International Journal of Economics, Business and Management Research

Vol. 1, No. 03; 2017

ISSN: 2456-7760

RELATIONSHIP BETWEEN AFFORDABILITY STRATEGIES AND BOTTOM OF THE PYRAMID MARKET SEGMENT

James Gateru

PhD. Student, Department of Economic& Finance in the College of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology

Dr.Thomas A. Senaji

. Chairman, Department of Economics and Finance in the College of Business, Kenya Methodist (KEMU), Kenya.

Prof. Willy. M. Muturi

. Chairman, Department of Economics, Accounting and Finance; School of Business, Jomo Kenyatta University of Agriculture and Technology, Kenya.

ABSTRACT

The biggest population of the world is found at the bottom within the economic pyramid with the market potential apparent in this segment promising. Whilst most fast moving consumer goods (FCMGs) firms have in years past been reluctant to invest in this market, recent studies reveal untapped or under-tapped opportunities at the bottom of the pyramid (BOP) market segment that are increasingly shifting the attitudes of these firms making them ever willing to invest in this market segment. This paper thence assesses the influence of affordability on the sale of FMCGs at the BOP and the resultant profitability on the selling firms. Particularly, the paper explores how the affordability strategies of reducing profit margins, using affordable packaging materials, encouraging retailers to repack products, investing in cheap technology, maintaining competitive prices, packaging in small and affordable units and production en masse impact sale of FMCGs at the BOP and consequently the profitability of FMCG firms with results showing that all the strategies, save for encouraging retailers to repack products, positively impact the sale of FMCGs at the BOP.

Keywords: Affordability, BOP, Profitability, Market Share.

INTRODUCTION

Prahalad (2010) stated that affordability, accessibility, availability and awareness are the key ingredients for developing the bottom of the pyramid (BOP) market. According to Anderson and Billou (2007), companies have lacked a comprehensive framework for addressing the BOP market, but leveraging on the affordability, availability, accessibility and awareness strategies (4As) could achieve growth in this market.

Wamburi (2013) noted that very little research has been conducted on the BOP market segment in Kenya although few multinationals and large companies have started targeting this market

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through small size packages that are affordable to the consumers in this segment. Auclair (2008) further posited that availability, accessibility and affordability of private sector goods and services are bound to change the situation of the urban poor and in turn address some of the challenges facing urban centers today such as unemployment, provision of social amenities and generally reduce the impact of poverty of the bottom of the pyramid consumers.

Companies that take into account the unique conditions prevailing in the BOP markets while developing their marketing strategies are more likely to succeed in tapping this market potential (Chikweche & Fletcher, 2012). According to Chikweche (2007), the BOP concept is built around three pillars that can also be termed as its key principles, namely, availability, accessibility/acceptability and affordability. This study is an exploration of the 4As strategy with focus Affordability impacts the profitability of FMCG Firms at the BOP Market segment.

Affordable pricing can be achieved by reducing cost of a product or service by making its features as simple as possible. Prahalad (2010) argued that BOP consumers are rational consumers who value quality and products which are convenient to use, but this must be matched with an affordable price since, as Anderson and Billou (2007) note, most bottom of the pyramid consumers rely on daily wages and low incomes which mean they have cash flow challenges. Single serve packages in small Stock Keeping Unit (SKUs) such as 100 ml fresh milk packages and *'Bamba 10'* airtime from Safaricom Ltd are perfect examples of resolving this challenge of affordability.

It is also important to note that BOP consumers usually pay higher than their TOP counterparts since they buy similar products in small SKU's which can hardly attract discounts and therefore companies with economies of scale and efficient supply chains should invest in this market and offer quality products at affordable prices (Martinez & Carbonell, 2007). This principle is essential because it addresses the economic power of the BOP consumer. Coupled with affordability that is achieved by a low cost, the types of products availed to the BOP consumer is also important to consider. Food, shelter, water and sanitation, energy and transport, waste management, financial services, security and clothing are the immediate needs of the urban poor as increased affordability to these goods and services will play a significant role in radically reducing the levels of poverty in most urban areas (Nakata & Weirder, 2012).

2.0 THEORY AND HYPOTHESIS

Affordability is the extent to which a new product can be purchased on very restricted income (Nakata & Weirder, 2012). Affordability is a term directly related to pricing and refers to the extent to which the bottom of BOP can afford the product. According to Anderson and Markides

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(2006), the term affordability refers to the degree to which a firm's goods and services are affordable to the BOP consumers. This is important because BOP consumers earn very low wages and therefore companies must deliver offerings at price points appropriate amongst even the least paid consumers.

June, Lee and Park (2013) postulate that the lower the price of a product is, the higher the competitiveness force of the product in the market and this happens when a company improves its efficiency in the production process through adoption of better technologies and reduction of waste. The reduced cost will enable the company to sell affordable products to the BOP consumer.

The first element that increases affordability is the pricing which is directly affected by the cost structure of the production process. If an organization increases its efficiency in the production process through adoption of better technologies and reduction of wastage, the cost structure will enable them to price the products targeted at the urban BOP consumer at a much lower price (Nakata & Weirder, 2012). According to Karnani (2007), one of the key tenets of BOP is the affordability, which means that products must be affordable to the target market.

