FACTORS FOR CHOOSING A POINT OF PURCHASE OF MEAT PRODUCTS

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Abstract

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This paper is focused on factors influencing consumers when choosing an outlet when shopping for meat products. This issue is very relevant in the Czech Republic as there were a number of problems and affairs in the food industry in the past period. Consumers begin to change their buying habits gradually and focus more on product quality. In the Czech Republic producers specializing in their production of meat products on quality have begun to improve their situation. The research results come from a questionnaire survey conducted in the Czech Republic (n = 1137). The data were processed with Statistica v. 11. Frequency tables, contingency tables and cluster analysis were used for the data analysis. Results show that in the Czech population a strong influence of price as a factor influencing a choice of point of purchase still prevails. Analyses focused on assessment of three hypotheses that were validated through decomposition into sub-hypotheses and application of contingency analysis. Measures of associations were examined in particular in relation to age category of respondents, household income, and level of attained education. In all cases, associations were identified for all three characteristics, the strongest associations were found particularly in the context of respondent's age. The presented results show that managers of stores selling meat products should pay attention to a demographic structure of their customers and adjust their services and offer to their preferences.

Keywords: consumer behavior, preferences, meat, retail, point of purchase, Czech Republic

INTRODUCTION

There are many factors that influence consumers in their purchasing decision-making process (Xuanli, 2007). The main factors that may influence the choice of point of sale when shopping for meat and meat products are certainly quality and price. Attributes, however, are numerous. This paper seeks to identify the levels of influence of the various factors when shopping for meat products in the Czech environment. This information may be quite useful for retailers when setting their marketing strategies. It also tries to find the differences among customer groups according to their household income, education and age. The aim is to group the factors into basic categories of influence on the purchase decision process. The paper should provide useful information for the retailers and vendors of meat and meat products in general when preparing and implementing their marketing strategies.

Following hypotheses were set:

H1: Respondent's age has an influence on the level of importance of individual factors. (This hypothesis will be evaluated through sub-hypotheses for each factor listed in the introduction. In a similar manner other hypotheses will be evaluated too.).

H2: Level of household income has an impact on the level of importance individual factors influencing choice of outlet selection when shopping for meat products.

H3: Level of attained education has an impact on the level of importance individual factors influencing choice of outlet selection when shopping for meat products.

The selection of factors was based on previous research and studies based on various surveys conducted on a similar topic, which is grocery store selection (e.g. Xuanli, 2007; Horská, 2009; Turčínková, 2007). Xuanli *et al.* (2007) present results

of their investigation focused on following attributes: advertisements, store display, price special, in-store tasting, safety assurance, convenience product, fat content and cholesterol content, etc. Primarily safety assurance and cholesterol content are reported as the most substantial one.

The article is based on the same assumptions as stated by Quagrainie, Xing and Hughes (2011) in their publication dealing with consumer behavior on the fish market. The purpose of their study was to determine consumer preferences. Their findings were a base for recommendations for vendors of live fish. The factors they focused on were: expenditure on live fish, monthly quantity, distance traveled, seafood type, purchase frequency, quality assurance, freshness, tradition, price, size, native region. Income was the main used characteristic of the household. Each parameter was rated on a scale from 1 (positive) to 0 (negative). In addition, they analyzed impact of various price levels and as the most important factors influencing consumer choices were: price, size and freshness.

Pelzer *et al.* (1991) focused on factors influencing consumer rankings of alternative retail beef packaging. Also Rimal (2002) deals with factors influencing consumer preferences when buying meat. He focuses, however, on household characteristics (age, income, education, household type, country, race, etc.). The meat product characteristics considered were nutritional values (cholesterol, fat, vitamins and minerals, sugars). A different direction in research of consumer behavior on the market with meat was followed by Drescher (2012) and her team, their focus was on consumer trust in meat producing industry and meat products. The team looked for differences in perception of fresh meat and processed meat products in respect of household characteristics.

