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THE ROLE OF THE SOCIO-ECONOMIC FACTORS IN MODELLING THE CONSUMER BEHAVIOUR (The case of consumption of fruits in Slovenia)

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1. DEFINITION OF THE ROLE OF THE SOCIO-ECONOMIC FACTORS THAT INFLUENCE THE CONSUMER BEHAVIOUR (THE CASE OF CONSUMPTION OF FRUITS IN SLOVENIA)

1.1 Main factors that influence consumer behaviour

In the definition of consumer behaviour we proceed from theoretical model of purchase behaviour as it offered by Kotler in his work. The characteristic of his model is that it proceeds from:

- market stimulations, such as: product, price, sale ways and methods, marketing communication;
- other stimulations, such as: economical, technological, political, cultural;
- consumer characteristics , such as: cultural, social, personal, psychological;
- process of purchase decision-making, that includes: recognition of needs, search for the data, estimation, decision, after-purchase behaviour;
- purchase decisions, such as: product selection, trade mark selection, seller selection, definition of the purchase timing, definition of the purchase quantity.

The aim of this article it is not to deal with theoretical factors that influence the consumers purchase behaviour in detail. So we think, it is more important, in continuation, to present those results of our research, that significantly influence the definition of the characteristics of fruit consumers and with that also the definition of those factors of purchase behaviour of fruit consumers, that later on essentially influence the purchase of the fruit.

1.2 Characteristics of fruit consumers purchase habits in some EU countries

The consumption of the fruit in EU is slightly increasing. The biggest consumption of fresh fruit we can trace in Germany, Italy, Spain and Great Britain. As the consumption of apples in EU decreases and stagnates, the consumption of citruses, bananas and exotic fruit is increasing. The consumption of the fruit in Germany

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amount to 121 kg/inhabitant, in which the apples with consumption of 31 kg/inhabitant represent 26%. CMA (Central Marketing Gesselschaft der deutschen Agrarwirtschaft) opinion poll showed, that 85% of German population regularly consume apples, 54% women and 41% men consume daily or few times per week, at least one apple. Among younger population the percentage is only 35%.

Consumers are purchasing the apples mostly in supermarkets (65%), those are followed by specialized fruit and vegetable shops and in minority is purchase at the market halls. If the apples are not eaten fresh, the consumers mostly use them as the ingredients for cakes and sweets (49%), for fruit salads (38%), or they bake them (14%). The research showed also, that more than a half of consumers are purchasing fruits in autumn and winter.

The consumption of fruits is increasing also in other countries. According to CFCE data the purchase of the fruits and vegetable in Sweden for the year 1999 was 135 kg/inhabitant. It means that the consumption, in comparison with year 1960, has doubled. The share of fruit is 70,3 kg and the share of fresh fruit is 58,2 kg. The largest is the consumption of bananas (23,1 kg) and melons (23,1 kg), which is persistently increasing from 1990. In opposition to that, the consumption of stone fruit (14,1 kg) and citruses (13,0 kg) is continuously decreasing.

2.3 The Analysis of main factors of purchase behaviour of fruit consumers in Slovenia

2.3.1 Presentation of the research methodology

Because of the limited possibilities of the research we were not able to study the nourishment habits, purchase habits, or consumer inclination, fidelity and recognition of origin of the fruits in the area of entire Slovenia (6).

In the research of consumers' purchase and nourishment habits we decided to investigate in following Slovene towns: Maribor, Ljubljana, Celje, Nova Gorica, Kranj and Murska Sobota. We decided for verbal opinion poll on the pattern of 1500 persons. We performed the investigation on the streets, with coincidentally selected persons. The data, which we got from sampling we processed with central limit sentence. As we had a large sample ($n > 30$) on our disposal, we presumed that the value of statistical parameter tends to **regular division**, when the largeness of samples tends to ∞.

