Hypothetical models of food consumption behavior by the elderly

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Aging is not only a challenge for food producers, but also provides a treasure trove of new opportunities for product development and innovations. We have designed a prototype model of food consumption of the elderly with the goal of calling the attention of producers and growers to the specific needs of this growing market segment. However, the food consumption habits of the elderly cannot be compacted into a single model, since this specific age group is not homogenous. By designing hypothetical models we are hoping to facilitate the further research of the issue. In the near future we want to test and try our general models in practice, involving the producers as well as the consumers. The models point at the specific needs of aging populations and their choice of food products based upon reasonable decisions and focusing on the future. Considerations of the future perspective are an important feature of this behavior, since it might significantly improve the quality of life and health awareness of the elderly, their decisions in the field of consumption, and ultimately their general health and welfare conditions.

Keywords: aging population, food consumption behavior model, longevity

1. Introduction

The *food consumption habits* represent a specific feature of the consumer's behavior in many respects. Firstly, they are directly or indirectly linked to the human existence; secondly, they result from historical, biological, social and cultural processes; and thirdly they represent one of *the most complex forms* of human beings. The rationality of eating habits is limited, since the information available to individuals and/or the public is not comprehensive: sometimes consumers have little information and sometimes they are flooded with too much. The limited ability of individuals to analyze and evaluate information, the reliability of information and the asymmetric information flow amongst the market actors just accentuate this fact. The specifics of decision-making in small communities make the overall mosaic even more colorful. The limited ability to absorb information (prior to, during and after consumption) and the consequent perception and observation (experience,

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knowledge, recollections etc.) lead to a distortion rather than a crystal clear rationality, and this distortion might even be further exacerbated by unconscious factors.

The differences between the consumption habits of the young, middle age and elderly generations are *undoubtedly clear* (Cseres-Gergely - Molnár 2008). Aging as a universal process has generated new requirements for food production and processing, as well as for the production of cooking tools. Nevertheless, marketing has continued to focus *primarily on the younger generation* and has seldom noticed the demands of *the elderly*, even though they represent a great market potential. Developed countries have taken notice of the aging society and have started to adapt their strategies to their new needs by introducing "senior-friendly" products to the goods and services market (Pettigrew 2005). These rapid changes have raised the question: to what extent will the goods aimed at the current seniors suffice the needs of *future seniors*. Expenditures in developed countries indicate that so far, foodstuffs have represented a major share in the overall consumption, but we can realize signs of a decreasing trend. We are living in a time of expanding goods and services not linked directly to simple subsistence. In general we can say that a part of income spent on foodstuffs (with some exceptions) has been decreasing and we are facing a quantitative saturation (Keszthelyiné 2004, Lehota 2004). The desire to preserve good health is a new phenomenon of growing importance. We can presume that the Hungarian society will also start paying more attention to the quality and origin of the goods it buys.

2. Time related aspects of food consumption by the active elderly

The conceptual scheme in this chapter represents the time-related aspects of *food consumption by the active elderly* and the long-term changes in the habits of this same group in three different time periods: in the past, at present and in the future. The Chart 1 also includes *the general factors* we consider relevant in this aspect.

The most *significant determinant* of food consumption in the *past* was the strong influence of experience and standards. Due to lack of *information, experiences and traditions* were inherited from fathers/mothers by sons/daughters. The under-developed delivery and trading methods were not able to ensure unlimited access to food products originating from different geographical areas. Many food products were available only seasonally, since their shelf life was limited. The purchasing methods were also limited: most often the consumers bought products directly from the producers. Before the development of a global economy, there were only *local and/or regional markets*. However, the past factors were also an advantage for many reasons, e.g. buying directly from the producer in an open-air market made the buyers feel safe about the origin and the freshness of the product. In the past, consumers strived for extending the shelf life of products and in order to

achieve this they used different procedures and storage chambers, according to actual experience and possibilities.