Pirvutoiu and Popescu (2013) focused on the importance of individual factors in selection of meats raging from chicken to fish on the Romanian market. They differentiated fresh, frozen, and packaged meat. The analyzed factors were taste, smell aspect, color, texture, nutritive value, cholesterol content, price, production technology and poultry welfare, producer brand, label and provided information, packaging and weight. The results suggest that for Romanian consumers the most important are sensorial characteristic (taste, smell aspect, texture).

MATERIALS AND METHODS

The paper is based on information obtained from a long term research. This particular research was carried out in 2012. In total, there were 1137 households that filled out the questionnaire properly. Respondents were from the Czech Republic. The identification characteristics describing the household representative were: assessment of household income, household structure, region of residence, age category, gender and economic activity. The research was carried out through research online questionnaire system UMBRELA, developed by Department of marketing and trade at Faculty of Business and Economics, Mendel University in Brno.

The Umbrela provides data in a format suitable for statistical processing. For editing, sorting and elimination of incomplete questionnaires MS Excel was selected. The data was then processed and analyzed in Statistica v. 11. The analysis included calculations of frequencies and other basic statistical characteristics. The results were presented in a radar chart. The analysis also included evaluation of statistical hypotheses about the independence (significance level α = 0.01). The significance level was then compared with the p-value, for p-value > α, the null hypothesis was not rejected. To evaluate the strength of dependence, Pearson coefficient of contingency was used. The coefficient values range from 0 to 1. The higher the value, the stronger is the dependency. The outputs of the statistical software Statistica were further processed in MS Excel and MS Word then.

RESULTS AND DISCUSSION

The research focused on analyses of a variety of aspects related to consumer behavior when shopping for meat and meat products. In our results, attention will be directed to the decision making about store choice and factors influencing this process. The factors were as follows:

- current offers in leaflets,
- a convenient store location,
- a possibility to park next to the store,
- proximity to public transport stops,
- low prices,
- friendly and courteous store staff,
- fast service and care,
- short waiting times at cash registers,
- easy handling of claims and complaints,
- cleanliness and store layout,
- easy orientation inside the store (easy to find merchandise),
- correct indication of products (most of all the prices),
- wide assortment,
- sufficient stock of merchandise currently in a special offer,
- fresh products,
- quality of merchandise,
- the store offers Czech and local products,
- possibility to pay with lunch tickets,
- bags free of charge,
- habit.

In first step of the analysis, the focus will be on the assigned level of importance of the individual factors in the selection of outlet when shopping for meat products. The most important influencing

factors are quality factors: fresh products (average rating 9.1) and quality of merchandise (8.9). The scale was set up from range 1 to 10, where 10 was very important and 1 unimportant.

The least important factors (out of the given set) were the offer of bags free of charge (3.9) and the possibility to pay with lunch tickets (3.8). Lunch tickets are employee benefits provided by some employers and employees can then redeem them at restaurants or selected grocery stores. Ranking of other factors can be seen in Fig. 1. The results of the analysis suggest that Czech consumers most of all focus on quality and simplicity of choice in a wide assortment of products. Consumers also expect short waiting times at cash registers and fast service and care. Low prices are in outlet selection less important than other mentioned parameters.

