

Effects of Shoppers' Individual Characteristics, Price and Product Knowledge on Shoppers Purchase Behavior

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Abstract

The purpose of this study is to investigate the effect of shopper's individual characteristics, price and product knowledge (knowledge concerning processed milk) on the outcome of purchase behavior (amount of milk bought from supermarkets in Kenya). Based on regression analysis, the study employed a survey design and a primary data set of 1000 shoppers of fresh processed milk. Except for shopper's gender and price, other shoppers' individual characteristics (education, age, family size) and product knowledge (knowledge level for processed milk) had a significant effect on the outcome of behavior in terms of the amount of milk bought from the supermarkets in Kenya. The study provides empirical evidence on the effect of shoppers' individual characteristics, price and level of product knowledge on the amount of processed milk bought from supermarkets in Kenya. From the accessible literature, there is no study that has investigated the effect of shoppers' individual characteristics, price and product knowledge on the amount of processed milk bought from supermarkets in Kenya. The findings could guide milk processing companies and supermarkets' management when planning and implementing their marketing strategies in attempt to increase sales of processed milk.

Keywords: Consumer Behavior, Shoppers' Individual Characteristics, Product Knowledge, Price

Introduction

Given the competition prevailing in the business environment today, understanding of consumer behavior is fundamental issue in marketing. The better the firm understands its consumers, the more likely it becomes successful in the market. The study of factors influencing buying or consumer behaviors is important due to the following reasons: Firstly, knowledge of factors influencing consumer behavior would help manufacturers when planning and implementing marketing strategies. For example, this understanding would assist them in selecting and segmentation of target markets, thus devising appropriate marketing strategies most relevant to the target market segment. Secondly, a major component of the marketing concept is that a firm should create a marketing mix that satisfies consumers Kibera & Waruingi (2007). According to Saleemi (2011), the proof of establishing consumer orientation in the marketing concept of the firms depends on how the marketing mix adopted satisfies the consumers. This is known only when marketing mix is developed to include positive answers to the questions listed below: what are the products they buy, why they buy them, how they buy them, when they buy them, where they buy them and how often they buy them. Thirdly, buyers' reactions to a firm's marketing strategy have great impact on the firm's success. Thus, by gaining a better understanding of the factors that affect buyer behavior, milk processors and retail outlets would be in a better position to predict how consumers will respond to milk marketing strategies.

The market share for processed milk in Kenya is only 20% compared to that of raw milk which is 80% (Muriuki, 2011 p.g.14). As a result, milk processing firms are operating at a combined capacity which is far below their combined capacity of 2.9 million liters per day. The situation is worsened by some consumers' preference of raw milk over processed milk (Muriuki, 2011). The argument is that unprocessed milk is cheaper compared to processed milk. However, there have been arguments that unprocessed milk is handled in unhygienic manner and could cause diseases such as T.B. (Muriuki, 2011). Introduction of small milk packages targeting low income earners helped the processors of fresh milk to increase their market share from 15% in 2003 (Karanja, 2003) to 20% in year 2011. Level of income is just one of the shoppers' individual characteristics. This implies that, knowledge concerning the effect of the other shoppers' individual characteristics such as age, gender, education and family size on milk shoppers' behavior needs to be understood. Effects of other marketing factors such as, price and knowledge about processed milk (types of processed milk, forms of packaging and brands available) on the amount bought is also necessary if milk processors are to make proper marketing

strategies for processed milk. Knowledge about a product is mainly through exposure to advertising and other promotional activities (Peter & Donnelly (2007).

The purpose of this study is to investigate the effect of shoppers' individual characteristics, price and the knowledge about processed milk on the outcome of behavior. The outcome in behavior in this study refers to the amount of processed milk bought from supermarkets in Kenya during a shopping activity. The main objective of this study is to investigate, whether customers' individual characteristics, price and level of knowledge of processed milk has any significance effect on the amount of milk bought from supermarkets in Kenya. To address this objective, the following hypotheses were tested:

- Ho₁: Shoppers gender has no significant effect on the amount of processed milk bought from supermarkets in Kenya
- Ho₂: Shoppers age has no significant effect on the amount of processed milk bought from supermarkets in Kenya
- Ho₃: Shoppers level of education has no significant effect on the amount of processed milk bought from supermarkets in Kenya
- Ho₄: Shoppers level of knowledge of processed milk has no significant effect on the amount of processed milk bought from supermarkets in Kenya
- Ho₅: Family size has no significant effect on the amount of processed milk bought from supermarkets in Kenya
- Ho₆: Price has no significant effect on the amount of processed milk bought from supermarkets in Kenya

From this point, the paper is organized as follows: section 2 provides a brief review of the pertinent literature, section 3 describes the methodology of the study, section 4 presents the results and discussion of the results, while the final section provides the conclusions based on the results.

