

# Tariff as a Determining Factor in Choosing Mobile Operators: A Case Study from Higher Learning Institution in Dodoma Municipality in Tanzania

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**Abstract**—In recent years, the adoption of mobile phones has been exceptionally rapid in many parts of the world, and Tanzania is not exceptional. We are witnessing a number of new mobile network operators being licensed from time to time by Tanzania Communications Regulatory Authority (TCRA). This makes competition in the telecommunications market very stiff. All mobile phone companies are struggling to earn more new customers into their networks. This trend courses a stiff competition. The various measures are being taken by different companies including, lowering tariff, and introducing free short messages within and out of their networks, and free calls during off-peak periods. This paper is aimed at investigating the influence of tariffs on students' mobile customers in selecting their mobile network operators. About seventy seven students from high learning institutions in Dodoma Municipality, Tanzania, participated in responding to the prepared questionnaires. The sought information was aimed at determining if tariffs influenced students into selection of their current mobile operators. The results indicate that tariffs were the major driving factor in selection of mobile operators. However, female mobile customers were found to be more easily attracted into subscribing to a mobile operator due to low tariffs, a bigger number of free short messages or discounted call charges than their fellow male customers.

**Keywords**—Consumer Buying, mobile operators, tariff.

## 1. INTRODUCTION

TELECOMMUNICATION companies have accomplished a great deal in recent years. What has been done in the past fifteen years is incomparable to many years before. The emerging breakthrough in telecommunications will revolve around improving lives through more efficient communications, better delivery of information and improving lives away from work, as well as on the job. Companies that have succeeded in the past and that will continue to flourish in the era to come know that the future is brightest for companies that develop technologies which make the lives of customers easier and better. This means satisfying the needs and desires of people of all age groups, both in the work place and at home [1].

Mobile phones have a positive and significant impact on economic growth. This impact may be twice as larger in developing countries than in developed counties. The value of

mobile phones to the individual is greater because other forms of communication such as postal services, roads, and fixed-line telephones are often poor. Mobile phones provide a point of contact and enables users to participate in the economic system. Many people who cannot afford to own mobile phones themselves can access mobile services through informal sharing with family and friends or through community phone shops. The use of text messaging in rural communities is much lower due to illiteracy and many indigenous languages. This has implications to other technologies that use a written word, such as the internet [2].

Advantages of mobile communication are many, but just to mention few, it has a constant connection, regardless of whether you are outside your normal premises or not. It is easier to gain access to up to date information. It has minimum installation activities compared to the fixed lines. Mobile subscribers are free to roam from one network to another in case of travelling abroad. Mobile phones are scalable and no cables are involved. In addition, it is easy to extend the network to remote areas by using satellite.

Despite all the mentioned advantages, it has some disadvantages such as a careful network planning; otherwise communications will not be possible. It is not environmental hostile due to emissions, along their scattered towers. Security in mobile telephones is very poor; more efforts are needed to be taken to ensure security, than that in fixed land lines. Safety where there has been no means to locate the mobile instruments have been implemented, (as the case still in many developing countries), and where subscription for mobile lines is loose. The safety of the users and the society is very much at risk. Spectrum licenses are an issue due to a small available frequency spectrum which several mobile companies are rushing to utilize for their transmissions. In addition, usage costs are higher than fixed lines.

In the past, people in Tanzania generally relied upon a single means of communication. This includes the hardwired landline telephone (fixed telephone). This was the only choice offered by a single service provider called Tanzania Telecommunications Company Limited (TTCL). This was the only way to reach someone across the street, city, nation or International. Today people have a multitude of communication and service provider choices, each with different types of communication services and devices. Communication is no longer confined to landline voices option, but also include mobile voice, Voice over Internet Protocol (VoIP), hotlines, Web-based voice applications, e-

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mail, social networks and Instant Messaging, just to mention a few. The abundance of choices certainly provides wonderful advantages. But today's choices also have downsides. The wide variety and range of communication options has created a fragmented communications landscape. When you ask many people and they will tell you they've lost control, not gained it. Despite the entire breakthrough, today's communications experience is a source of frustrations for many [2].

