

DEMOGRAPHIC CHANGES AND CONSUMERS BEHAVIOURS ON THE BREAD MARKET

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Abstract. Analysis of demographic changes occurring in Poland conducted in the present article shows trends and allows the consideration of demographic premises of the development and changes in behaviours of consumers on the bread market, i.e. of the product which takes priority place in the group of essential needs. Following demographic indicators were discussed: the size of Polish population, the rate of the fertility and mortalities, the age structure, average life expectancy, the household and the level of education. Appearing demographic trends allow forecasting the volume of demand for products. It was stated that on the bread market there will be changes of quantitative, genre as well as qualitative character that determine a challenge for enterprises of the bakery industry.

Key words: consumers behaviours, demographic changes, market, bread

INTRODUCTION

In the literature it is possible to find detailed classifications and descriptions of factors that shape behaviours of consumers that could be used in order to explain sources of human behaviours. Engel, Blackwel and others [1993] define consumer behaviors as actions associated with getting and using products or services, having them at one's disposal with decisions preceding and conditioning those activities. A little bit later definition of Rudnicki [2000] expresses consumer behaviors as the whole of consumer's actions and perceptions resulting in the preparation of the decision of choice of product, performance of that decision and in its purchase. Woś [2003] is supplementing those definitions for issues of individual preferences of the consumer and his reactions to market stimuli.

Understanding of consumer behaviours and their recognition are not easy, because they are conditioned by diverse factors which constitute the integrated which has an influence on itself. Those factors have a character of stimuli, brakes or conditions which influence the changes of food consumption and dietary behaviours [Iglehart 1993, Deepchand 1997, Kowrygo 2004, Wei 2005]. Difficulties in creation of the universal set of factors that influence consumers' behaviours are reflected in many studies [Berbeka 1998, Garbarski et al. 2000, Jeżewska-Zychowicz 2004, Racjonalność konsumpcji... 2004, Szwacka-Salmonowicz 2003, Żelazna et al. 2002]. The systematics of those factors can however be done "taking into consideration many criteria and depending on its destination" [Racjonalność konsumpcji... 2004].

Dietary behaviours are influenced by the factors which according to Garbarski et al. [2000] can be divided into three groups, i.e. social-economical, demographic and psychographic factors. The importance of individual factors differs among societies and particular persons, and in the society, where foodstuffs are available in a wide assortment, their producers are competing for consumers [Solheim and McEwan 1996].

The aim of this study is the analysis of demographic transformations occurring in Poland with indication of trends and consideration of demographic premises of the development and changes in behaviours of consumers on the market of the bread, i.e. of the product with the primary importance in the group of basic needs. Concentration on demographic changes results from the fact that they "are affecting functioning of the economy, they also do not remain meaningless for the sphere of the food and feeding" and tracking of them is "an important challenge for the market of the food of the population which differs more and more in the global, regional and domestic system" [Kowrygo and Kutermankiewicz 2001].

THE MATERIAL AND METHODOLOGY OF RESEARCH

In the present article secondary sources of information as well as findings from own research were used¹. Secondary data served to determine demographic changes in Poland and tendencies in consumption of bread. On the other hand own research concerned customs and behaviours of consumers of the bread. Conclusion was conducted in studied area with the usage of gathered primary and secondary data. On this base demographic premises of the development and premises of changes in behaviours of consumers on the market of the bread were considered.

Below the following demographic indicators were discussed: the size of the population of Poland, the rate of the fertility and mortalities, the structure of the age, average life expectancy, the household and the level of education².

¹ Questionnaire survey concerning customs and behaviours of consumers with usage of the method of the direct questionnaire form was conducted in entire Poland, on the sample of 1676 respondents with applying the quota sampling. Scientific work financed from funds for the science in years 2006/2007 as a research project No. 1632/P01/2006/31.

² Feature – level of education is understood as the effect of the process of the socialization. According to that it was assigned to the group of factors of demographic character.