The purpose of the study was to examine the effect of affordability strategies on the performance (sales volume and profitability) of FMCGs at the BOP Market

Consistent with this objective the hypothesis of the study ($H_{0)}$ was:

H_0: Affordability strategies used by fast moving consumer companies have no significant effect on the bottom of the pyramid market performance in Kenya.

3.0 METHODOLOGY

3.1 Research Design

This research used the survey design which is similar to that used by Angoitia and Ramirez (2009) in a similar study on strategic use of mobile telephony at the BOP. It was an exploratory survey where survey data was analyzed to determine the relationships |between the variables (Bryman, 2004), where data was collected on both the affordability strategy descriptors and performance measures namely sales volume and profitability. In keeping with the objective of this study, the effect of affordability strategies on performance of FMCGs at the bottom of the pyramid market, cross-sectional survey research was appropriate as it was not possible to collect data from all the FMCGs companies operating in Nairobi, Kenya

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3.2Target Population

In this study, the target population comprised two categories namely, all the FMCG scompanies in Kenya as listed by Kenya Association of Manufacturers directory of 2014 (KAM, 2014) and BOP consumers from the five informal dwellings (slums) of Nairobi county: Mathare, Sinai, Soweto, Kibera and Kwanjenga/ Pipeline. Chikweche and Fletcher (2012) used similar populations namely FMCGs firms dealing in foodstuff and personal hygiene products and BOP consumers in a related study in Zimbabwe. While the Sales and Marketing managers were the most suitable FMCGs respondents due to their knowledge of strategies used in addressing BOP consumer needs, the BOP consumers were well suited to provide information on the products they purchase.

3.3 Sampling Frame

The sampling frame for FMCG companies was a list from the Kenya Association of Manufacturers (KAM) directory of 2014. It was, however difficult to obtain a sampling frame for BOP consumers and as stated by Zikmund e*t al.* (2010) and Babbie (2010), where the sampling list does not exist then one can be prepared using the most appropriate data. In this study, a list was prepared using information availed by Tetra Pak International who are the market leaders in food packaging who carried out a retail audit on the total number of kiosks in Nairobi in the year 2012.

3.4 Sampling Size and Sampling Techniques

A cross-sectional census survey (Table 1) of all the 130 fast moving consumer goods companies operating in Nairobi County was conducted

Table 1: Fast Moving Consumer Goods-Across the Country

Region	**Number of Firms**
Nairobi Region	130
Other regions outside Nairobi	46
Total Number	**176**

Source: KAM Directory (2014)

3.5 Sampling Techniques.

This study utilized cluster sampling and specifically area sampling and purposive sampling. According to Mugenda and Mugenda (2003) and Kothari (2013), area sampling is ideal when the

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population of study is scattered over a large geographical area. Kothari (2013) stated that Area sampling, which is a special type of cluster sampling, is primarily used when the unit of analysis is based on a geographic area.

Purposive sampling was used to select Nairobi County because it is cosmopolitan and most FMCGs companies and BOP consumers are found in Nairobi County and being the capital city, it has representation from all other counties in Kenya. According Zickmund (2010) purposive sampling is used where the researcher wishes to isolate a sample that has qualities or characteristics required for the study. Nairobi County having 74.7% of all the fast-moving consumers' companies in Kenya was therefore an appropriate setting for this study. Fast moving consumer goods companies are scattered all over the country and as Mugenda and Mugenda (2003) stated, cluster sampling is used when the population is scattered over a large geographical area.

For the BOP consumers, the sampling technique was multi-stage sampling which combined cluster sampling and purposive sampling. According to Zikmund *et al.* (2010), purposive sampling involves deliberate selection of a particular unit of the population and is normally used when a researcher wishes to isolate a sample that has qualities or characteristics which are required for the study and that only a small sample is required if the population is homogeneous. In such a case, a small sample size with similar characteristic was used and this gave an objective representation of the population.

In this study, the BOP consumers' buying characteristics were very much similar because their limitation was the wage or disposable income which was normally paid daily and the consumer ought to have bought the basic goods which met their family daily requirement based on the money at their disposal. This is what is referred to as single serve purchase because the consumer only buys a basket of goods which are supposed to last for one day only. By selecting Nairobi County to represent the 47 counties in Kenya, purposive sampling was invoked. This sampling was also used to select the BOP consumers in Nairobi.

In the second stage, the five major slums in Nairobi which represent the main urban BOP consumers were selected. These slums are Kibera, Sinai, Mathare, Kwanjenga/Pipeline and Soweto slums. In stage three, the prepared sampling frame was used at random to select 150 respondents/BOP consumers who buy from the kiosks/shops in each of the five slums identified above.