The results show that in the Czech population influence of price still prevails as a strong factor for choosing a particular point of purchase. But freshness of goods, which was rated as a significant factor by nearly 60% of respondents, has the strongest importance. A quality of meat product has a similar effect (53%). Another significant factor is the cleanliness and appearance of the store and assortment range. The results also demonstrate that respondents are not very loyal to specific stores. The article also presents a situation when selecting a specific retail format. The most used are (mid-size) supermarkets (68%) and butchers (59%). But in terms of retailers chains the most popular chain among respondents is Kaufland. The survey results form a comprehensive view of how consumers select their preferred outlet for meat and meat products purchases.
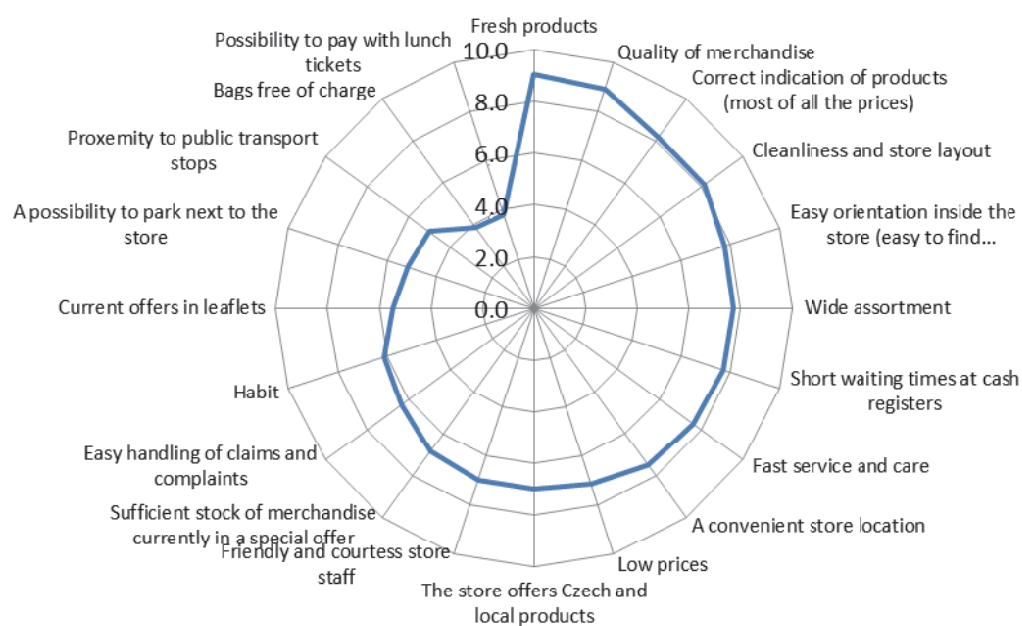
Age Impact

The focus then turned to further analysis of possible differences among consumer groups according to three basic criteria: age, household income, and education. Respondents were divided into the following 6 groups according to age:
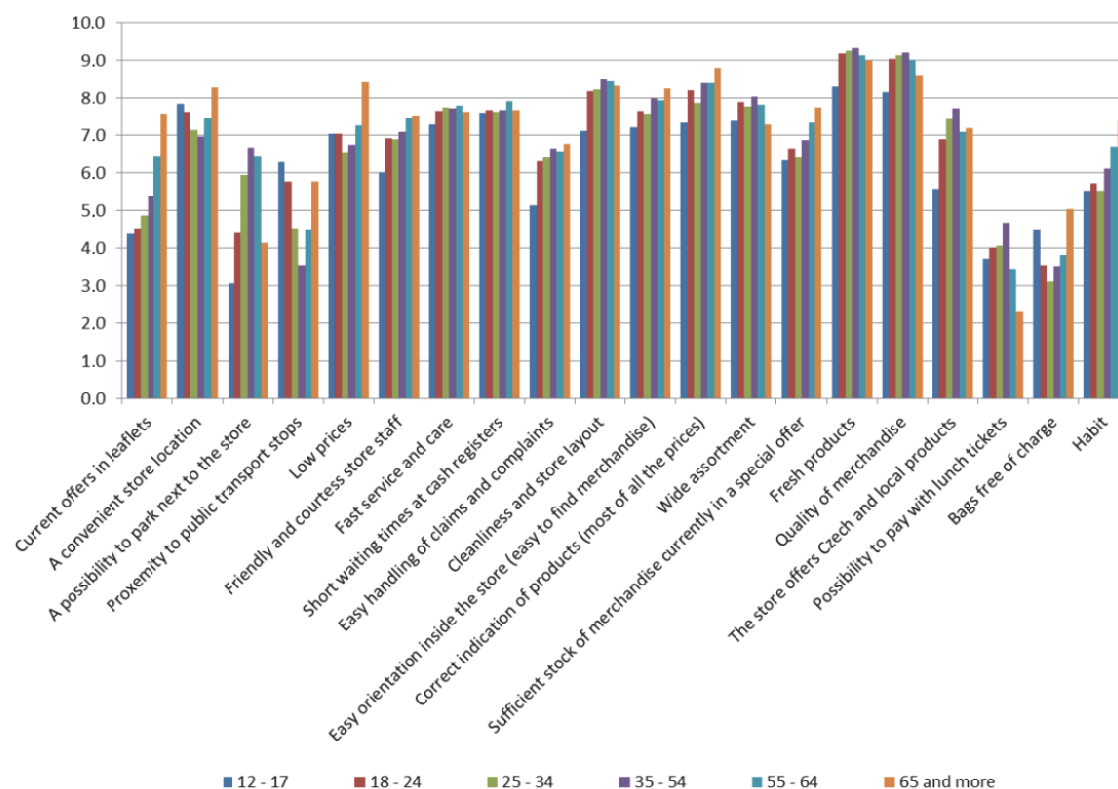- 12–17,
- 18–24,
- 25–34,
- 35–54,
- 55–64,
- 65+.