TENDENCIES OF CHANGES IN CONSUMPTION OF THE BREAD IN POLAND³

The market of the bread in Poland is saturated; the general consumption of bread will not grow. During last years noticeable changes took place not only in quantitative consumption of bread but also in the consumption pattern. In Poland since 1994 we have been observing the permanent decline in consumption of the bread. It concerns mainly mixed bread, in all groups of population on the level of approximately 20%. Distinct tendency for consumption of rye bread is becoming more visible. A slight increase of consumption of the wheat bread is appearing.

The characteristic feature of demand for bread is its diversity. It manifests itself at different levels, i.e. regional, place of residence, the size of income, the biological type of households or the membership to the particular socio-economical group. In recent years dynamics of changes in the consumption of the bread underwent the reduction. Conducted own research indicate that consumers can however not notice in their households the change in terms of consumed bread.

Further decrease of consumption of bread is probable. The own forecast predicts that the consumption of bread in years 2009-2010 will slightly decrease, reaching in 2009 the level of 5.2 kg per 1 inhabitant per month and in 2011 4.9 kg per 1 inhabitant per month. However forecast drawn up by the GUS for years 2007-2013 is pointing on stopping a downward trend of bread consumption. Analysis of the average level of consumption of the bread allows determining the magnitude of the domestic annual demand for this product which is 3.2-3.3 million ton of the bread (including the consumption in companies of collective nutrition). In coming years further changes under the quality account should be expected. It means that on the market of the bread there are possibilities to develop existing kinds of bread and to create new ones. Those possibilities can determine the direction of the development of bakery enterprises in the future.

THE SIZE OF POLISH POPULATION

Changes in the number of population allow to describe directions of changes of the demand for the food. The increase in the population numbers is contributing to an increase of the demand for foodstuffs by volume, and inversely – the fall is having an influence on the reduction of the size of the market which is served by enterprises active in particular sector.

Forecasts for years 2005-2050, predict the increase of the number of population in the worldwide scale, distinguishing in the same time regions with the different trend [Human Development Report 2004]. Poland in terms of the numbers of population occupies the 29th place among countries of the world and the 8th in Europe, and in terms of the density of the population it is in a group of average populated European countries. It is estimated, that by the year 2010 the number of Polish population will decrease by almost 750 thousand of people and in years 2010-2020 by next 670 thousand. In year 2030 it may reach the number of 35 693 thousand and will decrease by approximately 3 million people comparing to year 2000 [Mały rocznik... 2004].

³ More on that subject in the study of Goryńska-Goldmann [2010].

From observations of changes that occur on the market of the bread it can be concluded that the demand for the bread will be smaller and its structure will change as well. Bigger share in consumption will concern wheat and rye bread, while the importance of mixed bread will decrease. Consumers preferences will move from kinds of bread that do not give sensory satisfaction to those more sophisticated.

THE RATE OF THE FERTILITY AND MORTALITIES

The dynamics of changes of the number of births have the primary importance for development of age groups structures of the population. It expresses in the synthetic way conditions created for the biological development of the family, for its economical strengthening and the stability of intergenerational ties.

The fall in the birth rate is regarded as a direct cause of reduction of the number of population. From 1993 the birth number is on the level below 500 thousand and from 1998 – below 400 thousand. Next the mortality did not change significantly in this period (Fig. 1). According to data from Central Statistical Office, in Poland 80% demises are results of so-called diseases associated with the progress of civilization⁴.

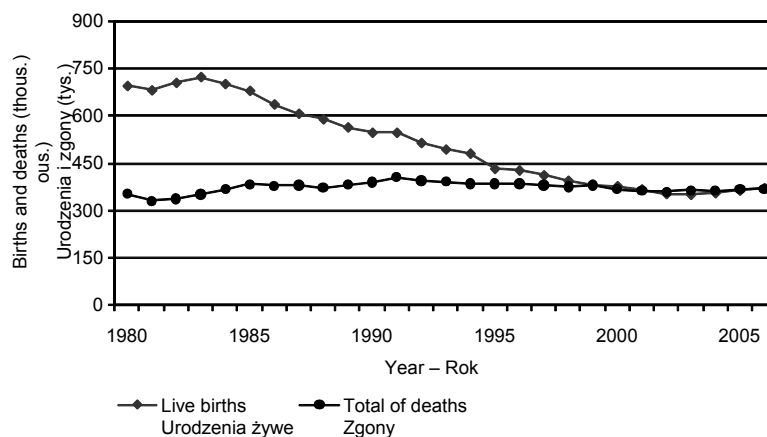


Fig. 1. Natural motion of the population in Poland in years 1980-2007
Source: Own study according to data from GUS [Proгноza ludności... 2009, Mały rocznik... 2008].

