Factors influencing the consumer behaviour when buying food

Faktory ovlivňující chování spotřebitele při nákupu potravin

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Abstract: The paper analyses buying behaviour of Czech consumer units on the market with food. Authors present the factors that can influence significantly this behaviour, e.g. price, brand, quality, product attributes, habits, price reductions, advertisement, innovation and word-of-mouth. The results were obtained within the framework of a survey performed in a set of 1 074 Czech households by the staff of the Department of Marketing and Trade, the Mendel University of Agriculture and Forestry Brno, in November and December 2004. Respondents were classified on the base of their annual income, residency, social group, age and education.

Key words: consumer behaviour, consumer units, marketing research, factor analysis, chi-quadrate

Abstrakt: Článek analyzuje chování českých domácností na trhu potravin. Autoři prezentují faktory, které mohou toto chování ovlivňovat významně, např. cenu, značku, kvalitu, vlastnosti zboží, zvyklosti, snižování ceny, reklamu, inovaci a doporučení přátel a příbuzných. Výsledky byly získány šetřením souboru 1 074 českých domácností v rámci výzkumu prováděného ústavem marketingu a obchodu Mendlovy zemědělské a lesnické univerzity v Brně. Domácnosti byly tříděny za základě ročních příjmů, bydliště, sociální skupiny, věku a vzdělání.

Klíčová slova: chování spotřebitele, domácnost, marketingový výzkum, faktorová analýza, chí-kvadrát

In the past, the vendors used to know their customers knew consumers and their needs much better, namely due to the fact that the owners of small corner shops were daily in a direct contact with their customers. The growth in the size of companies and markets, which took place in the recent decades, has significantly disturbed, complicated and impersonalized these direct contacts between sellers and their clients. At present, changes in the size and structure of firms and markets force marketing managers to organise and carry out surveys enabling them to obtain the necessary data about the general situation in the market on the one hand and about the requirements, expectations and opinions of their customers on the other.

In this context, it is also necessary to remember that each consumer has a different personality and that also their buying decisions are different (Foret 2005). His or her decisions are influenced above all by the concrete situations and concrete offers. However, in spite of the fact that the consumer behaviour represents only a part of the complex human behaviour, for marketing managers this component is a cardinal one.

The consumer behaviour of people is very often much more complex than it could seem (Smith 2000). It is not easy to predict the behaviour of individuals but, in general, the behaviour of the groups of customers (i.e. their percentages in individual markets) can be estimated more easily.

Supported by the Ministry of Education, Youth, and Sports of the Czech Republic (Grant No. ID 6215648904 "Czech Republic in the processes of integration and globalization and development of agricultural sector and sector of services under new conditions of European integrated market", thematic circle 03 "Development of business sphere relations related to changes of lifestyle and consumer behaviour of Czech inhabitants and changes in corporate environment in the processes of integration and globalization").

Both in the organisational and consumer markets, customers respond to the effects of marketing tools in a different manner when buying products and/or services. For the time being, both commercial and academic research of the behaviour of individuals and organisations is based on the theoretical base, which uses methods of psychology, sociology, social psychology, cultural anthropology and economics. All these tools help to describe, explain and understand the consumer behaviour of people.

The consumer behaviour is that form of human behaviour that is manifested in situations when people search for, buy, use, and evaluate those products and services, which should satisfy their needs (Schriffman, Kanuk 2004). The consumer behaviour is based on decision-making of individuals when spending their own resources (i.e. time, money and efforts) in order to obtain items associated with consumption. This form of behaviour involves reasons why, when, where, how often and what people buy, how often they use the purchased items, how they evaluate them after the purchase and in which way these factors influence their future purchases.

