. Then the steady-states occur when

$$v = vP \qquad where\ P\ is\ the\ transitional\ matrix.$$

The vector v which is called balance vector can also be referred to as market share of mobile phone among the students is given in the table 2.0 below
In the above Markov-chain model, consider the state space variable as the types of mobile phone's use by the respondent presently and in future. Then one can predict or forecast for the market share of each brand of mobile phone among University of Lagos undergraduate students as the brand with the most loyalty among others. After the collection of the administered questionnaires; the analysis was carried-out using combination of Statistical Package for Social Science and R-Code.

4.0 Results and Discussion

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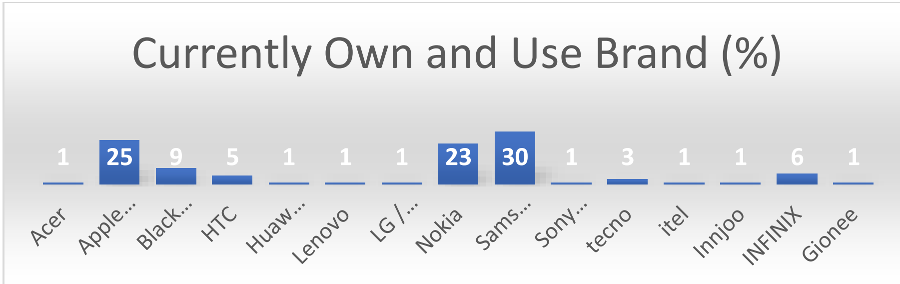

Figure 2: Currently Own and Use Mobile Phone Brand in Percentage.
Source: Researcher Survey 2018.

The figure 2 above depicts the frequency distribution in percentage of average number of brand of phone currently own and use by respondents. Out of 500 respondents, 30% are currently owned and use Samsung brand, while 25%, 23%, 9%, 6%, 5%, 3%, and 1% owned and use Apple iphone, Nokia, Blackberry, Infinix, HTC, Tecno, and others respectively.

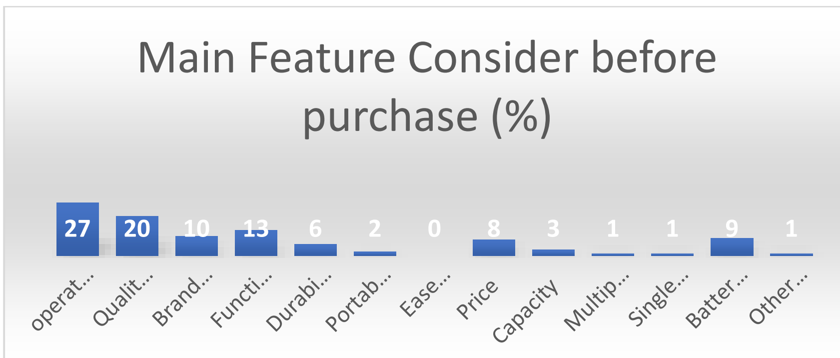

Figure 3: Main Feature Considered Before Purchasing A Mobile Phone In Percentage.
Source: Researcher Survey 2018.

The above chart (figure 3), depicts the percentage of brand features considered by the respondents before purchasing brand of a phones. This indicate from the chart that on average, operating system of a phone with 27%, quality of the phone with 20%, and functionality of the brand are highly considered before purchasing any brand of phone. While brand name, battery life span, price of the phone, durability, capacity of the phone, and portability of the phone with 10%, 9%, 8%, 6%, 3% and 2%respectively are equal considered.

Figure 4: Class of Mobile Phone Own and Use in Percentage.
Source: Researcher Survey 2018.

The figure 4 above shows the frequency distribution in percentage of the average number of class of phones own and use by respondents. Out of 500 respondents, 76% are brand new phones, while 24% used phones.