In our case, having statistical set with N statistical units and N_α units, which have desired value of statistical variable, the share of desired constant variables, expressed with percentage, we reckoned up the equation:

$$\pi = \frac{N_\alpha}{N} 100$$

In the research was not possible to investigate the complete statistical multitude, therefore we used the sampling method. Sample estimation of structural percentage n_α units, which have desired value with regard to the sample, we reckoned up the equation:

$$p = \frac{n_\alpha}{n} \cdot 100$$

As the sample structural percentage, reckoned up this way, can differ from structural percentages, reckoned up of the statistical set, we reckoned the sample estimation of structural percentage standard error up the equation:

$$se_\pi = \sqrt{\frac{p(100-p)}{n}}$$

As the number of units in the sample is n << *N,* the correction for finite is not needed.

2.3.2 Some more important results of the research, that influence the definition of behaviour of fruit consumers in Slovenia.

In continuation we will represent more important results of the research, that influenced the construction of the agricultural products marketing model with a special emphasis on fruit. Being able to define nourishment habits with regard to the sort of fruit, that consumers are consuming, we asked the following:

Table 1 Frequency of consuming the particular sorts of fruit

Characteristic	Which sort of fruit you are consuming most frequently?	%
Apples	1035	69
Bananas	210	14
Peaches	75	5
Grapes	60	4
Pears	60	4
Oranges	45	3
Plums	15	1
Total	1500	100

We ascertained, that the level of education does not influence the sort of the fruit that consumers are consuming, as the division was very close to the structure of all persons investigated. Apples most frequently consume 69 % of all persons investigated. The sex of the persons does not play the essential role, as the 68 % of asked men and 71 % of asked women put the apple as the most frequently consumed fruit for themselves. The age, as next characteristic, has bigger influence on the frequency of consuming different sorts of fruit.

Table 2 Influence of the age on the frequency of consuming apples (Question 4)

Characteristic	Under 20 years old	20 – 50 years old	Above 50 years old	Total
Which sort of fruit you are consuming most frequently?				
Answer: an apple	(59%)	(74%)	(91%)	(69%)

We ascertained, that with 1-percent risk, we can predict, that the value of structural percentage of all persons investigated, who most frequently consume apples, range from 65,919 % to 72,081 %. The estimation of structural percentage is good, as by the level of risk $\alpha = 0{,}01$, the biggest declination from sample structural percentage is 4,46 % of sample estimation of structural percentage.

Table 3 The importance of the characteristics of apples for consuming? (Question 6)

Characteristic	What are the essential characteristics of the apples for you to consume them?	%
Price	56	3,7
Quality	102	6,8
Vitamins	513	34,2
Taste	762	50,8
Other	67	4,5
Total	1500	100

We ascertained, that with 1-percent risk, we can predict, that the value of structural percentage of all persons investigated, who consume apples because of vitamins, range from 47,47 % to 54,13 %.The estimation of structural percentage is satisfactory, as by the level of risk $\alpha = 0{,}01$, the biggest declination from sample structural percentage is 6,52 % of sample estimation of structural percentage.

3. THE CRITICAL ANALYSIS OF THE ROLE OF SOCIO-ECONOMIC FACTORS IN MODELLING THE CONSUMER BEHAVIOUR OUT OF SIGHT OF THE CUSTOMER VALUE
(The case of consumption of fruits)

3.1 Definition of the customer satisfaction and value

The consumer or purchaser is a subject, who decides on purchase of the offered product. It is important to know the factors, which influence the consumer before he decides on the purchase of the offered product. The purchaser has to see some value in the product and on the basis of estimated value he will decide for purchase. Considering nourishment products, the most important value for the purchaser is the value of the nourishment, which considers his state of health. In our research we studied the purchaser out of sight of consumption of fruit, as for structuring the market model, it is of a great importance the behaviour of the consumer before and after the purchase. We presumed, that the purchasers decide for particular sort of apples because they are familiar with the taste of it and the containance of the vitamins. According to Kotler, the purchaser is interfered by value, the difference between common value for the purchaser and common expenditure for the purchaser. Common values for the purchaser are all the benefits, that purchaser are expecting from particular product or service.