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Purposive sampling gave the researcher the opportunity to pick a BOP consumer who bought goods from a specific kiosk/shop through the assistance of the owner of the business who identified the BOP consumer. The kiosk/shop owners were requested to identify the BOP consumers and clarify to them the purpose of the study. This was to cultivate trust and enable the researcher to conduct the interview without suspicion from the BOP consumers. This is in line with Creswell (2009), who stated that the respondents are purposefully selected because they can inform an understanding of the research problem and central phenomenon in the study. Anderson and Billow (2007) and Ireland (2008) used the same technique to select the sample size and the sample in their studies on BOP research.

3.5 Data Collection Methods and Instruments

Two self-administered semi-structured questionnaires were used for data collection: one the Sales and Marketing managers in the FMCGs and the other for the BOP consumers. This approach is supported by Chikweche (2010) who noted that having more than one group of respondents is good in studies involving consumers and firms because they have a dyadic relationship.

3.6 Administration of Research Instruments

Sales and Marketing managers are easy to identify and are key persons who develop the sales and marketing strategies for their companies. The strategies were used to develop the market share and improve sales for the companies they work for.

According to Yang (2008), the questions in a study should be directly related to the research objectives. In the development of the questionnaires, the variable, affordability, was identified and operationally defined. The procedure for issuing the questionnaires to the respondents was through self-introduction. A self-introduction letter and an authority letter for data collection from the Jomo Kenyatta University of agriculture and technology (JKUAT) accompanied the questionnaire.

3.6.1 Pilot Testing

Piloting of the questionnaire was done using the 15 sales managers from FMCGs companies and 15 BOP consumers from the five slums of Nairobi, namely, Kwanjenga, Mathare, Kibera, Sinai and Soweto. This was 10% of the total sample population and according to Babbie (2010), this is a good representation to test the reliability and validity of the research instruments. This helped the researcher to identify any ambiguous and unclear questions in the questionnaire before administering it to the selected population.

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3.6.2 Reliability: Reliability test for the data collection instruments was done using the Cronbach's formula to measure the internal consistency of the instrument. According to Mugenda and Mugenda (2003) and Zimund *et.al* (2010) this is a better test of reliability and the higher the coefficient the better the results in terms of and a coefficient of 0.7 and above is considered a good measure of reliability.

3.6.3 Validity: Validity was achieved during the pilot testing of the research instruments using the 15 Sales Managers from the FMCG sector. To ensure that the instrument produced valid data attention was taken while designing the questionnaire. The objective was to ensure that the questionnaires were measuring what was intended and collected what was intended to be collected. This is what is known as content validity and is normally improved through the use of an expert or a professional in a certain field (Mugenda & Mugenda, 2003).

4.0 DATA PROCESSING AND ANALYSIS

Descriptive statistics such as mode, median, mean, standard deviation were used to achieve the first objective of getting a feel for the data while the second objective of testing the goodness of data was achieved through test of reliability using the Cronbach's Coefficient alpha formula and finally, the third objective of hypothesis testing was achieved through multiple regression analysis.

Data was processed using the SPSS (Statistical data processing for Social Sciences) version 20 to obtain results using linear regression and correlation analysis models. The use of classic linear regression model is preferred due to its ability to show relationships between the independent and the dependent variables (Castillo, 2009). Multiple regression analysis and correlation analysis were carried out with the aim of analyzing the relationships between strategies used by FMCGs, affordability strategy and bottom of the pyramid market performance. Martin and Hill (2012) used a similar model when they carried out a BOP research on life satisfaction, self-determination and consumption adequacy in 51 countries. Shafayet and Rozario (2012) used multivariate model in a similar study on purchase decisions regarding FMCGs companies in Bangladesh while Nguyen and Mohamed (2011) used multiple regression in their research on leadership behaviors.

4.1 Quantitative Analysis. The descriptive statistics were employed in the analysis of quantitative data in terms of frequency distribution tables, pie charts, mean and standard deviation on the strategies used by the FMCGs to respond to the bottom of the pyramid market. The study also utilized multiple regressions to determine the relationship between BOP strategies

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and the BOP market. The effect of the moderating variable was also tested using regression analysis. The t-test was carried out to test the hypotheses.

General Multiple Regression Analysis. The general multiple regression models for this study were as follows:

$Y = \beta_0 + \beta_1\chi_{1+}e$

Where

Y = BOP market performance

β_0 = Model intercept

β =coefficient of regression

χ= Availability strategy

e = is the error term

Nguyen and Mohamed (2011) stated that multivariate regression allows prediction of a single dependent variable from more than one independent variable and also the determination of the influential dependent variable; linear regression with OLS was used to estimate the relationship between affordability strategies employed and BOP performance among FMCG firms in Nairobi County, Kenya.

4.2 Moderated Multiple Regression Analysis. The government normally has a lot of influence on the strategies developed by the FMCGs especially on BOP consumption through taxation such as the value added tax (VAT) which was used as a moderator variable in this study. The general multiple regression model with a moderator for this study will be; $y = \beta_o + \beta_1X + \beta_2X*Z + e$

Where Y = BOP market performance

X = independent variable – Availability strategy

Z = moderating variable (VAT at 16%).

