

Analysis of changes in meat and meat products consumption in the Czech Republic in the past ten years

Analýza změn spotřeby masa a masných výrobků za posledních deset let

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Abstract: In the past ten years, meat and meat products consumption has changed dramatically. It has been caused by price and non-price factors. This article gives a brief recapitulation of the development of the consumption of meat and meat products and identifies the key factors which, in the past ten years, have had a major impact on this development. This article presents results of the secondary data analysis and the results of an inquiry into meat and meat products consumer behaviour carried out in the late 2004.

Key words: meat and meat products, consumption, consumer, factors behind consumption change, purchasing behaviour, consumer behaviour

Abstrakt: Za posledních deset let došlo v České republice ke značným změnám ve spotřebě masa a masných výrobků. Důvodem změn byly cenové i necenové faktory. Tento příspěvek se zaměřuje na stručný popis vývoje spotřeby masa a masných výrobků a na identifikaci klíčových faktorů, které tento vývoj za poslední desetiletí zásadní měrou ovlivnily. V článku jsou prezentovány výsledky analýzy sekundárních dat a výsledky dotazníkového šetření chování spotřebitelů masa a masných výrobků, které bylo provedeno na konci roku 2004.

Klíčová slova: maso a masné výrobky, spotřeba, spotřebitel, změna spotřeby, faktory změny spotřeby, nákupní chování, spotřební chování

INTRODUCTION

In the past fifteen years, there have been significant changes in food consumption development. They have been caused by many factors. One of the most affected group foods has been meat and meat products. Although meat consumption in the Czech Republic has dropped considerably since 1990, it is still quite high compared to other developed countries. In general, in terms of well-balanced diet, there has been a positive trend among people who have reduced their red meat consumption and prefer poultry. This has been caused by price factors as prices of the different kinds of meat significantly determine demand for certain kinds of meat as well as by non-price factors such as the trend to follow a well-balanced diet

supported by health education of the public. There are a number of factors affecting the change in the behaviour of meat and meat product consumers. The factors affecting purchasing behaviour of meat and meat product consumers have to be identified in order to comprehend the changes in the purchasing behaviour of consumers that has occurred since 1989 and in order to make a qualified prognosis for the further development of the consumers demand for this commodity.

Purpose of the article

This article aims to give a concise overview of meat and meat products consumption in the Czech Republic

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in the past ten years, to identify the key factors affecting the overall consumption of this food group and to study the factors affecting meat purchasing behaviour. Presentation of trends in consumption of the analysed commodity and identification of key factors determining meat consumption and purchasing behaviour have been part of the long-term project carried out within the Grant Agency of the Czech Republic "Changes in behaviour of the commercial sphere brought about by the transformation of economy and new trends in consumption", the purpose of which is to highlight the crucial changes in the consumer behaviour and reactions of the trade network to customers' impulses in the period after 1989.

MATERIAL AND METHODS

It is without any doubt that an important factor in achieving commercial success is understanding the variability of consumer behaviour which requires a thorough analysis of the target group of customers and the consequent identification, assessment and comparison of the key factors affecting the consumer behaviour in the given sector. The identification of changes in the purchasing and consumer behaviour facilitates the prognosis of the development of consumer demand for the analysed commodities.

Purchasing behaviour refers to the behaviour displayed by consumers while looking for, purchasing, using, evaluating and handling products or services which they expect to satisfy their needs. Purchasing behaviour focuses on decisions made by individuals when using their own resources (time, money, efforts) to acquire items related to consumption. Purchasing behaviour is analysed with respect to what consumer's buy, why, when, where, how often they buy the products, how they assess them after the purchase and what impact does their assessment have on their next purchase.

Analysis of purchasing behaviour

An analysis of purchasing behaviour should identify purchasing and consumer habits in relation to the given product group as this enables to find out and understand the motivation factors behind purchasing a particular commodity. The consumer habits represent a certain practice related to the purchase and usage of products and services, generally affecting the consumer behaviour and purchase of the given commodity.

When analysing purchasing behaviour, it is necessary to collect and systematise primary and secondary data,

when the primary data is usually collected by means of quantitative research. As the prime instrument for data collection, the quantitative research uses a questionnaire comprising both important questions regarding the analysed problem and demographic data, Shiffman, Kanuk (2004).

Cultural factors belong among the factors affecting consumer behaviour – society culture; social – a reference group, family, position in society; personal – age, occupation, economic situation, life style, life cycle including psychological factors such as motivation, perception, learning or attitudes.