The results shown in Fig. 2 suggest differences in preferences of individual age groups. Most of the factors are influenced by age consumers. In Tab. I we can see that the strongest dependence seems to be between respondent's age and impact of current offers in leaflets (flyers) on their store selection.

The hypothesis that the respondent's age has an influence on the importance of individual factors was tested with use of the p-value and Pearson coefficient of contingency. The null hypothesis of independence was rejected only for the parameters: friendly and courteous store staff, fast service and care, short waiting times at cash registers, easy orientation inside the store, and wide assortment. For the remaining factors, the null hypothesis of independence was rejected and it is assumed there is a relationship between age and individual factors. The degree of association is evident from the column with coefficient of contingency value. The strongest association is demonstrated between age and current offers in leaflets and the possibility to park next to the store.

1: *Mean rating values of factors according to income of household*
Source: questionnaire survey, 2012, n = 1137

2: *Analysis of factors according to respondent's age*
Source: questionnaire survey, 2012, n = 1137

I: *Measures of association – Age category*

Factor	p-value	coefficient of contingency	H_0
Current offers in leaflets	p = 0.0000	0.43	reject
A possibility to park next to the store	p = 0.0000	0.40	reject
Proximity to public transport stops	p = 0.0000	0.35	reject
Low prices	p = 0.0000	0.33	reject
Habit	p = 0.0000	0.33	reject
The store offers Czech and local products	p = 0.0000	0.31	reject
A convenient store location	p = 0.0000	0.29	reject
Quality of merchandise	p = 0.0000	0.29	reject
Possibility to pay with lunch tickets	p = 0.0000	0.29	reject
Cleanliness and store layout	p = 0.0000	0.29	reject
Correct indication of products (most of all the prices)	p = 0.0000	0.29	reject
Sufficient stock of merchandise currently in a special offer	p = 0.0000	0.29	reject
Fresh products	p = 0,0001	0.28	reject
Bags free of charge	p = 0.0007	0.26	reject
Easy handling of claims and complaints	p = 0.0027	0.25	reject
Friendly and courteous store staff	p = 0.0151	0.24	not reject
Fast service and care	p = 0.6814	0.18	not reject
Short waiting times at cash registers	p = 0.1618	0.21	not reject
Easy orientation inside the store	p = 0.0212	0.24	not reject
Wide assortment	p = 0.0991	0.22	not reject

Source: questionnaire survey, 2012, n = 1137

The Influence of the Consumer's Income

In the next step of the analysis attention was paid to the impact of household income situation on individual factors affecting the choice of outlet when shopping for meat products. The income categories were given as follows:

- *Insufficient* (such as when a household needs to borrow money for a short term, because monthly income is not sufficient).
- *Low* (covers basic household needs, but household needs to be savvy and limit these expenditures).
- *Sufficient* (household can cover its basic needs – such as food, housing, clothing, but needs to limit other expenditures).
- *Satisfactory* (covers all household needs within a reasonable range).
- *High* (allows higher investments and purchases of luxury goods).