The average business person in Tanzania has at least four ways of sending and receiving information, namely, telephone, text messaging, e-mails, or letters. The new communication revolution is dramatically shifting how people play, work, and collaborate with each other. For the telecommunication service providers, the question for success is to find ways to translate these social and technological phenomena into new revenue streams. This will include the integration of these powerful tools and resources into improved workflows, greater productivity and more effective customer responsiveness for businesses. The new communications environment will continue to enhance life away from the job too. The introduction of Internet Protocol, (IP) to the world of broadcast television is providing the flexibility needed to transform radically what has been a one way mass broadcast medium with a tight link between content and distribution. In recent days we have observed a migration from analogue to digital broadcasting. With new broadband Internet access as a proven model, television viewers have new expectations of what entertainment can and should be. With proper tools, service providers can ensure that entertainment and education offering continue to evolve to provide customers with personalized and interactive experiences both at home and on the go [3].

Without a doubt, both organizations and people, the need is not just more communications, but technologies that put a greater emphasis on personalization and the creation of specific communities or, in the case of business, collaborative work groups. While these technologies continue to evolve, service providers and equipment manufacturers must continue to build interoperable and highly flexible infrastructures, from the first mile to the last mile. This will open the door to a new era of barrier free and personalized options for communication and entertainment. The possibilities are endless. With the growth of mobile network operators the customers are challenged to choose a proper network operator. This paper intends to investigate on if the tariff is influencing consumers in selecting mobile operators.

## II. THEORETICAL FRAMEWORK

### A. Consumer Buying Behavior

In embarking into this it is worth to get an overview of consumer behaviour. Consumer behaviour can be defined as the study of individuals, groups, or organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy the needs and the impacts that these processes have on the consumer and society [4]. Consumers and their behaviour comprise of many

attributes and differentials. These differences are not just associated with demographics but groups of any one particular item. There is a complex development of behaviours that exist in the consumer markets. By human nature, consumers can be spontaneous, unpredictable, and selfish [5]. Due to these consumer behaviours, business owners and purchasers are usually trying to find the best advantageous deal around which they can benefit themselves, in case of consumers, or their businesses, for business owners. Consumer buying behaviour is influenced by numerous factors. Decision making questions such as what, why, how and when consumers buy are influenced by two major conditions. These include Environmental factors and the buyer's factors.

What makes the customers is not always a predisposition attribute but rather an educated or enforced protocol that has been in stowed into their mindset. There are ways to improve products and services, and the providers create relationships to influence the consumers to have confidence in the products or services. Once the consumer needs are found, providers can then create the "image" of what the consumer should expect from the products. At the same time, getting as much information about the consumer can give the provider more information to better serve the market as a whole.

The marketplace is characterized by continuous changes in market composition, business practices and structure [6]. Consumer behaviour is affected by many uncontrollable factors such as friends, upbringing, culture, the media, a role model or influences from a certain group [5]. These factors are believed to influence consumer's purchasing behaviour. However, other factors like groups of friends or people they look up to may influence their choices of purchasing particular products and services. According to Belch and Belch [6] there are four types of consumer buying behaviour based on the type of products that intends to be purchased. This includes complex buying, Habitual buying, Variety seeking buying and Dissonance reducing buying.

Complex buying is where the individual purchases a high value brand and seeks a lot of information before the purchase is made. Habitual buying is where an individual buys a product out of habit for example sugar, daily newspapers, salt and so on. Variety seeking buying is where the individual likes to shop around and experiment with different products every time. Dissonance reducing buying- where the buyer is highly involved with the purchase of the product because the purchase is expensive or infrequent.

### B. Information Search

Once the consumer has recognized a problem, they search for information on products and services that can solve that problem. Belch and Belch [6], explained that consumers undertake both an internal (memory) and an external search. Sources of information regarding the possible solutions for the problem can be Personal sources, Commercial sources, Personal experience and experiential sources. Personal sources include family, friends, neighbors, acquaintances. Commercial sources include advertising, sales people, dealers, packaging, displays. Personal experience include: mass media, consumer-

rating organizations. Experiential sources include handling, examining, using the product.