In the Czech Republic, the consumption of the majority of food has not changed too much. There are only increasing trends in consumption of bakery products, cereals, dairy products, cheese and fruit. On the other hand, the consumption of eggs has decreased by 64% per year within the same time interval. This, together with a great increase in the consumption of mineral water and soft drinks, can indicate positive changes in the lifestyle of Czech population. On the other hand, however, the consumption of sugar, sweets and pastry has also increased (Table 1) (Štiková 2006).

The objective of this paper is to study factors influencing buying decisions of consumers and households – both rational ones, i.e. product attributes (such as price, quality, brand, discounts and package), habits, advertisement, recommendation of other people,

Table 1. Per capita consumption of foodstuffs and non-alcoholic beverages in the Czech Republic within the period of 1997–2004

Consumption of food and non-alcoholic beverages	Unit	1997	1998	1999	2000	2001	2002	2003	2004
Bakery products	kg	608.20	591.40	588.20	595.30	601.50	631.70	617.70	616.90
Meat (on bone)	kg	81.50	82.10	83.00	79.40	77.80	79.80	80.60	80.50
Fish (dead weight)	kg	5.50	5.30	5.20	5.40	5.40	5.30	5.30	5.50
Milk	litres	57.90	58.20	58.50	57.90	58.90	60.20	56.80	59.80
Dairy products	kg	28.10	27.30	30.70	30.70	32.10	34.40	34.70	35.60
Cheese	kg	8.60	8.80	9.30	10.50	10.20	10.60	11.30	12.00
Eggs	ks	311.00	319.00	297.00	275.00	286.00	279.00	256.00	247.00
Animal fats	kg	9.30	9.20	9.10	9.00	9.10	9.40	9.30	9.40
Edible plant fats and oils	kg	16.20	16.70	16.40	16.30	16.10	16.00	15.70	16.00
Fruit (fresh weight)	kg	71.50	72.50	75.60	75.00	70.10	73.50	76.20	83.80
Vegetables (fresh weight)	kg	81.10	82.20	85.30	82.90	82.10	78.70	80.00	79.80
Pulses	kg	1.90	2.00	2.00	2.00	2.20	2.10	2.10	2.10
Potatoes	kg	76.00	76.10	75.90	77.00	75.30	76.00	73.60	73.00
Sugar, confectionery, pastry	kg	58.80	57.40	57.00	55.80	58.80	61.90	64.10	64.00
Poppy seed	kg	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Yeast	kg	1.50	1.60	1.60	1.60	1.60	1.60	1.80	2.10
Instant soups	kg	1.80	1.80	1.90	1.90	1.80	1.70	1.70	1.70
Salt	kg	6.10	6.10	6.10	6.00	6.00	6.10	6.00	6.00
Tea, coffee	kg	2.80	2.80	2.90	2.70	2.90	2.70	2.50	2.70
Mineral water, non-alcoholic beverages	litres	147.00	158.00	180.00	206.00	220.00	246.00	266.00	275.00

Source: Czech Statistical Office

innovations etc. on the one hand and demographic/economic ones, i.e. income category, settlement size, age, education, and profession on the other.

MATERIAL AND METHODS

To test the hypotheses concerning significant effects of factors influencing the purchases of food, an extensive research involving 1 074 consumer units was performed within the last two months of 2005. The marketing research was performed by the means of online inquiry, which showed to be very efficient, above all due to the fact that the obtained data were immediately available for the subsequent processing and it was not necessary to transfer them into the electronic format. Another advantage of this method was the possibility of a quick pre-test and a subsequent modification of the form and structure of questions.

The analysed set of consumer units was classified into:

– different income groups (with the annual net income up to 200 thousand; 201–300 thousand; 301–400 thousand, and above 400 CZK);
– different settlement groups (up to 1 000; 1 001 to 10 000; 10 001–70 000; 70 001–200 000; and above 200 000 inhabitants);
– different education level groups (basic, secondary technical, upper secondary, and university education level);
– different social groups (self-employed persons, employees, farmers, retired and others);
– different age categories (20–35 years, 36–60 years, and over 60 years).[1]

The inquiry was performed by students of the Faculty of Business and Economics, the MUAF Brno, in different regions of the Czech Republic. Questions were focused on hypotheses concerning effects of factors influencing decision making of people when buying food, for example whether the purchase of food is influenced by habits, or by product properties, its price, quality, brand, action price, package, advertisement, recommendations of other people and/or interest to try new products (Stávková et al. 2006).