Results in Fig. 3 suggest that there are differences in preference based on household income. The major difference is seen in case of households with very high and very low income. High-income households consider low price as unimportant factor. It is quite interesting that households with the lowest and highest incomes are similar in assessment of importance of many factors, such as: easy handling of claims and complaints
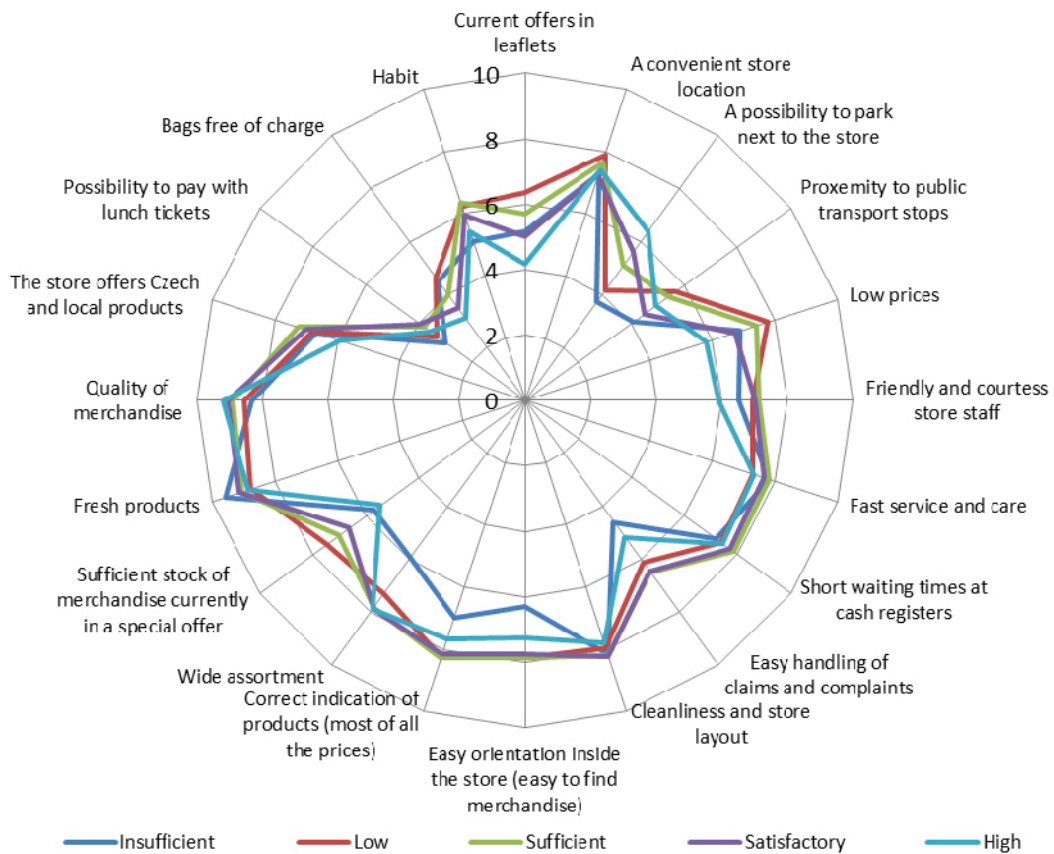
and sufficient stock of merchandise currently in a special offer. To evaluate the hypothesis H2 (Level of household income has an impact on the level of importance individual factors influencing choice of outlet selection when shopping for meat products.) contingency analysis was used again. Tab. II reveals the results. The strongest associations between income and individual factors are for impact of current low prices and offers in leaflets.

