

ANALYSIS OF THE CONSUMERS' SWITCHING BEHAVIOR FOR DIGITAL SET TOP BOXES IN KENYA

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ABSTRACT *We determine the consumers' selection criteria and explore the effectiveness of selected attitudinal, behavioral and demographic variables in discriminating between switchers and continuers of particular digital set top boxes in Kenyan market. We analyze the data, randomly collected from consumers in Nairobi city, using discriminant function analysis. Our findings show that the quality of service, customer experience, ease of use and pricing were key factors. Indeed, from the study, the price and quality of service were critical consideration in switching of service. The study would therefore be beneficial to various DSTB providers, by providing awareness and necessary information to retain the customers. Furthermore, DSTB providers will have to invest more in customer care services, programme quality and fair product price to remain competitive in the Kenyan market.*

Keywords: Financial decision making, Discriminant function analysis, Consumer behaviour, Communication authority of Kenya, Digital broadcasting, Service marketing, Product competition, International Telecommunication Union agreement.

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1. INTRODUCTION

In 2006 during the Regional Radio Conference held in Geneva Switzerland (RRC-06) under the umbrella of International Telecommunication Union the member states adopted the Regional Agreement relating to the planning of the digital terrestrial broadcasting service. Kenya as a member state was required to implement the resolution reached at the RRC-06 to migrate from analogue to digital terrestrial television broadcasting by 17th June 2015 for both VHF and UHF bands.

Kenya adopted the first generation Digital Video Broadcasting –Terrestrial (DVB-T) TV transmission standard and MPEG 4 video compression standard following the conclusion of the RRC-06. Thereafter, the East African Communications Organizations (EACO) Broadcasting Task Force adopted and implemented a harmonized DVB-T, MPEG 4 specification for the EAC countries.

A pilot digital signal on DVB-T technology was launched in December 2009 by the Kenya Broadcasting Corporation. Kenya opted to migrate to the second generation DVB-T2 standard in 2010 due to its capacity to accommodate more channels than the first generation. This decision was advised by the fact that the second generation DVB-T2 standardization work had just been concluded in 2008 hence would be advantageous for the country to move forward with the very latest technology. Thereafter, CCK in consultation with DTC, prepared DVB-T2, MPEG 4 minimum specifications for set top boxes for the Kenyan market. Kenya discontinued DVB-T transmissions in Nairobi on 30th September 2012 following upgrade of all digital transmitters to DVB-T2 standard. Therefore, in Kenya, type approval of set top

boxes is on the basis of minimum DVB-T2, MPEG 4 specifications.

The migration from analogue to digital broadcasting means that consumers can receive high quality video and sound. Secondly, it supports high definition television, mobile television, a wider choice of enhanced broadcasting applications, multimedia data and entertainment services on the same platform.

In digital transmission, each broadcasting frequency can accommodate several programme channels using only one transmitter. The TV frequency is therefore assigned to a third party or signal distributor to roll out the distribution/ transmission network and not to the broadcaster. So, instead of each broadcaster buying their own transmitter, a signal distributor will put up this infrastructure and allow several broadcasters to share one transmitter. This is part of the digital dividend that allows for optimal use of infrastructure and frequency spectrum resources.

The two licensed signal distributors were identified to roll out the digital terrestrial transmission (DTT) network in major towns and their environs since 2012.

Marketing firms have been long interested in retaining existing customers. It is well known that acquiring a new customer costs much more than retaining existing ones. Therefore, it makes sense for firms to focus on their loyal customers and nurture those relationships. The elderly consumers have long been considered to be more prone to repurchasing known brands. With the increase in the elderly population due to the aging baby boomers, the elderly consumer group will become increasingly important to businesses.

In Kenya, the most cost effective migration path adopted for consumers is the use of digital set top boxes (STBs) so that consumers continue to make use of their existing analogue TV sets. The existing analogue TVs therefore required a STB that is type-approved by the Communication Authority of Kenya in order to correctly receive a TV signal transmitted in digital format.