2.0 Literature Review.

Some studies on behavior of consumers of processed milk have focused on the consumers individual characteristics and importance of milk packaging characteristics (Bytyqi, Gjonbalaj, Mehmeti, Gjergjizi, Miffari & Njazi 2008; Rita, Aiste & Laura, 2009), others have focused on consumer's preference for milk packages (Agnieszka & Miroslaw, 2008). Wambugu (2014) focused on the attitude towards milk packaging designs in Kenya. According to marketing theory, preference and attitude towards a product does not indicate the actual outcome of consumer behavior. Consumers may indicate preference for a commodity or a favorable attitude towards a product, but this may not actually translate to purchase (Blackwell et al, 2009). In order for firms to come up with effective marketing strategies for processed milk, it is important that outcome of behavior in terms of the amount of milk bought from retail stores is investigated. Despite this, the effect of shoppers' individual characteristics, price and exposure to processed milk through advertising and other promotions on the amount of milk bought from supermarkets during a shopping activity remains unknown. An exception is the study of Mwangera (2012), which investigated factors influencing milk consumption in Kenya. However, the study was not carried out at the point of sale.

According to Kibera & Waruingi (2007) consumer behavior can be defined as *'that behavior exhibited by people in planning, purchasing and using economic goods and services.* According to Paul & Olson (2008 p.g 59), consumer shopping behavior is defined as *'the dynamic interaction of affect and cognition, behavior and the environment by which human beings conducts the exchange aspect of their lives'*. In view of the two definitions, consumer behavior can be defined as the buying behavior of ultimate consumers, mainly those persons who purchase products for personal or household use, not for business purpose. Consumer behavior is influenced by a number of factors, some which are internal and others external. Internal sources include: Individual characteristics factors, needs and motives, perception, attitudes and personality. External factors include: culture, social class, reference groups and opinion leaders. The internal factors focused in this study are the shoppers' individual characteristics, while the external factors are limited to price and knowledge about processed milk (types of processed milk, forms of packaging and brands available).

2.1 Shopper's individual characteristics

Customer individual characteristics are those factors particular to an individual Kotler, et al (2009 pg 115). They are classified into the following categories: Customer's age, gender, income, education, family size, tastes and preferences. First of all, the amount that a shopper buys of a commodity depends on his tastes or preferences. In the extreme case, if he dislikes the commodity altogether, he will not buy any at all. Each person is likely to have his own individual tastes and preferences, influenced by all sorts of factors such as age, gender, education, income or religion. Customer's age factor influences purchase decision in that, individuals buys different goods and services over a life-time (Rajan, 2006). Taste in food, clothes, furniture and recreation is often age related. The second customer individual characteristic that influences buying behavior is the family. Family has four

elements that may influence buyer's behavior: marital status, age of family members, size of family and work status of the family head (Mutlu, 2007). Trends like delayed marriages, age of the children, tendency of professionals/ working couple to acquire assets such as a house or an automobile in the early stage of career (earlier these used to be close-to- retirement acquisitions for a large majority) has resulted in differently opportunities for marketers at different stages in the consumer life cycle.

Gender is third factor particular to an individual that influences buying behavior. It has been defined as the fact of being male or female (Kotler et al, 2009). Consumers buy different goods and services depending on their gender (Kibera & Waruingi, 2007). As a result, gender has been used as one of the criterion for segmenting the market for goods and services. The fourth dimension of customer individual characteristics is consumer's level of education: This factor determines the occupation of an individual. Consumer's occupation influences consumption patterns as items required by different types of workers differ.

Consumer's level of income is the fifth dimension of customer individual characteristic. Individual's buying power is directly proportional to income/earnings. Income determines how much an individual spends and on which products (Blackwell et al, 2009). High monthly disposable incomes generally lead to greater purchase of goods and services, which in turn leads to expansion of firm's production and sales volumes.

