



The Impact of Customer Behavior on The Type of Household Expenditure.

Case Study (City of Vlora)

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Abstract

This study focuses on the family, enabling data collection and processing to come to the conclusion that it spends on average a month in a family in the city of Vlora. The data was collected in written and electronic form with a form that was drafted following the study of many models performed in economically developed countries. Contribution was given by more than 100 families involved in the survey. This paper aims to look at the essence of decision-making by applying the mathematical methods that approximate the average cost per capita for the city of Vlora and are equal to 1 328 lek, the understanding of the basic concepts of these managerial and conceptual disciplines and to increase the level of application of these methods and principles among stakeholders in decision-making in all levels of politics, economy, society, etc.

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Introduction

To understand customer behavior, companies need to understand why customers are buying products and services. Generally, customers buy a product because they can expect more benefit from it than another product, clearly delivering a cost-benefit ratio for their choices. Understanding the different participants in the purchasing process and the most powerful influences affecting their buying behavior, companies can develop effective marketing programs to support an attractive offer for the target market (Kotler, Armstrong, Saunders, Wang 2006).

The more general definition of expenditures means expenditures as an expression in the value of the economic goods consumption, respectively of the producer factors, in order to produce and sell the enterprise's effects and earnings on that basis.

Such a definition of spending leads us to three main features:

- As a principle, the cost base should be the quantitative expression of the consumption of economic goods.
- The consumption of economic goods should be related to the products, respectively conditional on their production.
- Expenditures of economic goods should be in value expressed at the respective prices.

Successful companies focus their marketing efforts in meeting customer needs that match their core competencies and a successful factor is to determine a true balance of functional and psychological needs that best satisfy target markets company (Grewal, Levy 2008). Today, marketing is understood not in its old sense as a "sale" but in its new meaning to "satisfying the needs" of the consumer. Marketing begins long before a company has produced a product (Kotler, Wong, Saunders, Armstrong 2005). Successful companies have a common thing, they are strongly focused on the customer and are very dedicated to marketing. These companies share a passion for understanding and satisfying the needs of customers in target markets, motivating everyone in the organization to help build sustainable customer relationships based on value creation. Customer relations and value creation are especially important today (Kotler, Armstrong 2012).

To carry out a study of this type, such as the calculation of the average monthly household expenditure, a questionnaire was developed, which then served to collect all possible data that helped to achieve the results. The questionnaire consists of three sets of questions. Elective questions were included in the first group, where each respondent could choose the type of family to which he belongs, the age, the education of the head of the household and the status of the head of household's employment, and the manner of securing the income of the family his. The second group of questions includes the expenses that the family carries out for each spending group. Such as: food and non-alcoholic beverages, alcoholic beverages and tobacco, clothing and footwear, housing, health, transportation and communication, education, culture and care costs, spending on other products and services, luxury spending, and even more other expenses not included in any of the mentioned groups. The third group of questions includes personal information about the respondent, such as gender, age, and role in the family (head of household, mother, son or daughter). More than 100 families were willing to meet the approximate value of their monthly expenses, and by groupings and categories

Methods

In the first part of the analysis of the results, a descriptive statistical analysis of the data collected by the sample was performed. The part of the statistics that deals with the summary and description of data is called descriptive statistics (Ross 2010). The most basic statistical analysis is descriptive analysis. Through this analysis we make the initial transformation of the data in order to describe the basic characteristics such as: central tendency, distribution, and densities (Zikmund, Babin 2007).

Descriptive analyzes focus on measuring, evaluating values, quantities and disseminating the characteristics of variables taken in the study. Its objective is to present variables in time and not analyze the relationship between



the variables. Market research is often descriptive, for example in measuring market size, market structure, behavior and attitudes of consumers in the market (Kent 2007).

According to Kume (2015), the descriptive analysis is advisable to use for the processing of measurement data and surveys carried out in order to assess the manner and / or measure of reaction and / or dependence of an economic indicator, economic phenomenon, consumer behavior.

As to the question of how the socio-demographic and psychological characteristics affect the behavior of different brands, the χ^2 test was used to test hypotheses based on the hypotheses raised.

The Hi-square test estimates the magnitude of the discrepancy between the choice cutoff matrix and the estimated cutoff matrix. In this case, the minimum value of the function is multiplied by N-1, where N is the size of the selection, and the value of the Hi-square statistic is obtained. The degrees of freedom for assessing this statistic are equal to the difference between the total number of degrees of freedom and the number of estimated parameters. The χ^2 test is a nonparametric statistical test, through which the relationship between variables is measured when they are nominal and number able; enabling the frequency of each category of measured variables to be counted, allowing researchers to test the independence of categories and evaluate their effect (Nolan, Heinzen 2012). According to Waters (2011), variables that receive a special value during a study are called parameters and the hypothesis tests that arise and that relate to the parameter value are parametric tests.

