

CONSUMER ATTITUDES AND PREFERENCES ABOUT THE PORK MEAT IN HUNGARY (Based on cluster analysis)

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Abstract: In my study I wish to investigate the fact that how the pork consumption of Hungary changed during the last years. This study focuses on consumer's attitudes about (pork) meat, what do they think about the healthness of the different meat type, what are the strengths and weaknesses of pork meat, what are the main features of good quality pork meat, what are the major pork purchase influencing factors and what are the favourite food of the respondents from pork meat etc. Then I analyze the tendency of these values (cross tabs, bar/pie charts, means, Chi-square), where can be found significant differences, and make a cluster analysis to identify the pork consumers in Hungary.

Keywords: pork consumption, place of procurement, price, strenghts, weaknesses, good quality, favourite food, significance, frequency, cluster analysis

Introduction and objectives

The actuality and importance of the chosen subject is justified by the trends observed in the recent years, show that questions concerning nutrition, food and food safety are gaining more and more significance. One of the biggest challenges of the 21st century is to ensure a stable, sustainable and safe food production for the continuously growing population of the world. The problematic of food production and supply are highly complex, as nowadays, almost 13% of the world's population is starving (FAO, 2011) and cannot have sufficient quantity and quality of food, meanwhile on the other parts of the world; obesity is causing socio-economical problems.

Determining factors of food production and the change in consumer trends can influence as well the demand and consumption of food. The change of consumer habits, the decisions of the consumers can not be calculated. But they could be observed and analysed. Consumers can choose and select from a wide range of products, from the cheaper to the premium category products and it happens a lot, that even the consumer doesn't know for sure why he or she selected or preferred a product. Today's modern customers bring their decision by taste, health, food quality and safety, as a consequence of the recent international and national food scandals. In my research work, the focus is on the consumption of animal based food products; more precisely my thesis will conduct its research on pork meat consumption.

I have chosen for my research work this subject, as I wanted to deal with an issue that is influencing our everyday life, our lifestyle and welfare and our health. For that reason, my

thesis is focusing on analysing consumer habits, preferences and attitudes related with pork consumption, namely on the areas of nutrition marketing. Hungary's population consumes traditionally pork meat and it is one of the most popular and consumed meat, so I have chosen pork meat to be in the highlights of my research.

The selected subject has been analysed with primary and secondary research work. In order to achieve this work, I have collected, assessed and analysed the relevant national and international scientific literature, which helped as well in the judgement of the market position of pork meat. Following this practise, based on the data deriving from different sources, I have conducted my secondary research work. In order to determine the market position of pork meat I have formulated new, more informative data lines with different statistical and other methodologies (basis and chain coefficient, indexes, means and price elasticity indicators).

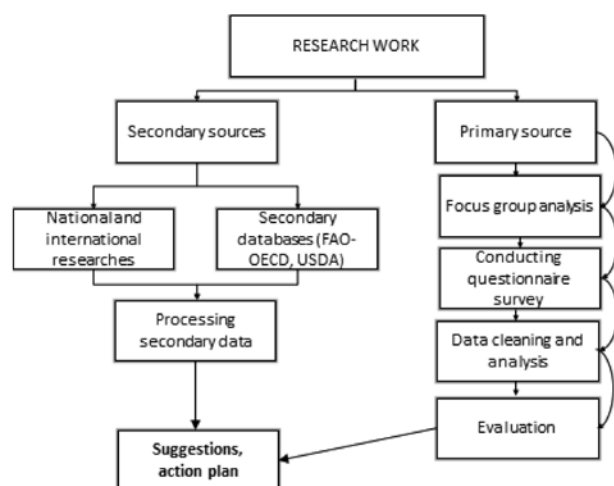
The main objective of my primary research was to formulate my conclusions on pork meat consumption in Hungary by the help of the data of the sample (1201 questionnaires). I will analyse separately the buying habits of the Hungarian consumers, the consumed quantity, and the differences of the consumer attitudes. I will examine as well how much the results of my questionnaire are in line with the conclusions of other scientific author's in the subject. My objectives related to my primary research is (1) to reveal the attitudes and preferences of consumers towards pork meat consumption in Hungary; (2) to find breakout points from the current situation in order to ameliorate the perception of pork meat and to scientifically support my recommendations.

4 hypotheses were formulated related to the primary research work:

1. Most of the Hungarian consumers believe that chicken meat is healthier than pork meat.
2. There is a significant difference between genders regarding the frequency of pork consumption.
3. For most of the domestic consumers, the most important aspect in the course of pork purchasing – in comparison with its competitor products – is the relative value of retail price.
4. Late in life, a higher portion of elderly domestic consumers prefer pork meat and pork based products.