Rys. 1. Ruch naturalny ludności w Polsce w latach 1980-2007
Źródło: opracowanie według danych GUS [Proгноza ludności... 2009, Mały rocznik... 2008].

⁴ Commonness of diseases associated with the progress of civilization in Poland it is an effect among others, of unhealthy lifestyle of the contemporary consumer. From analyses of the World Health Organization (WHO) it results that four fundamental factors are affecting the health of the man (a lifestyle, genetic factors, the environment and the health care), from which a lifestyle is playing an important role. These factors constitute a base of long and healthy life. Nowadays more clearly connections between consumed food and the health are stressed.

The rate of the fertility of Polish women at the current level 1.3 does not provide with the substitutability of generations. In order to hold the straight substitutability of generations the rate of fertility should be at least 2.10-2.15 [Mały rocznik... 2003]. In years 2010-2035 the rate of fertility is expected to raise slightly up to approximately 1.4 [Prognoza ludności... 2009].

STRUCTURE OF THE POPULATION ACCORDING TO THE AGE

Changes of the structure of the age are a factor that creates expenses and consumption of many products, including bread.

The forecast of the Polish population conducted by the GUS till 2030 predicts significant changes in population structure. Information regarding the percentage share of individual age groups in the general population illustrating clearly occurring demographic transformations are put together on the Fig. 2.

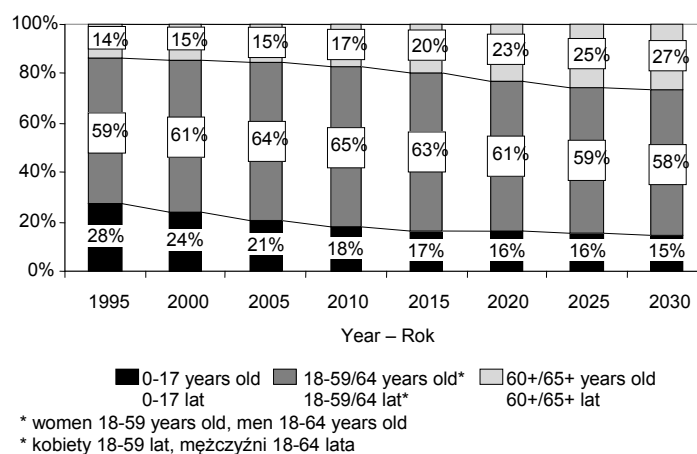


Fig. 2. The demographic structure and the forecast of the population in Poland according to the age in years 1995-2030
 Source: study on the basis of data from the GUS [Prognoza ludności... 2004, Mały rocznik... 2003-2008].

Rys. 2. Struktura demograficzna i prognoza ludności w Polsce według wieku w latach 1995-2030
 Źródło: opracowanie na podstawie danych GUS [Prognoza ludności... 2004, Mały rocznik... 2003-2008].

Demographic structure of the Polish population is changing. The number of people in economically pre-productive age is decreasing (economically pre-productive age – women and men from 0 to 17 years old), from over 10 million in year 2000 up to the level of 5 million in year 2030, in other words of 50%. The percentage of people in that age is falling what is caused by the reduction of the birth rate. It is predicted that a loss in the number of children and youths within nearest 30 years will be over 30% [Prognoza

ludności... 2004]. The reallocation will also take place in proportion between the number of people in an economically productive age and the post-productive age. By the year 2030 the number of people in economically productive age will be reduced by almost 3 million people, simultaneously the number of people in retirement age will rise by nearly 4 million. The phenomenon of „supply” of the group of retired people by the group of people in economically productive age and the favourable changes of extension of life expectancy will deepen the process of ageing of the Polish society [Roszkowski 1997, Kowrygo 2000, 2003, 2004, Świtała 2005]. However, in comparison to other European countries, e.g. Central and Eastern Europe, Poles are still a relatively young society. The movement of highs and periods of population decline through all age groups, the reducing birth rate, as well as the fall in the level of the mortality – determine the processes of ageing of the Polish society [Strefa społeczna... 2002].