The *modern era* can be characterized by an unlimited flow of *goods and information.* The changes that have taken place in the food market in recent decades, as well as those to come in the near future, are resulting from the following processes: aging population, increase in the number of single-member households, improved health care, changed employment structure, rapid development of technology, increase in international traveling and the increasingly important role of the media.

Since the start of *first demographic transition* (i.e. the last quarter of the 19th century), life expectancy has increased significantly in Hungary. This process can be associated with the changed lifestyle and improved standard of living. In addition, the population is well informed by *medical scientists* about different factors causing diseases, and this logically has lead to a change in our dietary habits (e.g. massive increase in allergies, sensitivity to foodstuffs, high mortality rates due to cardio-vascular diseases, gastroenterological disorders etc.). In many cases, however, one of the consequences of the efforts to extend the shelf life of products is the excessive use of preservatives in food products, which may cause allergic symptoms. One of the distinctive features of the present time is the unlimited food supply. The seasonality (the original indicator of the rhythm of life over the year) is slowly fading away. This is due to exporting and importing, and also to the fact, that irreconcilable distances no longer exist (Simai 2007, Nemes Nagy 2009). This is partly a result of increased *international traveling* (Rátz et al. 2008), and partly due to the expansion of food store chains, which offer a broad product selection throughout the year.

Our objective is to outline a possible scenario of the future based upon present considerations (Nováky 2006). In all likelihood, the change in the structure of consumption will continue. Focus on the near *future* (as a key factor of behavior) will be a *typical feature of elderly consumers.* This can have a very serious impact on their health awareness, health-related decisions and the development of their health conditions. Information on food and nutrition based on the most recent facts might become an important sector of mass media activities, since once provided with the necessary information one could actively contribute in the preservation of his/her own health.

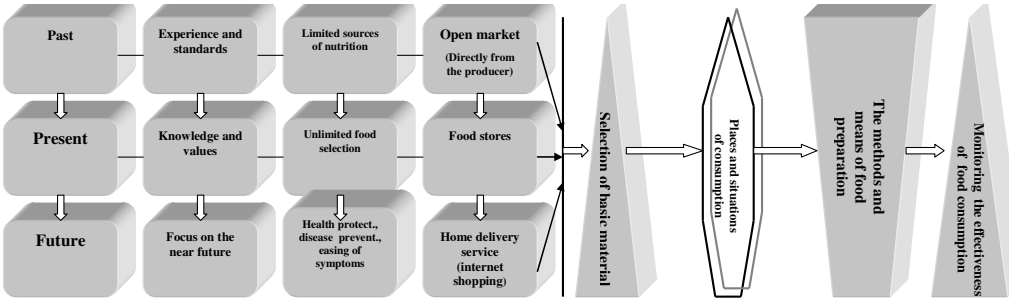
In general we can state that a new wave of purchasing and consuming habits is unfolding and influencing the behavior of the middle-age generation, and in time, it will integrate into the everyday habits of the elderly consumers. The *key characteristics* of this new wave are the following:

- Increasing popularity of natural products (“bio”);
- Increasing demand for functional food products;
- Increasing interest in the healthy life style (i.e. physical activity, diet…);
- Increasing sale of “convenient” products with short preparation time;

- Lessening of time spent shopping;
- Possible increase in the time spent preparing food;
- Preferring "at one place, once a week " shopping;
- Increase in eating out options.

The last phase of the conceptual scheme depicted in Chart 1 indicates "usefulness" as one of the aspects of food consumption by the elderly. In the past, this factor was not the focus of attention, when the goal was mere nutritional survival. However, in the present and in the future, the improvement of the quality of life will become increasingly more important. The priority for the consumer will be to rank the product characteristics by usefulness and effectiveness. These can be determined upon the previous information and experience the buyer had available. The key characteristics of food products are specifically important, including taste, freshness, healthiness and also the price. In regards to the uncertainty factors, we need to understand, that it is not possible to define elderly consumers in general, because this age group is highly heterogeneous. In addition, the mental state, income situation, health condition of a person varies and, depending on these factors, one may often reconsider the usefulness and effectiveness of food products. Therefore if we want to maximize the value of a product, we need to carefully monitor the changes in the consumption habits of this fragmented target group, as well as the characteristics of the products intended for it.