The other option for the consumer is to acquire a DVB-T2 MPEG 4 integrated digital TV set (IdTV) which has an inbuilt set top box hence does not require a set top box. However, this IdTV option targets the high end consumers who can afford these more expensive gadgets.

There are currently over 50 models of free to air (FTA) STBs, two models of Pay TV STBs and four models of Integrated Digital Televisions (IdTVs). There has been an increase in different models of set top boxes flooding the market and retailing at different prices. Raising concern on customers' decision and choice of a particular digital set top box over another and the decision to retain the same over time. The purpose of our research is to determine the customers' selection criteria of digital set box.

2. LITERATURE REVIEW

Customers are a key factor and have a direct impact on the overall performance of the businesses. The way the individuals, groups or organizations choose, buy, use and dispose the goods and the factors such as their previous experience, taste, price and branding on which the consumers base their purchasing

decisions have an effect on the market (Kotler and Keller 2012; Lee et al. 2016). There are a number of factors that influence a customer's decision making. For instance, Wiedermann et al (2007) classified them into internal and external factor. On the other hand, Winer (2009) divided them into social, personal and psychological factors. Social factors may arise from consumer behavior as a result of interactions of perspective consumers with others in various levels and circumstances (Hoyer et al., 2012). Personal factors include their own tastes and preferences, their status among others. The cultural factors include the customs and practices that relate from one community to the other. Culture can be defined as "the ideas, customs, and social behavior of a particular people or society" (Oxford Dictionaries, 2015).

Customers switch services for various reasons. For example, in banking industry customers switching can be related to perception of quality (Rust and Zahorik 1993). When a customer switching is lower it creates a benefit for a firm as it continues to enjoy the revenue while spending minimum costs in management as has been shown to be effective from both defensive and offensive strategic marketing perspectives (Fornell and Wernerfelt 1987; Zeithaml 2000). It therefore means the firm can continue to service its existing customers with the focus of new customers buying their product. In respect to revenue, studies have shown that customers continue to purchase an item with a higher rate of return (Grant and Schlesinger 1995; Heskett, Sasser, and Schlesinger 1997; Reichheld and Sasser 1990) and this is not affected even when the price of the item increases that is revenue performance of the firm continues to increase (Bolton and Lemon 1999). The firms that report high satisfaction or some level of insulation effect on their

reputations are likely to retain the customers more (Anderson and Sullivan 1993). On the cost side, studies have shown that selling costs of serving continuing customers are lower and operating efficiencies are higher (Heskett et al. 1997). Looking at it from the strategic perspective on the revenue side, retained customers attract new customers through positive word of mouth, thereby increasing market share (Reichheld and Sasser 1990).

In the service industry where there is a subscription required for a service to be provided the switching behavior can have a significant effect on the firm. For example, most of the STB's, insurance, banking and telecommunications charge a certain fixed fee for access of the services. They only provide additional charges for premium or additional charge for increased usage of the facility. In some cases, like telecommunication operators have an incentive for peak periods and lower periods in usage with peak periods attracting more charges while the low times attracting lower costs below the average cost. Other providers like health clubs and online services tend to charge a single fee for unlimited usage for period to access their facilities. All these enterprises thus depend a great deal to the membership fees on continuous basis and therefore when customers have a switching behavior it tends to affect them significantly.

The review above, points to the fact that customers have a central role in the switching behavior from one firm's product to another. This is based on their needs and wants and they thus purchase to satisfy these needs and wants. In this case there is a need to watch television but it requires that customer must have an STB. These customers also tend to switch because of different reasons, based from differences in satisfaction and loyalty of

service (Bolton and Bronkhorst 1995). Switchers versus those who stay on are thus guided by the satisfaction and loyalty to the service (Ganesh, Arnold, and Reynolds 2000). In addition, there is an attitudinal variable namely quality of service quality to customers' switching intentions (Anderson and Sullivan 1993; Cronin and Taylor 1992).