Method of the investigation

I have divided my research work on two parts: on analysing framework, on research question and on hypothesis, focusing on the information required for my research. In case, we would like to group the information into a structure, the most general criteria is, if we are talking about finding, harmonising, grouping and synthesising of already existing database or we have to conduct a totally new market research. Basically, this makes the difference between primary and secondary market research. *Graph 1.* is showing how the structure of my research work was set up.



Graph 1: Synthesis of my research work
Source: Own editing, 2012

In secondary research I have elaborated several purchase and food consumption models related to the subject and I have concluded, that from these models' the most suitable one for my work is the one HAJDUNÉ-LAKNER, 1999 had set up, as it is using similar factors, as I had used during the process of the scientific literature (the model is representing the relation between food consumer behaviour, food consumption and nutrition and health).

From the acquainted publications and databases, I conducted my secondary research and collected the data of consumer price and average net earnings in Hungary for the period of 2000-2009. From these data I determined the

elasticity of demand, the cross-elasticity of demand and the income elasticity of demand. I have divided the primary data collection as well on two parts: namely on qualitative and quantitative research. In the frame of the qualitative research, before the questionnaire assessment - to help to put together the questionnaire and the determination of the possibilities of answers – I conducted a focus group interview. For the quantitative research I chose the method of questionnaire survey. By the communication channel, the survey was oral, by its subject, it was consumer-type, by the theme, it was specific (concentrating on pork consumption) and looking at its frequency it was ad-hoc.

The main objective of my consumer survey is to get to know the attitude of the consumers, the reasons behind them and to explore the factors influencing them and by the analysis I would like to forecast the prospective reactions of the consumers regarding pork meat consumption. We can get acquainted with customers' reactions if we presume that there is permanence amongst the past, present and future attitudes and we conclude on the future from the past and the present, respectively we ask questions on future intentions. The socio-economic criteria of the consumers are crucial for the survey, as the consumer behaviour and decision is highly determined by the criterion of the consumer.

For conducting my survey, I had developed a questionnaire on my own, from which after the query, 1201 turned out to be valuable. The title of the questionnaire was „ Analysis of consumer preferences and attitudes towards pork meat consumption”. I have used mostly closed questions, but there was a possibility for open questions and own opinions as well. The structure of the questionnaire followed the classic 4P, therefore the questionnaire begins with the product, namely pork meat or product made from pork (recognition, popularity, frequency of consumption and product differentiation, etc.). The questionnaire was continued with the place of procurement (Place), followed with questions regarding Price and finally questions related to Promotion had been asked. There were some questions on general knowledge and some filtering, connecting, reminder and control questions as well. At the end of the questionnaire, I have formulated 14 statements that could be rated on Likert-scale from 1 to 5, as this is the most frequently used scale for attitude measuring. After surveying the consumer habits of pork meat, I have phrased questions segmenting the customers, in order to group them by different criterions (gender, age, marital status, education, economic activity, size of settlement and income).

The questionnaire survey¹ took place at country level between 30 November 2010 and 31 January 2011. During

¹ Places of sample collection: Abony, Bagod, Balinka, Békéscsaba, Boldva, Budakalász, Budakeszi, Budaörs, Budapest, Bükkösd, Debrecen, Derecske, Dévaványa, Dombóvár, Dunasziget, Ebes, Eger, Egerszalók, Földeák, Füzesabony, Gödöllő, Gyöngyös, Győr, Gyula, Hajdúböszörmény, Hajdúsámson, Halásztelek, Hódmezővásárhely, Jánossomorja, Kakasd, Kápolnásnyék, Kaposvár, Kazincbarcika, Királyegyháza, Kisbér, Kiskunhalas, Kurityán, Levelek, Mágocs, Magy, Mindszent, Miskolc, Mosonmagyaróvár, Múcsony, Nagykálló, Noszvaj, Nyíregyháza, Orosháza, Páhi, Pécs, Rákóczi falva, Siklós, Szeged, Székesfehérvár, Szentlőrinc, Szolnok, Tapolca, Tardos, Tata, Tatabánya, Teskánd, Tiszatelek, Újszilvás, Varbó, Zalaegerszeg.

the sampling, the structure of the different regions and settlements was adequate for the quote determined by the National Statistical Office, therefore the representativity could be ensured. In case of 'gender' and 'age', the data of the sample showed minimal difference from the ratio published by the National Statistical Office, therefore the sample is representing the consistency of the basic set by four factors (region, type of settlement, gender and age).

In the regions and settlements the method of 'random walking' were used in order to ensure a total suddenness of the selection of respondents. Therefore, all respondents had the same chance to get into the sample. From the requested households the person for the interview had been selected with the method called 'birthday key', ensuring as well a total suddenness (VERES – HOFFMANN – KOZÁK, 2009).