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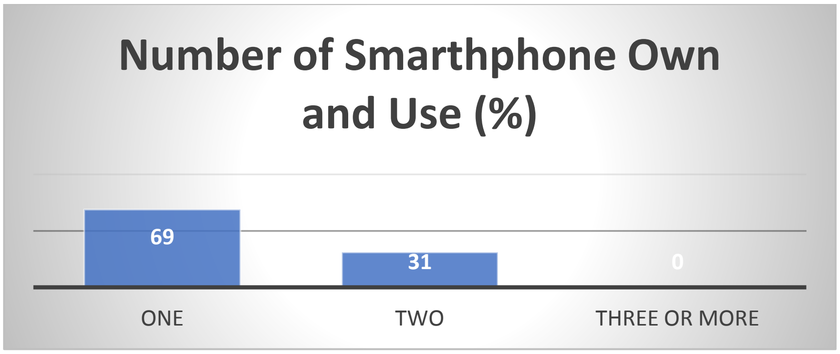

Figure 5: Number of smartphone Own and Use In Percentage.
Source: Researcher Survey 2018.

The bar chart in figure 5 above shows the number of phone owned and use by respondents. 69% of the respondents owned and use only one phone, while 31% Owned and use two phones at the same time.

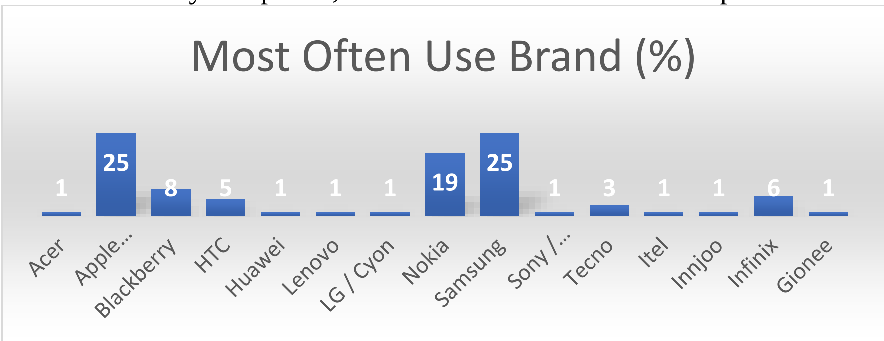

Figure 6: Most Often Use Band in Percentage.
Source: Researcher Survey 2018.

The bar chart in figure 6 above shows the percentage of the brand phone often use by respondents. Out of 500 respondents, 25% often use Apple iphone and Samsung brand, while 19%, 8%, 6%, 5%, 3% and 1% are using Nokia, Blackberry, Infinix, HTC, Tecno, and others respectively.

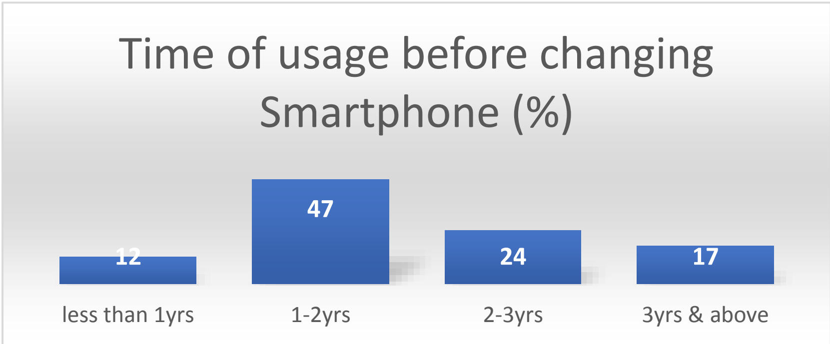

Figure 7: Year of Usage before Changing the Smartphone in Percentage.
Source: Researcher Survey.

Figure 7 shows that on average 12% of the respondents make use of their smartphone for less than 1year, 47% use their phones for 1-2years, while 24% and 17% make use of their phone between 2-3years and 3years and above respectively.

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Table 1: Transition Probabilities of Mobile Phone Brand among Students of University of Lagos

	Acer	**Apple iPhone**	**Blackberry**	**HTC**	**Huawei**	**Lenovo**	**LG / Cyon**	**Nokia**	**Samsung**	**Sony / Sony Ericsson**
Acer	0.990	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apple iPhone	0.024	0.670	0.000	0.000	0.000	0.000	0.000	0.024	0.258	0.024
Blackberry	0.088	0.559	0.324	0.000	0.000	0.000	0.000	0.000	0.029	0.000
HTC	0.000	0.217	0.000	0.566	0.000	0.000	0.000	0.000	0.217	0.000
Huawei	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000
Lenovo	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000
LG / Cyon	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000
Nokia	0.000	0.683	0.000	0.045	0.000	0.027	0.027	0.000	0.218	0.000
Samsung	0.000	0.428	0.000	0.008	0.000	0.024	0.024	0.000	0.492	0.024
Sony / Sony Ericsson	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Source: Researcher Survey.