βo = constant or intercept

β1 = regression coefficients associated with affordability (X)

β2= regression coefficients associated with the moderating variable (taxation, Z)

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e = error term

XZ = Interaction term of taxation with Affordability strategy (X)

4.3 Variable Definition and Measurement

In this study, variable measurements were based on a mix of tools because the questionnaire had both qualitative and quantitative measures and therefore the variables of study had different measurement levels, some with nominal, ordinal, interval and some with ratio scales.

According to Zikmund *at al*. (2010), interval and ratio scales are used frequently in social science studies when a researcher collects product rating information. The independent variable availability, while the 16% VAT that was introduced on the BOP goods was the moderating variable. The BOP market performance was the dependent variable

Affordability is said to prevail when BOP consumers are willing and able to purchase a basket of goods to meet the needs for the family daily requirement and not necessarily low priced goods. Price performance and price sensitivity were used to evaluate the affordability strategy. The study utilized percentage and the actual values in figures such as prices and Likert scale statements to establish the effect of affordability variable on the BOP market. Price sensitivity used a rating from 5 to 1, where 5 was very sensitive and 1 represented not sensitive. The strategy on affordability was evaluated using a 5-point scale which are indicated as, 1=No 2=Slightly 3= To some extent 4= Moderate and 5= To a great extent. Price point was measured using actual price per package ranging from Ksh.10 to Ksh. 50 per package.

Bottom of the pyramid marked performance refers to the change in consumption of goods due to the implementation of the 4As strategies by the FMCGs. This was measured using two indicators, namely the % change in sales and size of BOP market share occasioned by the implementation of the affordability strategy Auclair (2008) supported this view by stating that the urban BOP consumer if properly targeted creates new markets which increase consumption of goods and increases market share.

Growth in consumption was measured using % growth in sales. A 5-point scale was used where; 5=81-100%, 4=61-80%, 3=41-60%, 2=21-40% and 1=0-20% was used. Market share was measured using the proportionate market share of BOP as a % of the total market. A five-point scale was provided where; 5=81-100%, 4=61-80%, 3=40-61%, 2=21-40% and 1= 0-20%. The Table 2is a summary of how each variable was measured.

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Table 2: Operationalization of study Variables

Type of Variable	Variable Name	Variable Indicators
Dependent Variable	**BOP Market**	Effect on BOP consumption when products are made affordable. Parameters are; • % growth of BOP sales • BOP Market share
Independent Variables	**Affordability strategy**	Extent to which the product price is appealing to the consumer. The parameters are: • Price performance • Price point • Sensitivity tactics

Source: Author, 2017

4.4 RESULTS

The purpose of this study was to evaluate the effectiveness of Affordability strategy on the performance of FMCGs at the BOP in Nairobi County, and whether taxation moderates this relationship.

4.4.1 Response Rate

Out of the 130 questionnaires distributed, 102 were filled up by the sales and marketing managers. This was a response rate of 78.4% and according to Babbie (2010), a 50% response rate is considered adequate, 60-70% is considered good while above 70% is considered very good and therefore, a 78.4% response rate from this study was very good. The findings are shown in Table 3.

During inferential statistics analysis, a number of respondents' questionnaires were removed from the model because they were found to be affecting the model adversely due to the effect of outliers. This therefore reduced the actual frequency in the model from 102 to 84 questionnaires, this is in line with Hair, Black and Babin (2010); and Abbott and McKinney (2013) who stated that cases or observations showing characteristics or values that are markedly different from the majority of cases in a data set should be dropped. This is because they distort the true relationship between variables, either by creating a correlation that should not exist or suppressing a correlation that should exist.

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Table 3: Response Rate

Response Rate	**Frequency**	**Percent**
Responded	102	78.4%
No Response	28	21.6%
Total	**130**	**100%**

4.4.2 Diagnostic Tests

Reliability Testing Cronbach's Alpha test was carried out on the three variables so as to a certain their reliability. The measure ranges from 0 to 1 and the higher the coefficient, the more reliable or consistent the construct is. The reliability results are presented in Table 4

Table 4: Reliability Test of Constructs

Construct	**No. of Items**	**Cronbach's Alpha**	**Status**
Affordability	18	0.782	Acceptable
Taxation	20	0.701	Acceptable
Bottom of the Pyramid	20	0.888	Acceptable

The reliability statistics were 0.782 for affordability, 0.701 for taxation and 0.888 for the BOP performance. All the three variables passed the minimum threshold of 0.70 and this meant that they were reliable and therefore full data collection commenced.

Tests of Normality. To test normality, skewness and kurtosis statistics were used. Skewness is the extent to which a distribution of values deviates from symmetry around the mean (Norusis,

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1994). A value of zero means that the distribution is symmetric, while a positive skewness is shown by a greater number of smaller values, and a negative value indicates a greater number of larger values. A kurtosis value near zero indicated the shape of data was close to normal. A negative value indicates a distribution which is more flat than normal, and a positive kurtosis indicates a shape peaked than normal. According to Creswell (2008), statistic values of +/- 2 for Kurtosis and Skewness are adequate for statistical analysis.

