

## THE CURRENT TREND MODELLING OF THE CONSCIOUS IN HEALTHY LIFESTYLE IN THE CONTEXT OF INTERGENERATIONAL MANAGEMENT

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**Abstract:** 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 behaviour model, longevity, intergenerational management.

**JEL Classification:** A19, D12, D91, P52

### 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 to absorb information (prior to, during and after consumption) and the consequent perception and observation (experience, 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. The desire to preserve good health is a new phenomenon of growing importance.

### 2. RESULTS AND DISCUSSION

#### Contemporary ageing versus intergenerational management: empirical evidence from Hungary

Ageing (statistical point of view, the increase of old people within the population) has been the most perspective demographic process since the end of the last century. We can anticipate with high probability that its deep and long standing effects entangle the whole society. Ageing process has a diffusive character. Since its emergence, ageing has been spreading spatially, too from highly developed countries to less developed ones (among them situated in Hungary). The diffusion of ageing is an uneven process. The timing and mechanisms of appearing, the development of the process varies countries to countries. In spite of the heterogeneity, the start of ageing process easily provable with data and in help of analogues of similar countries erected from the past we can forecast the near future trends. However, it should be noted that it is hard to prepare for the potential consequences.

In Europe and the rich part of the World the ageing process has been transforming a completely new stage. The temporary advantages of ageing disappeared and the negative consequences played the dominant role. Behind the deteriorating dependency ratio we can find the decrease of active population in line with the increase of inactive ones, and within the inactive population the share of children fell and the proportion of pensioners expanded. The highly rising social and health expenditures combined with the decreasing fertility and population loss. From historical perspective in 1869 one in twentieth was 60 years and over during the first modern population census. After one and a half century one in fifth Hungarians was old in relative sense. The long term distribution of population by gender and five years age groups provides us a mosaic picture on the ageing process. From analytical angle the indicators help us more deeper understanding than simple

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shares. We can judge better the level of mortality with the use of average age, dependency ratios, index of ageing and life expectancy. We chose among the indicators the life expectancy at birth and other ages in order to we concentrate on the more recent changes in longevity.

A Table 1 show the longevity has been increasing since 1949 except for the period of 1960's and 1970's in Hungary. At 2009 the life expectancy at birth was higher with nearly 13 years than 1949. However, the increase was uneven in the period investigated due to the epidemiological crises characterised the second half of the socialist epoch (Uzzoli, 2003; Daróczi, 2007; Pál, 2007). If we analyse the gender differences we can conclude that the female life expectancy at birth was over than male counterpart. Perhaps the most interesting findings that the four-year gap measured the initial period broadened out 8 years. Table 1 demonstrates that the epidemiological crises overtook males with higher extent than females. We can conclude that in medium term the life expectancies at 60, 70 and 80 ages increased significantly. We also find that the absolute values of growth naturally decreased (2.80; 2.54; 1.51). The increase between 60 and 70 ages was expressive and it was mainly caused by the improvement of women life expectancy. Men with exact age of 60's value increased slightly (0.79). All in all, the longevity as one of the component of demographic ageing has been spreading widely and the age structure of elders has been becoming older and older. The ageing process has become one of the main population challenges in Hungary (Józan-Katona, 2003). The weight of the population problems depends on the authors' values and norms, too. In a widely quoted study of Emil Valkovics and Péter Pál Tóth (1996, 2) distinguished ten fundamental population problems in Hungary, in which the population ageing and its consequences was situated in the fourth place following the decrease of population number, the low fertility level and the relatively high mortality. Thereafter the level of mortality has been continuously falling (Józan, 2006) so as to the ageing got somewhere the third place. According to our opinion the pure demographic process of ageing is not a problem regardless from the economical, social and political context. If the individuals are getting higher and higher ages, in general it is a joyful phenomena. Only some consequences of ageing can be judges as the source of tension or potential possibility in society. We can anticipate that among the potential possibilities the change in the

structure of elderly consumption will be crucial challenge. Aging is not only a challenge for food producers and consumers, but also provides a treasure trove of new opportunities for the research of product development and innovations. We have designed three prototype models of food consumption of the elderly with the goal of calling the attention of producers and growers, as well as, consumers to the specific needs of this growing niche 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 will test our general models in practice, involving the producers as well as the consumers. In this paper a simplistic concept of model is used.

The factors defining the elderly food consumption are modified. The health-consciousness and quality orientation is constantly growing in the elderly society. The elderly consumer beside the traditional products often looks for the organic foods and the functional foods, too. In the elderly consumer the food does not mean the essential element of his subsistence, but it is a part of a conscious health maintainer lifestyle.

