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dr hab. Urszula Grzega, prof. UE^{BDF}

Uniwersytet Ekonomiczny w Katowicach

ORCID 0000-0002-1220-7880

CONSUMPTION INDICATORS IN THE RESEARCH OF SOCIO-ECONOMIC DEVELOPMENT

MIARY KONSUMPCJI W BADANIACH ROZWOJU SPOŁECZNO-GOSPODARCZEGO

Abstract: The measuring socio-economic development with the use of consumption indicators is an important and current focus of interest for researchers and scientists. It applies all countries, especially those, that have undergone transformation and integration changes, such as Poland. The recognition and assessment of changes in the different elements that fit into the broadly understood socio-economic development is used to verify the basic objectives of changes related to the improvement of the standard of living of people. The analysis of consumption indicators in Poland in the years 2004-2017 confirms the improvement of

standard of living, and thus the progressing socio-economic development of the country. This is indicated, among other things, by positive changes in the structure of individual consumption in Polish households could be observed as well. They were emphasized in the decrease of food expenditures in general expenditures, while the free choice expenditures share was increased.

Keywords: consumption, consumption expenditure, consumption indicators, household, Poland, socio-economic development

Streszczenie: Pomiar rozwoju społeczno-gospodarczego z wykorzystaniem miar konsumpcji stanowi ważny i aktualny przedmiot zainteresowania badawczy i naukowców. Dotyczy wszystkich krajów, a szczególnie tych, które poddane zostały przemianom transformacyjnym i integracyjnym, w tym Polski. Poznanie i ocena zmian w zakresie poszczególnych elementów wpisujących się w szeroko rozumiany rozwój społeczno-gospodarczy służy do weryfikacji podstawowych celów przemian, związanych z poprawą poziomu życia ludności. Analiza wskaźników konsumpcji w Polsce w latach 2004-2017 świadczy o poprawie poziomowi życia ludności, a tym samym o postępującym rozwoju społeczno-gospodarczym kraju. Potwierdzają to m.in. pozytywne zmiany w strukturze spożycia indywidualnego polskich gospodarstw domowych polegające na zmniejszeniu udziału wydatków żywnościowych w wydatkach ogółem oraz wzroście udziału wydatków swobodnego wyboru.

Słowa kluczowe: konsumpcja, wydatki konsumpcyjne, wskaźniki konsumpcji, gospodarstwo domowe, Polska, rozwój społeczno-gospodarczy

Introduction

The category of socio-economic development means favorable quantitative, qualitative and structural long-term changes occurring in the economy and society of a given country¹. The measurement of development does not belong to simple tasks, because many different areas, events, objects and phenomena have to be researched. By their very nature, some of them possess aspects difficult to measure or even non-measurable ones, and examining the interrelations between them is often of indirect or postponed character. The difficulties in measurement result as well from the limited supply of statistical information, meaning the availability of information sources and the arbitrary decisions of a researcher connected with incorporating to research particular issues or their omission.

In the research of socio-economic development, various indicators are used, enabling, among others, characteristic and assessment of the condition of the entire economy and its sectors, assessment of the effects of market actors' operations and monitoring of trends in various areas of social and economic life, in temporal and

¹ UNDP, *Krajowy Raport o Rozwoju Społecznym. Polska 2012. Rozwój regionalny i lokalny*. Biuro Projektowe UNDP w Polsce, Warszawa 2012, p. 19.

spatial cross-sections. It should be emphasized, however, that from the point of view of consumption entities, socio-economic development is manifested first of all by improving the living conditions of the population, and the basic tools of its description and assessment are consumption indicators. Their use ensures large measurement possibilities, but this measurement requires a precise selection of content of analyses. Analyses using consumption indicators can be conducted on a micro and macroeconomic scale. Each time the selection of specific measures should be dictated by substantive, formal and statistical premises.

The main, theoretical aim of the present study is the demonstration of basic consumption indicators used on the research of socio-economic development. The additional aim is to present the use of consumption indicators in the evaluation of Poland's standard of living between 2004 and 2017. The basis of the research is the secondary sources of information.

