

Czech consumers' evaluation of chosen meat products

Hodnocení vybraných masných výrobků českým spotřebitelem

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Abstract: The article summarises the main results of the analysis of the perception of selected meat products in the Czech Republic (i.e. the following types of salami: Gothai, Famer's, Tourist, Poličan, chicken ham salami, Hunter's, pork ham salami and turkey roll). Two factors have been defined on the basis of a composition approach, which influence the evaluation of meat products by Czech consumers during their purchase. The first factor was the perceived quality of the product and the second one was the healthiness factor. It has been found out that the perceived quality of the product has a decisive influence on forming of the preferences of Czech consumers in all analysed meat products. This finding has resulted from both direct and indirect acquisition of preference data. The healthiness factor is also important even though it has a relatively higher importance mainly in the meat products made from poultry and lean parts of other slaughter animals. Further, the analysis has confirmed the hypotheses of the influence of the consumers' perception on forming their preferences.

Key words: meat products, evaluation, preference, consumer, Czech Republic

Abstrakt: Příspěvek shrnuje výsledky analýzy percepce vybraných masných výrobků v České republice (tj. následujících salámů: Gothaj, selský, turistický, Poličan, kuřecí šunkový, lovecký, šunkový a krutí rolku). Na základě kompozičního přístupu byly definovány dva faktory, které ovlivňují hodnocení masných výrobků českým spotřebitelem při jejich nákupu. Prvním faktorem byla vnímaná kvalita výrobku a druhým faktor zdraví. Bylo zjištěno, že vnímaná kvalita výrobku má rozhodující vliv na formování preferencí českého spotřebitele u všech analyzovaných masných výrobků. Toto zjištění vyplynulo z přímého i nepřímého způsobu získání dat preferencí. Faktor zdraví je rovněž důležitý, avšak relativně vyšší váhu má především u masných výrobků produkovaných z drůbeže a libových partií ostatních jatečných zvířat. Dále byly potvrzeny hypotézy vlivu percepce spotřebitele na vytváření jeho preferencí.

Klíčová slova: masné výrobky, hodnocení, preference, spotřebitel, Česká republika

INTRODUCTION

Monitoring and research of consumer trends and all factors influencing the decision making of consumers is a basis for the development of a successful marketing strategy. It is in the interest of any producer, meat processing plant and, consequently, also in the interest of sellers to know what position their products hold in the perception of consumers. Is it necessary to change this position? What are the cognitive dimensions on the basis of which consumers make their decision? In what way do they influence the preferences of consumers? All these issues should be in the centre of interest of producers, manufacturers or distributors of meat and meat products. Answers to the aforementioned questions can be found by means of the perception analysis which is often applied in the marketing research.

LITERARY REVIEW

Models of rational behaviour of consumers assume that preference of a certain product is based on product at-

tributes which are perceived by consumers (Trijp, Steenkamp 1997). Perception of these attributes may be influenced by the technical development of the product or by means of marketing instruments.

External information which consumers acquire with the aim to evaluate various products of the market requires the process of perception. Everyday consumers are exposed to a huge amount of information of both commercial and non-commercial nature. Commercial information represents instruments of the marketing mix (product, price, place, promotion). Consumers analyse this information and gradually process it. During the processing some information is consolidated, another eliminated. In the course of evaluation of products and product attributes, consumers develop certain beliefs relating to the respective product. Such beliefs are a personal subjective representation of the product. Preference and final choice of consumers are determined by the way how the respective product is perceived and how true the beliefs of consumers are (Dam 1997).

A number of models of the behaviour of consumers assume that consumers' preferences of a certain product are based on the perception of this product or on the per-

ception of individual product attributes to which consumers attach a certain importance (Fischbein, Ajzen 1975; Urban, Hauser 1993). Whether the creation of preferences is dependent on the evaluation of individual product attributes or whether it is based on a common general evaluation of the product depends on the strategy of processing of information which consumers have at their disposal about the given product or brand and on the consumers' knowledge (Assael 1995). Of great importance is also consumers' experience relating to the respective product.

Huang and Fu (1995) state that producers and marketing managers in highly competitive markets must know the needs and wishes of their consumers. A successful businessman offers in the market products competitive not only by their price but also by their quality, healthiness, packaging etc. In order to win a better competitive position and consequently also an increased market share, each businessman should know the attributes of the products preferred by consumers.