Along every purchase the purchaser makes the estimation of the value and then he acts in accordance with that estimation. Purchaser satisfaction we can define with the definition (5) which says, that the satisfaction is a level of human sensitivity, which is the consequence of comparison between the perceptive effect of the products (or results) and personal expectations The purpose of marketing and effect of the complete instrumentation is the response on needs and desires of the end consumer and fulfilment of those. In the first place it is necessary to get to know very well the-purchaser-consumer. It is very important to study consumer desires, perception, tendencies and purchase behaviour. Study of those categories enables development of new products, definition of their characteristics, selling prices, ways, messages and other elements of marketing net.

We decided to get to know fruit consumers, as with the insight ascertainment we can deciding influence on the selection of new fruit sorts as well as contribute to better effect of complete marketing instrumentation.

As far as we result out of balance definitions of fruit consumption in Slovenia, we can ascertain, that more than a half of consumed quantity belongs to the apple (source: SURS). According to frequency of consumption of particular fruits, on the first place are apples, followed by bananas. The sex does not deciding influences the frequency of the consumption of apples.

3.2 Consumer behaviour with the special emphasis on definition of purchaser value (the case of consumption of fruits)

On the basis of adapted Kotler's model of added value determinants for the apples purchaser, we ascertain that the added value of the product and the difference between all value and all costs is mediated to the apples purchaser. All values for the purchaser are all benefits that he is expecting from apples. Those benefits are: nutritiousness, vitamins and taste. At the same time, those benefits are most frequent for the purchasers, in contrast to the value of the image, which is structured by location and ways of production of apples. In the research (6) we presumed, that the location of production deciding influences the purchase. We ascertain, that with 5-percent risk, we can affirm, that the value of structural percentage of all persons investigated, who purchase (in the market hall) only Slovene apples, range from 40,083 % to 53,917% $P(40{,}083 < \bar{y} < 53{,}917) = 0{,}95)$. At the same time we affirm, that the share of those purchasing Slovene and imported apples is 57 % of all investigated persons, that purchase in shops and with 95-percent certainty we affirm, that the ascertained structural percentage is reneging within interval: $(52{,}148 < \bar{y} < 61{,}852)$. Considering the value of the product we ascertain following: with 1-percent risk, we can affirm, that the value of structural percentage (50,8) of all persons investigated (1500), who eat apples because of taste, range from 47,47 % to 54,13 % $(P(47{,}47 < \bar{y} < 54{,}13) = 0{,}99)$. While with 5-percent risk, we affirm, that the structural percentage (34,2) of all persons investigated (1500) range from 31,799 % to 36,601 % $(P(31{,}799 < \bar{y} < 36{,}601) = 0{,}95)$. In the research we did not study factors as: nutritiousness, way of production or time and energy used up. Therefore we will not define them in this part. However we will explain the influence of the price as a factor of purchase decision-making. While we studied the influence of the price, in combination with the quality, vitamins and taste, on purchase decision-making, the share of those, that purchase apples because of the price, was 3,7 %. The influence of the price on purchase we can better define from the results of the investigation, that we performed in the second part of the research, where the sample of the investigated persons was 600. We ascertain that the price has the influence on purchase decision-making. With the same price and quality, the consumers purchase in Slovenia produced fruit, as the location of the production one of the deciding factors of the purchase. However, when the price of domestic apples rises for 15 %, the share of purchasers, who purchase Slovene apples, is only 61 % of those who purchase in the market hall and 48 % of those who purchase in the shop. From these results we gather, that also the price is deciding purchase factor.

Age has a big influence on fruits consumption. Even if only 60% of people under age of 20, prefer to consume apples, this percent raises with the raise of age. So already 74% of those of age 20-50 and 90% of those above the age of 50, give the priority to the apple. Among people under age of 20, the bananas are replacing apples, while the consumption of other sorts of fruit is not strongly connected to the age. With 1-percent risk, we can affirm, that the value of structural percentage of all persons investigated, who prefer to consume apples, range from 65,919% to 72,081%. We estimate the value of gained structural percentage with interval estimation, which basis on marked sample estimation of statistical parameter. In our case it means, that with 99-percent certainty we can predict, that structural percentage 69 % range within above-mentioned interval.