The results of normality test are presented in Table 5

Table 5: Test of Normality

Variable	**Mean**	**Std. Dev**	**Skewness**	**Kurtosis**
Affordability Strategy	.0267	0.96578	-0.274	.479
Bottom of the Pyramid Market performance	-.1319	0.72869	-0.190	0.179

As seen from Table 5, the affordability construct had a mean of - 0.0267, standard deviation of 0.96578, skewness of - 0.249 and kurtosis of 0.479, while the bottom of the pyramid performance construct had a mean of- 0.1319, standard deviation of 0.72869, and skewness of 0.190 and finally a kurtosis of 0.179.

For all variables, skewness and kurtosis coefficients were well within +/-2 and hence a conclusion that the data was normally distributed. This therefore meant that the assumption of normality in linear regression analysis was satisfied. Data can be considered to be normal if the skewness and kurtosis is between +1 and -1. According to Cunningham (2005), data results values of between +1and –1 in skewness and kurtosis are normal but values +2 and -2 are still acceptable.

4.4.3 Demographic Statistics

Period Worked in the Company. The distribution of responses according to the period that the managers in the organization is presented in Table 6

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Table 6: Period Worked in the Company

	Frequency	Percentage
<3 years	23	23.5
3-5 years	35	35.7
6-10 years	32	32.7
more than 10 years	8	8.1
Total	98	100.0

The findings show that majority of the respondents, 77%, had worked with the fast moving consumer goods companies for more than 3 years, a period long enough to be conversant with the way the companies develop and implement their strategies especially for the BOP consumers who were the main focus of this study. This therefore meant that the information provided by the respondents was reliable and could be used to make conclusions on the study hypotheses.

4.4.4 Age of the Company

The distribution of the age of the respondents is presented in Table 7

Table 7: Age of the Company

Number of Years	Frequency	Percent
1-5 years	3	3.0
6-10 years	9	9.1
11-15 years	5	5.1
Over 15 years	82	82.8
Total	99	100.0

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According to the study (Table 7) about 83% of the companies had operated for more than 15 years. The fact that the most of the companies, 88%, had operated for more than 11 years meant they had enough time to prepare and evaluate the strategies and monitor them. This may have contributed to their longevity, for more than 11 years, and therefore the findings from this study could highly be relied upon to test the hypotheses.

4.4.5 Types of Products the Company Sells

Table 8 shows the type of products that the companies sold.

Table 8: Type of Products the Company Sells

Product Types	**Frequency**	**Percent (%)**
Foodstuff only	64	66.0
Personal Hygiene only	18	18.5
Foodstuffs & Personal Hygiene	15	15.5
Total	**97**	**100.0**

According to the findings, 66% of the companies were selling foodstuffs only, 19% were selling personal hygiene products and beauty care products only, while 15% of the companies were selling both foodstuffs and personal care products.

4.4.6 Descriptive Statistics on the Affordability Strategies

Affordability of Company Products. Respondents were asked to state whether the products they sell are affordable or not and the results are shown in Table 9.

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Table 9: Affordability of Products

Opinion	Frequency	Percent (%)
Yes	89	97
No	3	3
Total	92	100

The majority of respondents (97%) stated the products they sell are affordable while only a small **proportion that is 3% stated that the products they sell are not affordable.**

4.4.7 Evaluation of Affordability Strategies

The respondents were asked to evaluate the various strategies they use so as to make their products affordable and ensure they improve their market. The results are shown in Table 10

Table 1: Affordability Strategies used by FMCG Companies

Strategies	We don't (%)	Very low extent (%)		Some extent (%)	Quite often (%)	Great extent (%)	Mean	Std. Deviation
Reduce profit margins of fast moving packages/sizes	1	6		26	38	29	3.88	0.94
Use affordable packing materials	7	8		36	32	17	3.44	1.09
Encourage retailers to repack your products	74	12		9	1	3	1.46	0.94
Invest cheap/affordable technology	11	15		34	26	14	3.16	1.19
Maintain Competitive Prices	0	4		13	36	47	4.26	0.84
Pack in small sizes that are affordable and used once and /or one day	0	3		35	42	20	3.78	0.79
Produce in mass so as to reduce cost of production through increased	0	7		52	30	12	3.45	0.80

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On the reducing profit margins of the fast moving packages, overall results on this strategy showed that 94% of the companies use this strategy to appeal to the BOP market consumers.

On use of affordable packaging material, the findings show that 85% of the companies use this strategy to appeal to the BOP consumers. On the strategy of encouraging retailers to repack their products, 74% said they don't use it, meaning that although most retailers are repacking fast moving consumer goods products which they buy in bulk, only few companies use this as a strategy to increase their BOP market.

On the strategy of investing in cheap and affordable technology only 11% indicated that they do not use it, 15% stated they hardly used the strategy, 34% agreed that they use the strategy, 26% said they quite often use the strategy while 14% of the respondents agreed that they use the strategy heavily. This is in line with the theory of disruptive technology which contends that BOP products need to use appropriate and affordable technology which will make their products affordable and therefore competitive in the market.