METHODS

The article presented includes some results of a questionnaire survey of consumers of meat products in the Czech Republic which focussed on Czech consumers' perception and preferences of eight kinds of meat products (i.e. salami: Gothai, Farmer's, Tourist, Poličan, chicken ham salami, Hunter's, pork ham salami and turkey roll). In order to identify product attributes of meat products considered by our consumers, a very important pilot survey was first carried out with 20 respondents by the means of the method of a controlled interview. On the basis of this survey, the following 10 attributes of a high frequency were selected and subsequently included in the questionnaire within the following survey:

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| 1. price of the product | 6. tastiness of the product |
| 2. saltiness of the product | 7. fat content of the product |
| 3. life time of the product | 8. content of ingredients in the product |
| 4. flavour of the product | 9. suitability of the product for guests |
| 5. suitability of the product for children | 10. exclusiveness of the product |

The composition approach of the analysis of perception was based on the factor analysis. Data for this analysis was obtained by means of a questionnaire survey which was performed in 1998. In total 220 questionnaires were distributed. The return rate and usability was 50%. The examined population comprised 111 randomly selected respondents from the Czech Republic. The suitability of the scale evaluating product attributes was tested by means of the reliability test. Cronbach alpha coefficient shows the value of 0.73. This value is satisfactory and therefore no product attribute was eliminated. Bartlett's test of sphericity is statistically significant (0.00000). Chi-

Square value is 3029.841 with $0.5 \times P (P - 1)$ degree of freedom. P is the number of variables which in this case is 10. As Kaiser-Meyer-Olkin (KMO) shows the value of 0.826 the data obtained is suitable for the factor analysis. MSA index (Measure of sample adequacy) also confirmed the suitability of data for the analysis. MSA values are higher than 0.6 in all variables (0.688–0.884) which is a condition for preserving the variable – the attribute in the analysis.

RESULTS AND DISCUSSION

Table 1 shows that regarding the purchase of the analysed meat products, the evaluation of the product by Czech consumers depends on two basic factors (cognitive dimensions). The first factor can be defined as the "perceived quality of the product". This factor comprises the following attributes: price, exclusiveness, tastiness, flavour and suitability for guests. Of greatest importance in the development of this factor, there are the attributes of "exclusiveness" and "suitability for guests". The most significant in the creation of this factor is the suitability for guests which documents the importance of the circumstances of consuming these products in the Czech Republic when meat products (salami) are consumed during visits of guests. Substantially important in the creation of first factor are also the attributes related to the tastiness of the product and its price. The fact that the price of the product correlates with other attributes documents that this first factor is the real indicator of the quality of the product.

The second factor may be defined as the "healthiness" factor (Table 1). This factor comprises the following attributes: content of ingredients, saltiness, life (durability), fat content and suitability of the product for children. The importance of this factor has been recently largely discussed because the healthiness aspect is very important in the purchase of food as is documented also by the results of our survey.

Table 1. Matrix of factors and their factor loads

Product attribute	Factor 1	Factor 2
	perceived quality of the product	healthiness
Price	-0.639	0.145
Exclusiveness	0.839	0.132
Tastiness	0.763	0.220
Content of ingredients	-0.015	0.664
Saltiness of the product	0.158	-0.481
Life	0.485	-0.590
Fat content	0.452	0.712
Flavour	0.774	-0.254
Suitability for children	0.227	0.658
Suitability for guests	0.860	0.130

Perception of the chosen meat products

Table 2 shows the positions of individual meat products related always to one factor (dimension). It is applied here so that the scale of dimensions is oriented in reverse order which means that negative values of the positions of meat products are allocated positive evaluations, always relatively to one of the dimensions. Positions of products are again calculated by means of average values of the score of factors of individual respondents.

Table 2 shows that with regard to the “perceived quality of the product” (1st factor), the most positively perceived by Czech consumers are the following products: Poličan, Hunter’s salami, turkey roll, chicken ham salami and pork ham salami. Not very positively are perceived the following types of salami: Gothai, Farmer’s and Tourist.

From the viewpoint of the second “healthiness” factor, as the most healthy is perceived chicken ham salami, turkey roll and pork ham salami. They are products with a lower fat content. The first two products are made from poultry meat, the third product is from pork. Recently, the range and consumption of products from poultry has been diversifying. It is a consequence of the promotion of the healthiness factor in the consumers’ awareness and of the prices of these products.