1. The chosen consumption measures – problem overview

In the last few decades, the great advancement in the range of methodology of socio-economic development measurement was made. Taking into consideration the scope of researched economic reality, the socio-economic development measures can be divided as: partial and synthetic measures. The synthetic indicators can be divided additionally for: indicators based on natural units, indicators based on value-related units and mixed indicators. In the group of value-related indicators it can be distinguished as well: the basic indicators of national account systems and the modified measures of national account systems².

Concentrating on the basic indicators of national account systems it is worth noticing that GDP and GNI per capita are traditionally used measures, which initiate the analyses concerning the level of economic development of a given country. Treated as the prosperity and economic measures they are based on material wealth. Their basic advantages are related to the low level of complexity of calculations and the impartiality of measurement³. However, the above mentioned measures reflect only the mean values, which present the internal structure and disproportion between particular social groups. They do not take into consideration such aspects as e.g.: housing conditions, natural environment, market supply, the value of free time, leisure and the size and quality of services connected with following areas: health care, education, cultural services and others. The criticism of GDP treated as a measure of socio-economic development is expressed by many recognized and

² U. Grzega, *Tradycyjne i alternatywne mierniki poziomu życia ludności w ujęciu teoretycznym*, „Zeszyty Naukowe Uniwersytetu Szczecińskiego. Współczesne problemy ekonomiczne” 2015, No. 851, p. 80-83.

³ S. Gorobievski L. Nädrag, *The Worldwide Methodologies for Assessing Living Standards*, “Economics, Management and Financial Markets” 2011, No. 6(1), pp. 640-649.

respected economists, including Nobel Prize winners. In their studies, they touched upon following issues: the principles of proper GDP calculation, the lexicographic preferences connected with fulfilling the basic human needs, the empirical research on happiness, the distribution of income, the averaged character of the measure, the accounting for non-market consumption and informal income, the failure to take into account the external environmental factors and exhaustion of natural reserves⁴.

The theoretical arguments, connected with the use of income or consumption in the research on socio-economic development, are almost always in consumption's favour. The contemporary research, conducted on the basis of the use of means of consumption, clearly indicate to significant and constantly growing role of consumption in the research that is discussed⁵.

The use of consumption measures serving as an evaluation of socio-economic development can be conducted with relation to macro and micro scale. Micro scale concerns individual consumers. Macro scale concerns the total population of a given country or other territorial community or the whole sector of households (e.g.: personal computers' possession in household in %, in total households),

Taking into consideration the above, the research with the use of consumption measures may be conducted on the basis of various source data. In micro scale, the most significant is the research gathering the consumers' opinions on the subject of economic condition of their households or on other issues relating to area of socio-economic research. In the second case, the significant importance is attached to macroeconomic data achieved from national account systems.

One of the basic consumption measure characterizing the level of socio-economic development of a country or region is an indicator of global consumption. It shows above all, the material standard of living of population. As regards the difficulty to bring to a common denominator the size of consumption of many goods and services, the global consumption indicator is expressed in monetary value. It has value-related nature, where the value of consumption of food-related and non-food-related goods and services is expressed in one currency e.g.: Euro or zloty. The expenditures of a household are mostly spend on consumption goods and services, meaning: the purchase of food, alcoholic beverages, non-food-related goods and services. The very own essence of the discussed indicator depends on the accepted system of prices and the range of consumption. This indicator may include the value of goods and services

⁴ J. van den Bergh, *The GDP Paradox*, "Journal of Economic Psychology" 2009, No. 30, pp. 117-135; P. Dasgupta, K. Mäler, *Net National Product, Wealth, and Social Well-Being*. "Environment and Development Economics" 2000, No. 5(1-2), pp. 69-93; D. Kahneman, A. Krueger, D. Schkade, N. Schwarz, A. Stone, *Toward National Well-Being Accounts*, "American Economic Review" 2004, No. 94, pp. 429-434.