Further questions were aimed at providing information about persons deciding predominantly about the purchase of food (decision-makers), where people obtain the necessary data, where people shop, what share of their money are spent for individual categories of food (milk, eggs, fruit, non-alcoholic beverages, wine, distillates etc.). Other data concerned changes in food purchasing in situations when people have not enough money and the frequency of food consumption outside home (canteens, restaurants etc.). The opinion of respondents was expressed by the means of a ten-point-scale (1 – effect, 10 – maximal effect).

The obtained results were analysed with the use of the statistic software STATISTICA with the objective to test hypotheses about the effects of factors influencing the buying behaviour and to find significant differences in behaviour of the individual groups of households.

The dependence of qualitative variables was evaluated on the base of rate of contingency (χ^2) using contingency tables. Analysed were all categories mentioned above (income, settlement size, education, and age). Within each category, altogether ten contingency tables were created showing the dependence on individual factors under study (habits, product characteristics, price etc.). These fifty contingency tables were thereafter pooled be made more transparent and comprehensible (Tables 4 and 5).

The rate of contingency or the so-called coefficient of contingency (Minařík 2000):

$$\chi^2 = \sum_{i=1}^{k}\sum_{i=j}^{m} \frac{\left(n_{ij} - \frac{n_{i\bullet}n_{\bullet j}}{n}\right)^2}{\frac{n_{i\bullet}n_{\bullet j}}{n}}$$

was calculated for each of these tables where $n_{i\bullet}$ is the frequency in the i^{th} row throughout all columns and $n_{\bullet j}$ is the frequency in the j^{th} column throughout all rows. Based on theoretical consideration and actual frequencies obtained from measured data and using the statistical software, it was then decided about the dependency or independency of each variable. The table of theoretical frequencies corresponded with the contingency table under conditions of the independency of variables.

We have also used a multidimensional statistical method, i.e. factor analysis. By the means of this method, it is possible to analyse the structure of mutual relationships existing between the individual variables under study. This method is based on the hypothesis that these dependencies result from the effects of a small number of intrinsic, non-measurable variables that are called *common factors.*

Inputs of the factor analysis are the opinions of respondents (characterised by the means of a point scale) about all factors under study (i.e. habits, advertising,

[1] For the evaluation of last three categories, the considered member of the household was the person with the decisive role (reference person, decision-market).

price etc.), regardless of identification characteristics of the individual households while outputs are those common factors that involve traits under study and that should be correctly evaluated and denominated. (Hebák et al. 2005)

RESULTS

The results of the survey suggest that consumer units spend 28.47% of their total expenditures (301 952.35 CZK) on food. When compared with the data from the Czech Statistical Office for the period 2000–2004, we could see that there are some differences between the data from our survey and the official data, as presented in Table 2.

In recent years, a number of changes took place in food consumption of our population not only in the quantitative, but also qualitative aspects. These changes were influenced by a number of different factors. The most important of them are the following:

– changes in consumer prices of alimentary and non-alimentary products and services,
– changes in incomes of people,
– supply and availability of products in the market due to the development of the distribution network,
– advertising, promotion, health education.

Besides the above mentioned factors, the consumption of food was influenced also by changes in food quality, extent of self-sufficiency, degree of saturation of needs etc., but the most important were the changes in consumer prices of food, industrial products, and services and their relationship to income changes, i.e. the purchasing power of people. In recent years, there was a visible trend indicating a diminishing effect of prices on consumption of alimentary products. This fact is documented by the values of direct price elasticity, which show a tendency to decrease, i.e. to approach to zero (Hebák et al. 2005).