Other research has supported the need to consider causes of service switching beyond dissatisfaction. In an exploratory study of customer switching behavior in services industries, Keaveney (1995) identified eight major causes. Some could be associated with feelings of dissatisfaction with the service for example core service failures, failed service encounters, poor service recoveries, but others were extrinsic or situational factors for example price, inconvenience, ethics, competition, and involuntary situations. Anderson (1996) reported the importance of price tolerance in addition to satisfaction when predicting customers switching. Outcome-related, extrinsic, and service process factors were all important in predicting customers' intentions to switch providers of an experiential service (Dabholkar and Walls 1999). Customers of cellular services who had complained to the firm were more likely to switch than customers who had not complained (Bolton and Bronkhorst 1995). It seems important to augment studies of satisfaction and intentions—which, although quite important, have been well studied—to include other attitudinal, behavioral, and demographic variables.

Our study contributes to services marketing and customer behavior literature in the following ways: The study identifies the criteria customers use to determine which STB to use; identify and profile defection

prone customers using STB's; the research examines the actual switching behavior of DSTB users; the study goes beyond satisfaction and intentions to explore attitudinal, behavioral and demographic characteristic of customers as possible prediction of their switching behavior in Nairobi, Kenya.

Digital Migration in Kenya

The digital migration in Kenya presented opportunities and challenges for broadcasters using channeling their productions through STB's and the STB providers having to build the network and work with the broadcasters. The digital broadcasting presented a significant challenge to broadcasting companies in respect to their expected revenues. Looking at the advertising performance in Kenya, the overall revenue arising from advertising rose to Kshs. 49.2 billion in 2010 (Ochieng, 2015). With the advent of the digital platform, this revenue is set to be spread across numerous broadcast outlets that are existing and those that will join the digital platform.

A study conducted by Mwangi (2012) investigating consumer aspects that influence adoption of digital television broadcasting concluded that the most significant factors that stood to motivate the purchase of set-top boxes included the high resolution and the sound quality of the technology. However, the findings of the study revealed that the respondents attributed affordability and implementation of the digital technology as the most significant setbacks to the process. Consumers anticipated high cost of initial purchase and installation of the set top-boxes as the major challenge to be faced in the adoption of digital television broadcasting (Mwangi 2012).

3. CONCEPTUAL DEVELOPMENT AND RESEARCH HYPOTHESIS

The review of services and products literature reveal a variety of reasons why customers select a particular product or service and their decision to continue using it or shift from it. The attitudinal, behavioral and demographic factors play a key role in the selection process. Consumers also base on external and internal factors to select and continue to use a given product. Advertising literature provides critical information that helps decision making. When consumers learn about a product and make product decisions under the influence of advertising, the advertising information may be said to prime or "transform the product experience" (Hoch and Deighton 1989).

Consumer behavior theory holds that in making purchase decisions, consumers use different types of information sources to help them identify possible choice. Information sources can be characterized as internal versus external, personal versus impersonal, marketer-oriented versus third party. Information on consumer research informs us that consumers differ in their preferences for types of information (Mazis and Staelin 1982; Furse, Punj, and Stewart 1984). Preferences for different types of information sources have also been found to vary between goods versus services decisions (Murray 1991).

Consumers with higher incomes and education levels may be capable of developing sophisticated and probably accurate estimates of what to expect from a service. For example, customers with higher incomes may have experience with more frequent usage of services or usage of a greater variety of services. In the online world, higher income users tend to be more

experienced “surfers” (Cyberatlas.com 2000b). Higher incomes also allow customers to afford to choose “buy” in potential “make-versus-buy” service decisions, potentially giving them more experience with a wider variety of services.

Higher education levels may also provide consumers with greater skills in forming hypotheses about future service performance. Because services are intangible, they can require somewhat more imagination, vision, or hypothesizing to predict what actually using the service would be like. This is particularly true of services having experiential or credence properties where, even after experiencing the service, many consumers find evaluation of service performance to be complex and difficult (Murray 1991; Nelson 1970).