For the selection of the methodology, I examined similar surveys on food consumption in the domestic scientific literature in order to compare how other authors conducted their surveys and what kind of methodology they used. During the analysis of the questionnaire, I constantly used the „best methodological approach” found in the domestic (SZAKÁLY – SZIGETI – SZENTE, 2009, SZŰCS – TIKÁSZ – KOVÁCS, 2008, SZAKÁLY – FÜLÖP – NÁBRÁDI, 2008) and international (NGAPO, 2003, FORTOMARIS, 2005, VERBEKE, 2010, XING, 2009) scientific literature. I had processed the questionnaires with SPSS 19.0 statistical software. From the primary data collection with the methodology of descriptive statistic, I have calculated means, minimum, maximum, median, mode and deviation and relative frequency. For the evaluation of the statements - that could be answered on a Likert-scale from 1 to 5 – I have calculated different position indicators (mean, median and mode), dispersion indicators (range and dispersion), and indicators of the shape (skewness and kurtosis) and other indicators (sum, number of the set, minimum, maximum). I used two new methods for the analysis of the answers given on scale-type questions. The lowest 2 boxes are summing (SZAKÁLY – SZABÓ G., 2009) the most unfavourable opinions (answer number 1 and 2), top 2 boxes are showing the most favourable ones (answer 4 and 5). By my opinion, this method is really talkative in the case of consumer surveys, as it gives the possibility to compose bigger, but homogenous groups by the given answers. This reflects better the opinions of the customers. For the demonstration of the coherence between the questions, in the case of one variable method, I used significance analysis with Pearson-type Chi-square probe. For the multivariate data analysis from the methods based on dependence, I used cross-tables and at the end of the primary research, I made cluster analysis for shaping the segments of consumer behaviour. At last, it is important to mention that I used a 5% of error probability during the analysis of the significance and in the end I kept the results or rejected.

Results and discussion

The main objective of the primary research was to be able to conclude on domestic pork meat consumption by processing the results of the questionnaire developed by me. As a result, amongst the objectives of the primary research, one of the most important results was to map the preferences and attitudes of customers towards pork meat and to formulate recommendations on them. Based on the primary research I stated four hypotheses, which could be proved obviously or could be disproved.

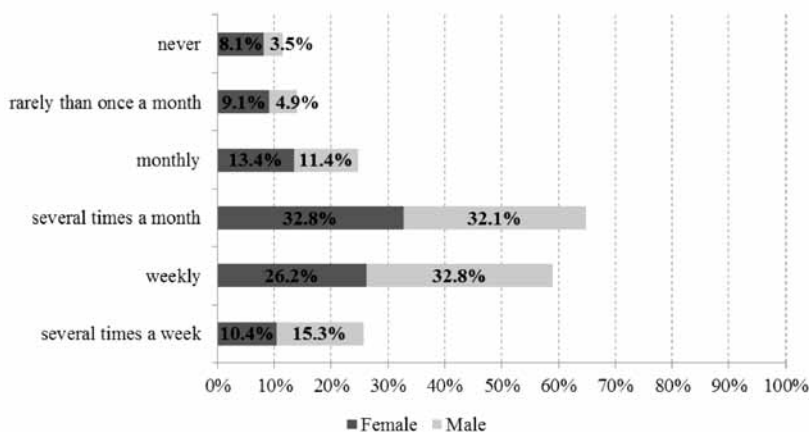
Hypothesis 1. of my primary research was that „*Most of the Hungarian consumers believe that chicken meat is healthier than pork meat*”. From the answers on the question related to the hypothesis, I came to the result that customers really do think that chicken meat is healthier than pork meat, 28.3% of them, so the hypothesis was proved. From the five possible answers the first was the fish with 57% (685 persons), the second was chicken meat with 31.3% (376 persons), the third was turkey with 5.4% (65 persons), pork was the fourth only with 3.0% (36 persons) and finally beef meat with 2.2% (26 persons) (Table 1.). Altogether I concluded that the half of the respondents found fish as the healthiest and one third found chicken. Regarding gender differences, I stated that by the opinion of women white meat (fish, chicken, and turkey) is healthier, while men find red meat (pork and beef) healthier (as you can see on Table 1., % within question). The cross-table of the age showed that younger generation marked white meat and elderly respondents preferred red meat. Therefore my recommendation is to dispel the disbeliefs on pork meat being unhealthy (especially amongst youngsters), as the results reflect that the negative perception position pork meat at the last and of course this influences the consumption as well. In the future, female customers should be concentrated on, as they are the ones who purchase and prepare the food for the family. For the popularisation of pork meat, such strong points should be highlighted that are based on researches of modern nutrition science and arguments like 'it can be easily procured, it is not too expensive, fresh, it can be variously prepared and it is one of the most important source of protein'.