Results of the inquiry performed with the objective to define the factors decisive in the purchasing of food indicated (Table 3).

As one can see, the biggest was the group of households with incomes above 400 thousand CZK per

Table 2. Consumer expenditures of households for food in the Czech Republic

Expenditures	2000	2001	2002	2003	2004
Food and non-alcoholic beverages	23.2	22.7	22.2	21.2	21.3

Source: Czech Statistical Office

Table 3. Classification of households into individual income groups

Income group (thousand CZK)	Number of households	Percent
< 200	182	16.95
201–300	269	25.05
301–400	238	22.16
> 400.	385	35.85

Source: Results of own research

Table 4. Types of outlets

Place	Absolute numbers	Relative numbers (%)
Discount shops, supermarkets, shopping centres and hypermarkets	699	65.08
Small convenience shops and self-services	360	33.52
Specialised shops	12	1.12
Market places and farm shops	3	0.28

Source: Results of own research

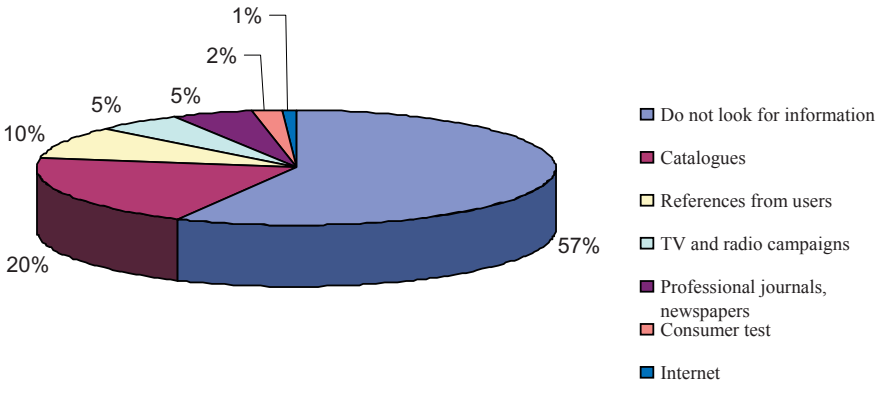

Figure 1. Sources of data about information concerning the purchase of foodstuffs

year (nearly 36%) while the groups with incomes of 201–300 thousand and 301–400 thousand CZK were nearly the same and the group with the income lower than 200 thousand CZK was the smallest.

When deciding about the purchase of food, 57% of respondents did not look for any additional information, 20% used leaflets and catalogues, 10% decided on the base of recommendation of other users, 5% were influenced by information published in professional books and journals, 2% relied on results of consumer tests and less than 1% browsed on Internet.

The obtained answers revealed that the most frequent place of food purchase were discount shops, supermarkets, shopping centres and hypermarkets; this was obviously influenced by their wide and varied assortment on the one hand and by the distributed leaflets and catalogues on the other. Small convenience shops and self-services were mentioned as the

Table 5. Dependency of the purchase of food on the settlement size and profession (in %)