Table 1 above shows the transition probabilities matrix (brand switching matrix) results in percentage of the mobile phone brands. The matrix with ten spaces, having sum of each row to be equal to 1, is obtained by cross-tabbing the current brand users against the future brand consideration by the respondents. The transition of the mobile phone users is depicted in the diagram in figure 8 below. The transition diagram and matrix did not capture others mobile phone brand that were listed in questionnaire but not selected by the respondents.

S= {Acer, Apple iPhone, Blackberry, HTC, Huawei, Lenovo, LG/Cyon, Nokia, Samsung, Sony/Sony Ericson}.

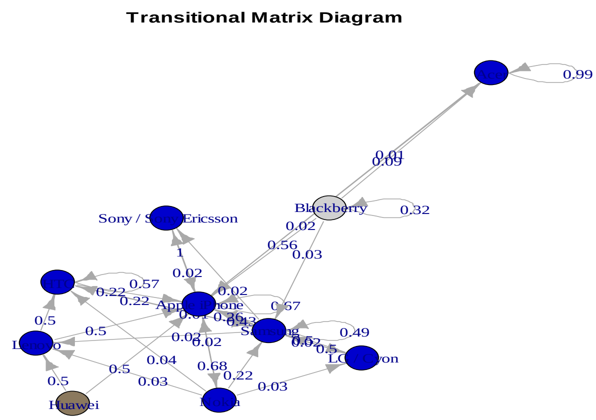

Fig 8: Transitional Diagram of Brand Switching (Source: Research Survey)

Table 2: Brand Preferences of the Mobile Phone.

Brand Name	Weight (%)
Acer	59.1
Apple iPhone	24.6
Blackberry	0.00
HTC	0.70
Huawei	0.00
Lenovo	0.34
LG / Cyon	0.34
Nokia	0.59
Samsung	13.4
Sony / Sony Ericsson	0.91

Brand Loyalty (Source: Research Survey 2018)

Table 2 above depicts the brand loyalty of the mobile phone used in the course of the study. The result values on the table shows that Acer mobile phone brand with highest value of 59.1% has the highest loyalty when compared with other selected mobile phone brands on a long period of time, followed by Apple iphone and Samsumg with 24.6% and 13.4% respectively. This indicates that University of Lagos students are more loyal towards Acer mobile phone brand than others brands. This result is depicted in the transitional matrix table in table 1 above. The transition matrix value in row one indicated that 99% of Acer brand user preferred to continue using the brand in future, while the remaining 1% had the aim of switching to others brand in future.

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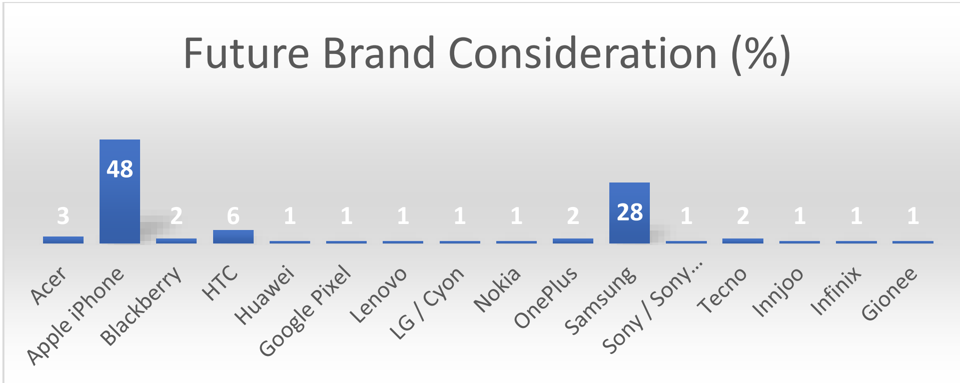

Figure 9: Future Brand Consideration in Percentage.
Source: Researcher Survey 2018.