The characteristics that are essential for consumption of apples we classified by following groups:

- Price,
- Quality,
- Vitamins,
- Taste and
- Other.

From the analysis of the completed questioners we ascertain, that the taste and vitamins are most deciding characteristics in the groups of all ages.

Table 4 Disposition of preferred characteristics of fruit according to age (in %)

Characteristic	Total	0-20	21-50	Above 50
Price	3,7	2,7	5,2	2,1
Quality	6,8	6,2	10,3	13,3
Vitamins	34,2	27,1	35,4	44,5
Taste	50,8	51,3	53,1	38,4
Other	4,5	5,1	5,2	3,1

We estimate the value of structural percentage of those who claim vitamins as most important characteristic of the apple with interval estimation, which basis on marked sample estimation of statistical parameter. With 95-percent certainty, we can affirm, that the value of structural percentage of all persons investigated, that consume apples because of vitamins, range from 31,799% to 36,601%. The estimation of structural percentage is satisfactory, as by the level of risk 5%, the biggest declination from sample structural percentage is 7,36% of sample estimation of structural percentage. From the analysis of the results we ascertain,

that the importance of vitamins as preferred characteristic is increasing according to age of investigated persons. Also the level of taste as preferred characteristic is changing according to age of investigated persons. With 1-percent risk, we can affirm, that the value of structural percentage of all persons investigated, that consume apples because of their taste, range from 47,47% to 54,13%.

With the help of the research we ascertain those characteristics of the apples that are most deciding in purchase decisions. Characteristics as:

- taste,
- vitamins,
- quality,
- price

are equally estimated by men and women, which means that the gender does not have important role in deciding. Considering decisions on assortment of apples is important, that purchasers prefer the taste of apple. With 50,8 % this characteristic is in first place, while the content of vitamins was most important for little more than one third of the consumers. Age as a personal factor has bigger influence also considering the definition of characteristics of apples. The taste of the apple is the deciding characteristic for the population under 20 and 20 – 50. In the population above 50 the deciding characteristic are vitamins and on the second place is taste.

In the definition of criterion, that would determine the quality of apples we ascertain, that on the first place is the taste, which deciding interfere on the field of quality of the fruit. On the second place are vitamins, while the colour, the shape and the size are less important characteristics for the determination of the quality with regard on customers.

We got identical result with the analysis of the data regarding the question of most important characteristics of the apples. With 1-percent risk we affirm, that the value of structural percentage of all persons investigated, who think that the taste is most important characteristic of the apples, range from 67,05% to 73,15%. The estimation of structural percentage is good, as by 1-percent level of risk, the biggest declination from sample structural percentage is 4,35%

When Slovenes decide on quality of apples, the taste is on the first place for 70,1% costumers. A little more than one-fifth believes, that on the first place, considering the quality of apples, are vitamins. Only 8,1% of investigated persons would estimate the quality of apples with regard to shape, colour and size.

CONCLUSION

Stable consumption of agriculture products and share of the agriculture in domestic product is possible to retain only with improvement and variegation of the products. That can be substantiated by improvement of the quality of products in a way of nature friendly growth, so that the prices of those products increase. As a result of successful communication with the market, the consumption of nature friendly grown food increases, while the consumption of conventional (cheaper) products decreases. Hence it follows that with the increase of gross domestic product also the absolute value of agriculture products is on the increase, and by that the share of agriculture in gross domestic product stabilizes.

With initiation of new products is necessary to identify consumer and especially his purchase behaviour. The consumer or purchaser is a subject, who decides on purchase of the offered product. It is important to know the factors, which influence the consumer before he decides on the purchase of the offered product. The purchaser has to see some value in the product and on the basis of estimated value he will decide for purchase. Considering nourishment products, the most important value for the purchaser is the value of the nourishment, which considers his state of health. On our opinion, in the research we achieved exactly that, as we, on the basis of analysis of primary data and with the help of statistical parameters defined added value determinants purchasers of the apples.

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