### 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 Figure 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.

**Table 1** Life expectancy at birth and other ages from 1949 through 2009 in Hungary

Year	At birth			60 year-old			70 year-old			80 year-old		
	male	female	together	male	female	together	male	female	together	male	female	Together
1949	59,28	63,40	61,36	15,82	17,11	16,52	9,79	10,42	10,14	5,31	5,61	5,49
1960	65,89	70,10	68,03	15,60	17,55	16,67	9,40	10,39	9,96	5,03	5,45	5,27
1970	66,31	72,08	69,20	15,19	18,19	16,78	9,22	10,88	10,17	5,10	5,69	5,46
1980	65,45	72,70	69,02	14,58	18,32	16,56	8,88	11,19	10,17	5,03	5,92	5,59
1990	65,13	73,71	69,33	14,72	19,02	17,03	9,47	11,81	10,83	5,27	6,27	5,91
2000	67,11	75,59	71,33	15,29	20,04	17,90	9,94	12,59	11,59	5,85	6,90	6,53
2001	68,15	76,46	72,32	15,97	20,65	18,56	10,37	13,09	11,99	6,01	7,05	6,69
2002	68,26	76,56	72,43	15,98	20,74	18,61	10,39	13,12	12,01	6,05	7,05	6,70
2003	68,29	76,53	72,43	15,79	20,61	18,45	10,22	13,01	11,88	5,93	6,92	6,58
2004	68,59	76,91	72,78	16,06	20,86	18,72	10,46	13,24	12,12	6,01	7,03	6,68
2005	68,56	76,93	72,76	16,04	20,85	18,70	10,43	13,19	12,08	5,97	7,04	6,67
2006	69,03	77,35	73,21	16,30	21,13	18,97	10,73	13,49	12,38	6,08	7,18	6,81
2007	69,19	77,34	73,30	16,31	21,23	19,02	10,62	13,59	12,39	6,05	7,23	6,83
2008	69,79	77,76	73,83	16,58	21,44	19,27	10,90	13,75	12,61	6,19	7,33	6,94
2009	70,05	77,89	74,03	16,61	21,51	19,32	10,95	13,83	12,68	6,24	7,39	7,00

Source: Demographic Yearbook 2010. Hungarian Statistical Office, Budapest

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.

Since the start of first demographic transition (i.e. the last quarter of the 19<sup>th</sup> 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 led to a change in our dietary habits (e.g. massive increase in allergies, sensitivity to foodstuffs, high mortality rates due to cardiovascular 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 Figure 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.

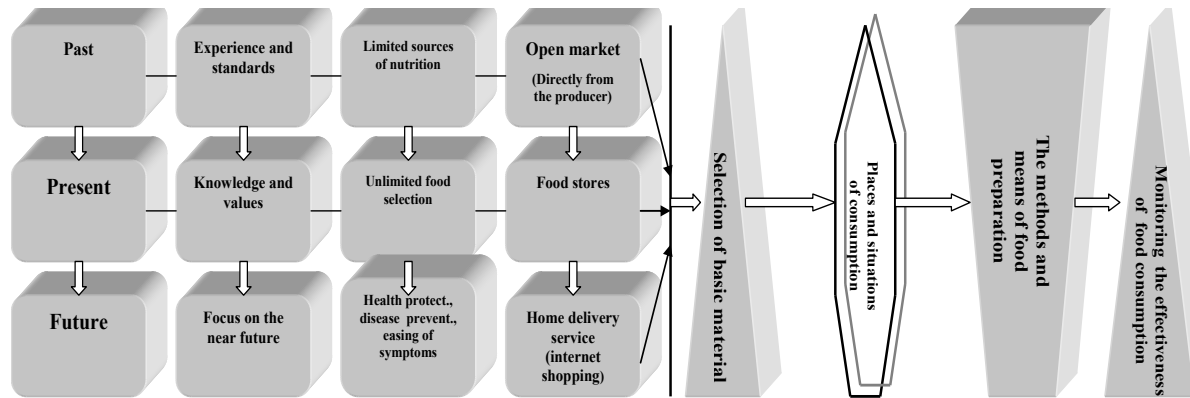
#### **The future oriented model of quality and healthy food consumption behavior by the elderly**

The model represented in Figure 2 has three fundamental starting points:

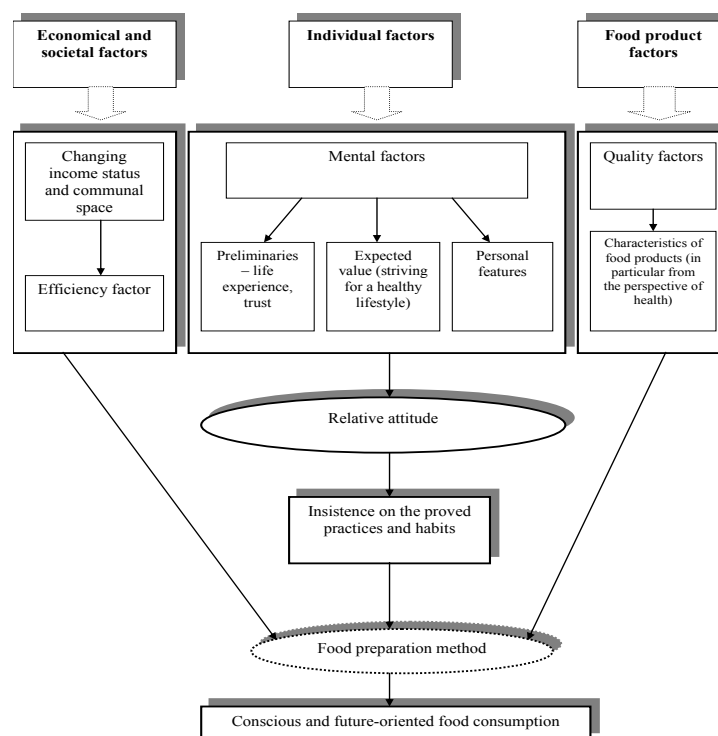
- Economic and societal (cultural) factors;
- Individual factors;
- Food product factors.

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. The health condition of the Hungarian population had alarmingly worsened before the change of the political regime (Gaál, 1998). The accelerating speed from conscious efforts, since a person is not only a passive of life also requires education about what constitutes a healthy lifestyle. To a great extent, maintaining good health results 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 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). The *fundamental factors relating* to food products include food quality factors and food product characteristics. When designing their quality model, Csete and Láng (1999) tried to capture all distinctive dimensions of quality.

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**Figure 1** Time-related aspects of food consumption by the active elderly  
Source: Designed by the authors



**Figure 2** The future-oriented model of quality and healthy food consumption by the elderly  
Source: Designed by the authors

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 *functional food products and modify their composition* - some ingredients are decreased, others are increased.

### 3. CONCLUSION

Global development and prosperity will result in the rapid aging of populations in countries that have recently

experienced a demographic boom, which makes aging a “global challenge”. The elderly period of life is not simply a qualitatively new situation nor only important for those concerned, but it is a challenge for the entire society. This new situation can be characterised for example by different needs of the elderly consumers associated with their new situation in life. The behaviour of food consumers has a special position within the general consumers’ behaviour for several reasons: firstly, it is directly or indirectly associated with the survival of mankind; secondly, it results from long-lasting biological, social and cultural processes; and thirdly, it is one of the most complex human behaviours. The difference between consumption by young, middle-age and elderly generations is indisputable. The universality of the aging process brings about new criteria for food products. In regards to the interest in new food products we can observe the development of two parallel directions: interest in the consumption of bio-products and enriched and fortified foods. At first glance these refer to two different categories

of society. Consumers of bio-food support eco-farming and the protection of health and environment. The customer preferring fortified and/or functional foods presumably accepts genetic modification, since the most intensive effects can be achieved that way. They consider themselves to be modern people requiring the latest scientific achievements. The rapidly growing number of the elderly requires food producers to give priority to the specific needs of this market segment. This is closely connected to the fact that the needs of the elderly differ from those of other age categories, and their needs represent the foundation for targeted marketing. Health awareness and a focus on quality keeps increasing and providers have to face new challenges every day. Consumers (including the elderly) receive a broad range of information on what constitutes a healthy lifestyle and pay special attention to the prevention of illnesses, which also affects their attitude towards food products. For the elderly consumers, food products are not just an issue of subsistence, but also a conscious process aimed at maintaining their health and preventing illness. We

started out from the traditional food consumption behaviour model by PILGRIM (1957). The model represented in Figure 2 has been developed on the basis of three major indicators: economic and social (cultural) factors, factors associated with an individual, and factor associated with a food product. The latter include aspects of food quality and other food properties. Consumers with increased health awareness typically reject mass-products and specifically seek high quality products with a higher added value satisfying their special nutrition needs.

The designed models make it possible to draw a conclusion as to the specific needs of the elderly, and can also lead us to a conscious and future-focused choice of food products. Focusing on the future is a significant aspect of behaviour, since this specific attitude can significantly increase the health awareness of the elderly, facilitate their health-related decisions and ultimately improve their health condition.