Consumer behaviour is generally influenced by price and non-price factors which also affect the development of food consumption. The basic price factors include the development of population income, the development of consumer prices of food as well as other product and services. The non-price factors include demand for products and their availability in the market with regard to the development of the distribution network, advertising and promotion, health education, development of the food quality, degree of saturation of population needs, scope of self-supply etc.

According to Ingr (2004), the consumption of different kinds of meat depends on the following three factors: wholesomeness of meat, quality of meat and, last but not least, the consumer price. Thus, it is evident that the consumer price will play one of the crucial parts in meat consumption.

Consumer behaviour is influenced by many factors, some of which cannot be identified without help of the primary data. Therefore, the authors of this article have produced a questionnaire and collected primary data by the method of personal inquiry. In October and November of 2004, 2 000 respondents were addressed and 1 750 questionnaires were processed. The quota selection was made, that is to say, the selection is made so that according to the pre-defined characteristic features, the composition of the selected collection would be identical to the one of the basic collection. In this case, the control characteristics include gender, social group, age and residence place of the respondents. The primary data, acquired from the research, were processed using the SPSS programme (Statistical Package for Social Sciences). This article also presents some of the inquiry results.

RESULTS AND DISCUSSION

The situation in the meat consumption in the Czech Republic with respect to the development in

the world's meat market and meat markets in Central and Southern Europe.

In the past ten years, the meat industry in the countries of the former Eastern Block has undergone dramatic changes as a consequence of the transfer from the centrally-planned to market economy, which has necessitated transformation of the organisation and structure of the whole industry. The decline in purchasing power of the population and reduction in consumer subsidies had resulted in significant drop in meat consumption in the early 1990s. Consequently, many of meat-processing plants struggling with the low prices and idle production capacity went bankrupt.

In the latter half of 1990s, the meat consumption in most of the countries of Central and Eastern Europe started to grow and this trend still continues. In many countries, poultry meat consolidated its position in the market compared to other kinds of meat (in the majority of the analysed countries, poultry meat had gained a greater share in the market at the expense of other kinds of meat).

The meat market in Central and Eastern Europe was very much influenced by the developments in the world meat market which, in the past twenty years, had shown a substantial growth. This growth had been brought about by many factors, among them being the growth in the world population (Asia, South America) and increased meat consumption per capita due to higher population income and standard of life. After thirty years of growth, meat consumption first dropped in 2001. It was mainly due to lower consumption of beef related to the apprehension for the BSE – “mad cow disease”. The decline in the beef consumption had led to substantial increase in the market share of poultry meat at the expense of beef. In the next years, beef consumption is expected to gradually regain its former share of the market. Nevertheless, poultry consumption per capita is expected to continue growing and so is, from the long-term perspective, the market share of poultry compared to other kinds of meat.

In 1980, poultry shared 19% in the overall meat consumption. In 1990, it was 23% and 28% in 2000. In the consumer popularity rating, poultry attained second position before beef after the first pork. In the USA and the EU countries, the market share

of poultry grew approximately by 4%, respectively 3% per year while the markets in Russia and Japan, two world's most important poultry importers, were stagnating.

The most popular meat in all the countries of Central and Eastern Europe is pork. Hungary, Slovenia and the Czech Republic are the greatest consumers of poultry meat the consumption of which exceeds the average consumption in the European Union. In the countries of the former Eastern Block, meat consumption as well as preferences in meat vary.

Meat consumption in the Czech Republic

Despite the decline, the overall meat consumption in the Czech Republic is high both from the perspective of a healthy diet as well as compared with other developed countries. A moderate increase in beef consumption and after some fluctuation also in pork is envisaged in the future. Consumer demand for red meat has dropped due to its high price and diet reasons in favour of white meat such as fish and poultry. Here, the demand for white meat can be expected to continue growing.

The development of the overall meat consumption in the Czech Republic after 1989 is shown in Table 1 and the consumption of individual kinds of meat in Table 2. From Table 1, it is evident that after 1989, meat consumption in the Czech Republic rapidly dropped from 97.4 kg/capita/year to 79.8 kg/capita/year in 2002, that is by 18%. Dramatic was also the reduced consumption in 1991–1994 (from 88.4 kg/capita/year to 81.2 kg/capita/year). In the period from 1994 to 1999, meat consumption showed a slightly growing trend. The structure of consumption of different kinds of meat changed too, see Table 2. Major reduction occurred in beef consumption (from 1989 to 1996 it reduced by almost 40%), pork consumption decreased too and slightly reduced was also poultry consumption. In 1995, the overall meat consumption started to grow again until it declined in 2000 and this declining tendency has continued ever since. After 1996, there has been a significantly decreasing tendency in beef consumption, less dramatic is the decrease in pork consumption and since 1997, there is a rising tendency in the consumption of poultry.