As the least healthy, there are perceived the following types of salami: Poličan, Hunter’s, Tourist, Farmer’s and Gothai. These are mainly products with a higher fat content. In some meat products, Czech consumers rather prefer the perceived quality of the product than the healthiness factor.

Table 3 includes the order of the selected Czech meat products according to the perception by Czech consumers from the viewpoint of their perceived quality (1st factor) and impact on health (2nd factor). Number 1 expresses the most positive evaluation, number 8 the least positive evaluation.

Table 2. Position of individual meat products (regression analysis)

Meat products	Regression factor. score 1	Regression factor. score 2
	perceived quality of the product	healthiness
Gothai Salami	1.3608	0.1895
Tourist Salami	0.2766	0.6116
Farmer’s Salami	0.7409	0.3011
Hunter’s Salami	-0.7901	0.8081
Chicken ham Salami	-0.0908	-1.1567
Turkey roll	-0.4817	-0.8705
Poličan Salami	-0.9458	0.8941
Ham Salami	-0.0663	-0.7527

Table 3 shows evidently which aspects of the individual meat products are perceived positively and which are not. In the application of certain marketing measures aimed at the improvement of the perception of products, it is necessary to analyse individual attributes which constitute the respective factor.

The analysed meat products are intended for different situations of consumption, such as visit of guests, and are related to the preparation of certain dishes. Some meat products are not intended for children, others are not long-life ones by their consistency etc.

The determination of the position of meat products required the evaluation of all products on the basis of the same product attributes. The results of the evaluation of the satisfaction of consumers with individual attributes allows to determine the fields where the respective product has to be improved in a certain way and thus it can improve its position in the perception of consumers.

The least positively evaluated from the viewpoint of “the perceived quality of the product” is the Gothai salami (8th position). From the viewpoint of satisfaction of consumers, this product is evaluated neutrally in attributes relating to the taste of the product (tastiness, flavour). They are the fields where it is possible to change consumers’ perception by means of a physical change of attributes. However, it is necessary to realise that any physical change of the product may imply also a change in the production costs and, consequently, a change in price. The Gothai salami was evaluated by Czech consumers as the cheapest salami, insufficiently exclusive and unsuitable for guests. Similarly evaluated were the Tourist and Farmer’s types of salami (Table 3).

From the viewpoint of the second “healthiness” factor (Table 3), as the least healthy there are evaluated the products Poličan (8th position) and Hunter’s salami (7th position). With regard to the attributes constituting this factor, it has to be realized that these products are not intended for children and consumers are in general satisfied with the content of fat, saltiness as well as the content of ingredients. The only field where consumers

Table 3. Evaluation of meat products by Czech consumers

Meat products	Factor 1	Factor 2
	perceived quality of the product	healthiness
Gothai Salami	8	4
Tourist Salami	6	6
Farmer’s Salami	7	5
Hunter’s Salami	2	7
Chicken ham Salami	4	1
Turkey roll	3	2
Poličan Salami	1	8
Ham Salami	5	3

Order of products: 1 – the best product, 8 – the least suitable product

express dissatisfaction is the high price of the two products.

The Czech consumers express neutral evaluation of the satisfaction in case of attributes of the content of ingredients and saltiness in the remaining products which are not evaluated from the viewpoint of health very positively, i.e. in case of Tourist, Farmer's and Gothai salami (6th, 5th and 4th positions in the evaluation). All three products are evaluated as the types of salami with a high fat content. These attributes may be changed, however, the limiting factor will be the raw materials which may increase the price of these products.

The growing importance of the "healthiness" factor is beneficial mainly to the meat products from poultry or lean parts of other slaughter animals. This is also proven by the continuous diversification of the range of products from poultry. In case of the utilisation of some marketing instruments for influencing the purchasing behaviour, it is important to know the preferences of consumers.

Preferences and attitudes of consumers

The general preference vector models calculated in case of a different way of preference data acquisition do not differ much in the proportion of the importance of two defined factors (the perceived quality of the product and the healthiness factor). The proportion of the importance of two factors calculated in this way may be applied also during the development of a new product which is homogeneous with the analysed group, i.e. in fact of a new type of salami. Of main significance in the forming of consumers' preferences of different types of salami, there is the defined the "perceived quality of the product". The product should be suitable for guests and thus sufficiently exclusive and full of flavour. Promotion can play an

important role in drawing the consumers' attention to the suitability of the product for guests and to its flavour. Similarly important is the graphical part of the promotion plausibly illustrating the product and its name which should be easy to remember. Also important in this respect are the manufacturers.