My 2nd hypothesis: „*There is a significant difference between genders regarding the frequency of pork consumption*” was proved (Graph 2.). During the survey I found interesting differences between male and female customers and a significant difference could be shown (Pearson-type Chi-square $p=0.000$). 49% of male customers weekly or more in a week, 32% of them more in a month and 19% once in a month or rarely eat pork meat or food made from pork. In the case of female customers this portion was more balanced; 37% of them eat pork once a week or more, 33% more than once in a month and 30% once in a month or rarely. As a result, my recommendation is to focus on male customers in the campaigns of pork meat, because in higher frequency rate (several times a week, weekly) the consumption of male customers was always higher. Meanwhile in the case of lower frequency rate (never, less often than once a month), the portion of female customers was higher.

Table 1: Crosstabulation – “Which is the healthiest meat type from the followings? * Gender of interviewed”

		Gender		Total
		Male	Female	
Poultry meat	Count (capita)	180	196	376
	% within question	47.9%	52.1%	100.0%
	% of Total	15.0%	16.3%	31.3%
Turkey meat	Count (capita)	29	36	65
	% within question	44.6%	55.4%	100.0%
	% of Total	2.4%	3.0%	5.4%
Pork meat	Count (capita)	26	10	36
	% within question	72.2%	27.8%	100.0%
	% of Total	2.2%	0.8%	3.0%
Fisheries	Count (capita)	331	354	685
	% within question	48.3%	51.7%	100.0%
	% of Total	27.6%	29.5%	57.0%
Beef	Count (capita)	23	3	26
	% within question	88.5%	11.5%	100.0%
	% of Total	1.9%	0.2%	2.2%
I do not know	Count (capita)	6	7	13
	% within question	46.2%	53.8%	100.0%
	% of Total	0.5%	0.6%	1.1%
Total	Count (capita)	595	606	1201
	% within question	49.5%	50.5%	100.0%
	% of Total	49.5%	50.5%	100.0%

Source: Own editing based on primary research, 2012



Graph 2: Crosstab – Pork consumption frequency and respondent gender
Source: Own editing based on primary research, 2012

The 3rd hypothesis of my primary research is „For the most of the domestic consumers the most important aspect in the course of pork purchasing – in comparison with its competitor products – is relative value of retail price”. For the proof of my hypothesis I asked in a separate question to rank the influencing factors of the purchase of pork. The descending rank of them is: freshness, price, fatness, and domestic product, healthy nutrition, farming conditions,

packaging and advertisement, as it can be seen in Table 2. So my 3rd hypothesis couldn't be proved, as most domestic customers choose to buy pork meat by its freshness, secondly by its price. My recommendation is to motivate buyers of pork not only with low price, but to highlight features of pork meat that could be important for the customers like reliable quality, domestic product and freshness. In this case, the customer can rely on these features, meanwhile price is continuously changing, but quality and reliability is stable.

The 4th hypothesis connected to the results of the survey is „Late in life, a bigger portion of elderly domestic consumers prefer pork meat and pork based products”. The statement were in relation of my hypothesis (I gladly consume food made from pork) that could be ranked on a scale from 1 to 5. To determine that someone is gladly consuming pork meat, I took into consideration ranks 5 (I totally agree) and 4 (I agree in a small-scale). My survey focused on the question that in these categories, what is the portion of the different age groups and looked for the answer with the method of top 2 boxes (I considered the answers of 4 and 5 together). My hypothesis hasn't been proved by the significance analysis, as a result I couldn't prove the coherence between the two factors, and therefore my 4th hypothesis was rejected. You can see the results on Graph 3. Even so, I would recommend to produce new, modern tasted (e.g. Mexican, barbecue, chilli and pepper-mustard) half-finished and finished products from pork meat or rather the extension of product range suiting customer needs.

Based on the answers, it can be stated that the thigh of pork meat is the most frequently consumed part of the pork, than chop and spare rib. The rank of the most frequently consumed product from pork is bologna, salami, Vienna sausage, ham and sausage.

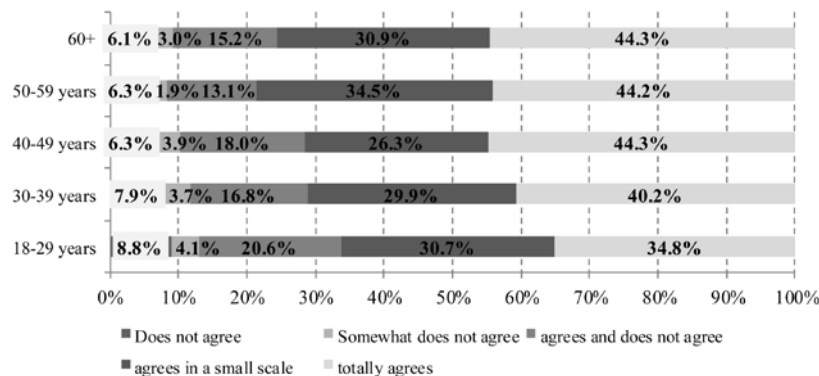
Regarding the place of procurement, I concluded from the data of the sample, that there is a significant difference with more background factors of the consumer habits of male and female customers. The place of procurement of fresh pork meat is the local butcher, or smaller meat shops (45.36%), as the customers believe that these smaller shops are the most reliable and the safest, as you can see on Graph 4. The second highest rate has the hyper-and supermarkets (28.56%) of purchasing fresh pork. Therefore the purchase in local stores trusted by the customers should be motivated, aiming to help the purchase and consumption of local products. 73% of the respondents answered yes on my question, if they buy meat from households or from the farmer itself.