Table 1. Meat consumption development in the Czech Republic (kg/capita/year)

Food group/year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Meat in total	97.4	96.5	88.4	86.6	84.2	81.2	82.0	85.3	81.5	82.1	83.0	79.4	77.8	79.8

Source: Ministry of Agriculture of the Czech Republic

Table 2. Structure of meat consumption per capita/year in % (total value of meat = 100%)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Beef	30.8	29	25.3	23.6	23.5	22.7	22.6	21.3	19.8	17.4	16.6	15.5	13.1	14.0	14.3
Veal	0.41	0.42	0.45	0.35	0.36	0.37	0.37	0.35	0.37	0.37	0.24	0.25	0.26	0.13	0.12
Pork	51.2	51.8	54.1	56.4	57.1	57.5	56.3	57.7	56.2	55.7	53.9	51.5	52.6	51.3	51.5
Poultry	13.4	14	14.5	14.4	13.9	14.3	15.9	16	18.8	21.8	24.7	28.1	29.4	29.9	29.5
Other	4.2	4.7	5.7	5.3	5.1	5.2	4.9	4	4.2	4.0	3.7	3.8	3.9	3.8	.

Source: Ministry of Agriculture of the Czech Republic

It can be stated that in the past fifteen years, the structure and volume of meat and meat products consumption have changed. According to Štiková, Sekavová and Mrhálková (2004), primarily it has been caused by the development of consumer prices of food and manufactured articles and services in relation to the income development. In the course of time, however, the relation between food consumption and its price has been less and less apparent. Thus, the trends in meat consumption are and will be more influenced by non-price factors. All the same, the influence of the consumer prices is not negligible. Consumer's choice is mainly determined by the mutual proportion of the individual kinds of meat, especially the proportion of consumer price of pork and poultry.

The above presented results (Pourová, Pour, Čermáková 2004), carried out at the Czech Agricultural University in Prague in 2003 and the focused on the perception of and the preferences in eight kinds of meat by Czech consumers (beef, pork, poultry,

lamb, mutton, veal, fish and turkey), showed that consumers buying meat are most influenced by the seven following factors: fine taste, wholesomeness, fat content, price, availability on the market and easy preparation. These factors had a substantial impact on meat consumption and on the choice of Czech consumers.

Findings of the research in purchasing behaviour of meat and meat products consumers

Consumption of individual kinds of meat and meat products

Behaviour of meat and meat products consumers was studied with the purpose to find out the real structure of meat and meat products consumption, that is to say the actual consumption of these commodities as well as the purchasing frequency. Most

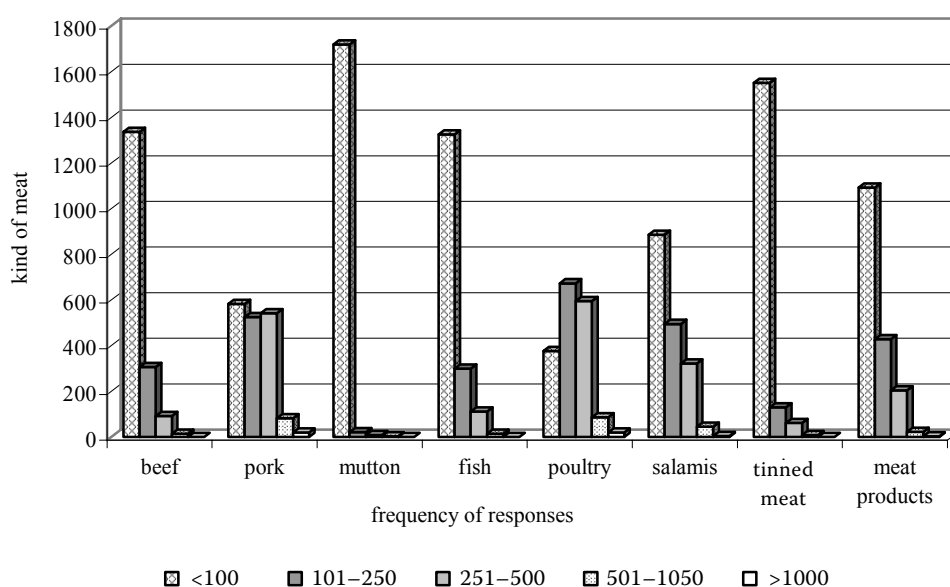


Figure 1. Weekly consumption of some kinds of meat in grams per family member

often consumers buy salamis, sausages and similar meat products. Over 13% of consumers buy salamis daily and 56% of consumers buy them weekly. As for the meat, almost 60% of respondents buy poultry weekly. Beef is bought less often, almost 47% of respondents buy it less than once a week and as many as 41% of them do not buy beef at all. Fish is bought less than once a week and mere 14% of consumers do not buy it at all.