The Impact of Consumer's Level of Attained Education

The last tested relationship was defined in the hypothesis H3 (Level of attained education has an impact on the level of importance individual factors influencing choice of outlet selection when shopping for meat products.) that the strongest associations are with following variables: possibility to park next to the store, current offers in leaflets, sufficient stock of merchandise currently in a special offer, the store offers Czech and local products, habit. More details are presented in Fig. 4 and Tab. III.

Cluster Analysis

The final step was cluster analysis; results are shown in Fig. 5. Factors can be divided into four basic clusters. First cluster groups factors
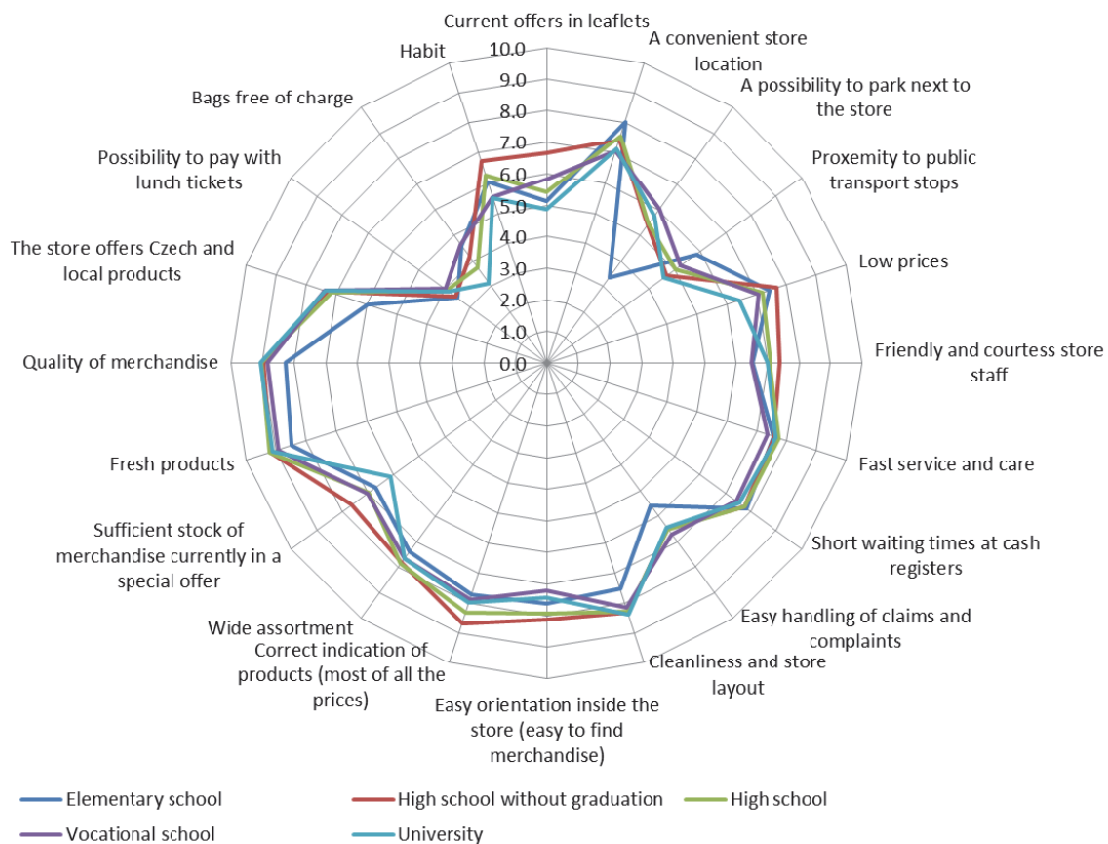