Chart 1. Time-related aspects of food consumption by the active elderly



Source: Designed by the authors

3. The future oriented model of quality and healthy food consumption behavior by the elderly

The model represented in Chart 2 has *three fundamental starting points:*

- Economic and societal (cultural) factors;
- Individual factors;
- Food product factors.

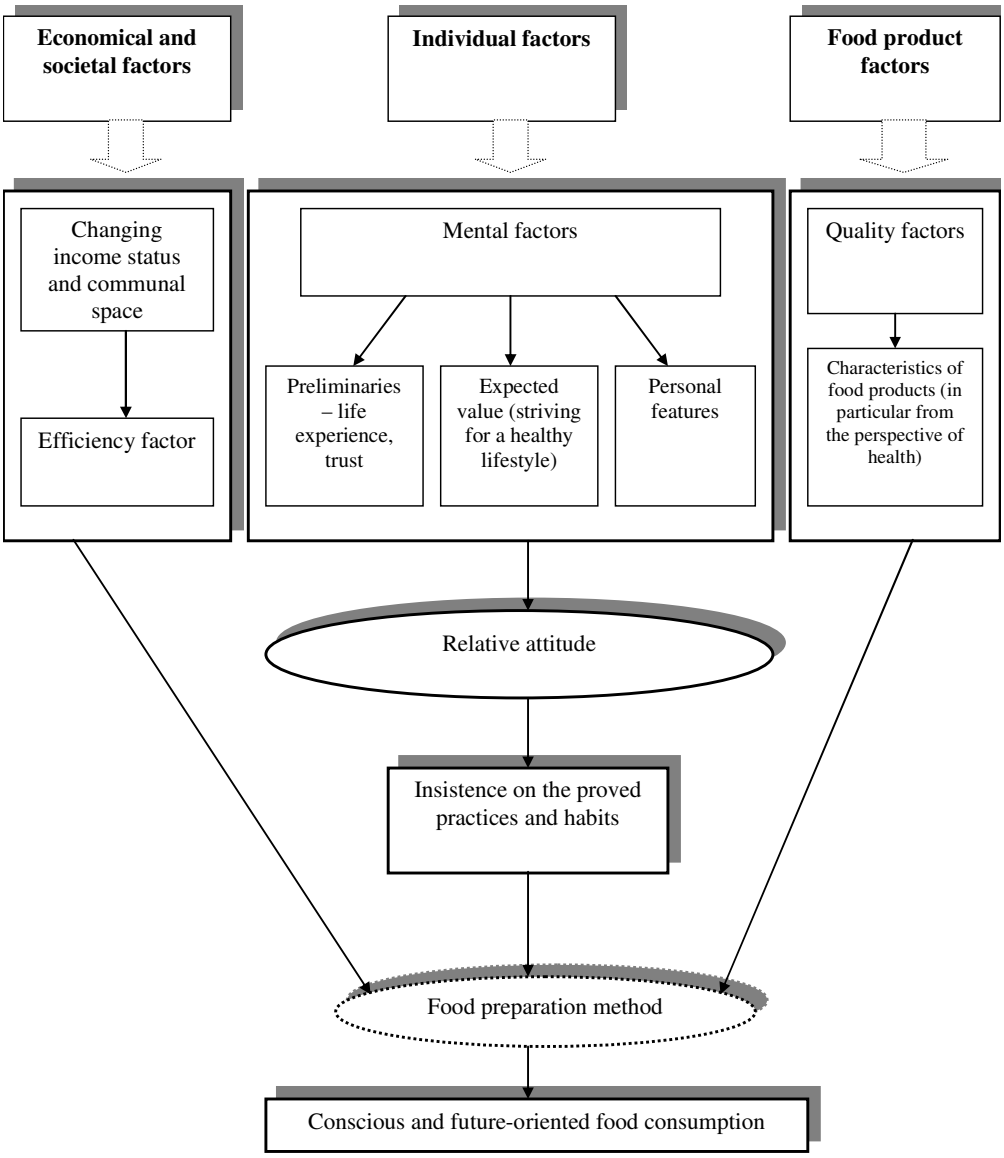
The model has been elaborated based upon the classic Pilgrim model of *food consumption behavior* (1957). The fundamental determinant of this model is perception. The model starts from the mental and chemical characteristics of a food product influencing the physiological needs. While shopping and eating, one is striving for a balance between the perceived reality and objective reality (cognitive dissonance). This indicates that there is often a difference between what we think in relation to food consumption and what we actually do.