The above chart (figure 9), depicts the percentage of brand users that will switch in future if they are privileged to another brand. This indicate from the chart that on average, of all the respondents, 48% and 28% of the brand users will transit or continue with Apple iphone and Samsumg brand respectively.

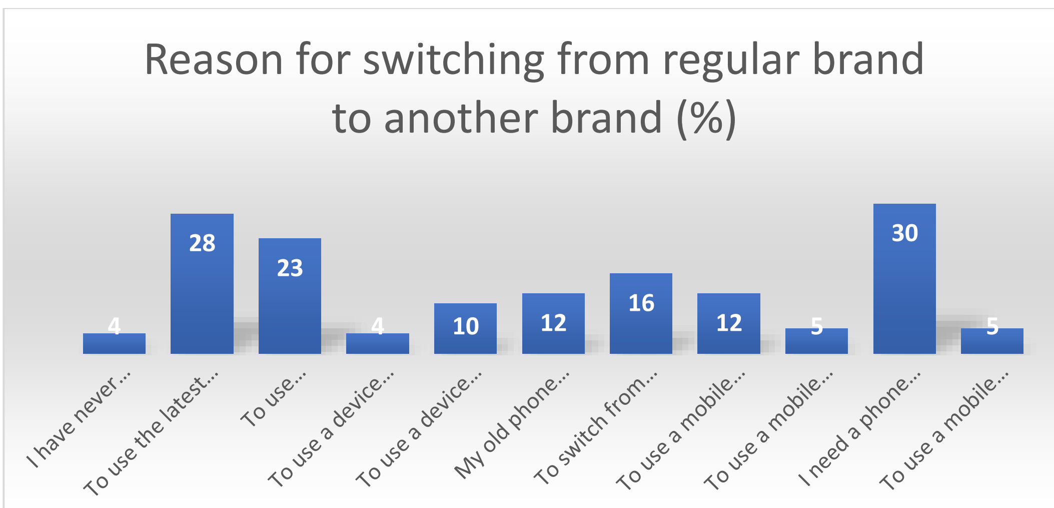

Figure 10: Percentage Frequency of the Reasons for Switching Mobile Phone Brand
Source: Researcher Survey.

The figure 7 above shows the percentage frequency distribution of the respondents and the reasons for brand switching to the others mobile phones with the need of more quality phone (30%) as the major reason for switching to another phone, followed by latest phone model (28%) and use of latest application features (23%), e.t.c.

5.0 Discussion of the Findings

This study examines the consumer brand loyalty of a mobile phone brands among the students of University of Lagos in Nigeria using Markov Chain techniques. The data for the study was collected through a well-designed questionnaire and administered among 500 students of the institution. The analysis was performed using a statistical package for social science and R-Code software. The results of the analysis revealed that

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Acer brand users are 99% loyal to the product, but on average, of all the respondents, 48% and 28% of the brand users if they are privileged, will transit or continue with Apple iphone and Samsumg brand respectively in future. Hence, University of Lagos students including both undergraduate and postgraduate students have brand loyalty preferences towards Apple iphone and Samsumg brand product than others mobile phones product. The result also shows how brand mobile phones in relating to the ability of inbuilt features have influence on customer loyalty and transition to another brand of phone. In addition, as shown in figure 7.0 above, the results of the analysis shows the percentage frequency distribution of the respondents and the reasons for brand switching to the others mobile phones with the need of more quality phone (30%) as the major reason for switching to another phone, followed by latest phone model (28%) and use of latest application features (23%), e.t.c. The remaining other reasons that is; switch from one operating system, mobile phone with longer operating battery life, use of devise with faster mobile data, mobile phone with multiple sim card, and mobile phone with bigger screen and others with corresponding percentage of frequency 16%, 12%, 10%, 5%, 5%, 4% and 4% respectively also have influence on customer loyalty and preventing switch from one mobile phone to another.

6.0 Conclusion

Building loyalty with key customers is an essential marketing objective shared by key players in all industries catering to business customers (Arokiasamy, 2013). Therefore, as rivalry of phone brand penetrating and strengthens in the mobile phone market in Nigeria higher institutions, the significance of retaining customers has become a key issue for mobile phone managers in the country. The phone producers/managers need to maintain communal beneficial and lasting relationship with valued customers, understanding the causal relationship between satisfaction and customer loyalty by mobile phone managers as loyal customers are less likely to switch, less expensive to maintain and bring in new customers through positive conversation.