2.2 Product Knowledge

According to Peter & Donnelly (2007), product knowledge refers to the amount of information a consumer has stored in his memory about particular product types, product forms, brands, models and ways to purchase them. For example, a consumer may know about a product class versus another, product form versus another, product brand versus another and various package sizes (models) and stores that sell it (ways to purchase). Reference groups, marketing and situational influences determine the initial level of product knowledge as well as changes in it. For instance, a consumer may hear about a new product from a friend(group influence), see an advert for it in the media(marketing influence) or see the product distribution agent on the way to work(situational influence). Any of these increases the amount of product knowledge, in this case, a new source for purchasing the product. It influences the purchase decision in regard to how much information is sought when deciding to make a purchase, which either quickens or delays purchase decision-making process. Further, research on new products in the market has shown product knowledge has significant effect on the outcome of purchase behavior (Reene, 2010). In this study, milk is a low involvement product; consumers are not expected to develop a high degree of product knowledge so that they can be confident that it is the right for them. However, given that Kenya is less developed country, and information about processed foods including milk may be limited by the level of education and exposure through promotions, there is need to establish whether knowledge about processed milk (types of processed milk, forms of packaging and brands available) has significant effect on the shoppers' purchase decision.

2.3 Price

The amount of a given commodity that the shopper buys depends on its price. Kibera & Waruingi, (2007 p.g 179) defines price *'as the value placed on a product/service by customers at some point in time'*. If the product is very expensive, he may buy very little of it, and in general it is expected he buys more as the product becomes cheaper. However, there are exceptions to this rule. This is in the case of Veblen a goods, which are goods whose demand increases as their prices increases. Further, the amount bought is usually affected by prices of other related goods; such as, substitutes and complementary goods. If the price of the substitute is high, the shopper is likely to buy more of the other related commodity and vice versa. For complementary goods, if the price of one commodity is increased, the demand of the other commodity decreases and vice versa

3.0 Methodology

This study was based on primary data collected from a sample of shoppers using a structured questionnaire developed for this study. The study population is all users of fresh processed milk produced in Kenya. The shoppers who participated in the study were selected using random sampling technique in three heavily populated towns within Nairobi metropolitan area. These are: Ruiru, Kiambu and Ongata Rongai. The questionnaire was administered to 1000 shoppers of fresh processed milk. To ensure reliability of this study, various precautions were taken. For instance despite the fact that the interviews were conducted in English, local language and Kiswahili were used in case the respondent does not understand English. To get the information on the shoppers' profile, the respondents were requested to indicate their gender, age, education, family size as follows: Shoppers indicated their gender as either male or female. They were requested to indicate their age in either of the age brackets: below 21 years, 21-30, 31-40, 41 -50 and over 50 years. In overall, shoppers who were 40 years and below were classified as young while shoppers above 40 years were classified as old. Shoppers' income level was captured by requesting them to indicate their monthly income in Kenya Shillings using the following income brackets: 40,000 Kenya shillings and above, 30,000- 39,000, 20,000-29,000, 10,000-19,000

and below 10,000 Kenya Shillings. In overall, shoppers who earned 30,000 Kenya shillings and above were classified as highly salaried, while those shoppers earning 29,000 Kenya shillings were classified as low salaried shoppers. Shoppers were also requested to indicate their level of education attained according to the following educational level brackets: above secondary, secondary level, primary level and below primary level. The shoppers with above secondary education were classified as highly learned while those with secondary and below were classified as not highly learned. They also indicated the sizes of their families using the size brackets provided as follows: 1-3 members, 4-6 members and above 7 members. Finally, shoppers were requested to rate themselves in regard to level of knowledge about processed milk (types of processed milk, forms of packaging and brands available) using a scale of 1 to 7 where: 1= extremely low level knowledge, 2= slightly low level of knowledge, 3= low knowledge, 4= slightly knowledgeable, 5= knowledgeable, 6= very knowledgeable, and 7= extremely knowledgeable. The shoppers with ratings above scale of 4 and above were considered knowledgeable, while those with ratings ranging 1-3 were considered as not knowledgeable.