## REFERENCES

- [1] CSERES-GERGELY ZS. – MOLNÁR GY. (2008): *Háztartási fogyasztói magatartás és jólét Magyarországon a rendszerváltás után. Közgazdasági Szemle*, 55, 2, 107–135. o.
- [2] CSETE L. – LÁNG I. (1999): *Minőség és agrárstratégia. Magyar Tudományos Akadémia*, Budapest, 15–38. o.
- [3] DARÓCZI E. (2007): *Ageing and health in the transition countries of Europe – the case of Hungary. Working Papers on Population, Family and Welfare*, Demographic Research Institute of Hungarian Central Statistical Office, Budapest.
- [4] GAÁL B. (1998): *A magyar háztartások élelmiszerfogyasztási szokásai. Marketing&Menedzsment*, 50, 3, 71–75. o.
- [5] HIDEG É. (2007): *A forecasttól a foresightig. Magyar Tudomány*, 168, 9, 1167–1170. o.
- [6] HOFMEISTER-TÓTH Á. (2006): *Fogyasztói magatartás. AULA Kiadó*, Budapest.
- [7] JÓZAN P. (2006): *A new Hungarian revolution. Circulation*, Vol. 113. No. 5. 17–20. o.
- [8] JÓZAN P. (2008): *Válság és megújulás a második világháború utáni epidemiológiai fejlődésben Magyarországon. MTA Társadalomkutató Központ*, Budapest.
- [9] JÓZAN P. – KATONA T. (2003): *Az ezredforduló népesedési viszonyai Magyarországon*. In: Lenkei Gábor (szerk.). *Demográfia, foglalkoztatás, női munkavállalás*. MeH, Budapest, 17–55. o.
- [10] KESZTHELYINÉ RÉDEI M. (2004): *Az időskorú háztartások fogyasztási színvonala és szerkezete. In Időskorúak Magyarországon. KSH*, Budapest, 144–174. o.
- [11] LAKNER Z. – SARUDI CS. (2004): *Ways and deadlocks in the strategic development of the Hungarian food chain. Gazdálkodás*, 49, 8, 48–57. o.
- [12] LÁSZLÓ V. – FALUSI A. (2002): *Az öregedés sejtani és genetikai alapjai. Magyar Tudomány*, 58, 4, 406–411. o.
- [13] NEMES NAGY J. (2009): *Terek, helyek, régiók. A regionális tudomány alapjai. Akadémiai Kiadó*, Budapest.
- [14] NOVÁKY E. (2006): *Jövő kutatás és felelősség. Magyar Tudomány*, 167, 9, 1090–1098. o.
- [15] PÁL V. (2007): *The geography of health in the Hungarian human geography*. In: Kovács, Csaba (ed.) *From villages to cyberspace*. Department of Economic and Human Geography, University of Szeged, Szeged, 417–424. o.
- [16] PETTIGREW, A. M. (2005): *Segment with segments: Younger and Older Seniors Expectations of Financial Planning Service. Journal of Research for Consumer*, Issue 7, 24–34. o.
- [17] PILGRIM, F. J. (1957): *The Component of Food Acceptance and Their Measurement. American Journal of Clinical Nutrition*, 5, 2, 171–175. o.
- [18] RÁTZ T. – SMITH, M. – MICHALKÓ G. (2008): *New places in old spaces: mapping tourism and recreation in Budapest. Tourism Geographies*, 10, 4, 429–451. o.
- [19] SIMAI M. (2007): *A világ a XXI. század forgatagában: utélágazások és útvesztők. Akadémiai Kiadó*, Budapest.
- [20] SZAKÁLY Z. – BERKE SZ. (2004): *A táplálkozás, a minőség és a marketing kapcsolata élelmiszereknél*. In Berács J. – Lehota J. – Piskóta I. – Rekettye G. (szerk.): *Marketingelmélet a gyakorlatban*. KJK Kerszöv, Budapest, 319–335. o.
- [21] SZÁNTÓ Z. (1998): *A racionális döntések elméletén nyugvó társadalomtudomány. In Csontos László (vál.) A racionális döntések elmélete. Osiris-Láthatatlan Kollégium*, Budapest, 7–24. o.
- [22] TÖRŐCSIK M. (2006): *Vásárlói magatartás. Akadémia Kiadó*, Budapest.
- [23] UZZOLI A. (2003): *A magyar népesség egészségi állapota az európai országok körében. Földrajzi Közlemények*, Vol. 127. No. 1-4. 131–156. o.
- [24] VALKOVICS E. – TÓTH PÁL P. (eds.) (1996): *Demography of Contemporary Hungarian Society. Columbia University Press*, New York.

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