Factor	Effect	Size of the settlement					Profession				
		1	2	3	4	5	self-employ	retired	other	employ.	farmer
Habit	low	0.65	0.56	0.19	0.84	0.47	0.47	0.28	0.09	1.86	0.00
	medium	13.78	9.03	1.86	10.71	13.97	8.75	3.35	2.51	34.26	0.47
	high	14.99	9.12	1.49	10.99	11.36	8.19	6.33	2.14	31.01	0.28
Product characteristics per attributes	low	0.74	0.56	0.28	1.40	0.74	0.47	0.65	0.19	2.42	0.00
	medium	15.83	10.06	1.96	13.04	11.92	8.19	5.96	2.89	35.47	0.28
	high	12.85	8.10	1.30	8.10	13.13	8.75	3.35	1.68	29.24	0.47
Price	low	2.14	1.68	0.47	1.02	2.05	2.42	0.19	0.09	4.66	0.00
	medium	13.59	7.82	1.40	9.78	11.64	10.52	2.05	2.42	29.05	0.19
	high	13.69	9.22	1.68	11.73	12.10	4.47	7.73	2.23	33.43	0.56
Quality	low	0.65	0.37	0.09	0.47	0.19	0.09	0.47	0.00	1.21	0.00
	medium	14.53	8.29	1.68	10.24	10.15	6.89	5.59	2.51	29.52	0.37
	high	14.25	10.06	1.77	11.82	15.46	10.43	3.91	2.23	36.41	0.37
Brand	low	8.29	4.93	1.12	5.77	6.05	3.45	3.82	1.02	17.78	0.09
	medium	18.53	11.73	1.96	13.97	16.29	11.64	5.68	3.17	41.43	0.56
	high	2.61	2.05	0.47	2.79	3.45	2.33	0.47	0.56	7.91	0.09
Sales support per discount price	low	3.91	1.77	0.74	1.77	2.89	2.98	0.47	0.65	6.98	0.00
	medium	13.04	7.26	1.58	9.03	12.01	9.40	2.61	2.05	28.49	0.37
	high	12.48	9.68	1.21	11.73	10.89	5.03	6.89	2.05	31.66	0.37
Package	low	12.20	6.80	1.49	9.59	8.66	4.56	4.75	2.23	26.91	0.28
	medium	15.83	10.43	1.40	11.64	15.55	11.36	4.93	2.33	35.85	0.37
	high	1.40	1.49	0.65	1.30	1.58	1.49	0.28	0.19	4.38	0.09
Advertisment	low	9.31	6.42	1.21	8.19	10.06	5.03	2.89	1.49	25.51	0.28
	medium	18.06	10.15	1.96	12.48	12.85	10.71	5.59	2.79	36.03	0.37
	high	2.05	2.14	0.37	1.86	2.89	1.68	1.49	0.47	5.59	0.09
Word-of-mouth	low	4.19	3.26	0.65	3.91	5.21	2.79	1.49	0.65	12.10	0.19
	medium	18.90	10.61	2.23	12.85	13.50	10.52	5.87	3.17	38.36	0.19
	high	6.33	4.84	0.65	5.77	7.08	4.10	2.61	0.93	16.67	0.37
Innovation	low	8.38	3.72	0.65	5.77	5.68	3.17	4.47	1.12	15.27	0.19
	medium	15.83	11.17	2.14	13.78	14.34	10.43	4.47	2.70	39.29	0.37
	high	5.21	3.82	0.74	2.98	5.77	3.82	1.02	0.93	12.57	0.19

Source: Results of own research

second most important place of purchase and only few people purchased their food in specialised shops, market places and farm shops.

The significance of effects of the individual factors on buying decisions of individual income groups of households was tested by means of χ^2 test and the

Table 6. Dependency of the purchase of food on age, education, and income group (in %)