This study focused on the effect of shoppers' individual characteristics, price and the knowledge about processed milk on the shoppers purchase behavior. The amount of milk bought from the supermarket is the outcome of purchase behavior, and in this case, it is the dependent variable in the regression model. Specific variables per each independent variable are identified in figure table 1. Some of the independent variables that influence the dependent variable can be in two states, A or B (e.g. high or low), a situation taken care of by creating dummy variables (Newbold, 1999). Dummy variables are a data classifying device in that they divide a sample into various subgroups based on qualities or attributes (Gujarati, 1988). A dummy independent variable is defined to take the value of 1 when this factor is in state A and 0 if in state B. If the regression model contains a constant term, the number of dummy variables must be less than the number of classifications of each qualitative variable. Second, the coefficients attached to the dummy variable must be interpreted in relation to the base group that is; the group that gets the value of zero (Newbold, 1999). The dummy variables in this study included the shopper's age, gender, education and the shoppers' knowledge level for processed milk.

The data analysis followed the following steps: first descriptive analysis was carried out; secondly, the effect of shoppers' individual characteristics and shoppers' knowledge level for processed milk without controlling for the effects of the marketing factors was estimated using regression. The final step involved the estimation of the combined effect of the demographic factors, shoppers' knowledge level for processed milk and the controlled factors, mainly price. Regression analysis used to measure the effect of individual characteristics and the product knowledge level of shoppers of processed milk. The regression equation was specified as follows:

$$Y = \alpha_0 + \alpha_1 X_{1i} + \alpha_2 X_{2i} + \alpha_3 X_{3i} + \alpha_4 X_{4i} + \alpha_5 X_{5i} + \alpha_6 X_{6i} + u_i$$

Where: Y = amount of fresh processed milk purchased, α_0 = constant term. $\alpha_1, \alpha_2, \dots, \alpha_6$, are unknown parameters associated with changing patterns of the explanatory variables which must be estimated. The explanatory variables are: X_1 = shopper's age, X_2 = shopper's gender, X_3 = shoppers' level of education, X_4 = shopper's family size, X_5 = shopper's knowledge level for processed milk, X_6 = Price, u_i = random error term.

Table 1: List of Independent Variables (exposure to processed milk through advertising and promotions)

Dependent Variable	Description
Amount of processed milk bought (Y)	Amount in litres
Independent Variable	Description
X_1 Shopper's age	Age = 1 if the shopper is young and age = 0 if the shopper was old
X_2 Shopper's Gender	Gender = 1 if the shopper is male and gender = 0 if the shopper had no companionship
X_3 Shopper's level of education	Education = 1 if the shopper is highly educated and shoppers education = 0 if the shopper not highly educated.
X_4 Shopper's Family Size	Number of family members
(X_5) Shoppers' Knowledge level for processed milk	Shoppers' Knowledge level for processed milk = 1 if shopper is knowledgeable and Shoppers' Knowledge level for processed milk = 0 if shopper is not knowledgeable
X_6 Price	Amount in Kenya Shillings

4.0 Results

Results are presented according to the steps highlighted above. First, descriptive statistics are presented in tables 2, 3 and 4. Results in table 2 above show the profile of the respondents. It indicates that, 38% of the respondents were male, implying that 62% were female. 54.4 % of the shoppers were young (40 years and below years), and 25.6 % have attained education above secondary level. Only 23.5 % of the respondents were highly paid, while their average family size was 3.9 (approximately 4 persons). Approximately 49 % of respondents were knowledgeable concerning processed milk implying that more than half of the respondents (51 %) were not were knowledgeable concerning processed milk.

4.1 Descriptive statistics

Table 2: Profile of the Respondents.

Variable	Observations	Mean	Std.dev	Min	Max
Amount of Milk bought	1000	1.379	0.821	0.189	4
Gender	1000	0.380	0.494	0	1
Shoppers' age	1000	0.544	15.614	0	1
Education	1000	0.256	3.129	0	1
Shoppers' Family size	1000	3.852	1.311	1	6
Monthly Income	1000	0.2350	16.725	0	1
Shoppers' Knowledge Level for Processed Milk	1000	0.489	0.498	0	1

Table 3: Amount of Milk Bought by Shoppers of Different Individual Characteristics