The question examined in relation to age I can conclude, (that) the proportion of self-producing is relevant at the age of 60 and over (24.1%), at the same time buying from producer in the 30-39 and 40-49 age ranges. Buying at the meat store / butcher's is typical the age of 40-49 and 18-29 year olds. The 30-39 age categories leads the 'buying from market' section with more than 28% of the whole purchase. In discounts around

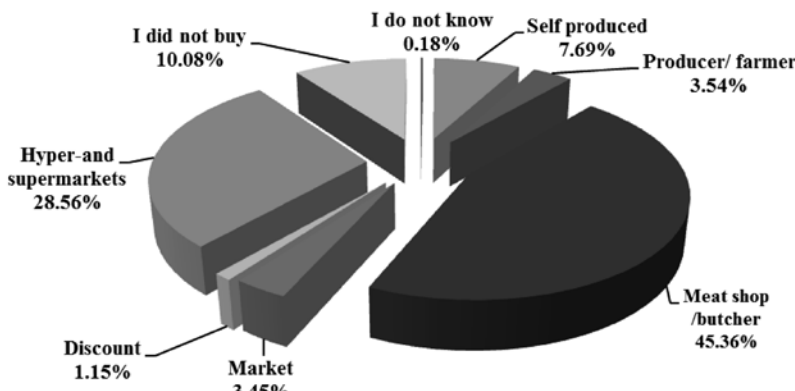
Table 2: Pork purchase influencing factors

	Freshness	Price (Ft/kg)	Fatness	Domestic product	Healthy nutrition	Farming conditions	Packaging	Advertisement
Mean	4.81	4.39	4.17	4.04	3.96	3.83	3.51	2.12
Median	5.00	5.00	5.00	4.00	4.00	4.00	4.00	2.00
Mode	5.00	5.00	5.00	5.00	5.00	5.00	4.00	1.00

Source: Own editing based on primary research, 2012



Graph 3: Degree of agreement with the 7th statement „I gladly consumer food made from pork by dispersion of age groups
Source: Own editing based on database, 2012



Graph 4: The place of procurement of fresh pork
Source: Own editing based on database, 2012

40% of the pork sales belong to the older individuals (60-year old or above) while the youngest category (18-29 year old) mainly do it in the hyper and supermarkets. Self producing swine is mostly typical in villages and towns where the population is less than 1000 people. Bigger cities' and county capitals' residents prefer hyper and supermarkets, at the same time the majority of the interviewed Budapest citizens chose markets. Blue-collar workers and pensioners own the biggest percent of buying from farmers and self-producers. Mostly white-collar workers do shopping at marketplaces. To sum up, I can conclude, there are significant differences between age and the place of procurement, since the different age ranges shop pork different places/shops.

On my question, if on the packaging information the place of origin should be marked, 70% of the respondents

marked the answer 4 (agreed on a smaller-scale), 25% marked answer 5 (totally agrees) and especially active physical workers, unemployed people and housewives found that information important.

The obligatory content of nutrition (GDA²) marked on the packaging is really talkative and obvious information. By my opinion, the place of origin should be marked on the packaging with a new labelling. There is a lot of unnecessary information influencing the customer, but the place of origin is only one word most of the time and it doesn't even reflect the reality. My suggestion is to develop such a label for pork meat (or could be used for other products as well), on which place of origin is stated in different manners. As a result, the product could be tracked more efficiently from the farmer to the customer and food scandals could be avoided as well. Country of origin, the country, where it was raised and where it was cut and processed should be stated on the label of the packaging. In case, it was processed more times, all places should be stated.

In my questionnaire, I was curious, if customers believe that domestic products are better quality. I wanted to explore the positive attitude of the customers towards Hungarian pork with this question. From the answers, I figured out that 80% of the respondents found that domestic pork is better quality than the ones from abroad and 54% would pay more for this. Within these answerers, in the biggest portion active physical workers and pensioners could be found. The respondents have strong positive attitude towards pork meat that has no objective background. This was stated by the customers own, subjective opinion, but this could be useful for a marketing campaign.

As a next step with the help of an open question, I determined the ranking of good quality pork meat seen in Table 3.