The age in a considerable degree is shaping consumers behaviours regarding the consumption of the particular product. The present consumer of the bread is still slightly opened on the novelty however he has the habit of systematical consumption. The age of consumers is closely associated with the time and the frequency of bread consumption. Conducted own studies show that younger consumers usually more often than older eat bread during dinner or between meals. Younger people also more often eat different kinds of wheat bread, toast bread or crisp bread, rice bread etc. In reference to the age, consumers value more the healthy value of bread. It is a healthy value of bread and its price that turns out to be important criteria of choice of the bread for older than younger persons, in contrast with the recognition of the species of bread.

AVERAGE LIFE EXPECTANCY

The rate of the life span is recognized as the synthetic measure of the health condition of the population, because its changes in the time are illustrating the improvement (greater value of this parameter) or deterioration (lower value) of the health of population.

Data related to average life expectancy of people in Poland show that the average human lifespan is becoming longer. From the beginning of the nineties of XX century, an uninterrupted growth of average life expectancy is observed (Fig. 3). It is contributing to extension of the life span of Poles, both women and men.

In 2030 a difference between the life span of men and women will reduce from over 8 years up to nearly 6 years. In spite of positive changes of average life expectancy, Poland is still placed on disadvantageous position comparing to other European countries. The main causes of deaths are diseases associated with the progress of civilisation, cardiovascular diseases, cancers, injuries and poisonings.

The strong attitude of care of the health among consumers may cause that they will change their consumption habits. Consumers will more often look for the bread that will not only provide them with essential nutrients but also will satisfy the caloric requirement of the organism. Choosing products, they will pay attention, which products will guarantee them keeping good health. What is more, which will allow them to eliminate diseases associated with the progress of civilization and will strengthen their immunological system, what as a result will delay the ageing processes. Therefore they will

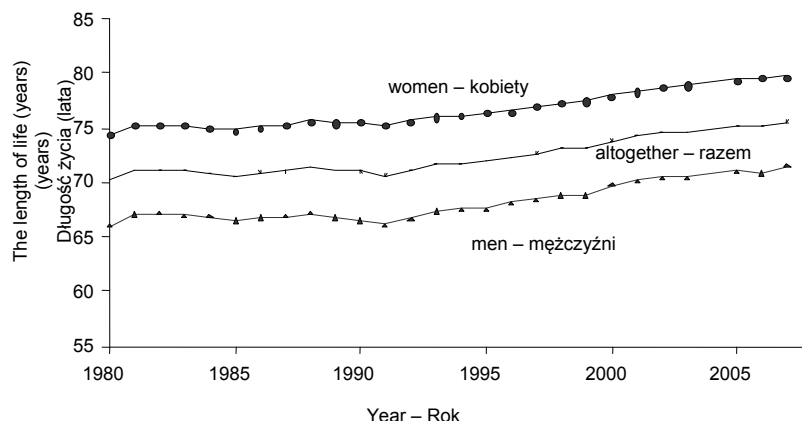


Fig. 3. Life expectancy of Poles

Source: own study based on data from GUS [Prognoza ludności... 2009, Mały rocznik... 2008].

Rys. 3. Długość trwania życia Polaków

Źródło: opracowanie własne według danych GUS [Prognoza ludności... 2009, Mały rocznik... 2008].

be returning to products made on the basis of former prescriptions and recipes (to bread achieved from naturally fermented leaving) which will allow to obtain above mentioned values. Best quality, understood as the healthy value, the nutritional value and organoleptic advantages are these features of the bread, which, valued by consumers, may influence the choice of a particular kind of the bread.