On maintaining competitive prices, none of the respondents indicated that they don't use the strategy while a meagre 4% of the respondents said they hardly use the strategy. Only 13% of the respondents stated that they use the strategy occasionally, 36% said they use the strategy quite often while a large number of respondents that is 47% stated that they use the strategy to a great extent.

On the strategy of packing in small sizes that are affordable and used once and/or once per day, no respondent stated they don't use the strategy, 7% said they hardly use the strategy, 35 % said they sometimes use the strategy, 42% said they use the strategy quite often while 20% agreed that they use the strategy to a great extent. The results supportfindings by June, Lee and Park (2013) that small well packaged brands are normally affordable to the BOP consumers and is a good tactic to target the low-income consumers. On the last strategy of Producing in masses so as to reduce cost of production through increased volumes, no respondent stated that they do not use the strategy, a mere 7% said that they hardly use the strategy, majority 52% indicated that they use the strategy quite often and 12% said they use the strategy to a great extent.

The mean was also used to evaluate the utilization of the various affordability strategies and the findings are summarized in Table 4.5.5. On the strategy of reducing the profit margin of fast moving packages, the mean was 3.88. for the strategy of using affordable packing materials the

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mean was 3.44, the strategy to invest in cheap/affordable technology was 1.46, 3.16 was the mean for the strategy to encourage retailers to repack their products, 4.26 was for the strategy to maintain competitive prices, 3.78 was for the strategy to pack in small sizes that are affordable and used once/or once per day while 3.45 was for the strategy to produce in masses so as to reduce cost of production through increased volumes. A mean score of more than 3.0 meant that the strategy is on average quite often used by the FMCG and this is a clear indication that most of the stated affordability strategies are common apart from the strategy to encourage retailers to repack their products which had a score of 1.46. The strategy to maintain competitive prices scored 4.26 which was the highest and this meant that it is a key strategy to grow the BOP market.

4.4.8 Most Preferred Price Point for BOP Products. The study also sought to identify the most acceptable and most used price point for the BOP consumer products. The results are shown in Table 11.

Table 11: Most Preferred Price Point

Price Point	**Frequency**	**Percent (%)**
1-10/-	6	6
11-20/-	22	23
21-30/-	13	14
31-40/-	10	10
41-50/-	20	21
over 50/-	25	26
Total	**96**	**100**

At the lowest price point of Ksh.1-10/, 6% of the companies said they have products selling at this price. At price points of Ksh.11-20, 23% of the companies stated they have products selling at such price point, while at the price points of Ksh. 21-30, 14% of the companies agreed they had products selling at this price point. Ten percent (10%) of the companies stated they have products selling at price pints of between Ksh. 31-40.

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At the price points of Ksh. 41-50/-, 21% of the companies stated they have products selling in that range and finally at a price point of Ksh. 50/- and above 26% of the companies stated they have products selling at that range. What can be implied from the results is that a price point which is within the range of Ksh. 50 is acceptable to most BOP consumers. This is because majority of the respondents, that is 47%, preferred price points of either between Ksh. 41-50/- or over Ksh.50/- per package. This implies that the BOP consumers are not necessarily looking for very small packages but could be having other reasons why medium sized packages are also preferred.

4.4.9 Price Sensitivity of Products

Data was also analyzed with regard to price sensitivity of products; the findings shown in Figure 1.

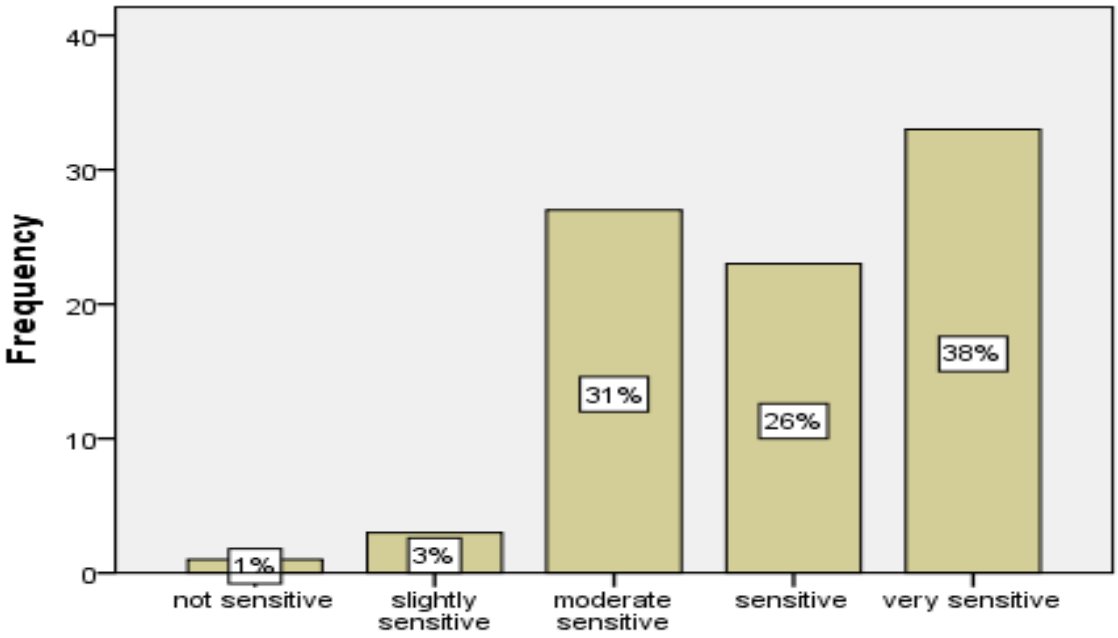

Figure 1: Price Sensitivity of BOP Products

The findings (Figure 1), concur with many BOP studies which claim that BOP products are highly sensitive to prices changes and that companies should ensure they develop the right strategies so as to ensure the price changes do not affect their sales adversely.