Analyzing the *economic and societal factors*, it is important to take into consideration the changing income situation of the elderly and their relationships with spouses and any household members. Given this changing situation, the elderly have to be efficient and balance consumption with income.

The *health condition* of the Hungarian population had alarmingly worsened before the change of the political regime (Gaál 1998). Interestingly, since the mid-1990's, there has been an unexpected improvement in the Hungarian mortality rates (Józan 2008), which has stabilized and indicates the improvement in the general health state of the population. The accelerating speed of life also requires education about what constitutes a healthy lifestyle. To a great extent, maintaining good health results from conscious efforts, since a person is not only a passive sufferer of outer conditions that make him/her feel good/bad, but also is central in creating these conditions.

The *individual factors* are evidently mental factors. We defined three subcategories in our research: the specific cognitive factors, perception factors, and the influencing factors including motives. The fundamentals of the specific *cognitive factors* are the importance of health (relative importance), external health control, and the perceived health condition. The mental factors are associated with relative attitudes towards a product, i.e. they indicate the relation of the consumer to the food product (Hofmeister-Tóth 2006, Törőcsik 2006). Since the shaping of *attitudes and how* they can be changed precede knowledge and learning, marketing can play an important role. The effective use of communication along with personal habits rooted in a cultural context can draw attention to the importance of the methods of preparing food. The information flow facilitates food consumption in line with healthy lifestyle standards and considerations of rational values (Szántó 1998).

Chart 2. The future-oriented model of quality and healthy food consumption by the elderly



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4. Developments and process expected in the near future

The f*undamental factors relating* to food products include food quality factors and food product characteristics. When designing their quality model, Csete - Láng (1999) tried to capture all distinctive dimensions of quality. According to their interpretation, quality is the result of a complex and multi-faceted process with various different aspects, including biological, technical, technological, health, consumption, marketing, nutritional, environmental, food safety etc. In a concise wording: Quality is the suitability for the purpose.

It is increasingly characteristic for the category of consumers with a higher level of health awareness to draw back from mass-produced goods and to demand products with a higher added value and special quality meeting their specific dietary needs. When we talk about quality, firstly we refer to advantages of nourishment, and secondly to the natural origin, value for the consumer and reasonable price – briefly the marketability (Lakner–Sarudi 2004). Food producers develop f*unctional food products and modify their composition* - some ingredients are decreased, others are increased. Such food products can positively influence a number of physiological functions, which will improve health and general wellbeing and decrease in the risk of certain diseases (Szakály–Berke 2004). In addition to nutrition, the purpose of functional food products is to improve immunity, prevent certain diseases (e.g. high blood pressure, diabetes), facilitate the recovery from certain diseases, maintain good physical and mental condition and modify the process of aging.

Evidence of the aforementioned interrelations is currently available. For example it is generally known that fruits and vegetables of different color contain the most antioxidants, which improve the *immunity system* and *life expectancy*, but they do not slow down the aging process. A strict diet (1,500 calories a day) consisting of mainly fruits and vegetables not only decreasing the body temperature and eliminates the feeling of hunger, but also slows down aging (László–Falus 2002). The aforementioned examples indicate the specific needs of the elderly and help us to arrive at the shaping of a conscious and future-oriented choice of food products. Orientation to the future (as a behavioral element) is an important factor (Hideg 2007), because it (as a mental attitude) can have extremely serious implications on the health awareness of the elderly, their health related decisions and thus also on their *progressive health condition.*

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