The relevant psychological process that is associated with information search is perception. Belch and Belch [6], defined perception as the process by which an individual receives, selects, organizes, and interprets information to create a meaningful picture of the world. The implication of this process helps the marketers to develop an effective promotional strategy, and select which sources of information are more effective for the brand. According to Kotler *et al* [7], perception is not a function of sensory input alone; rather it is the result of two different needs of inputs which interact to form the personal pictures; the perception that each consumer of any item experiences.

#### *C. Alternative Evaluations*

At this stage, the consumer compares the brands and products that are in their evoked set. Consumers evaluate alternatives in terms of the functional and psychological benefits they offer. The marketing organization needs to understand what benefits consumers are seeking and therefore which attributes are most important in terms of making a decision. The relative internal psychological process that is associated with the alternative evaluation stage is attitude formation. Attitudes comprise both cognitive and effective elements- that is, they comprise of both what the consumers think and how they feel about the products or services.

#### *D. Purchase Decision*

After evaluating the alternatives, the consumer is ready to make a purchase decision. To arrive at an overall product evaluation, a consumer has to integrate the evaluations of all the determinant attributes. It is not necessary that always, the purchase decision result into an actual purchase. Sometimes provision of credit or payment terms by marketers from business firms may encourage purchase, or a sales promotion such as the opportunity to receive a premium or enter a competition may provide an incentive to buy now. Belch and Belch [6] noted that, the purchase intention is also influenced by unexpected situational factors. The consumer may form a purchase intention based on factors such as expected family income, expected price and expected benefits from the products. When a consumer is about to act, unexpected situation, or unexpected factors may arise to change the purchase intention, for example, one losing his or her job, some other purchases may become more urgent than the intended and many other.

According to Belch and Belch [6], a consumer's decision to change, postpone or avoid a purchase decision is influenced heavily by perceived risk. The amount of perceived risk varies with the amount of money at stake, the amount of purchase uncertainty and the amount of consumer self-confidence. A marketer must therefore understand the factors that provoke feelings of risk in consumers and must provide information and support that will reduce the perceived risk. The relevant internal psychological process that is associated with purchase decision is integration. By integration, a consumer is faced

with three possibilities to choose in making the buying decision. The decisions to be integrated include from whom to buy- terms of sales, past experience with the product or services, and return policy.

#### *E. Post Purchase Evaluation*

After the consumers have purchased and used the products, they will evaluate their purchasing decision to compare the product's performance with their expectations. Should the product fail to perform to meet their expectations the consumers will experience post purchase dissatisfaction. When consumers purchase more expensive products for which they exert a greater purchasing effort in terms of time and search, they usually experience some level of discomfort after purchase. That is, they experience some doubt that they made the right choice. This situation is called, thinking disharmony. Marketers must work to minimize the likelihood of post purchase dissatisfaction. The relevant internal psychological process that is associated with post purchase evaluation is learning [5]. According to Belch and Belch [6], consumer learning refers to the process by which individuals acquire the purchase and consumption knowledge and experience they apply to future related behaviour. Both newly acquired knowledge and experiences serve as feedback to the individual and are the basis, upon which he or she acts, sustains or modifies behaviour in similar situations in the future. Therefore, consumer learning results from acquired knowledge or experience.

### III. EMPIRICAL FRAMEWORK

According to Kotler *et al.* [7], there are several factors that influence consumers in making their buying decisions. Such factors are: groups, family members, friends, age, gender, price, (or tariff) of the product or service.

Buyer's decisions are also influenced by personal characteristics such as the buyer's age and occupation, economic situation, lifestyle, personality and self-concept [7]. An investigation conducted at the University of Oulu, in Finland by Pakola *et al.* [8] revealed that, 83 percent of the interviewed responded were influenced to join their mobile operators by prices and 82 percent were influenced by audibility of the operator. Other motives of significant importance were properties, friends, types of contract offered by the operator and available free calls. Salesmen and employer's were the least important factors affecting the choice of one's operator. The author concluded that, although many people thought and believed that price was the important variable affecting consumer choice, audibility was practically speaking of equal importance. He suggested for a more rigorous study on the factors that seem to influence the choice of mobile phones and operators in order to get a better understanding of consumer motives especially in aggressively competed countries.