⁵ B. Chan Yin Fah, *Living Standard, Living Level and Economic Wellbeing of Older Persons. Similarity and Differences in Measuring these Concepts*, "Canadian Social Science" 2010, No. 6(5), pp. 145-150; B. Meyer, J. Sullivan, *Measuring the Well-Being of the Poor Using Income and Consumption*, NBER Working Paper, No. 9760/2003, pp. 33-35.

financed from the disposable income of households and/or the value of goods and services financed from public sources (e.g.: the education, the health care services, security). The basic disadvantage, as stated towards this indicator, is the difficulty of making the proper estimation of services provided free of charge and partially for a payment. This measure does not take into account the transfer of the savings, the size and volume of stocks, equipment of households and it does not inform about the structure of consumption goods and services. Some solution to that is using the extended consumption indicator which includes additionally the value of household work expressed in money. Still, in this indicator, actions taken into consideration are only those which bring positive result in the range of needs fulfillment level e.g.: cooking, cleaning, sewing. The problem of estimation of this kind of work did not meet the commonly accepted solution. It is difficult to evaluate the work done by members of households using the wages of e.g.: a cook or a cleaning lady. In a simplistic form, there were attempts to evaluate all of the household activities according to the mean wage of worker with low qualifications ⁶ but they did not find the application in a long term.

In the analyses of socio-economic development, the indicators of level, dynamics and the structure of consumption expenses in the nominal and real approach (in micro and macro scales), are used most frequently. They enable knowing the pace and directions of income dispersion of available income of households for satisfying different groups of needs. The expenditures, as a derivative of income, their level, structure and changes in time can give relatively actual image of state and development of the economy. The thorough analysis creates possibilities to make comparisons in time and space as well.

One of the oldest measures of consumption, used to evaluate the standard of living of whole populations and different groups of households, is food indicator. It expresses the share of food expenditures in general expenditures and it is treated as one of the leading measures of society wealth and the societies life level. E. Engel noticed over 150 years ago that the size of an income defines the society material life level and it models the food expenditures and other goods. According to his 1st law, the higher the income, the lower the share of food expenditures. The low value of food indicator means that relatively small part of the income is designated for food. It proves simultaneously that the society is wealthy, and conversely – the high value of food indicator, means substantial share of income allocated for food and low level of society wealth⁷. Therefore, analyzing this measure in time – the decreasing share of the food expenditures in general expenditures shows that there is improvement in society wealth and in the economic development of a given country.

⁶ J. Andrycz, *Poziom życia ludności*, Wydaw. Akademii Ekonomicznej w Katowicach, Katowice 1995, p. 12.

⁷ U. Grzęga, *Poziom życia ludności w Polsce – determinanty i zróżnicowania*, Wydaw. Uniwersytetu Ekonomicznego w Katowicach, Katowice 2012, p. 170.

Another measure, which depicts the level of economic development of societies is the indicator of free choice expenditures, counted as the share of free choice expenditures in general expenditures. The free choice expenditures are the expenditures devoted to fulfilling more than basic needs of households. Those expenditures are not necessary to function normally, and the resignation from them does not result in any effects on health, life or functioning in society. However, their high and still growing values show the advancing economic development. It is worth noticing, that the division of expenditures into basic and of free choice is often of arbitrary character, because it can be modified with various subgroups of expenditures. The criterion of expenditures division for basic and of free choice is always the answer to question whether the given expenditures is connected with the fulfillment of the need treated as conventionally indispensable in some socio-economic conditions. Such a division is firstly- highly subjective, which disables the possibility to compare the expenditures in particular groups, and second- impossible to conduct on the basis of public access information sources⁸.

To analyze the socio-economic development of societies, the quantitative consumption indicators are used. They are expressed in the natural units e.g.: pieces, liters. They may be in the form of direct measures (eg kilo) or conversion measures (eg number of square meters per person). They enable, in a relatively objective manner – because it relates to physiologists' and other specialists' recommendations – the estimation of the level of fulfillment of chosen need groups e.g.: food, housing, recreational and other needs. The positive quantitative and qualitative changes relating to natural consumption indicate the improvement of standard of living and as a result the socio-economic development.

2. Use of consumption measures on the example of Poland

The aim of consideration in the present part of the study is the presentation of the changes in consumption of households in Poland beginning from the year 2004. The research material constitutes secondary information sources such as macroeconomic Statistics Poland data derived from national account systems and relating to individual consumption in household sector.