HOUSEHOLD

A structure of the size of households is exerting significant influence on the level and the structure of the consumption. The number of people in the household influences the size of purchases and their structure [Cotte and Wood 2004].

Currently households in Poland are becoming smaller, both in the country as well as in the city. It is correlated with the reduction of the fertility of Polish families and with the increase of the percentage of single households. The increase of the number of households was noted. From year 2002 in the structure of households dominate single and two-person households, constituting together 50% of total number of households (Fig. 4), while in nineties of XX century dominated two- and four-person households. It is predicted that by the year 2030 a participation of single and two-people households in the total number of households will be increasing [Prognoza ludności... 2004, Raport... 2002]. Those two groups of households will dominate in the total number of households. A share of households formed by five and more persons will be reduced by the half.

Household – measured through the average number of people – was formed on average by 2.8 people 2002, in addition in cities the value of this indicator on average was

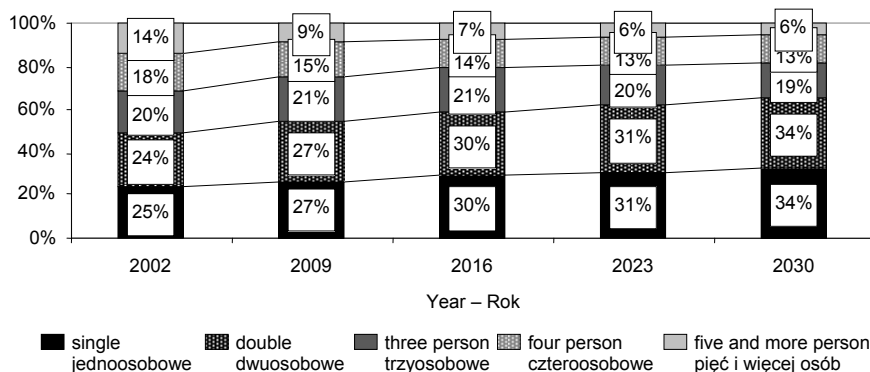


Fig. 4. Structure of households

Source: own study based on data from GUS [Proгноза ludności... 2004, Raport... 2002].

Rys. 4. Struktura gospodarstw domowych

Źródło: opracowanie własne na podstawie danych GUS [Proгноза ludności... 2004, Raport... 2002].

2.6 and in the country 3.3 people. From the beginning nineties of the XX century a slow fall of this rate is being observed. It is predicted that the average number of people in the household in year 2030 will be 2.3 people.

Progressing demographic changes within the size of Polish households influence changes of the structure of consumption of the bread. One should expect further qualitative changes, the growth of requirements of consumers not only regarding the kind and grade of bread, but also regarding the amount and basis weight.

FOREIGN MIGRATIONS AND THE INFLOW OF THE POPULATION FROM THE VILLAGE TO CITIES

Apart from the fall of the birth rate, another cause of the decrease of number of the population in the country is a balance of long-term foreign migrations. In last couple of years the balance of foreign migration is slightly growing, and therefore a negative balance of migration slightly increases.

In last couple of years the number of people changing the place of residence permanently declined, what undoubtedly was directly linked with a difficult situation on the labour market. Relating to the general fall in the mobility of the population, direction of the migration from city to the village stands out with the different tendency. The increase of the tendency to migration of the urban population to the village already showed up within a half of nineties of the XX century. It is partly a wave of returns extorted by the disadvantageous change of the family or professional situation, as well as desired lifestyle based on settling in more comfortable conditions near the city, available for people who earn better. One may suppose that tendencies that refer to preferences of a lifestyle and starting up a family will not turn away. During the nearest years internal migrations will remain on the current level. In migrations between the city and

the village a majority of transfers to the village that has been appearing for a few years will be continued, due to occurrence of sub-urbanization.

The knowledge about the percentage of the rural population in the general population, as well as available trends of changes of this participation lets to predict changes in the consumption pattern of the bread. The percentage of the rural population is diversified in the regions and villages are diversified in terms of the number of inhabitants. Moreover the traditional country family usually lives in multigenerational structures (close 1/4 of all households in the village and in cities approximately 10% constitute households of around five and more persons). A place of residence and the structure of households influence the size, the kind and the grade of the consumed bread. What is more, a part of the population, both municipal and country is satisfying own demand for the bread by self-supply. The place of purchase of the bread is also related to a place of residence. The urban population has access to numerous points of purchase, and the assortment of the consumed bread by them is wider comparing with the assortment, to which country dwellers have an access.