	Mean	Std. Dev.	Freq.
Shoppers' Gender			
Male	2.118	0.898	380
Female	0.639	0.291	620
Total	1.379	0.921	1000
Shoppers age			
Young shoppers	2.590	0.844	544
Old shoppers	0.891	0.412	456
Total	1.379	0.923	1000
Shoppers' education level			
Highly educated	1.695	1.085	256
Not highly educated	1.036	0.537	744
Total	1.379	0.671	1000
Shoppers' income			
Highly salaried	1.896	1.096	235
Not highly salaried	1.137	0.731	765
Total	1.379	0.872	1000
Shoppers Knowledge Level for processed milk			
Knowledgeable shoppers concerning processed milk	1.475	0.955	489
Not knowledgeable shoppers concerning processed milk	0.618	0.291	511
Total	1.379	0.721	1000

Table 3 shows a summary of the amount of milk bought by shoppers of different individual characteristics. From the results, the mean amount of processed milk bought by all shoppers was 1.379. The mean amount of processed milk bought by male shoppers was 2.118 litres while the mean amount of milk bought was by female shoppers was 0.639 litres. According to shoppers' age, the mean amount of processed milk bought by shoppers who were classified as young was 2.590 litres while the mean amount of processed milk bought by old shoppers was 0.891 litres. The mean amount of processed milk bought by highly educated shoppers was 1.695 litres, while the mean amount bought by those shoppers who were not highly educated was 1.036 litres. Highly salaried shoppers registered a mean amount of processed milk bought of 1.896 compared to a mean of 1.137 litres bought by the not highly salaried shoppers. Regarding knowledge level for processed milk, the mean score for the amount bought by those classified as knowledgeable was 1.475 litres, while the mean amount for those classified as not knowledgeable was 0.618 litres.

Table 4: Analysis of Variance

	Source	SS	Df	MS	F	P-Value
Shoppers age	Between groups	123.990	1	123.990	140.898	0.000
	Within groups	878.220	998	0.880		
	Total	942.2096	999	0.943		
Shoppers' Gender	Between groups	6.783	1	6.783	6.0133	0.0142
	Within groups	1124.95	998	1.128		
	Total	1442.19	999	14.54		
Shoppers' education level	Between groups	510.05	1	510.05	1113.64	0.000
	Within groups	457.134	998	0.4580		
	Total	1011.231	999	0.9442		
Shoppers' income	Between groups	41.732	1	41.732	45.7437	0.000
	Within groups	910.488	998	0.9123		
	Total	912.009	999	0.9130		
Knowledge level for processed milk	Between groups	140.601	1	140.601	161.983	0.000
	Within groups	867.15	999	0.8680		

Table 4 shows the results of analysis of variance indicating whether the difference in means for amounts of milk purchased by shoppers of different individual characteristics. The results for shoppers' age variable shows that $F(1,998) = 140.898$, $P\text{-value} = 0.000$. Thus, there were significant differences in the average amount of milk purchased by shoppers of different age. For gender variable, $F(1,998) = 6.0133$, $P\text{-value} = 0.0142$. Thus, there was no significant difference in the average amount of milk purchased by shoppers of different gender. The results for shoppers' level of education variable shows that $F(1,998) = 1113.64$, $P\text{-value} = 0.000$. As for the shoppers' income variable, $F(1,998) = 45.7437$, $P\text{-value} = 0.000$, indicating a significant difference in the average amount of milk purchased by shoppers of different levels of education. The results for knowledge level for processed milk variable shows that $F(1,998) = 161.983$, $P\text{-value} = 0.000$. Thus, significant differences do exist in the average amount of milk purchased by shoppers of different knowledge level for processed milk.

4.2 Correlation Matrix

According to the results in Table 5 below, except for gender variable, a significance relation between amount bought and each of the other variables identified for this study. The results indicate a positive relationship between age and each of the other seven variables. There was significance relationship between shoppers income (high salaried) and all other variables except for gender ($r = -0.070$, $p\text{-value} 0.123$). There was insignificant relationship between gender and family size ($r = -0.028$, $p\text{-value} 0.145$), gender and knowledge level for processed milk ($r = -0.070$, $p\text{-value} = 0.012$), Gender and shoppers education ($r = -0.043$, $P\text{-value} = 0.145$) and gender and price ($r = -0.090$, $P\text{-value} = 0.123$).