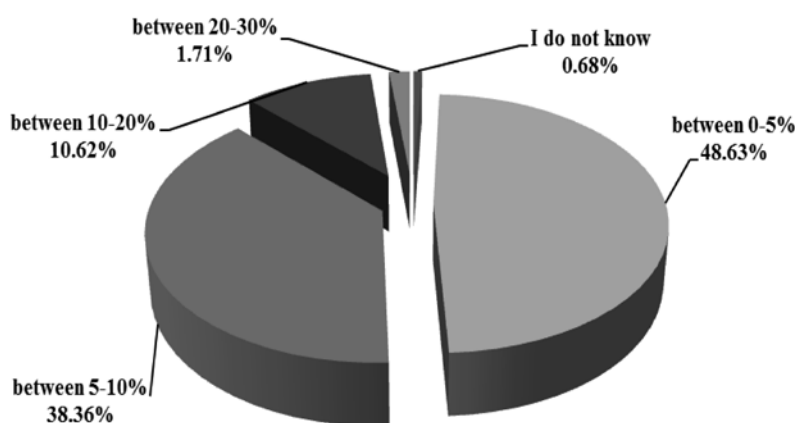
My observation is that the most important was the colour (43%), than the scent (11%), the taste and the flavour (7%), fatness (6%), appetizing (4%), consistency (4%), and other

²Guideline Daily Ammounts

Table 3: Features of good quality pork meat in descending order

Title	Frequency (piece)	Distribution (%)	Title	Frequency (piece)	Distribution (%)
Vivid colour	340	30.1	Not wet	16	1.4
I don't know	195	17.2	Not slimy	13	1.1
Nice red	106	9.4	Not dry	8	0.7
No scent	79	7.0	Not in bloody liquid	8	0.7
Not too fat	75	6.6	Do not have liquid	5	0.4
Tasty	58	5.1	Fine by touch	2	0.2
Nice scent	49	4.3	Hungarian	2	0.2
Appetizing	47	4.2	Warrant	2	0.2
Pink	43	3.8	Full of protein	1	0.1
Consistency	36	3.2	Clean	1	0.1
Short	22	1.9	Not frozen	1	0.1
Succulent	22	1.9	Sum	1131	100.0

Source: Own editing based on the database, 2012



Graph 5: Answers of "How much would you pay more for pork meat?" question
Source: Own editing based on database, 2012

factors in the rest of the portion. In my opinion, it is not by hazard that except taste and flavour; all important factors are the ones visible. To sum up, I appoint that customers buying fresh pork meat judge the quality by empirical features (colour, scent, taste and fatness) and bring their decision with the help of the information influencing their senses.

The rest of the questionnaire is on retail price. 26% of the customers said that they would pay more if information would be available on the conditions of producing and farming. This information underlines my recommendation already mentioned on labelling and the fact that customers require more information generally during their purchase. The information if customers would be ready to pay more (Graph 5.) lets us to think that the reservation price of pork could handle only 0-10% of increase in price. But for this increase in return, they would require more information, in order that they could bring their decision based on more information. This solution is recommended only for meat sold in hyper and supermarkets, as more information is needed in these cases, as packaging is the mute seller.

By the ranking of the preferences of the strength and weaknesses of pork meat, in the case of strengths, two third of the respondents emphasized the diversity of it, the half of the sample found its taste as the second most important factor, the third was that it is easily reachable, than quality and price. Based on the answers it can be said that in the case of strengths for the answerers pork meat is a variable, tasty, easily reachable, reliable quality and not too expensive meat. In marketing campaigns targeting Hungarian pork consumption, these features should be emphasized. In the case of weaknesses, I appoint that the results show high similarity with customers' misbelieves, as the biggest weakness of pork is its „fatness” followed by the fact that it is considered unhealthy. These

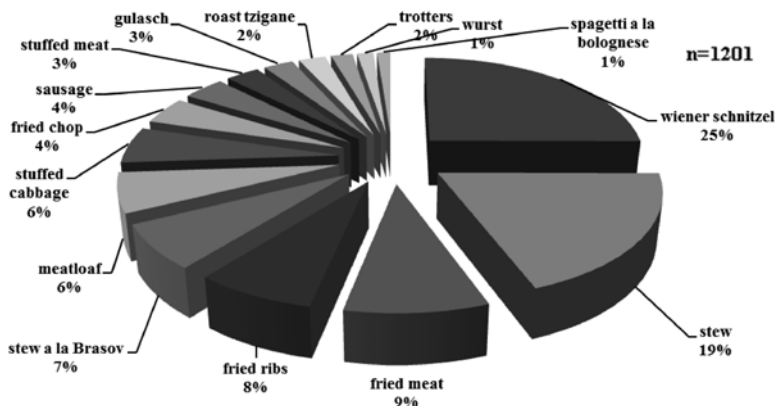
negative features should be in the focus of a countrywide educational campaign.