Factor	Effect	Age			Education				Annual income			
		20–35	36–60	> 60	basic	secondary techn.	upper secondary	university	1	2	3	4
Habit	low	0.93	1.49	0.28	0.19	3.54	23.65	42.92	0.84	0.47	0.47	0.93
	medium	9.31	37.15	2.89	1.02	11.64	21.04	15.64	6.89	12.38	11.82	18.25
	high	7.54	34.26	6.15	2.33	11.73	20.39	13.50	9.22	12.20	9.87	16.67
Product characteristics per attributes	low	0.37	2.51	0.84	0.28	1.49	1.12	0.84	0.84	1.21	0.65	1.02
	medium	9.31	37.80	5.68	1.68	14.53	23.37	13.22	9.40	13.78	12.94	16.67
	high	8.10	32.59	2.79	1.58	7.64	18.44	15.83	6.70	10.06	8.57	18.16
Price	low	1.58	5.49	0.28	0.00	0.84	2.23	4.28	0.37	1.12	1.21	1.02
	medium	9.31	32.77	2.14	0.65	9.78	18.44	15.36	5.40	9.50	10.71	16.67
	high	6.89	34.64	6.89	2.89	13.04	22.25	10.24	11.17	14.43	10.24	18.16
Quality	low	0.00	1.40	0.37	0.19	0.56	0.65	0.37	0.65	0.47	0.37	0.28
	medium	7.08	32.22	5.59	2.05	13.22	18.99	10.61	8.75	12.38	10.43	13.31
	high	10.71	39.29	3.35	1.30	9.87	23.28	18.90	7.54	12.20	11.36	22.25
Brand	low	3.91	18.62	3.63	1.21	7.08	11.55	6.33	5.87	7.54	6.42	6.33
	medium	11.36	46.00	5.12	1.96	14.25	26.16	20.11	9.68	15.08	13.59	24.12
	high	2.51	8.29	0.56	0.37	2.33	5.21	3.45	1.40	2.42	2.14	5.40
Sales support per discount price	low	2.89	7.73	0.47	0.19	1.49	4.28	5.12	1.49	2.14	1.86	5.59
	medium	8.94	31.75	2.23	0.84	9.50	17.97	14.62	4.93	9.96	10.06	17.97
	high	5.96	33.43	6.61	2.51	12.66	20.67	10.15	10.52	12.94	10.24	12.29
Package	low	6.80	27.65	4.28	1.86	10.24	16.20	10.43	7.26	10.61	8.85	12.01
	medium	9.50	40.88	4.47	1.21	12.76	23.56	17.32	8.66	12.57	12.48	21.14
	high	1.49	4.38	0.56	0.47	0.65	3.17	2.14	1.02	1.86	0.84	2.70
Advertisement	low	7.54	25.23	2.42	0.84	8.19	16.29	9.87	6.52	9.96	7.54	11.17
	medium	8.85	41.25	5.40	1.86	13.22	22.63	17.78	8.19	12.66	13.41	21.23
	high	1.40	6.42	1.49	0.84	2.23	4.00	2.23	2.23	2.42	1.21	3.45
Word-of-mouth	low	3.35	12.20	1.68	0.28	3.26	7.36	6.33	3.17	4.19	4.19	5.68
	medium	10.61	42.46	5.03	1.86	15.18	24.77	16.29	9.50	14.43	13.31	20.86
	high	3.82	18.25	2.61	1.40	5.21	10.80	7.26	4.28	6.42	4.66	9.31
Innovation	low	3.63	16.39	4.19	1.21	6.15	9.68	7.17	6.52	6.98	4.84	5.87
	medium	10.52	42.74	4.00	1.96	14.25	24.67	16.39	8.57	13.78	13.97	20.95
	high	3.63	13.78	1.12	0.37	3.26	8.57	6.33	1.86	4.28	3.35	9.03

Source: Results of own research

Note: Values presented in tables are in percents and altogether for each group equal 100%.
Symbols used for the settlement size: 1 = < 1 000; 2 = 1 001–10 000; 3 = 10 001–70 000; 4 = 70 000–200 000; 5 = > 200 000.
Symbols used for income groups: 1 = > 200 000; 2 = 201 000–300.000; 3 = 301 000–400.000 and 4 = > 400 000.
The ten-point-scale was pooled as follows: 1. 2. 3 = low effect; 4. 5. 6. 7 = medium effect; 8. 9. 10 = high effect.

data presented in contingency tables are summarised in Table 4 and 5.