Table 5: Correlation Matrix

	Amount of milk in Litres	age	income	Gender	Family size	Exposure processed through advertising promotion	to milk and Shoppers education level	Price
Amount of milk in Litres	1							
age	0.866 (0.00)	1						
income	0.854 0.00	0.690 0.00	1					
Gender	-0.040 0.112*	-0.088 0.009	-0.070 0.123*	1				
Family size	0.761 0.000	0.642 0.000	0.551 0.000	-0.028 0.145*	1			
Knowledge level for processed milk	0.863 0.000	0.615 0.000	0.928 0.000	-0.070 0.012*	0.731 0.000	1		
Shoppers' education level	0.828 0.000	0.829 0.000	0.822 0.000	-0.043 0.145*	0.751 0.00	0.849 0.000	1	
Price	-0.439 0.000	0.597 0.000	0.583 0.000	-0.090 0.123*	0.359 0.000	0.617 0.000	0.509 0.009	1

Key

- Lower column Figures is the p-value

* indicates an insignificant correlation at 95% confidence level

4.3 Estimation of the Regression Model

Results in table 6 shows that, R-squared is equal to 0.792 while adjusted R-squared is equal to 0.798. This implies that there is high degree of goodness of fit of the regression model. It also means that 79.2% of variation in the dependent variable (the amount of processed milk bought) can be explained by the regression model. The F test result was F (6, 993) 212.23, with a significance of 0.000. Consequently, the hypothesis that all regression coefficients in the model are zero is rejected. Therefore, a significant relationship was present between the amount of processed milk bought from the supermarkets and the explanatory variables in the regression model. RMSE was 0.280, which is rather low, an indication that there is high degree of goodness of fit of the regression model.

Gender has a positive but insignificant effect on the amount bought from supermarkets in Kenya (coefficient 0.0311, p-value = 0.167). Null Hypothesis H1 that shoppers' gender has no significant effect on the amount of processed milk bought from supermarkets in Kenya was accepted. On the other hand, age has a positive and significant effect on the amount bought from supermarkets in Kenya (coefficient 0.1220, p-value = 0.000). This implies that, holding all other factors constant, the amount of processed milk bought is expected to be higher by about 0.1220 liters for older shoppers than for young shoppers. Null hypothesis H2 that, shoppers' age has no significant effect on the amount of processed milk bought from supermarkets in Kenya was rejected. Shoppers education level has a positive and insignificant effect on the amount bought from supermarkets in Kenya (coefficient 0.0591, p-value = 0.000). This implied that, highly educated shoppers are expected to purchase 0.0591 litres of milk more than the amount bought by the less educated. Thus, null hypothesis H 3 that shoppers' level of education has no significant effect on the amount of processed milk bought from supermarkets in Kenya was rejected. Shoppers' knowledge level for processed milk has a positive and significant effect on the amount bought from supermarkets in Kenya (coefficient 0.1821, p-value = 0.000). Implying that, holding all other factors constant, the amount of processed milk bought is expected to be higher by 0.1821 liters for shoppers knowledgeable about processed milk than for those not knowledgeable about processed milk. Null Hypothesis H4 that shoppers' knowledge level for processed milk has no significant effect on the amount of processed milk bought from supermarkets in Kenya was rejected. Shoppers' family size has a positive and significant effect on the amount bought from supermarkets in Kenya (coefficient 0.0976, p-value = 0.000). Thus, null hypothesis H5 that family size has no significant effect on the amount of processed milk bought from supermarkets in Kenya was rejected. Price has a negative and insignificant effect on the amount bought from supermarkets in Kenya (coefficient-0.00511, p-value = 0.123). Thus null hypothesis H6 that price has no significant effect on the amount of processed milk bought from supermarkets in Kenya was accepted.

Table 6: Estimation of the Regression Model

			No.obs	1000
			F(6, 993)	212.23
			Prob > F	0
			R-squared	0.792
			Adjusted R-Squared	0.798
			Root MSE	0.280
Linear regression				
Amount of milk bought in litres	Coef.	Std.	t	P>t [95%
Age	0.1220	0.002	61.06	0
Shoppers education level	0.0591	0.007	8.14	0
Gender	0.0311	0.023	1.38	0.167
Family size	0.0976	0.014	6.95	0
Knowledge level for processed milk	0.1821	0.018	10.23	0
Price	-0.00511	0.001	-5.11	0.123
_cons	-0.8452	0.065	-12.95	0