In contrast, lower income and less-educated service users may find that their expectations were ambiguous, their ability to learn from experience limited (Hoch and Deighton 1989), their assessments uncertain, and their evaluations of the service more vulnerable to instances of dissatisfaction. For example, the Internet’s older, less-educated, and lower income users tend to lack confidence in their computer skills (Cyberatlas.com 2000a). Thus, less-educated, lower income customers may not be as skilled at forecasting the use of online services or at evaluating online service performance.

Based on above review on customer behavior, satisfaction, information processing, customer retention, and advertising literatures the hypothesis proposed is as follows:

Hypothesis: STB continuers have higher average income levels than DSTB service switchers.

4. METHODS

When a study of resource selection involves the collection of only two samples of normally distributed data then it’s possible to estimate a resource selection function using discriminant function analysis. Discriminant function analysis is used to determine which continuous variables discriminate between two or more naturally occurring groups’. To check the validity of the models, a proportional 50-50 split sample validation procedure will be used. With discriminant function we will be able to arrive at a prediction model that results from the procedure which will give insight into the relationship between group membership and the variables used to predict group membership.

As part of testing the hypotheses, data was collected from the subscribers of STB’s with their experience on selection of a given type and their switching behavior. There are currently 5 main providers of STB’s (DSTV, Star times, GoTV, Zuku and Bamba TV). Most of the television sets in Kenya are analogue. These existing analogue televisions require an STB that is type-approved by the Communication Authority of Kenya in order to correctly receive a TV signal transmitted in digital format. According to the Kenya Bureau of Statistics census in 2009, Nairobi has 500,000 households with Television sets. There is no existing listing of households however all working class people are expected to be coming from households and shall inform the population of households that we expect to collect information from on the use of STB’s.

The sample size was estimated using both power analysis and recommended procedures of discriminant function analysis. Power analysis allows us to determine the sample size required to detect an effect of a given size with a given degree of confidence. The discriminant function analysis is sensitive to sample size as well. Some experts suggest that 20 observations for each predictor variable are ideal (Hair, Anderson, Tatham and Black 1995). In view of the need to attain at least the 200 samples, a total of 400 individuals were sampled.

The data collection was done using questionnaires sent to STB users in Nairobi particularly those working in the central business district. In doing so they were all asked whether they had a television before they were issued with the questionnaire. They were also asked (i) if they currently have an STB (ii) If they have subscribed to a paid option (iii) If they have shifted from the initial subscription. A total of 400 questionnaires were then distributed.

These questionnaires were collected from the various individuals after three days. Out of the 400 questionnaires sent, 216 were collected as completed. All the 216 respondents reported that they currently had subscribed to an STB by one of the five main providers. 103 respondents indicated they were influenced by external sources (Articles, reviews, advertising, print & electronic media, road shows) in selecting the particular STB, while 107 reported they were influenced by interpersonal sources (Opinions of friends, workmates, colleagues, relatives) and the remaining 6 were influenced by their own personal television knowledge and experience. More than 90% of the users had had the digital equipment for more than one year. Of all the respondents, 185 returned as

continued users while 31 returned as those who have switched from one provider to the other. This was mainly between the DSTV and Zuku services.

A further classification was done for the respondents who are STB “service switchers” based on more detailed information provided by three main questions in the questionnaires. The service switchers are those customers who at the beginning went for a particular STB but in between have decided to move to another for different reasons. Mummalaneni and Wilson (1989) point out that satisfaction leads to binding the customer and the seller together and strengthening their relationship. Once a customer has decided that he or she is no longer satisfied with the product or service then they are likely to switch to another.

In the questionnaires, the respondents were asked to name the STB they have been using and if they have changed since their first acquisition. They were also asked to state the reason for changing from a given STB to the other. Based on the analysis, of all the respondents, 182 returned as continued users while 32 returned as those who have switched from one provider to the other. This was mainly between the DSTV and Zuku services. The 32 were classified as service switchers.

5. RESULTS

In Table 1, the descriptive statistics for the sample is reported.