Based on the calculated relative frequencies and values of coefficient of contingency (chi-square), it can be concluded that:

– **Habits** show a great effect on the purchase of food. Altogether 97% of households were influenced by this factor (in nearly 48% this effect was high). When comparing this factor with the individual identification variables, it was revealed that in the individual groups of respondents, the highest effect of habit was mentioned by 71% of people in the age category of 36–60 years; 65% of employees; 42% of respondents with upper secondary education; 35% people in the income group above 400 thousand CZK and 29% of respondent living in settlements up to 1 000 inhabitants. On the other hand, the lowest effect of habits was mentioned by 43% of respondents with university education. This analysis revealed that there was a dependency between age and education of respondents on the one hand and their habits on the other. Groups "Annual income", "Profession" and "Settlement size" showed to be independent on habits. This means that the purchase of food is a habitual activity, which is not dependent on the height of income, place of living and affiliation with a certain social group.

Table 7. Values of chi-square and the right-side probability for individual factors

Factor	Group	Chi-quadrate	Right-tail probability	Factor	Group	Chi-quadrate	Right-tail probability
Habit	income group	10.54	0.10	Sales support/ discount price	income group	48.31*	0.00
	size of settlement	6.81	0.56		size of settlement	16.10*	0.04
	education	11.16	0.08		education	42.97*	0.00
	profession	12.75	0.12		profession	48.82*	0.00
	age	21.58*	0.00		age	38.95*	0.00
Product characteristics per attributes	income group	14.76*	0.02	Package	income group	11.13	0.09
	size of settlement	18.41*	0.02		size of settlement	18.34*	0.02
	education	31.06*	0.00		education	17.08*	0.01
	profession	12.11	0.15		profession	20.38*	0.00
	age	15.05*	0.00		age	4.02	0.40
Price	income group	72.86*	0.00	Advertisement	income group	15.71*	0.02
	size of settlement	7.06	0.53		size of settlement	10.31	0.24
	education	67.42*	0.00		education	14.12*	0.03
	profession	84.29*	0.00		profession	11.47	0.18
	age	33.71*	0.00		age	12.17*	0.02
Quality	income group	24.53*	0.00	Word-of-mouth	income group	3.07	0.80
	size of settlement	9.61	0.29		size of settlement	9.96	0.27
	education	32.74*	0.00		education	13.27*	0.04
	profession	18.83*	0.02		profession	6.65	0.57
	age	19.94*	0.00		age	2.09	0.72
Brand	income group	27.94*	0.00	Innovation	income group	46.85*	0.00
	size of settlement	5.15	0.74		size of settlement	13.43	0.10
	education	8.13	0.23		education	9.31	0.16
	profession	16.46*	0.04		profession	31.00*	0.00
	age	12.51*	0.01		age	26.61*	0.00

Source: Results of own research

Note: Right-tail probability is a measure that is used for the identification of dependency. If its value is ≥ 0.05, the factors under study are dependent; if it is < 0.05, these factors are independent.

*indicates that there is a dependency between the given factor and the given group.