4.4.11 Tactics to Manage Price Sensitivity. The study sought to find out the strategies companies use to manage price sensitivity, the findings for the study are shown in Table 12.

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Table 12 Price Sensitivity Tactics

Strategies to Reduce Price Sensitivity	Hardly Used (%)	Slightly Used (%)	Moderately Used (%)	Used quite often (%)	Most Used (%)	Mean	Std. Deviation
Carry out trade promotion e.g. 10% extra volume	11	11	16	32	29	3.58	1.32
Carry out pricing gimmicks e.g. 9.99/-, 99.90/- etc.	37	22	27	11	2	2.18	1.12
Carry out product branding e.g. buy 3 get 1 free	7	13	32	30	18	3.39	1.15
Give price discounts e.g. 10% off	3	5	16	56	19	3.84	0.91
Pack single serve packages/small sizes with low prices per unit	14	7	36	30	13	3.2	1.20

On the tactic of carrying out trade promotions like 10% extra volume 11% stated they do not use this tactic, 11% of the companies stated they slightly use the tactic, 16% said they use the tactic moderately, 32% said they use the tactic quite often and 29% said this this is the most used tactic. This in conclusion shows that this is a good tactic to manage price sensitivity.

On the tactic of carrying out pricing gimmicks such as ksh.9.99/-,99.9/-,999.90/- etc., majority, 37%, of the respondents said they hardly use the tactic. A conclusion that this is not a good tactic to manage price sensitivity can thus be drawn.

On the product banding tactic like buy 3 get one free tactic, 7% stated they hardly use it, 13% said the tactic is slightly used, 32% indicated the tactic is moderately used, 30% said the tactic is used quite often while 18% said the strategy is the one commonly used. The results show that this is not a good tactic to manage price sensitivity. Results on the price discounts such as 10% off, over 80% of the respondents agreed this tactic can be used to manage price sensitivity and supporting a conclusion that it is one of the best strategies to use.

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The results on this tactic on packaging small sizes of products and offering low prices (Table 12) showed that 79% of all the companies under study agreed that they use this tactic to manage price sensitive and the results concur with Chikweche (2009) who stated that companies should pack small sizes goods so as to make the products more affordable to the BOP consumers.

4.5 TEST OF HYPOTHESIS

$H_0$1 – Affordability Strategies have no significant influence on the bottom of the pyramid market in Kenya.

First, the association between affordability strategy and BOP market performance was examined using a scatter diagram (Figure 2)

Figure 2 shows a scatter graph of affordability strategies and bottom of the pyramid market in Kenya. The diagram indicates a positive gradient which is an indication that affordability strategies affect the bottom of the pyramid market. Based on the scatter graph and the t-statistics, the null hypothesis was thence rejected since the graph indicates a positive linear relationship.

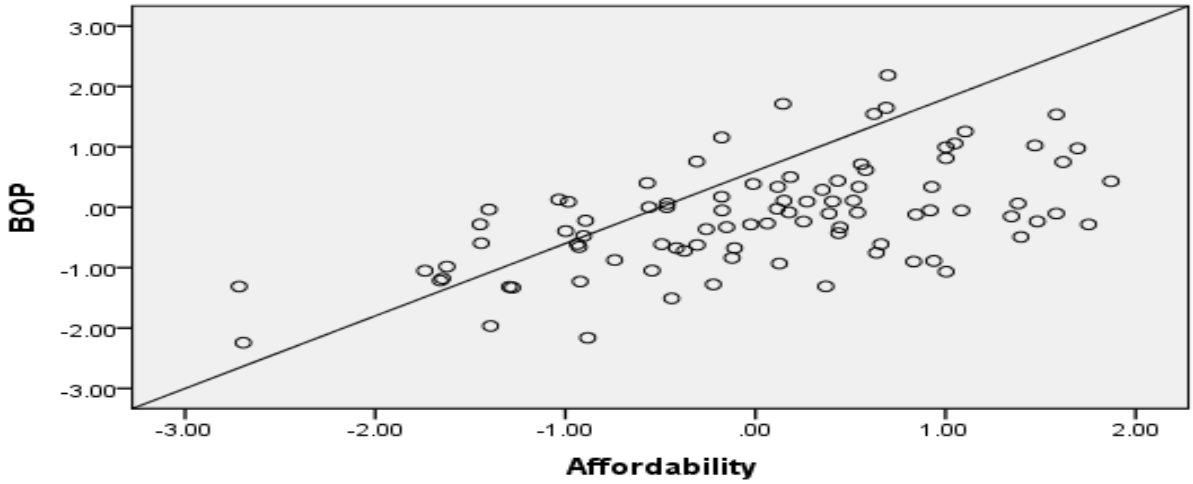

Figure 2: Scatter Diagran of the Bottom of the Pyramid Versus Affordability Strategies

From the scatter plot, it is discerned that there is a positive correlation between affordability strategy and the BOP market performance among FMCGs in Nairobi County, Kenya. Based on this finding, the hypothesis was tested using linear regression analysis.