TABLE 1
Characteristics of the sample

| <i>Variable</i> | <i>Frequency</i> | <i>Percentage</i> |
|----------------------|------------------|-------------------|
| <i>Gender</i> | | |
| Male | 119 | 55 |
| Female | 97 | 45 |
| <i>Age bracket</i> | | |
| 20-29 | 96 | 45 |
| 30-39 | 86 | 40 |
| 40-49 | 32 | 15 |
| <i>Nature of Job</i> | | |
| No response | 21 | 10 |
| Employed | 182 | 85 |
| Unemployed | 11 | 5 |

In the sample, there were more males than females, and younger people have television sets. The study also shows that most of the respondents were aged between 20-29 years although majority was aged 30-49 years of age. This shows that the study was able to capture the targeted age group. Majority of the respondents also were employed at 182 with 11 were unemployed. This means that since they had income they can be able to make informed decision and also money could dictate the choice of digital top box.

The study then sought to identify the use of digital set top box. The results are as shown in Table 2.

Table 2 Use of digital set top box

Majority of the respondents were using digital set top box and only a few who did not have a digital set top box. When asked the type of digital set top box they had 35.6% had STAR TIMES, 24.3% had DSTV and Go TV while about 10.2% of the population had Bamba TV

and 5.1% had Zuku TV. When asked to indicate what influenced their choice of digital set top box, slightly above half (53.3%) of the respondents noted that there were external sources of influences while 22.7% indicated that interpersonal sources. When asked the time they have had their set box, half of the respondents had it for one year while 30.1 % had it for more than 3years and 19.9% of them had two years. This led us to enquire from the respondents whether they had changed their first digital set top box. Majority of them (78.2%) had not changed while 21.8% of them had changed it.

5.1. Discriminant Function Analysis and results

Table 3 shows results from the respondents.

| <i>Hypothesis</i> | <i>Attribute</i> | <i>Study</i> |
|-------------------|-------------------------|--------------|
| 1 | External influence | 0.481 |
| 2 | Interpersonal influence | -0.501 |
| 3 | Experiential influence | 0.301 |
| 4 | Period of usage | 0.413 |

To test the ability of the hypothesized variables to discriminate between those who switch and the continued, two-group discriminant function analysis was used. The independent variables were external influence, interpersonal influence, experimental influence and period of usage.

| | Frequency | Percent |
|-------|-----------|---------|
| Yes | 204 | 95 |
| No | 10 | 5 |
| Total | 216 | 100.0 |

Table 4: Analysis Case Processing Summary

| Unweighted Cases | | N | Percent |
|------------------|---|-----|---------|
| Valid | | 205 | 94.9 |
| Excluded | Missing or out-of-range group codes | 11 | 5.1 |
| | At least one missing discriminating variable | 0 | .0 |
| | Both missing or out-of-range group codes and at least one missing discriminating variable | 0 | .0 |
| | Total | 11 | 5.1 |
| Total | | 216 | 100.0 |

The analysis cases processing summary give the study the data set in terms of the valid, excluded and the total number of cases. For cases that are excluded, the SPSS output gives the reasons for such exclusions. In our study there were eleven missing group codes resulting to 5.1% and the valid data that is used will be from 94.9% of the total group codes.

Group Statistics

In discriminant analysis the researcher is trying to predict a group membership, so first we examined whether there were any significant differences between the groups on each of the independent variables using means and ANOVA results. The group statistics are as shown in Table 5.