Table 4: Strengths and weaknesses of pork meat

Strengths	Number of respondent (capita)	Weaknesses	Number of respondent (capita)
Diversity	795	Fatness	675
Taste	579	Unhealthy	306
Easily reachable	431	Price	108
Quality	381	I do not know	45
Price	795	Quality	26

Source: Own editing based on database, 2012

Furthermore, I recognized that 13.2% of the answerers saw advertisements propagating pork meat and 76% saw it on TV. In my opinion, there is a high need for organised marketing activity that would build its strategy on educational campaigns.



Graph 6: Dispersion of favourite food of the respondents
Source: Own editing based on the database, 2012

Table 5: Results of cluster analysis

	„A” cluster	„B” cluster	„C” cluster	Value of Chi-square
Number of elements (person)	749	365	17	
Cluster features				
Gender	Balanced, but higher male ratio	Balanced, but higher female ratio	More than 80% male	p=0.020
Age	Mixed age groups, mostly over 40 years old	70% between 18-49	Between 18-39	p=0.000
Education	Lower education	Most of them graduated	65% graduated, 23% skilled worker	p=0.000
Marital Status	Half of them lives in marriage or in a relation	Lives in marriage or in relation	60% is single	p=0.001
Main activity	Active physical workers or pensioners	Active physical and intellectual workers	Pupils and active physical workers	p=0.000
Type of settlement	Lives in smaller settlements	Lives in a bigger city	Mixed settlements	p=0.002

Source: Own editing based on primary research, 2012

The last question of the survey (*Please indicate your 3 favourite pork based food*) was asked from curiosity in an open question. The answers were really heterogeneous, thus food reaching less than 1% was neglected. The most popular food was Wiener schnitzel, as 25% of the consumers chose it. The second was pork stew (19%), than fried meat (9%), fried rib (8%), stew a la Brasov (7%), meat loaf and stuffed cabbage (6-6%), but sausage and liverwurst, goulash and etc, could be found on the list. The heterogeneity of the answers underlines the diversity of pork meat, as from the same thing people love to make different food for them.

From the results of the questionnaire and by the Graph 6., I would like to state that the favourite food of Hungarian consumers from pork meat is Wiener schnitzel, pork stew and fried meat. The three mostly mentioned food is part of the traditional Hungarian cuisine; therefore I believe that there is a need for innovative, modern recipes of pork meat and for new taste and product portfolio and to introduce these

new products for a wider public. Currently, chicken meat serves as a basis for modern new recipes. In the gastronomy connected to pork meat, traditional Hungarian food can be found. In order to reposition pork meat, there is a need for renewing pork meat and to eliminate negative attitudes and to strengthen the positive ones.

The aim of the cluster analysis was to group my respondents into a homogenous group by some selected indicators. I formulated such clusters, whose elements were similar with each other, but they differed from the elements of other clusters. I have differentiated 3 clusters from each other, into which 1131 respondents could be assigned. The features of the clusters were determined with the help of cross-table analysis. The result of the cluster analysis is shown in Table 5.

With the help of the cluster analysis, I could prove that pork consumers can be differentiated from each other into three clusters and in order to enhance pork consumption the different consumer groups should be targeted with different marketing tools.

Conclusion

In the case of my primary research my objective was to explore consumer preferences and attitudes towards pork consumption and to make suggestions for the improvement of the perception of pork meat. I summarises the main results and the theoretical and practical capitalisation of the research:

- There is a significant difference between genders and meat found healthy by the respondents (p=0.000).
- Fatness (675 persons) and „unhealthy” (306 persons) were mentioned most frequently as main weaknesses of pork meat.
- There is a significant difference between male’s and female’s pork consumption (p=0.000).
- The most important factor by the purchase of pork meat was freshness (mean=4.81) and price was only the second factor (mean=4.39).
- Among the 7th statement of the questionnaire (I gladly consume food from pork meat) and the ratio of genders (p=0.000), main activities (p=0.000), education (p=0.000) there is a significant difference
- A significant difference could not be shown between pork consumption and age groups (p=0.951).
- The most frequently consumed pork meat is the thigh (19.1%), chop (14.1%) and spare rib (10.4%) and the most frequently consumed product is bologna (38.9%), and salami (34.4%).

- The two features mentioned most of the time was diversity (795 persons) and taste (579 persons).
- Significant difference can be shown among place of procurement of fresh meat and age group ($p=0.000$), education ($p=0.000$), and main activity.
- Significant difference could be shown by place of procurement of processed pork product, age, type of settlement ($p=0.000$), gender ($p=0.000$), education ($p=0.000$) and main activity ($p=0.000$).
- There is a significant difference among the importance of place of origin and age group ($p=0.026$) and type of settlement ($p=0.010$).
- Respondents found that domestic pork meat is better quality than the ones from abroad and there is a significant difference among answers and age groups ($p=0.029$), and type of settlement ($p=0.000$).