The most important non-parametric test is the Hi-Squared test or symbolically χ^2 (Waters 2011). Where Greek χ is pronounced "hi".

To make it clearer, suppose that we raise a hypothesis about the distribution of values for some variables and expect a distribution of frequencies $E_1, E_2, E_3, \dots, E_n$ and when we control the values, we get a series of observations $O_1, O_2, O_3, \dots, O_n$.

The difference between these values shows how much the observed values match the expected ones. By raising the square of the observed value differences observed with the expected values, we eliminate negative values and then dividing the expected frequencies into a standard format distribution (Waters 2011). So χ^2 is defined as:

$$\chi^2 = \frac{(O_1 - E_1)^2}{E_1} + \frac{(O_2 - E_2)^2}{E_2} + \frac{(O_3 - E_3)^2}{E_3} + \dots + \frac{(O_n - E_n)^2}{E_n}$$

For this test, determine the critical value or table of χ^2 , where standard tables are used to determine this value, taking into account the degrees of freedom and the alpha (α) coefficient of confidence, which is given as follows:

$$\text{Freedom rates} = \text{number of classes} - \text{number of variables} - 1$$

Collecting Data and Analyzing Them

The questionnaire was distributed in writing and online. The total number of respondents in the survey went 118. Surveyors were grouped by family category, level of education, age group of the head of household's employment status and income assurance.

Results and Discussion

By category of family

From the collected data it was noted that the largest number of families studied about 35.6% are those consisting of couples with two children. Their spending is 26.7% for food and non-alcoholic beverages, 3.8% for alcohol and tobacco, 10.5% for clothing and footwear, 11.1% for housing and 4.7% for their health. 12% of their spending goes to transport costs, 3.9% for communication, 3.5% for culture and care, 8.9% for child education,

7.5% for spending on luxury (bars, restaurants, hotels), 3.8 % for products and services and 3.6% for other expenses.

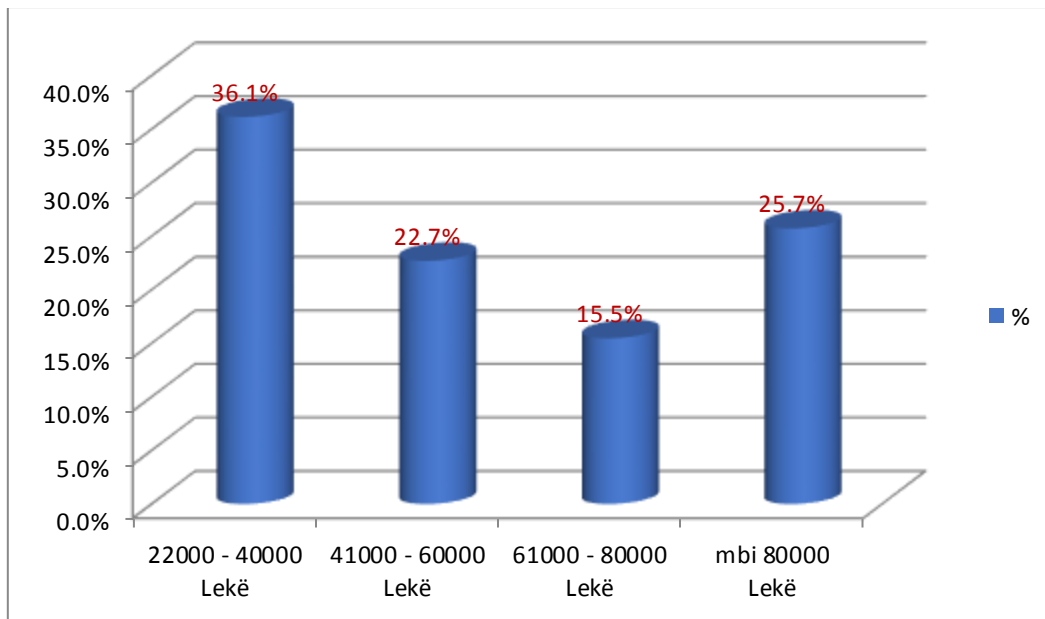
Families "Two-Year-Couple" spend more on food and non-alcoholic beverages and less for the category of spending on culture and care. Their average monthly expenditures amounted to 134,526 ALL, out of which 55,155 ALL go for consumption and the rest for non-consumption expenditures.