Table 5 Group Statistics

| Group Statistics | | | | | |
|---|---------------------------------|------|----------------|--------------------|----------|
| Which type of digital set top box do you have | | Mean | Std. Deviation | Valid N (listwise) | |
| | | | | Unweighted | Weighted |
| DSTV | Quality of services on device | 1.92 | 1.238 | 53 | 53.000 |
| | Price of service (subscription) | 2.08 | 1.492 | 53 | 53.000 |
| | Ease of use | 1.19 | .982 | 53 | 53.000 |
| | Quality of services | 1.58 | .969 | 53 | 53.000 |
| | Customer service | 1.55 | .798 | 53 | 53.000 |
| | Price of services | 2.81 | 1.161 | 53 | 53.000 |
| | Reliability | 1.57 | .797 | 53 | 53.000 |
| STAR TIMES | Quality of services on device | 1.91 | 1.269 | 77 | 77.000 |
| | Price of service (subscription) | 1.40 | 1.388 | 77 | 77.000 |
| | Ease of use | .66 | .661 | 77 | 77.000 |
| | Quality of services | 1.29 | .758 | 77 | 77.000 |
| | Customer service | 1.40 | .782 | 77 | 77.000 |
| | Price of services | 1.48 | .620 | 77 | 77.000 |
| | Reliability | 1.06 | .522 | 77 | 77.000 |
| BAMBA TV | Quality of services on device | 1.77 | 1.307 | 22 | 22.000 |
| | Price of service (subscription) | 1.32 | 1.492 | 22 | 22.000 |
| | Ease of use | .59 | .734 | 22 | 22.000 |

| | | | | | |
|-------|---------------------------------|------|-------|-----|---------|
| | Quality of services | 1.23 | .752 | 22 | 22.000 |
| | Customer service | 2.00 | .000 | 22 | 22.000 |
| | Price of services | 2.00 | 1.024 | 22 | 22.000 |
| | Reliability | 1.50 | .512 | 22 | 22.000 |
| GO TV | Quality of services on device | 1.81 | 1.194 | 53 | 53.000 |
| | Price of service (subscription) | 2.09 | 3.027 | 53 | 53.000 |
| | Ease of use | 1.08 | .730 | 53 | 53.000 |
| | Quality of services | 1.19 | .833 | 53 | 53.000 |
| | Customer service | 1.51 | .750 | 53 | 53.000 |
| | Price of services | 1.13 | .856 | 53 | 53.000 |
| | Reliability | 1.45 | 1.309 | 53 | 53.000 |
| Total | Quality of services on device | 1.87 | 1.238 | 205 | 205.000 |
| | Price of service (subscription) | 1.75 | 1.994 | 205 | 205.000 |
| | Ease of use | .90 | .813 | 205 | 205.000 |
| | Quality of services | 1.33 | .844 | 205 | 205.000 |
| | Customer service | 1.53 | .751 | 205 | 205.000 |
| | Price of services | 1.79 | 1.098 | 205 | 205.000 |
| | Reliability | 1.34 | .880 | 205 | 205.000 |

From Table 5, it can be noted that quality of services on device, price of service (subscription) and price of service provide the

greatest discrimination between digital set boxes.

Table 6 Tests of Equality of Group Means

| | Wilks' Lambda | F | df1 | df2 | Sig. |
|---------------------------------|---------------|--------|-----|-----|------|
| Quality of services on device | .998 | .143 | 3 | 201 | .934 |
| Price of service (subscription) | .969 | 2.157 | 3 | 201 | .094 |
| Ease of use | .907 | 6.844 | 3 | 201 | .000 |
| Quality of services | .966 | 2.328 | 3 | 201 | .076 |
| Customer service | .947 | 3.782 | 3 | 201 | .011 |
| Price of services | .648 | 36.386 | 3 | 201 | .000 |
| Reliability | .938 | 4.414 | 3 | 201 | .005 |
| Ease of use | .747 | 22.642 | 3 | 201 | .000 |

The group statistics table clearly indicated that there was a large separation among all the predictors within each other apart from type of digital set top box and quality of services on device. The standard deviations gave indication that the data was homogenous.

The same relation was established in Tests of equality of Group Means Table where apart from price of services and reliability. The F-value for price of service is high (36.386) which can act as a very good differentiator.