Wiese [9], in her study on consumer preferences among University students noted that 70 percent of the interviewed students were price sensitive. The students indicated that one major reason for their purchase decisions was because of

special price deals. She noted that students searched extensively for information to obtain the best price especially when the required product is expensive. She recommended that retailer's prices should reflect good-value-for-money and affordability, if they want a competitive advantage in the student market [9]. This study intends to verify whether students behave in the same way when selecting their mobile operators by looking into the operator's tariff in making calls, and sending messages, and accessing the internet through mobile phones.

Mitomo et al. [10] did a similar study on how university students in East Asia utilize mobile phones. On his empirical findings, he concluded that tariff can be the most influential factor in choosing a mobile phone rather than other existing factors [10].

Peighambari [11] developed a model to explain customer retention in Iran. In his studies, he had an intention of identifying variables that influence customer's retention. He wanted to establish what should be done by mobile companies under saturated market conditions to ensure that at least their existing customers are retained within their networks. Iranian mobile market was already saturated and therefore, new customer acquisition was already a rare event, let alone the competition to scramble for the few new incoming customers. Although his findings showed that tariff was one of the major factors determining customer's selection of a mobile operator, he believed that there are other factors such as demographic characteristics of customers, like gender, age, occupation, their life cycles and other usage patterns of mobile telecommunication services that needed to be studied by future researchers.

Fluss [12] in her study on customer retention in mobile telephone networks in European countries revealed that a fundamental truth in the business world is that competitors are always looking to steal other operator's customers, and many customers are on the lookout for a better deal. She observed that customer attrition rates range from 7% annually in some industries for high exit barriers like banking and insurance, to nearly 40% in the mobile phone industry. Slowing the customer churn rate by as little as one percent can add millions of dollars to any sizable company's bottom line [12]. This is what was observed by Fluss [12] in general telecommunication markets in the European countries. This study would like to find out whether changes in tariff can influence new comers in selection of a particular mobile network and eventually contribute in retaining the existing customers into their current mobile networks

#### IV. RESEARCH METHODOLOGY

##### A. Research Design

The study on weather tariff is influencing mobile telephone consumers in selecting their mobile operators combined both quantitative and qualitative approach, based on cross-sectional survey design. This is a survey in which observation of sample is done at one point in time and the data collected provides the description of population feature. Normally cross-sectional

survey studies focus on the relationship between different variables and relates to how they affect each other at the same time [13]. This type of design was chosen because it enables to describe the different factors that influence mobile phone subscribers in selecting their mobile operators, and make predictions based on the correlation survey data. Other advantages of cross-sectional survey design include that It gives the opportunity to see the reality more closely; inferences are not based on theory or dogma, but on facts as observed from the collected data. It is more objective and it helps to know the social situation around the target population. It is a practical way of collecting information such as attitudes, opinions, experiences and expectations from the population and it sensitizes the researcher to unanticipated or unknown problems. It facilitates to draw generalizations about population on the basis of data from representative sample. It is useful in verifying theories. Finally, it is for these advantages that the current research opted for it [14].

##### B. Area of Study and Its Characteristics

Dodoma Region is located at Latitude 6°10'60S and Longitude 35°45'0E, and at an Altitude of 1,148 meters above sea level. This region is located at the centre of Tanzania. Dodoma region has a population of over 1.7 million, out of which, more than 823,504 or 48.4 percent are males and more than 875,492 or 51.6 percent are females [15]. The region has a land area of 41,311 square kilometers and a population of 1,692,025 according to National Census, 2002. Dodoma region is selected as a case for this study to represent all other regions in Tanzania due to the fact that, all of the giant mobile operators conducting mobile phone business in Tanzania are found in Dodoma. The other main reason for selection of Dodoma is for the convenience of the authors who are living and working in Dodoma Municipality.