Average monthly consumption expenditures are higher for households consisting of three children with 59 928 leke and the lowest for a paired child with 25 889 leks, while average monthly expenses are higher for couples with three children 155 255 lek and the lowest 87 233 lek for those who live alone.

According to this classification of different types of expenditures by age group of households in table 1.3, we find that 31.6% of households in category 35-44 are spending more than 31.6% for alcohol and tobacco, 7.1% for households, whose head of household belongs to the age group below 24 years. 13.9% for clothing and footwear and transport 12.5%, spend more families that the chief occupier belongs to the age group 25-34, and for shelter 20.02% those under 24, which also have the highest health costs about 7.8%. As far as education spending is concerned, they are higher in the households that their head of household belongs to the age group over 64, around 17.5%, a group that spends more for both products and services by 16.5%.

With regard to the average monthly consumption expenditure and in total, we build the following chart:

Fig.1



In Figure 1. clearly show that the highest monthly consumption expenditures around 64 287 lek are spent by households, households belonging to the age group 35-44, and lower spending age group under 24 years with 32 642 lekë.

For the total average monthly expenses, the highest 142 544 lek are 35-44 years old and the lowest 78 637 lek, those families whose head of household belongs to the age group under 24 years.



General Results

According to the data collected from the forms, the total of expenditure groups for 118 pollsters results as follows:

Expenditures by groups:	Lekë	%
food and non-alcoholic beverages	3 383 800	24.2
alcoholic beverages and tobacco	490 400	3.5
clothing and footwear	1 730 500	12.3
accommodation	1 823 800	13.05
health	1 244 600	8.9
transport	1 582 600	11.3
communication	608 850	4.3
culture and care	504 000	3.6
education	490 400	3.5
luxury expense	1 053 500	7.5
other products and services	652 000	4.6
other expenses	407 100	3.25
TOTAL EXPENDITURES	13 971 550	100

Table 1.

Table 1. shows that the highest expenditure for the whole group that participated in the survey went to food with about 24.2% of the total, the rest 13.05% went to housing expenses and 12.3% for clothing and footwear. 11.3% are spent on transport and 8.9% on health. Luxury expenditures account for nearly 7.5% of the total and 3.5% go for tobacco and alcoholic beverages.

Test χ^2 for Socio-Democratic factors

Between Gender and Type of Expenditure

Data collected through questionnaires on the relationship between gender and type of expenditure.

The test hypotheses are:

$$H_0: \forall i, j \quad d_{ij} = t_{ij} \quad (\text{Gender does not affect the type of expenditure})$$

$$H_a: \exists i, j \quad d_{ij} \neq t_{ij} \quad (\text{Gender affects the type of expenditure})$$

where:

d_{ij} : the densities observed in the box (i, j) of the table,

t_{ij} : the expected densities in the box (i, j) of the table.



$$t_{ij} = t_{11} = \frac{(A) * (a)}{N} = \frac{233 * 202}{595} = 79,10$$

$$t_{ij} = t_{12} = \frac{(A) * (b)}{N} = \frac{233 * 214}{595} = 83,80$$

And in the next, so are calculated all the expected densities.

With the obtained data of the observed density and the expected density calculated according to the table above, we proceed by calculating the value of $\chi^2_{logaritum}$ as shown below:

$$\chi^2_{logaritum} = \sum_{i=1}^r \sum_{j=1}^c \frac{(d_{ij} - t_{ij})^2}{t_{ij}} = 19,92$$

The number of degrees of freedom is equal to $(r-1) (c-1) = (2-1) (7-1) = 6$

Table of χ^2 gives us a critical value equal to 12,59; for 6 degrees of freedom and of importance 5%. Value of $\chi^2_{logaritum}$ is significantly greater than the critical value: Then we can reject H_0 .

Link Between Age Groups and Choice of Type of Spending

The data collected through questionnaires on the relationship between the age group and the type of expenditure.

At the level of importance $\alpha = 5\%$, let's find out if there is a correlation between age group and brand choice.

The test hypotheses are:

$$H_0: \forall i, j \quad d_{ij} = t_{ij} \text{ (The age group does not affect the type of expenditure)}$$

$$H_a: \exists i, j \quad d_{ij} \neq t_{ij} \text{ (The age group affects the type of expenditure)}$$

where:

d_{ij} : the denser observed in the box (i, j)

t_{ij} : the expected densities in the box (i, j)

$$t_{ij} = t_{11} = \frac{(A) * (a)}{N} = \frac{27 * 202}{595} = 9,17$$

$$t_{ij} = t_{12} = \frac{(A) * (b)}{N} = \frac{27 * 214}{595} = 9,71$$

With the obtained data of the observed density and the expected density calculated according to the table above, we proceed by calculating the value of $\chi^2_{logaritum}$ as shown below:

$$\chi^2_{logaritum} = \sum_{i=1}^r \sum_{j=1}^c \frac{(d_{ij} - t_{ij})^2}{t_{ij}} = 69,75$$

The number of degrees of freedom is equal to $(r-1) (c-1) = (5-1) (7-1) = 24$.