3: *Analysis of factors according to income of household*
Source: questionnaire survey, 2012, n = 1137

II: *Measures of association – Income*

Factor	p-value	contingency coefficient	H_0
Low prices	p = 0.00000	0.30	reject
Wide assortment	p = 0.00000	0.27	reject
Sufficient stock of merchandise currently in a special offer	p = 0.00001	0.27	reject
Current offers in leaflets	p = 0.00002	0.26	reject
Friendly and courteous store staff	p = 0.00028	0.25	reject
A possibility to park next to the store	p = 0.00078	0.24	reject
Short waiting times at cash registers	p = 0.00158	0.24	reject
Proximity to public transport stops	p = 0.00899	0.22	reject
A convenient store location	p = 0.63020	0.17	not reject
Fast service and care	p = 0.20862	0.19	not reject
Easy handling of claims and complaints	p = 0.01220	0.22	not reject
Cleanliness and store layout	p = 0.33189	0.18	not reject
Easy orientation inside the store	p = 0.05620	0.21	not reject
Correct indication of products (most of all the prices)	p = 0.03270	0.21	not reject
Fresh products	p = 0.05520	0.21	not reject
Quality of merchandise	p = 0.16009	0.19	not reject
The store offers Czech and local products	p = 0.01645	0.22	not reject
Possibility to pay with lunch tickets	p = 0.07996	0.20	not reject
Bags free of charge	p = 0.08073	0.20	not reject
Habit	p = 0.07352	0.20	not reject

Source: questionnaire survey, 2012, n = 1137

4: *Analysis of factors according to education*
Source: questionnaire survey, 2012, n = 1137)

III: *Measures of association – level of attained education*

Factor	p-value	contingency coefficient	H_0
A possibility to park next to the store	p = 0.00000	0.29	reject
Current offers in leaflets	p = 0.00003	0.26	reject
Habit	p = 0.00005	0.26	reject
Sufficient stock of merchandise currently in a special offer	p = 0.00004	0.26	reject
The store offers Czech and local products	p = 0.00004	0.26	reject
Cleanliness and store layout	p = 0.00024	0.25	reject
Correct indication of products (most of all the prices)	p = 0.00007	0.25	reject
Fresh products	p = 0.00006	0.25	reject
A convenient store location	p = 0.00087	0.24	reject
Quality of merchandise	p = 0.00097	0.24	reject
Low prices	p = 0.00205	0.23	reject
Easy handling of claims and complaints	p = 0.00247	0.23	reject
Bags free of charge	p = 0.00617	0.23	reject
Friendly and courteous store staff	p = 0.01361	0.22	not reject
Fast service and care	p = 0.23655	0.19	not reject
Short waiting times at cash registers	p = 0.09069	0.20	not reject
Proximity to public transport stops	p = 0.01535	0.22	not reject
Easy orientation inside the store	p = 0.12144	0.20	not reject
Wide assortment	p = 0.07217	0.20	not reject
Possibility to pay with lunch tickets	p = 0.45152	0.18	not reject

Source: questionnaire survey, 2012, n = 1137

5: *Analysis of factors according to age*
Source: questionnaire survey, 2012, n = 1137

connected to price and habits: Current offers in leaflets; A convenient store location; Low prices; Habit; Sufficient stock of merchandise currently in a special offer.

The second cluster of factors can be described as in-store situational factors. The factors are: Friendly and courteous store staff; Fast service and care; Short waiting times at cash registers; Easy handling of claims and complaints; The store offers Czech and local products.

The next cluster if formed by qualitative store attributes, such as: Cleanliness and store layout; Easy orientation inside the store (easy to find merchandise); Correct indication of products (most of all the prices); Wide assortment; Fresh products; Quality of merchandise.

The last cluster is formed by factors connected to convenience when shopping. These include: A possibility to park next to the store; Proximity to public transport stops; Possibility to pay with lunch tickets; Bags free of charge.