Consequently, owing to the assurance of the brand mobile phone operating system in relating to inbuilt features, brand Image, product quality and facilities of the brand product all with high percentage frequencies as shown from the study, provided there are no compelling reasons for a customer to remain loyal to any mobile phone brand, it very important for mobile phone producers to build features or very high operating systems that can aids customer needs on their brand and encourage customer's satisfaction in order to build a strong loyalty. Mobile telecommunication producers should therefore; employ knowledgeable, skillful and experienced brand technologists who understand customers' needs better and provide customised services for customers. They should also design important strategies; like training programs on latest technologies for their employees, changing trend in customers' needs, and finding innovative ways of designing loyalty programs to retain their customers other than providing average services that everyone else is providing in the industry in order to stay on top of the competition and increase customers loyalty as researched by Kheng, Mahamad, Ramayah, & Mosahab, (2010).

References

Aaker, D., & Keller, K. L. (1990). Consumer evaluations of brand extensions. *Journal of Marketing, 54*(1), 27-41.

Ahmed, R. & Buttle, F. (2001). Customer retention: a potentially potent marketing management strategy. *Journal of Strategic Marketing, 9,* 29-45.

Arokiasamy, A.R.A. (2013). Satisfaction on customer loyalty and intentions to switch in the banking sector in malaysia. *The Journal of Commerce, 5*(1).

Bain Brief (2016). *Customer behavior and loyalty in insurance*: Global Edition 2016. Brain & Company, September 14, 2016.

Bansal, S., & Gupta, G. (2001). Building customer loyalty business-to-business commerce. *Customer relationship management: Emerging Concepts, Tools, and Applications, 1,* 273-291.

Nigerian Journal of Management Studies
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Bove, L. L., Pervan, S. J., Beatty, S. E., & Shiu, E. (2009). Service worker role in encouraging customer organizational citizenship behaviors. *Journal of Business Research, 62,* 698-705.

Brunner, T. A., Stöcklin, M., & Opwis, K. (2008). Satisfaction, image and loyalty: new versus experienced customers. *European Journal of Marketing, 42*, 1095-1105.

Chaudhuri, A., & Holbrook, M.B. (2001). The chain of effects from brand trust and brand affects to brand performance: The role of brand loyalty. *Journal of Marketing, 65*(2), 81-93.

Cherroun, R. (2014). Product innovation and the competitive advantage. *European Scientific Journal* June, *1*, 1857 – 7881.

Dick, A. S., & Basu, K. (1994). Consumer loyalty: toward an integrated conceptual framework. *Journal of Academy of Marketing Science, 22*(2), 99-113.

Gallo, A. (2014). The value of keeping the right customers. *Harvard Business School Review*. October 29, 2014.

Ganiyu, R. A., Uche, I. I., & Elizabeth, A. O. (2012). Is customer satisfaction an indicator of customer loyalty? *Australian Journal of Business and Management Research, 2*, 14-28.

Gounaris, S., & Stathakopoulos, V. (2004). Antecedents and consequences of brand loyalty: An empirical study. *Journal of Brand Management, 11*(4), 283-306.

GSM Association (2014). *The mobile economy*. Retrieved from https://elearning.scranton.edu/resource/business-leadership/how-the-smartphone-has-impacted-economic-development.

Hanson, W. (2000). *Principles of Internet Marketing*. Published by South-Western College Publishing, Cincinnati, Ohio, U.S.A., 2000.

Hoffman, K. D. & Bateson, J. E. G. (2002). *Essentials of services marketing: concepts, strategies and cases* (2nd ed.). Bangalore: Eastern Press (Bangalore) Pvt. Ltd.

Howard, J. A. & Sheth, J. N. (1969). *The theory of buyer behavior*, New York: John Wiley and Sons.9-28.

Jones, M. A., Mothersbaugh, D. L. & Betty, S.E. (2002). Why customer stay: measuring the underlying dimensions of services switching costs and managing their differential strategic outcomes. *Journal of Business Research, 55*, 441-450.