Table of χ^2 gives a critical value equal to 36.4; for 24 degrees of freedom and 5% of importance. The value of $\chi^2_{logaritum}$ is visibly greater than the critical value: then we can reject it H_0 .

The Relationship Between Education Level and Type of Expenditure

The data collected through questionnaires on the relationship between the educational level and the choice of the type of expenditures are given in the table below;

At the level of importance $\alpha = 5\%$, let's test whether there is any correlation between the educational level and the type of expenditure

The test hypotheses are:

$$H_0: \forall i, j \quad d_{ij} = t_{ij} \text{ (The age group does not affect the type of expenditure)}$$

$$H_a: \exists i, j \quad d_{ij} \neq t_{ij} \text{ (The age group affects the type of expenditure)}$$

where:

d_{ij} : the denser observed in the box (i, j)

t_{ij} : the expected densities in the box (i, j)

$$t_{ij} = t_{11} = \frac{(A) * (a)}{N} = \frac{54 * 202}{595} = 18,33$$

$$t_{ij} = t_{12} = \frac{(A) * (b)}{N} = \frac{54 * 214}{595} = 19,42$$

With the obtained data of the observed density and the expected density calculated according to the table above, we proceed by calculating the value of $\chi^2_{logaritum}$ as shown below:

$$\chi^2_{logaritum} = \sum_{i=1}^r \sum_{j=1}^c \frac{(d_{ij} - t_{ij})^2}{t_{ij}} = 88,77$$

The number of degrees of freedom is equal to $(r-1)(c-1) = (4-1)(7-1) = 18$.

Table of χ^2 gives us a critical value equal to 28.9; for 6 degrees of freedom and of importance 5 %. Value of $\chi^2_{logaritum}$ is significantly greater than the critical value: then we can reject it H_0 .

Comparison of Average Monthly Expenses for The City of Vlora In the Last Two Years

According to data provided by the Statistics Institute for the Vlora district for 2015, we notice that the highest expenditures are for food and non-alcoholic beverages with about 49.1%, the rest 15.0% for housing and 7.7% for transport. The lowest expenses go for education 2.1% and luxury expenses 2.6%.

Unlike 2015, the real situation continues to show that the largest expenditure still consists of spending on food and non-alcoholic beverages, even though they decreased to 24.2%. Expenditures for housing by 15.0% result to be 13.05%. Apparent change is observed in clothing and footwear costs, and apparently there is a rather high percentage increase from 3.7 to 12.3%.

From the chart we note that the percentage of communication costs in these two years has not changed. In 2015, tobacco and alcoholic beverages accounted for about 2.7% of total expenditures and education expenditures by about 2.1%, while for 2016 they were almost 3.5%. This shows that the growth rate of tobacco and alcoholic beverages spending for these two years is less than the growth rate of education spending.



Expenditures on health and transport have increased significantly, from 4.1 to 8.9% and from 7.7 to 11.3%. Other expenditures are increasing but at slower rates.

The average monthly consumption expenditures of the Family Household Units in 2015 for the city of Vlora are estimated to be 54 931 ALL (INSTAT, TIRANA, September 17), while for the year 2016 according to the survey it was estimated to be about 47 360 ALL per month. (total consumer spending / number of enumerators).

Conclusions

The questionnaire was completed by 66.1% female and the other male. Their average age is 30.85 years old and according to the role in their family 38.1% were girls, 25.4% were met by heads of households, 22% from mothers and 14% from households. Monthly expenses in total for the city of Vlora were calculated as 13 971 550 ALL for 118 families. Of which the average monthly expenses result 118 402 lekë. The average consumption expenditure was calculated at 47,361 leks per month, 7,571 leks less than two years ago, according to data published by the Institute of Statistics. For persons living alone, the average monthly expenses in total amount to 87 233 lekë, out of which 39 865 lekë go for consumption. Which helps us to estimate the average cost per capita for the city of Vlora and is equal to 1 328 lekë. In conclusion, based on the results of the sample taken in the study, it can be concluded that gender, age group of respondents, the educational level of the respondents has an impact on the choice of the type of expenditure and, consequently, this may orient the marketing of companies to consider this fact during promotional campaigns, paying attention to the variables of gender, age, and educational level.

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