– Altogether 96.3% of households considered **attributes and characteristics of products** to be important while only 3.7% of them did not take this factor into account. As far as the individual groups of respondents were concerned, the highest effect of product characteristics and attributes was found out in households situated in settlements up to 1.000 inhabitants (29%); people in the age category of 36–60 years (71%); groups of employees (65%); respondents with upper secondary education (42%) and households with the annual income above 400 thousand CZK. No relationship was found out between profession and this factor while in all other identification groups the consumer behaviour was influenced by product attributes and characteristics.
– **Price** was important for 92% of respondents (for 48% of them this influence was high). The effect of this factor on all identification groups was similar as the effects of both factors mentioned above and it was found out that even in the highest income group 35% of households were influenced by prices. The dependency on prices was observed in all identification groups under study.
– The **quality** of goods showed the highest effect of all factors under study and was mentioned as important by 98.43% of respondents. In groups with upper secondary and university education, its effect was very high, while in groups with basic and secondary technical education only a medium effect was observed. The dependency was demonstrated in all identification groups with the exception of the "Settlement size", which was independent.
– **Brand** played only a secondary role in consumer behaviour of respondents as only 11% of households considered this factor to be very important when deciding about the purchase of food. Medium and low effects of this factor were mentioned by 63% and 26% of respondents, respectively. In the age group the effect of brand on the consumer behaviour was on the medium level. A certain dependency of households on brands was demonstrated in the identification groups "Annual income". "Education" and "Age" while those of "Settlement size" and "Education" were brand-independent.
– The effect of **sales support/discount price** was mentioned as high and medium in 88% of household groups. This factor was important in all identification groups ("Annual income", "Settlement size", "Age of respondents", "Education", and "Profession").
– The dependency on product **package** was observed in the identification groups "Settlement size", "Education" and "Profession", while "Annual income" and "Age" were independent. The majority of respondents mentioned that its effect was low and/or medium and only few considered it to be important when buying food.
– The effect of the factor **advertising** was mostly mentioned only as low and/or medium. This was demonstrated also when calculating the dependencies for the individual identification groups. The dependency on this factor was found out in the identification groups "Annual income", "Education" and "Age".
– Altogether 58% and even 25% of households answered that the effect of the factor **word-of-mouth** was medium and high, respectively. In case of this factor, the independence was demonstrated in all identification groups with the exception of "Education".
– The dependency of consumer behaviour on the factor **innovation** was demonstrated in the groups "Annual income", "Age", and "Profession", while the groups "Settlement size" and "Education" were classified as independent. The effect of this factor was mentioned as medium and high by 57% and 19% of respondents, respectively. New products were preferred by nearly 60% of respondents from the highest income group.

The factor analysis of this set of data demonstrated that ten factors under study could be classified into three major groups that show effect on the behaviour of households when buying food (Table 8).

Table 8. Groups established through factor analysis

Factor 1	Factor 2	Factor 3
Effort to test innovations	Product characteristics/attributes	Habit
Word-of-mouth	Quality	Price
Advertisement	Brand	Sales support/discount price
Package		
22.55%	18.61%	**13.88%**

Source: Results of own research

The first group involves traits of *emotional* nature, the second one can be characterised as a group of *rational* motives, and the third one as a group involving factors associated with the *price* of goods.

Factors from the first group explain 22.55 % of the variability of results, the second one 18.61% and the third one 13.88% so that the total percentage of explained variability is 55.04% (Table 7).

DISCUSSION AND CONCLUSION

Based on the results of the analysis and calculation of frequencies and chi-square, it can be concluded that the factors "Quality, "Price", Action/discount price", "Habit" and "Product Attributes" showed a high degree of influence on the consumer behaviour of respondents.

Factors "Advertising", "Brand" and "Package" were not important when buying food and the level of their influence was considered low. However, in our opinion the effect of advertising is important but the respondents did not fully perceive it. This phenomenon is confirmed by many authors in their publications, and also by the fact that the Czech Republic obtained a permission to hold a competition EFFIE, awarding the most efficient promotion campaigns, which achieved to fulfil their objectives. When analysing the dependency of these factors on identification criteria, it was find out, that all identification groups were influenced by reduced prices. The dependency on three factors and more identification criteria occurs for the attributes and product characteristics, price, quality, brand and advertising. For the remaining factors, we found a prevailing independency on identification criteria.

With the use of factor analysis, we found three common factors standing behind the ten analysed variables: emotional subtext, rational behaviour and decision-making based on price. All of them have a significant influence on consumer behaviour of the analysed consumer units. The results of factor analysis cannot be compared with other known findings due to their unavailability. The outcomes of this survey can be used in further detailed studies. The objective has been accomplished. With the use of statistical methods, we closely analysed the factors stated in the introduction. As the most decisive factors with influence on consumer behaviour, we revealed "Quality, "Price", Action/discount price", "Habit" and "Product Attributes " when purchasing food. These findings could provide an important insight for managers when defining their marketing strategies.

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Arrived on 23rd August 2006

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