Table 7: Pooled within group matrixes

| Pooled Within-Groups Matrixes | | Quality of services on device | Price of service (subscription) | Ease of use | Quality of services | Customer service | Price of services | Reliability | Ease of use |
|-------------------------------|---------------------------------|-------------------------------|---------------------------------|-------------|---------------------|------------------|-------------------|-------------|-------------|
| Correlation | Quality of services on device | 1.000 | -.051 | -.015 | -.036 | .060 | -.059 | -.020 | .055 |
| | Price of service (subscription) | -.051 | 1.000 | .333 | -.032 | -.004 | .173 | -.076 | -.031 |
| | Ease of use | -.015 | .333 | 1.000 | .129 | .234 | .214 | .028 | .100 |
| | Quality of services | -.036 | -.032 | .129 | 1.000 | .486 | .227 | .388 | .364 |
| | Customer service | .060 | -.004 | .234 | .486 | 1.000 | .304 | .491 | .666 |
| | Price of services | -.059 | .173 | .214 | .227 | .304 | 1.000 | .300 | .249 |
| | Reliability | -.020 | -.076 | .028 | .388 | .491 | .300 | 1.000 | .620 |

The pooled within group Matrix also established the fact that the inter-correlations among all the variables were very low and

statistically insignificant except for quality of services on the device and price of service.

Log determinants and Box’s M tables

Table 8: Log Determinants

| Which type of digital set top box do you have | Rank | Log Determinant |
|---|------|-----------------|
| DSTV | 8 | -7.468 |
| STAR TIMES | 8 | -7.104 |
| BAMBA TV | 5 | . ^a |
| GO TV | 8 | -2.193 |
| Pooled within-groups | 8 | -2.895 |

The ranks and natural logarithms of determinants printed were those of the group covariance matrices.

Table 9: Box’s M Test Results

| | | |
|---------|---------|-----------|
| Box's M | | 534.322 |
| F | Approx. | 6.936 |
| | df1 | 72 |
| | df2 | 74253.256 |
| | Sig. | .000 |

The results from the Box's M. is 534.322 with $F = 6.936$ which is significant at a $p = 0.05$. Thus the null hypothesis was rejected which means the covariance matrices differed between groups formed by the dependent variable. However, this could be opposite if the sample size was being increased.

Summary of Canonical Discriminant Functions

Table 10: Eigenvalues

| Function | Eigenvalue | % of Variance | Cumulative % | Canonical Correlation |
|----------|--------------------|---------------|--------------|-----------------------|
| 1 | 1.243 ^a | 79.4 | 79.4 | .744 |
| 2 | .211 ^a | 13.5 | 92.9 | .417 |
| 3 | .111 ^a | 7.1 | 100.0 | .317 |

a. First 3 canonical discriminant functions were used in the analysis.

The canonical correlation one, was higher than all the other two at a 0.744 hence there was a significance difference between the **Wilks' lambda**

three functions hence the null hypothesis is rejected.

Table 11: Wilks' Lambda

| Test of Function(s) | Wilks' Lambda | Chi-square | Df | Sig. |
|---------------------|---------------|------------|----|------|
| 1 through 3 | .331 | 218.705 | 24 | .000 |
| 2 through 3 | .743 | 58.775 | 14 | .000 |
| 3 | .900 | 20.900 | 6 | .002 |

The table indicated a highly significant function which was less than .05. In our study the unexplained data in 1 through to 3 is at 33.1%.

The standard canonical discriminant function coefficients

Table 12: Standardized Canonical Discriminant Function Coefficients

| | Function | | |
|---------------------------------|----------|-------|-------|
| | 1 | 2 | 3 |
| Quality of services on device | .045 | .088 | -.138 |
| Price of service (subscription) | -.129 | .179 | -.003 |
| Ease of use | .002 | .689 | -.253 |
| Quality of services | .168 | .055 | -.609 |
| Customer service | -.750 | -.410 | 1.022 |
| Price of services | .727 | .202 | .394 |
| Reliability | -.561 | .792 | .295 |

Table 12 provided indexes of the importance of each predictor like the standardized regression coefficients (beta's) did in multiple regression. The sign indicated the direction of the relationship is both negative and positive. From the third function the highest variable was customer service at 1.022. The other important variable was customer service (-.750), was the strongest predictor which was highly rated although negatively, followed by the price of services (.727) as the second important predictor and (-.561) was the third

important predictor. The three variables in the first function on the type of digital boxes they had. On the function 2, reliability is the strongest predictor (.792) and ease of use is next important (.689).