Dodoma population has drastically increased in the past eight years due to opening of two Universities, namely: The University of Dodoma (a public University) [16], and The St. John's University of Tanzania (privately owned by Anglican Church of Tanzania) [17]. Other high learning Institutions within the municipality have been upgraded to offer degree programs. These are: The Institute of Rural Development and Planning (IRDP) [18], and College of Business Education (CBE) [19]. Together, these changes have drastically increased the population in the municipality, creating new business opportunities in the mobile telephony industry. Started only eight years ago, St. John's University of Tanzania has already enrolled more than 2,500 students while UDOM, having the same age as St. John's University approached 15,000. CBE has more than 2,600 students. Since most of the students are youths and coming direct from secondary schools, most of them own mobile phones immediately upon their arrival at the Colleges/Universities.

CBE, Dodoma Campus is situated in Dodoma municipality along Dar es Salaam-Dodoma Road, just before entering the Dodoma town centre near the Tanzania Parliament buildings. The campus is headed by the Vice Principal who is the overall in charge of the day to day activities of the campus. CBE's

mission Statement is: "To train highly competent and practice-oriented professionals in business administration, accountancy, marketing, procurement and supply, ICT, legal and industrial metrology and related fields at certificate, diploma, professional degree and postgraduate diploma levels and to undertake relevant basic and applied research as well as providing consultancy and advisory services to the public" [19].

UDOM is a public institution established in March 2007 under the Universities Act (2005) by the President of the United Republic of Tanzania. UDOM is located about 7 kilometers away from Dodoma town centre. UDOM is destined to be the largest University in the Tanzania and East Africa. This provides opportunity for economies of scale, creates attention of the government, development partners and other stakeholders. However, given the planned infrastructural development, the university was anticipated to enroll a 40,000 students within the first five years since its inaugurations, with 74 degree programmes. This is more than double the present size of The University of Dar Es Salaam, which is located in Dar es Salaam, Tanzania [20].

Teaching began in 2007 when 1, 116 students were enrolled for programs offered in the schools of Humanities and Social Sciences, School of Education, and School of Informatics. In addition, Schools of Natural and Mathematical Sciences, and Health and Allied Sciences were launched in 2008. The initial enrolment included students in full-time, evening and executive programmes, both undergraduate and post graduate. The university has been designed on a College mode, each of which will be semi-autonomous [21]. Currently the University of Dodoma has a total of six campus Colleges namely: College of Humanities and Social Sciences, College of Informatics and Virtual Education, College of Education, College of Earth Science, College of Natural and Mathematical Science and College of Health Science [16].

### *C. Target Population*

All Tanzanians using mobile phones are eligible respondents of the study. However, it is not economically wise or possible to reach out of them all so as to generate the sample frame for the study. Hence, the current study picked students from institutions of higher learning to represent a segment of all mobile users in Tanzania. Having four Universities/Colleges of the kind, namely, The University of Dodoma, College of Business Education, St. John's University College of Tanzania, and The Institute of Rural Planning and Development, two colleges have been picked to represent the rest. UDOM and the CBE were the picked institutions.

### *D. Sampling Techniques and Sample Size*

The current study used both non-probability and purposive sampling techniques to get the required information from the study population. Purposive sampling technique was used to select Dodoma Municipality, and specifically UDOM and CBE. While non-probability sampling techniques, particularly quota sampling and straw ball sampling method was used to get the respondents

### *1) Purposive Sampling- (Quota Sampling)*

In purposive sampling, a researcher selects respondents according to their convenience [22]. It was sometimes necessary to pick some students well known to own mobile phones and request them to participate in responding to the questionnaire. Different sampling methods were used to minimize the effects of misrepresentation of the population that could have resulted from non probability sampling method employed in this study.

### *2) Straw Ball Sampling*

Under this method, individuals select themselves as participants [23]. In this case, when one participant volunteer to answer the questionnaires, they were asked if they knew any other students with mobile phones and who could also participate in responding to the questionnaires.

### *3) Sample Size*

Questionnaires were distributed to about 80 students, out of which 50 were from UDOM and 30 from CBE. Equal number of females and males were given the questionnaires from each college.

## *V. DATA COLLECTION METHODS*

To gather the primary data for this study, close-ended questionnaires were distributed to fifty UDOM students and thirty students from CBE. Close-ended questionnaire were preferred in this study because, such questions are easy to administer and usually evoke a rapid response. Since the respondents are higher learning institution students who are most of the time bombarded with workloads from their academic syllabuses, great care was taken to ensure that the type of questions asked to them do not consume a lot of their time in responding, lest they lose interest and give up.