Mutton and other kinds of meat such as rabbit have not been on the Czech menu yet as 84% of respondents do not buy mutton at all and 61% of respondents do not buy game, rabbit or other kinds of meat. On the other hand, only 7% of respondents claimed that they do not buy salamis and sausages.

When assessing consumption of the individual kinds of meat, mutton is consumed the least, over 98% of respondents stated that on average they consume less than 100 g per family member a week. Beef rates among less popular meat with 76.4% respondents consuming less than 100 g per family member a week. It is followed by fish. A special category is tinned meat which is consumed rarely and thus does not belong to the food of daily consumption. 88.6% of respondents stated that on average, they consume less than 100 g of tinned meat per family member a week. In contrast, the weekly consumption of poultry, pork, salamis and sausages has been the highest (Figure 1).

As for meat products, consumers prefer sliced products (60.6% of respondents), 24.5% of them buy meat products in one piece and only 14.9% of them buy vacuum-packed products. They prefer to buy fresh meat from the butcher's (almost half of the

respondents), then chilled meat, 13.4% of respondents prefer frozen meat and the least popular is meat cut into portions in consumer packaging and meat ready-to-cook products.

Taken into account the current trend to shop in hypermarkets, quite surprising were answers to the question: "Where do you mostly buy meat and meat products?" when 27.5% of respondents replied that most often they buy meat at butcher's and only then in supermarkets, hypermarkets, small self-service groceries and groceries over the counter.

Factors affecting meat and meat products purchasing behaviour

Consumers decide on where to purchase meat and meat product from the force of habit. This factor in purchasing decisions was most frequently indicated by consumers of pork (75% of respondents), salamis (65%), beef (60%) and tinned meat (52%). This fact only confirms that food purchase belongs to habitual purchasing. However, habitual purchasing practice was denied by the respondents buying mutton whose decisions were most frequently determined by "other reasons" – see Figure 2.

The healthy lifestyle was the priority determining the purchase decisions of consumers of fish where 49% of consumers considered this factor decisive, 38% of poultry consumers and 21% of consumers of kinds of meat such as game or rabbit. The healthy life style played role more frequently in all the studied categories; women found the healthy lifestyle a more important factor than men.