The healthiness aspect is not very significant mainly in the group of dry, long-life types of salami. The influence of the healthiness factor can be used mainly in the products made from lean parts in which the vector model of preferences has shown a greater impact of the healthiness dimension on the creation of preferences of consumers in relation to other types of salami. The healthiness factor can be also supported by suitable instruments of marketing communication. At present, some journals present pictures of meat products with a suitable text emphasising e.g. dietetic nature of turkey and chicken types of salami, the purpose of use, various recipes etc. Promotion of the product may influence the perception of consumers positively.

The research has documented the dependence of preference of individual meat products on the perception of consumers. Most positively from the viewpoint of the perceived quality of the product, there were perceived and also preferred the following types of salami: Hunter's, Poličan, chicken ham and pork ham salami and turkey roll. Figure 1 shows that the above mentioned five meat products are preferred by almost three quarters of respondents. The group which does not prefer these product comprises only 10–18% of respondents. The products which are not evaluated very positively from the viewpoint of the perceived quality do not show any marked preference (Gothai, Farmer's and Tourist salami).

The analysis of preference data has shown that the perceived quality of product plays a substantial role in the forming of consumers' preferences in all analysed meat products. The healthiness factor has a higher im-

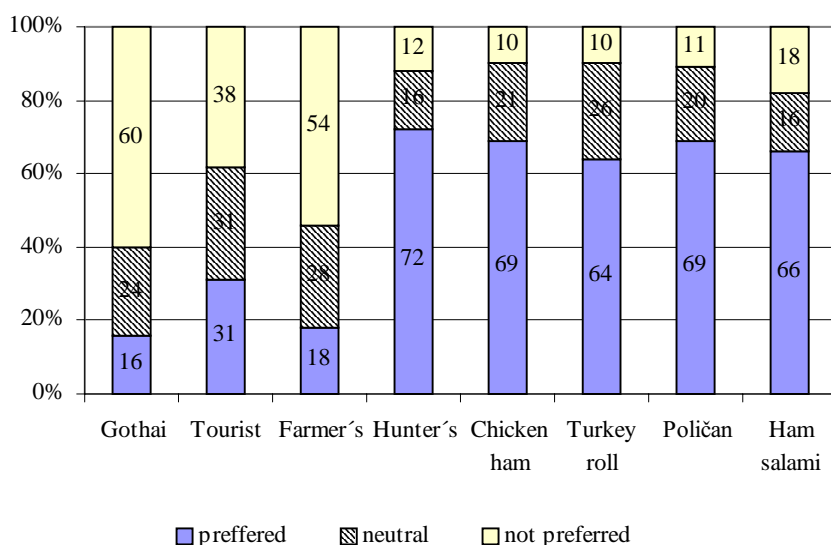


Figure 1. Structure of Czech consumers' preferences of selected meat products (salami) in %

portance only in products made from poultry and lean parts of other slaughter animals. Promotion of this factor by means of some instruments of marketing communication (promotion, public relations) may contribute to an increased interest in these products.

CONCLUSION

The article includes an analysis of the perception of selected meat products. Two factors have been defined on the basis of a composition approach which influence the evaluation of meat products by Czech consumers during their purchase. The first factor was the perceived quality of the product and the second one was the healthiness factor.

It has been found out that the perceived quality of the product has a decisive influence on the forming of Czech consumers preferences in all analysed meat products. This finding has resulted from both direct and indirect acquisition of the preference data. The healthiness factor is also important even though it is of a relatively higher importance mainly in the meat products made from poultry and lean parts of other slaughter animals.

Further, the analysis confirmed the hypotheses of the influence of the consumers' perception on forming their preferences. It means that the decision making of consumers is to a considerable extent under the influence of their perception of the product during its purchase which is the basis of models of rational behaviour of consumers (the theory of rational choice). The preference vector model has proved a relatively close dependence

of the creation of preferences on the perception and the percentage of the explained spread in preference vector models calculated for individual meat products ranged between 40–70%. On the basis of this fact, it may be stated that the applied model is relatively successful and suitable for the identification of importance of individual factors. Also the attributes used for their calculation are in most cases relevant.

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