### *A. Negotiating Access to Data Collection and Research Ethics*

Consent of the respondents was vital prior to data collection exercise. Therefore, students were persuaded to participate in responding to the questionnaires and asked if they knew some friends who owned mobile phones and who would also be willing to participate in the research. Where an approached student was not willing to participate, their decisions were humbly respected. The respondents were assigned anonymous numbers, (codes) instead of using their names, and even the institutions were also assigned codes. The fully filled questionnaires were locked under safe custody later after entering data into computer.

### *B. Reliability and Validity of the Research*

#### *1) Reliability*

Reliability of a questionnaire is the ability of the questionnaire to give the same results when filled out by like-minded people in similar circumstances. Reliability is usually expressed on a numerical scale from zero (very unreliable) to one (extremely reliable). It is mainly concerned with whether the measure used in a research will yield the same results in

different occasions, or if it can provide similar observations if done in different occasions [24]. Reliability of a research, according to Kirakowski[24] may suffer from the following threats:

- **Subject Error-** An error related to the time of the day or week during which the data for the study was collected. To ensure that this error is minimized, the researcher was keen on visiting times. Weekends and leisure times were mostly used to collect data from students since they appeared to be busy and on rush during working days, which would have resulted into lack of concentration in answering the questions.
- **Subject bias:** This is mainly due to collection of data in an unfriendly environment. For example where students are interviewed in authoritarian management of their colleges or people they fear, their responses may be such that they impress their senior officers or relatives. In this study, the researcher ensured a free and friendly environment during filling the questionnaires so that the respondents were not answering the questions under pressure or duress.
- **Observer error:** This occurs where the instruments used for research may be differently interpreted by the respondents. This type of error was taken care by making pilot test of the questionnaires to students from various other institutions namely: St. Joseph Institute of Technology [25], Dar es Salaam Institute of Technology [26], and University of Dar es Salaam Computing Centre [27] who were doing their practical training during the material time, in order to detect any ambiguous questions, and they were promptly corrected before the questionnaires were distributed to the intended respondents.
- **Observer bias:** This type of error is normally caused by the interviewer's tendency to direct the respondents in the way in which they should respond to the questions. The authors tried to allow total freedom to respondent and did not in any case, be part of the questionnaires.

## 2) Validity

To ensure validity of the collected data in the current study, the questionnaires were pre-tested to students of other high learning institutions and all ambiguous and unclear questions were corrected. The Authors ensured that respondents could understand the questions and answer them without assistance of the researcher. The recorded questionnaires were collected by the Authors to avoid any manipulation to the data already filled in the questionnaires. The same were kept under safe custody in a locked cabinet. To further ensure the reliability and validity of the measurements, this study used standard scales such as Likert scale for attitude test and well structured close-ended questionnaires.

### C. Methods of Data Analysis and Presentation

In the study on whether the tariff is influencing mobile phone customers in selecting their mobile operators, different statistical techniques were used. These include descriptive analysis and multiple logistic regressions to test the

relationships between dependent variable. This information was analyzed using Statistical Package for Social Science (SPSS) Software.

Logistic regression was used in analyzing the data because it is among many statistical techniques that can establish relationships between a dependent variable and multiple independent variables. The independent variables are dichotomous and for this case, logistic regression is the best statistical analysis method that fits the type of data. The technique could also analyze any non-linear relationships between dependent and independent variables. Other advantages of logistic regression according to Statgun Statistic Consulting are: It is more robust: the independent variables don't have to be normally distributed, or have equal variance in each group. It does not assume a linear relationship between the independent variables and dependent variable. The dependent variable need not be normally distributed. There is no homogeneity of variance assumption. Normally distributed error terms are not assumed. It does not require that the independents be interval. It does not require that the independents be unbounded [28].

Regression analysis is used to produce an equation that will predict a dependent variable (selection of mobile network operator), using the specified independent tariff, variables.