DISCUSSION AND CONCLUSION

The paper discusses factors influencing purchase decision-making process and focuses mainly on the choice of outlet when shopping for meat products and factors that influence it. The research results come from 1137 responses to a survey conducted in the Czech Republic. The data was collected through the UMBRELA questionnaire system.

The authors of the article tested the relationship between consumer parameters and factors which are important for the consumer. These hypotheses were tested through contingence analysis. First, the p-value was calculated, and then it was compared with the significance level. The significance level used was $\alpha = 0.01$. Every factor was evaluated on a scale with 10 levels (1 to 10, where 10 – the most important).

Firstly the analysis of importance of the factors in the selection of outlet when shopping for meat products was conducted. The most important factors were quality factors: fresh products (average rating 9.1) and quality of merchandise (8.9). The next step was to find a popular point of meat purchase. The result shows that medium-sized stores are preferred.

The following part included information about the contingence analysis. The consumer parameters chosen were age, the consumer's income and their education. The hypothesis that the respondent's age has an influence on the importance of individual factors wasn't rejected and the influence is at a mid-level (0.25–0.43). The essential influencing factor was leaflets. The influence wasn't demonstrated only for 5 factors. The income of consumers has influence especially on the following factors with impact on consumer's decision making about particular meat product: low prices, wide assortment, merchandise, leaflets. Null hypotheses weren't rejected for the remaining 12 factors. The effect of education is important for numerous factors.

The last part of this article dealt with a cluster analysis of the factors. Five clusters were found: the first is price and habits, the second is in-store situational factors, the third is qualitative store attributes and the last is shopping convenience.

If the results of this article were compared to similar studies, such as by Popescu (2013), Pelzer (1991), or Drescher and Rimal (2002), some similarities could be found. However, the focus of these studies is mostly on perception of meat packaging. In case of this article the attention was focused on more factors which are important in a buying process. What the studies have in common, that attributes of quality and freshness are the most important, just like for Czech consumers.

This article could provide useful information for companies which are focused on the meat market. The presented results show that managers of stores selling meat products should pay attention to demographic structure of their customers, find out more about their preferences and adjust their services and offer to them.

REFERENCES

DRESCHER, L. S., DE JONGE, J., GODDARD, E., HERZFELD, T. 2012. Consumer's Stated Trust in the Food Industry and Meat Purchases. *Agriculture and Human Values*, 29(4): 507–517.

HORSKÁ, E. et al. 2009. *Európsky spotrebiteľ a spotrebiteľské správanie* [*European Consumer and Consumer Behavior*]. Nitra: Slovenská poľnohospodárska univerzita.

LIU, X., NELSON, M. K., IBRAHIM, M. 2007. Analyzing consumer's calculation factors in the purchase decision of goat meat. *Journal of food distribution research*, 38(1): 196–202.

QUAGRAINIE, K. K., XING, A. and HUGHES, K. G. 2011. Factors influencing the purchase of live seafood in the north central region of the United States. *Marine Resource Economics*, 26: 59–74.

PELZER, P. M. L., MENKHAUS, D. J., WHIPPLE, G. D., FIELD, R. A. and MOORE, S. W. 1991. Factors influencing consumer rankings of alternative retail beef packaging. *Agribusiness*, 7(3): 253–267.

PIRVUTOIU, I. and POPESCU, A. 2013. Research on Consumer Behaviour in Bucharest Poultry Meat Market. *Animal Science and Biotechnologies*, 46(1): 389–396.

RIMAL, A. P. 2002. Factors Affecting Meat Preferences Among American Consumers. *Family Economics & Nutrition Review*, 14(2): 36–43.

TURČÍNKOVÁ, J., STEJSKAL, L. and STÁVKOVÁ, J. 2007. *Rohodování a chování spotřebitele* [*Consumer decision-making and consumer behavior*]. Brno: MSD.

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