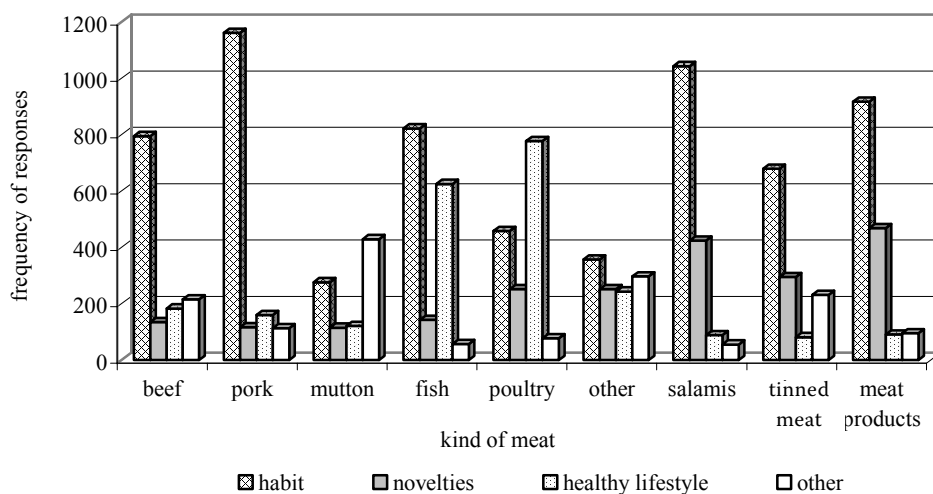


Figure 2. Decisive factors behind purchasing meat and meat products

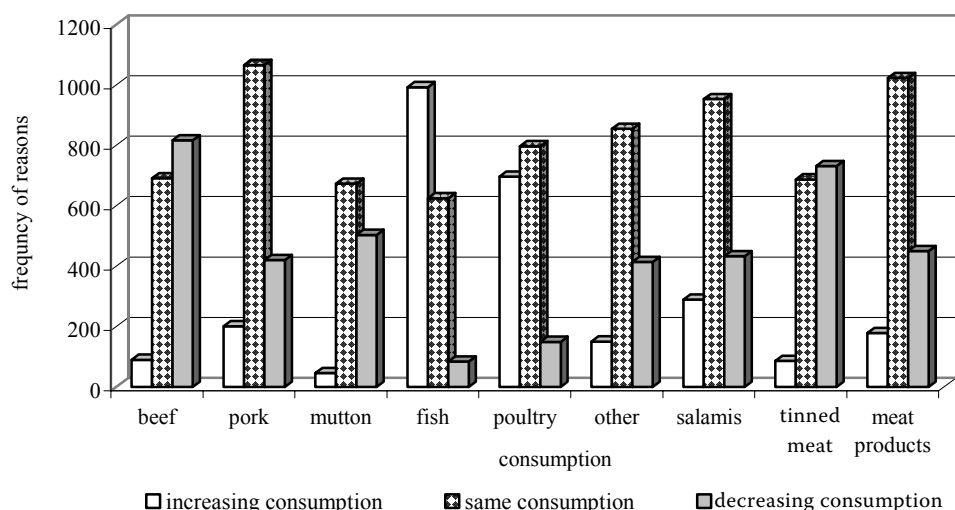


Figure 3. Change in meat and meat products consumption in the past ten years

Relatively few, only 6% of consumers, preferred Bio products.

Although the factor of traceability of the origin of meat and meat products has been largely discussed recently, according to the research findings, 27% of respondents were not affected by it and a decisive role it had only for 10% of respondents. The rest of them found this information interesting but it would not influence their purchase decisions. It is worth mentioning that it is mainly women (60%) and consumers of the social group “employees” whose choice would be influenced by the meat origin.

A great majority of meat and meat product consumers (87.5% of respondents) prefer domestic brands and only 4% of them prefer foreign ones.

The analyses of individual kinds of meat and meat product confirm that, in the past ten years, there has been a decreasing tendency in beef consumption and increased consumption of poultry and fish – see Figure 3.

Most frequently, the consumers reasoned that the change in meat and meat products consumption has come as a result of their inclination to a healthy lifestyle; this reason was given more often by women – see Figure 4. Another reason for the change has been the larger choice of meat on offer compared with ten years ago. This factor influenced more male respondents. Financial reasons ranked at the third place by both men and women. This factor influenced consumption of meat and meat products only in 20% of respondents, though. Not uninteresting is also the contingency of the reason for change in meat consumption and other demographic characteristics as the research showed that the change in the lifestyle is a dominant factor behind the changes in meat and meat products consumption in the large towns’ population and in the social group of employees, whereas, as expected, money is the criterion largely affecting meat consumption of the retired population and citizens of towns with population under 3 000.

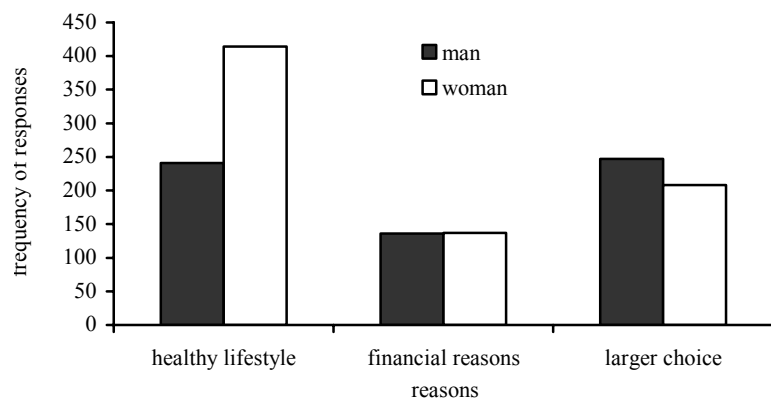


Figure 4. Main reasons for the change in meat and meat products consumption in the past ten years

CONCLUSION

The findings of the secondary data analysis identified rather extensive changes in meat and meat products consumption in the past ten years. The overall meat consumption has a declining tendency as a result of the impact of price and non-price factors. From the long-term perspective, however, the impact of these factors has been decreasing. Because of the change in the lifestyle promoted by health education, the structure of the consumption of different kinds of meat and meat products has been changing too – the decreased consumption of beef and tinned meat and a moderately reduced consumption of pork. On the other hand, the preference for poultry and fish has been growing. Consumers chose fresh meat and most frequently buy meat at butchers. Purchasing meat and meat products belongs to habitual purchasing, with the exception of mutton which is bought for other reasons.

To sum up, it can be stated that the research accompanied with the secondary data analysis con-

firmed, also in Czech consumers, the trend towards the change in meat consumption due to the healthy lifestyle and produced information that can be used in similar analyses of consumer behaviour in this sector in the future.

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