Junjun M. (2010), Customer brand loyalty. *International journal of business and management*. 5 (7), 213.

Kandampully, J., & Duddy, R. (1999). Competitive advantage through anticipation, innovation and relationships. *Management Decision, 37* (1), 51-56.

Khan, M.A., & Mahmood, Z. (2012). Impact of brand loyalty factors on brand equity. *International Journal of Academic Research, 4*(1), 33-37.

Kheng, L. L., Mahamad, O., Ramayah, T., & Mosahab, R. (2010). The impact of service quality on customer loyalty: A study of banks in Penang, Malaysia. *International Journal of Marketing Studies, 2,* 57-77.

Kima, M.K., Parkb M.C., & Jeonga, D.H. (2004). The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. *Telecommunications Policy 28*, 145–159.

Lee, M. & Cunningham, L. F. (2001). A cost/benefit approach to understanding service loyalty. *Journal of Services Marketing, 15*(2), 113-130.

Mark D. U., Grahame R. D. & Kathy H. (2003). Customer loyalty and customer loyalty programs. *Journal of Consumer Marketing, 20*(4), 294-316.

Mcllroy, A., & Barnett, S. (2000). Building customer relationships: do discount cards work? Managing service quality: *An International Journal, 10*(6), 347-355.

Narteh, B., & Kuada, J. (2014). Customer satisfaction with retail banking services in Ghana. *Thunderbird International Business Review, 56*, 353-371.

Oliver R. L. (1999). Whence consumer loyalty? Fundamental issues and directions for marketing. *Journal of Marketing, 63*, 33-44.

Nigerian Journal of Management Studies
Vol. 18, No. 1, 2018, 12-25

Rajkumar, R. & Chaarlas, L. J. (2012). Brand switching in cellular phone service industry: Impact of personal issues faced by clients. *EXCEL International Journal of Multidisciplinary Management Studies 2* (7), 59-76.

Rasheed, F. A., & Abadi, M. F. (2014). Impact of service quality, trust and perceived value on customer loyalty in Malaysia services industries. *Procedia-Social and Behavioral Sciences, 164*, 298-304.

Reichheld, F. F. (2003). The one number you need to grow. *Harvard business review, 81*, 46-55.

Reichheld, F. P., & Sasser, W. E. (1990). Zero defections: Quality comes to services. *Harvard business Review, 68*(5), 105-111.

Reichheld, F.F. (2003). The one number you need to grow. *Harvard Business Review, 81*(12), 46-54.

Schouten, J. W., & McAlexander, J. H. (1995). Subcultures of consumption: An ethnography of the new bikers. Journal of consumer research, 22, 43-61.

Schultz, D. (2000). Customer/brand loyalty in an interactive marketplace. *Journal of Advertising Research*, 40 (3), 41-53.

Storbacka, K., Strandvik, T. & Grönroos, C., (1994). Managing customer relationships for profit: The dynamics of relationship quality. *International Journal of Service Industry Management*, 21- 38.

The University of Scranton (2018). *How the smartphone has impacted economic development*. Retrieved from https://elearning.scranton.edu/resource/business-leadership/how-the-smartphone-has-impacted-economic-development.

Tweneboah-Koduah, E. & Duweh, F. A. (2016). Relationship between customer satisfaction and customer loyalty in the retail banking sector of Ghana. *International Journal of Business and Management, 11*(1).

Uslu, A., & CAM, T. (2014). *Analysis of brand loyal with Markov chain.* Retrieved from http://www. opf. slu. cz/vvr/akce/turecko/pdf/Uslu. pdf.

van Haaften, R. (2017). *Customer loyalty and customer retention*. Retrieved from https://www.van-haaften.nl/customer-satisfaction/customer-satisfaction.../82-customer-.

Yoo, M., & Bai, B. (2013). Customer loyalty marketing research: A comparative approach between hospitality and business journals. *International Journal of Hospitality Management, 33*, 166-177.

Yuen, E. F., & Chan, S. S. (2010). The effect of retail service quality and product quality on customer loyalty. *Journal of Database Marketing & Customer Strategy Management, 17*, 222-240.

Zairi, M. (2000). Managing customer dissatisfaction through effective complaint management systems. *The TQM Magazine, 12* (5), 331-335.