## VI. RESULTS DISCUSSION

The data being presented in this section are the responses from the questions that were given to respondents from questionnaires, in the respective colleges. The two higher learning institutions are UDOM and CBE which were selected to represent the particular population. The study intended to find out whether there is a relationship between selection of mobile operator and tariff. Out of the 80 questionnaires distributed to respondents, 77 (96.25%) were received. It was indicated that at least all questionnaires distributed to female students were received back, while 92.5% of the questionnaires distributed to male students were received back.

It is indicated that, currently Vodacom had more subscribers within the sampled population than any other mobile network operator, having 32 subscribers, (41.6%) out of all respondents. The second position was occupied by Tigo, (20.8%), and then Airtel, (9%). TTCL had the minority market share, when compared to the first four giant mobile operators, with only 9%. The rest was a combination of the multiple subscriptions to various operators. A critical case was also observed where one subscriber was subscribed to four different mobile network operators. For this particular sampled population, no subscriber was found to be subscribed to Zantel alone. This might be due to the operator being not so popular in Tanzania mainland so far.

This study was seeking to investigate whether or not there is any significant relationship between tariff and selection of a mobile network operator. Collected data from the questionnaires were analyzed using SPSS Software and logistic regression analysis as mentioned earlier, to identify the predictors of higher learning institution student's selection

of mobile network operators. There were very few missing data and these were replaced by sample means. Out of 77 respondents, 47, (61%) agreed that they were influenced by tariff in selection of their mobile operator(s). When the data was regressed using the SPSS, the results indicate that, the statistical significance is 0.135 which is greater than 0.05, the selected level of significance for analysis of this study. This makes the test not statistically significant, and therefore, we accept the null hypothesis at this level of significance which states that, "There is no relationship between tariff and selection of mobile network operator".

Although descriptive data indicated that 61% of the respondents were influenced by tariff into selection of their mobile network operators, the statistical test could not indicate any statistical relationship. These statistical results concur with the findings by Hee-Sun Kim from a research conducted in Korea and deduced that although tariff level can determine subscriber churn and customer loyalty, only factors such as call quality, handset type and brand image affect customer loyalty as measured by the intention or non-intention to recommend the service provider to other people [29].

Another researcher who had similar results is Stroppa, the product director at 'On Mobile', the largest mobile services provider in India. In his study on how mobile operators were winning more customers into their networks, he found out that, operators who managed to create address books for their subscribers stood a better position to acquire more customers than those who kept on harmonizing tariffs and other attributes [30].

However, this study results contradict with the findings by Birke and Swann [31], who found out that tariff, was one of the influencing factors in selection of mobile operator. Mitomo [10] studied the mobile telecommunication market in East Asia and found that tariff could be the most influential factor in selection of a mobile network operator. Other researchers who had the same results regarding the influence of tariff in selection of mobile operator were Peighambari [11], Wiese [9], Fluss [12] and Pakola et al. [8]. The study results is concur with Kotler [32] and other's theory on consumer buying behavior that price is one of the factors that can influence customers into making purchase decisions.

## VII. CONCLUSION

This paper was seeking to identify if tariff influence mobile customers in selection of their mobile network operators. A number of 80 students who were mobile customers were contacted and requested to respond according to the closed-ended questionnaires. Out of them, 77 students responded and returned the questionnaires. The main aim was to verify whether the theory of consumer buying behaviour in making purchasing decisions also holds true in selection of mobile network operators.

The study was conducted on students in higher learning institutions and it was revealed through descriptive analysis that, the tariff had 61%. The advantage of subscribing to such a mobile operator was found to be that, the mobile customers take advantage of the cheap rates of making on-net calls and

sending SMS within the same mobile networks. Also customers in the same network enjoy some bonus and promotional packages offered by operators from time to time for free or discounted calls and SMS within their networks.

It is known from consumer behaviour theory that, some products or services are acquired due to their quality in the eyes of buyers or from the post-purchase assessment. A satisfied buyer is therefore likely to repurchase the product or service, and also is likely to recommend it to a friend [7]. The mobile customers can therefore use their mobile telephones interchangeably while compromising for the required attribute at the particular time of usage.

## VIII. FUTURE WORK

In our future work will look at if the Age, Family, Group, Gender, Network Effects and Quality of Service are also determining factors that influences consumer in choosing mobile operators.

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