Summary

I showed by significance analysis, that there is a significant difference between the male and female consumers regarding pork consumption. I determined with the help of mathematical - statistical calculations that which parts of the pork are the most frequently consumed and where consumers purchase the product. I determined which features represent good quality for the customers and which is the most favourite food prepared from pork and what are the most popular products for grilling during summer time. This information could be useful for the producers and distributors. It was proved, that for the respondents during their shopping, retail price is not the only important factor, but freshness was considered the most important influencing factor. By the significance analysis, it couldn't be demonstrated that the older generation consumes pork meat more gladly. Furthermore after running the cluster analysis, I determined with the help of the background indicators who are the customers' preferring and consuming pork.

By my opinion, there is a high need for a marketing communication campaign at sectorial, community level that would build its strategy on educational campaigns aiming to dispel the disbeliefs of the customers. Only 13% of the respondents have seen or heard advertisements of pork and pork consumption, therefore it would be important to launch a targeted communication campaign whose aim would be the popularisation of pork meat and pork based products. With this we could open the door to inform customers about pork meat (place of origin) and to dispel the disbeliefs (fatness, unhealthiness) in order to increase the customers' trust.

From the point of the aim of the communication, informative advertisement could be successful, and in the focus of it, the advantages of domestic pork consumption should be positioned. Rational and emotional arguments

should be used. From the point of the message simple, clean, easily understandable, strictly informative content should be emphasized.

We should exploit the diversity of pork meat and a novel, modern image of pork meat suiting the 21st century should be built. Children of the present are the future customers; therefore healthy nutrition should be substantiated in nursery and elementary schools.

References

- FAO:** Food and Agricultural Organization of the United Nations: "The State of Food Insecurity in the World - How does international price volatility affect domestic economies and food security?" ISBN 978-92-5-106927-1. Published by the Food and Agriculture Organization of the United Nations, Rome, Italy, 2011. 44p.
- Hajdu I.-Né, Lakner Z.:** Az élelmiszeripar gazdaságtana. Mezőgazdasági Szaktudás Kiadó, Budapest. ISBN: 963 356283 X. 202-393 p.
- Fortomaris, P., Arsenos, G., Georgiadis, M., Banos, G., Stamataris, C., Zygoiannis, D.** (2006): „Effect of meat appearance on consumer preferences for pork chops in Greece and Cyprus”. In: *Meat Science* 72: 688–696 p.
- Ngapo, T. M.; Dransfield, E.; Martina, J.-F.; Magnusson, M.; Bredahl, L.; Nute, G.R.** (2003): „Consumer perceptions: pork and pig production. Insights from France, England, Sweden and Denmark”. In: *Meat Science* 66: 125–134p.
- Szakály Z., Fülöp N., Nábrádi A.** (2008): „Fogyasztói attitűdök elemzése a sertés- és húskészítmények piacán”. In: *A sertéságazat versenyképességének javítása. Debreceni Egyetem, Agrár- és Műszaki Tudományok Centruma.*
- Szakály, Z., Szabó G. G.** (2009): “Az élelmiszer-önrendelkezés aspektusainak elemzése termelői és fogyasztó szemzőgből”. In: *LI. Georgikon Napok Konferencia kiadvány, ISBN:978-963-9639-35-5. Keszthely 2009. október 1-2. 861-870 p.*
- Szakály Z., Szigeti O., Szente V.** (2009): „Analysis of consumer habits and attitudes on the Hungarian beef and rabbit market”. In: *APSTRACT – Applied Studies in Agribusiness and Commerce. Published: Agroinform Publishing House, Budapest, ISSN: 1789-221X. Vol. 3., Nr. 1-2. 67-70p.*
- Szűcs I., Tikász I. E., Kovács K.** (2008): „A hazai halhús-fogyasztási szokások főbb jellemzői”. In: *Élelmiszer, Táplálkozás és Marketing. ISSN: 1786 3422. Vol. 1., 53-61 p.*
- Verbeke, W., Pérez-Cueto, F., De Barcellos, M. D., Krystallis, A., Grunert, G.** (2010): „European citizen and consumer attitudes and preferences regarding beef and pork”. In: *Meat Science* 84: 284–292p.
- Veres Z., Hoffmann M., Kozák Á.** (2009): „Bevezetés a piacutatásba”. ISBN: 978-963-0582926. Kiadó: Akadémiai Kiadó Zrt., Budapest, 1-512p.
- Xing Z.** (2009): „Consumer Behavior Study in Pork Meat Market-Survey from Urban Area in Four China Cities”. The Center of Research of Industry Cluster and Enterprise Development, Jiangxi University of Finance & Economics. China.