In the future one should expect that a standardization of bread will not take place in Europe. In XX century a great standardization of the food took place. Migrations of the population originated transfer of the tradition of culinary of different circles and territories. Apart that it is still possible to observe the attachment to cultural values, and among them to culinary habits, e.g. the bread produced in France has other taste than the bread produced in Italy or in Poland. Bread will constitute one of characteristics of the culture of nourishing oneself.

THE LEVEL OF EDUCATION

As far as the level of education of Polish population is concerned, recently a rise of the number of people with a higher and secondary education is observed. Relatively high increase of the level of education concerns women. Studies conducted in Belgium show that the higher level of education of women refers among others to their health and dietary awareness constitutes the important factor of selection of pro-health food products what can play a significant role because of the more frequent participation of women in composing everyday meals of the family, in comparison with men [Verbeke 2005]. In spite of observed positive changes of the level of education it is still apart from the existing level of education in highly developed countries.

The fact of rising level of education lets adopt the thesis that the consumption of grades of the bread until now unknown on the Polish table will take place. A growth of requirements regarding diversity and organoleptic advantages of the bread will appear. That may influence on the bigger openness and the tendency to consume until now unknown products by highly educated people.

SUMMARY

Demographic transformations occurring in Poland are presenting an essential information for enterprises existing on the market. They allow forecasting the volume of

demand for products. Emerging demographical trends show the decrease of the population size. Changes of the demographic situation in Poland are accompanied by grow of the zone of the poverty and the high unemployment. Fertility is decreasing and life expectancy is rising. A group of older people who want to enjoy their long life and are interested in health care in the natural way is increasing. The increase of people's migrations from cities to the village and increase of the participation of people with secondary and higher education are observed.

The above mentioned changes cause changes of the quantity and the structure of demand for bread, what constitutes a challenge for the bakery industry. Consumers with different demographic profiles are characterized by different needs and expectations concerning the product – bread. For example individuals of different sex have different needs, similarly as in case of teenagers and older people, consumers of low and high income, living in the country or in the city. One may expect that people of higher level of education may get more information about the influence of consumed bread on health that might affect the improvement of their way of nourishing, for example by higher consumption of rye bread. An older society means buyers who value healthy aspects of bread according to its price. The tendency of the society to grow old heralds the change of the structure of demand for bread. Making choice of the bread, consumers will be interested in grades of the bread supporting health. In connection with changes within the size of households and the increase of the level of education, qualitative changes will proceed, connected with the increase of demand not only regarding the kind and grade of purchased bread but also amount or the basis weight.

REFERENCES

- Berbeka J., 1998. Czynniki przestrzennego zróżnicowania konsumpcji żywności. *Więś i Roln.* 4 (101), 40-54.
- Cotte J., Wood Stacy L., 2004. Families and Innovative Consumer Behavior: A Triadic Analysis of Sibling and parental Influence. *J. Consum. Res.* 31, 78-86.
- Deepchand K., 1997. Eating habits, The Scottish Health Survey. www.archive.offical-documents.co.uk/dokument/scottish/ehealth/shch3.html.
- Engel J.F., Blackwell R.D., Miniard P.W., 1993. *Consumer behaviour*. The Drygen Press, Chicago.
- Garbarski L., Rutkowski I., Wrzosek W., 2000. *Marketing. Punkt zwrotny nowoczesnej firmy*. PWE, Warszawa.
- Goryńska-Goldmann E., 2010. Tendencje zmian w konsumpcji pieczywa w Polsce. *Acta Sci. Pol. Oecon.* 9 (1), 73-86.
- Human Development Report. 2004. Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. *World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision oraz UN (United Nations) 2003 r.*
- Iglehart R., 1993. *The Silent Revolution. Changing Values and Political Styles Among Western Publics*, New Jersey.
- Jeżewska-Zychowicz M., 2004. *Zachowania żywieniowe i ich uwarunkowania*. Wyd. SGGW, Warszawa.
- Kowrygo B., 2000. *Studium wpływu gospodarki rynkowej na sferę żywności i żywienia w Polsce. Rozprawy naukowe i monografie*. Wyd. SGGW, Warszawa.
- Kowrygo B., 2003. *Polityka żywienia w Polsce na początku XXI wieku. Przemysł Spożywczy* 9, 14-18.
- Kowrygo B., 2004. *Europejski konsument – wyzwania dla nowoczesnej gospodarki żywnościowej*. W: *Problemy rolnictwa światowego*. T. 9. Wyd. SGGW, Warszawa, 299-309.