5.0 Conclusion and Implications

Shopper's gender and price has an insignificant effect on the amount of processed milk bought from supermarkets in Kenya. However, in line with theory of amount demanded and the price, the effect of price was negative, indicating an inverse relationship. Thus, when processing firms are setting the price for processed milk, they should be guided by this relationship. Since this effect is insignificant, it means milk is a necessity of life, thus the amount bought is not affected significantly by increases in price. The other shoppers' individual characteristics (education, age, family size) and knowledge level for processed milk has a significant effect on the amount of milk bought from the supermarket in Kenya. This could be important to the processing firms when designing and implementing their communication strategies for processed milk. For instance, when designing their adverts, milk processors have to not only include their brands, but must also include information about price, packaging designs available and benefits of consuming processed milk. This could lead to increased sales,

helping milk processing firms to increase their operating capacities. However, more research needs to be carried out on other factors which may influence outcome of purchase decision at the point of sale. The effect of situational factors (factors specific to place and time) on the amount of milk bought from supermarkets in Kenya should be investigated. This is necessary given that over 60% of processed milk is sold through supermarkets in Kenya.

References

- Agniezka, K. & Mirosław, G. (2008), Package Preferences of liquid Dairy Products Buyers, *Economics Journal* 2008, vol. 3 (2)
- Bytygi, H., Vegara, M., Gjonbalaj, M., Mehmeti, H., Gjergjizi H., Miffari I. & Njazi, B. (2007), An analysis of Consumer Behaviour in regard to Dairy Sector in Kosovo: Retrieved from <http://www.studymode.com/essays/Analysis-Of-Consumer-Behaviour-In-Regard-To-Dairy-Products-In-Kosovo-441677.html>; Visited on 12th May 2013
- East Africa Dairy Development Program (2008); The Dairy Value Chain in Kenya, A report by Technoservice Kenya, www.slideshare.net/eadairy/dairy-value-chain-kenya-report; visited 2nd May 2013
- Gujarati, D.N. (1988), *Basic Econometrics*, Second Edition, McGraw-Hill International Editions, economic series ISBN 0-07-025188-6
- Kabiru, M. & Njenga, A. (2009), *Research, Monitoring and Evaluation*, Printwell Industries Ltd, Nairobi Kenya
- Karanja, S. (2003), The Dairy Industry in Kenya; The Post-Liberalization Agenda. *Dairy Industry Stakeholders Workshop, Nairobi, Kenya*
- Kibera, F. N. & Waruingi, B.C. (2007), *Fundamentals of Marketing: An African Perspective*. Kenya Literature Bureau, Nairobi
- Kotler, P., Keller, K. L., Koshy, A. & Jha, M. (2009), Marketing management, 13th Asian Perspective, Edition Prentice-Hall London
- Muriuki, H.G. (2011), Dairy Development in Kenya, *FAO Rome*.
- Mutlu, L. (2007), Consumer Attitude and Behaviour towards Organic Food;: A cross-cultural Study of Turkey and Germany; *Doctoral Dissertation, Institute for Agricultural Policy and Markets, Stuttgart-Hohenheim University, Germany*
- Mwongera, R. K. (2012), Factors influencing Milk Consumption in Kenya; *Masters Thesis; Case of Thika Town, School of Business, Kenyatta University, Nairobi, Kenya*
- Paul, J. P. & James, H. D. (2007), *Marketing Management*, 8th Edition McGraw-Hill Irwin. ISBN-10-0-07-313763-4
- Paul, J.P & Olson, J.C. (2008), *Consumer Behavior and Marketing Strategy*, McGraw-Hill, Irwin 1221 Avenue of the Americas, New York, NY 10020
- Rajan, S. (2006), *Marketing Management* 3rd Edition, ISBN0-07-059953-X Tata McGraw-Hill Publishing Company New Delhi India
- Renee, K. (2010), A multi-attribute Model of Japanese consumers' purchase decision for GM Foods.
- Rita, K., Aiste D., & Laura, N. (2009), Impact of Package Elements on Consumer Purchase, *Journal of Economics and Management* Vol.14:441-447
- Saleemi, N.A. (2011) *Marketing simplified*, Saleemi Publications Ltd, Nairobi, Kenya.
- Ynze, V. D. V. (2008), 'Quick Scan of the Dairy and Meat Sectors in Kenya', Issues and Opportunities; *FARMCO, Dronrijp, The Netherlands*
- Wambugu W. H. (2014), Customers' Attitude towards Milk Packaging Designs in Kenya, *European Journal of Business and Management*, Vol 6, No. 19

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