Structural matrix table

The structural matrix table provided another relatively important of the predictor and could be seen in Table 13.

Table 13 Structure Matrix

| | Function | | |
|---------------------------------|----------|-------|--------|
| | 1 | 2 | 3 |
| Price of services | .621* | .399 | .527 |
| Ease of use | .508* | -.050 | .385 |
| Quality of services | .156* | .141 | -.054 |
| Price of service (subscription) | .002 | .391* | -.009 |
| Customer service | .018 | -.039 | .708* |
| Reliability | .049 | .424 | .473* |
| Quality of services on device | .029 | -.008 | -.097* |

In our study the customer service (0.708) is rated highly in function 3 while price of

service (.621) and ease of use (.508) are rated highly in function 1.

Table 14 Prior Probabilities for Groups

| Which type of digital set top box do you have | Prior | Cases Used in Analysis | |
|---|--------------|------------------------|----------------|
| | | Unweighted | Weighted |
| DSTV | .250 | 53 | 53.000 |
| STAR TIMES | .250 | 77 | 77.000 |
| BAMBA TV | .250 | 22 | 22.000 |
| GO TV | .250 | 53 | 53.000 |
| Total | 1.000 | 205 | 205.000 |

The classification results revealed that 77% respondents were classified correctly. This

overall predictive accuracy in the discriminant function is called the hit ratio.

Table 15 Classification Function Coefficients

| | Which type of digital set top box do you have | | | |
|--|---|------------|----------|--------|
| | DSTV | STAR TIMES | BAMBA TV | GO TV |
| Quality of services on device | 1.348 | 1.260 | 1.129 | 1.239 |
| Price of service (subscription) | .279 | .305 | .294 | .482 |
| Quality of services | 1.164 | .992 | .160 | .546 |
| Customer service | -1.124 | .603 | 2.210 | 1.993 |
| Price of services | 2.869 | 1.235 | 1.740 | .376 |
| Reliability | -.400 | -.252 | .047 | 1.641 |
| Ease of use | 3.736 | 1.661 | 1.181 | -1.586 |
| (Constant) | -10.560 | -5.700 | -7.466 | -6.098 |
| Fisher's linear discriminant functions | | | | |

From the classification function coefficient table ease of use of DSTV at 3.736 was the reason that makes customers choose the digital top box. Ease of use of STAR TIMES at 1.661 was also the reason why customers make choice of using it. On the other hand, customer services among users of both BAMBA TV were rated at 2.210 and GO TV at 1.993. Hence the classification function coefficients obtained among the groups was high on the four brands in both ease of use and customer service.

6. DISCUSSION AND CONCLUSION

The objective of this study was to determine the customer's selection criteria and we explored the effectiveness of selected attitudinal, behavioral and demographic variables in discriminating between switchers and continuers users of a particular STB in the market. The study supported the general proposition that STB selection was mainly based on external sources of information and that there were fewer switchers than continued users of service. This was mainly related to two of the main providers DSTV and Zuku. It was noted that: The quality of service, the customer experience, ease of use

and pricing determine the switching behavior. Indeed, from the research, the price and quality of service were critical consideration in switching of service. Our study therefore contributes to the communications and marketing literature by identifying the criteria used by customers to select a given DSTB and their switching behavior. The characteristic of a DSTB selection is greatly influenced by external factors mainly advertisements, print and electronic media rather than personal knowledge or information. Age and the nature of consumers' job also had an influence.

Implications of the study

The study provides a new contribution on the switching behavior of consumers. Specifically, the switching behavior on STB's in Nairobi was very low. Customers tended to stick to the same STB despite the fact that they could have challenges. This creates basis for further studies on why customers choose to stay with the given STB's despite the satisfaction levels not being high. Another implication of our study is that, DSTB providers will have to invest more on customer care services, programme quality and offer fair product price to remain competitive in Kenyan market.

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