- Kowrygo B., Kutermankiewicz J., 2001. Starzenie się polskiego społeczeństwa. *Przemysł Spożywczy* 6, 6-8.
- Mały rocznik statystyczny. 2003-2008. GUS, Warszawa.
- Prognoza ludności na lata 2003-2030. 2004. GUS, Warszawa.
- Prognoza ludności na lata 2008-2035. 2009. GUS, Warszawa.
- Racjonalność konsumpcji i zachowań konsumentów. 2004. Red. E. Kieźel. PWE, Warszawa.
- Raport z wyników Narodowego Spisu Powszechnego Ludności i Mieszkań. 2002. www.stat.gov.pl.
- Roszkowski W., 1997. Specyfika żywienia ludzi starszych. *Przemysł Spożywczy* 6, 11-13.
- Rudnicki L., 2000. Zachowanie konsumentów na rynku. PWE, Warszawa.
- Sfera społeczna w okresie transformacji – zjawiska i tendencje. 2002. Rządowe Centrum Studiów Strategicznych, Warszawa.
- Solheim R., Mc Ewan J., 1996. Consumers investigation – Methods and Application. *Przemysł Spożywczy* 12, 6-9.
- Szwacka-Salmonowicz J., 2003. Zmiany zachowań nabywców jako determinanta kształtowania strategii segmentacyjnych przedsiębiorstw przemysłu spożywczego w Polsce. Wyd. SGGW, Warszawa.
- Świtłała M., 2005. Proces starzenia się a zachowania konsumentów. *Handel wewnętrzny. Instytut Rynku Wewnętrznego i Konsumpcji* 3 (5-6), 51-57.
- Verbeke W., 2005. Consumer acceptance of functional foods: socio-demographic, cognitive and attitudinal determinants. *Food Quality and Preference* 16.
- Wei Sheng-Chung, 2005. Consumers' Demographic Characteristics, Cognitive Ages and Innovativeness. *Adv. Consum. Res.* 32.
- Woś J., 2003. Zachowania konsumentów – teoria i praktyka. Wyd. AE, Poznań.

ZMIANY DEMOGRAFICZNE A ZACHOWANIA KONSUMENTÓW NA RYNKU PIECZYWA

Streszczenie. Analiza przemian demograficznych zachodzących w Polsce, przeprowadzona w niniejszym artykule, wskazuje trendy i pozwala na rozpatrywanie demograficznych przesłanek rozwoju i zmian w zachowaniach konsumentów na rynku pieczywa, tj. produktu zajmującego priorytetowe miejsce w grupie potrzeb podstawowych. Zarysowujące się trendy demograficzne świadczą o spadku wielkości populacji, narastaniu strefy biedy i wysokim bezrobociu. Zmniejsza się dzietność, zwiększają się długość życia ludności i grupa osób starszych. Obserwuje się wzrost przemieszczeń ludności z miast na wieś oraz wzrost udziału osób z wykształceniem wyższym i średnim. Zmiany demograficzne pozwalają prognozować wielkość popytu na produkty. Na rynku pieczywa będą postępować zmiany zarówno o charakterze ilościowym, rodzajowym, jak i jakościowym, co stanowi wyzwanie dla branży piekarskiej.

Słowa kluczowe: zachowania konsumentów, zmiany demograficzne, rynek, pieczywo

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