Secondly, to hypothesize that affordability strategies have no significant effect on the bottom of the pyramid market in Kenya, a linear regression F-test was carried out using ANOVA to determine whether there was a significant relationship between affordability strategies and the bottom of the pyramid market in Kenya. The results of the linear regression indicate that r =

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0.635a and R^2 = 0.427. This is an indication that there is a moderate significant effect of affordability strategies on the bottom of the pyramid market performance among FMCG companies in Kenya. This relationship is explained in Table 13.

Table 13: Affordability Strategies and Bottom of the Pyramid Market Share Model

R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
0 .635a	0.427	0.420	0.55830

a. Dependent Variable: BOP Market

Predictors: (Constant), Affordability

Table 14: ANOVA (b) Affordability versus BOP Market

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	19.035	1	19.035	61.069	.000(b)
	Residual	25.559	82	.312		
	Total	44.594	83			

Predictors: (Constant), X1-Affordability Strategies

Dependent Variable: Y-Bottom of the Pyramid Market

Table 14 shows results of the ANOVA. F-test results of 61.069 and the critical values of F-test (1, 83 degrees of freedom) at 0.05 is 3.84 < 61.069. The null hypothesis was rejected and a conclusion that there is a linear relationship between affordability strategies and bottom of the pyramid market in Kenya was made. It was also revealed that affordability strategies have a significant effect on the bottom of the pyramid market in Kenya since P-value is .000 which is less than 5% level of significance.

To test this hypothesis, the beta coefficient was computed and t-test used to test the significance of the coefficient associated with the affordability strategies and bottom of the pyramid market in

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Kenya. This was tested at 5% significant level. The t-test results showed that the β coefficient was statistically significant since t-value at 5% is 7.815>critical t=1.96. The null hypothesis was rejected as the t-test indicated that β coefficient was different from zero, at 5% significant level. Table 2 shows a positive gradient which reveals that an improvement of affordability through affordability strategies increases the bottom of the pyramid market performance by a ratio of 0.501.

Table 15 Model Affordability versus BOP Market

Model		**Coefficients**		**t**	**Sig**
		B	**Std Error**		
1	(Constant)	-0.135	.061	-2.12	.030
	Affordability Strategies	.501	.064	7.815	.000
Dependent Variable: Y					

5.0 DISCUSSION

The stated null hypothesis 1 in this study was that Affordability strategies have no significant influence on the bottom of the pyramid market in K*enya (H_0)*. The study hypothesized that affordability strategies have no significant effect on the bottom of the pyramid market in Kenya. However, the results showed that there was a linear relationship between the two. Findings indicated that there was a positive significant relationship between affordability strategies and bottom of the pyramid market in Kenya. One of the key decisions that a customer makes before buying a product is checking the price and deciding whether according to him/her the product is worth the price which in this case will be affordability to a BOP consumer.

This is shown by a constant negative value of -0.135 in Figure 2. The results are also supported by the r^2 value of i.e.0.427 indicating affordability has a moderate influence on the growth of the BOP market in Kenya

Findings from the descriptive analysis also showed that BOP products are highly sensitive to price changes as 95% of the respondents stated that the demand of BOP declines as affordability, which is affected by prices, declines. Findings in the same study show that one way of improving affordability is to reduce profit margins of the products targeted to the BOP market especially on small packaged goods. This was confirmed by respondents, 79% of whom who stated that

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packing small SKUs improves affordability. The percentage of respondents who stated that reducing profit margins improves affordability were 93%. These findings are well supported by Karnani (2007) who stated that affordable pricing is one of the key tenets of the bottom of the pyramid market. Anderson and Ballou (2007) reinstated the same and postulated that BOP consumers rely on either daily or weekly wages and therefore companies must sell products that are within the reach of their consumers.

5.1 Conclusion

The results of this study lead to a conclusion that affordability strategies have a statistically significant effect on the bottom of the pyramid market in Kenya. The results also revealed that the affordability strategies developed by FMCG companies have a significant effect on bottom of the pyramid market in Kenya. Bottom of the pyramid market is highly influenced by the affordability of the product on offer and as seen by the results, purchase of these goods can even go to negative if the right strategies are not developed to make the product affordable, meaning consumers may switch to other goods from other sources such as goods packed and sold by the informal sector if they feel that the products being offered by FMCG companies are not affordable. It is also concluded that one way of improving affordability is to reduce profit margins of the products targeted to the BOP market especially on small packaged goods.

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