The consumption structure of the whole household sector are the primary indicators enabling the relatively objective evaluation of the level of economic development of a given society. In Statistics Poland methodology, the household final consumption expenditure is exploited with this end in view. This category includes all of the expenses made by the household sector, which is one of six institutional sectors in the country. The remaining part is the government expenses and the expenses of non-governmental organizations for healthcare and education⁹.

⁸ Ibidem, p. 171.

⁹ *Pojęcia stosowane w statystyce publicznej*, GUS, <https://stat.gov.pl/metainformacje/slownik-pojec/pojecia-stosowane-w-statystyce-publicznej/467,pojecie.html> [access: 9.05.2019].

Table 1. The structure of the household final consumption expenditure in Poland in the years 2004, 2010, 2017 (in % of total expenditure, current prices)

Tabela 1. Struktura spożycia indywidualnego w sektorze gospodarstw domowych w Polsce w latach 2004, 2010, 2017 (w % wydatków ogółem, w cenach bieżących)

Expenditures	2004	2010	2017
Food and non-alcoholic beverages	21.1	19.2	16.8
Alcoholic beverages, tobacco, narcotics	7.1	7.9	5.7
Clothing and footwear	4.8	4.1	5.1
Housing, water, electricity, gas and other fuels	21.3	22.8	20.7
Furnishings	4.3	4.4	5.3
Health	4.2	4.1	5.8
Transport	10.5	11.0	12.2
Communication	3.2	3.0	2.3
Recreation and culture	8.0	7.6	8.0
Education	1.4	1.2	1.0
Restaurants and hotels	2.9	2.8	4.2
Miscellaneous goods and services	11.2	11.9	12.9

Source: *Wskaźniki makroekonomiczne*, GUS, <https://stat.gov.pl/wskazniki-makroekonomiczne> [access: 9.05.2019].

It results from the data in Table 1 that in the analyzed period of time the share of food expenditures decreased by 4.3 percentage points. The decrease in the percentage of expenditures for alcoholic beverages and tobacco products (by 1.4 percentage point), communications (by 0.9 percentage point), housing, water, electricity, gas and other fuels (0.6) and education (0.4) could also be noticed. While the following expenditures areas increased: transport (by 1.7), health (by 1.6), restaurants and hotels (by 1.3), apartment furnishings, (by 1.0), clothes and footwear (0.3) as well as the miscellaneous goods and services (by 1.7). In the case of the expenditures for recreation and culture no changes were noted.

The most significant change stating the improvement of the standard of living of Polish society life between 2004 and 2017 was the decrease of food indicator. The systematic decrease of the value of discussed measure, year by year, indicates to slow, gradual improvement in wealth of Polish society. The similar conclusions can be made on the basis of free choice expenditures. For the purpose of the present research the following expenditures were included into this group: alcoholic beverages and tobacco goods, furnishings, recreation, culture and education, restaurants and hotels and miscellaneous goods and services. The level of the free choice expenditures, expressing the level of fulfillment of higher-order needs, is diverse depending on the analyzed year. Broadly speaking, between 2004 and 2017 this indicator

pointed the increase tendency in the whole household sector, where the share of free choice expenditures increased from 31.8% to 37.1%, i.e.: by 2.2 percentage point.

The changes in value-related consumption proceeded simultaneously with the quantitative consumption which is proved by the data concerning the consumption of chosen food and non-food-related goods, expressed in natural units, calculated for 1 Polish inhabitant.

Table 2. Consumption of selected food items in Poland calculated per capita in the years 2004, 2010, 2017

Tabela 2. Spożycie wybranych artykułów żywnościowych w Polsce na 1 mieszkańca w latach 2004, 2010, 2017

Specification	2004	2010	2017
Grain of 4 cereals in terms of processed products in kg	119	108	102
Potatoes in kg	129	110	96
Vegetables in kg	111	106	105
Fruit in kg	55	44	53
Meat and edible offal in kg	71.8	73.7	74.6
of which meat	67.3	69.9	70.1
Edible animal fats in kg	6.6	6.3	6.5
Cows' milk in l	174	189	218
Hen eggs in units	211	202	139
Sugar in kg	37.6	39.9	44.5
Vodkas, liqueurs, other alcoholic beverages in terms of 100% in l	2.5	3.2	3.3
Wine and mead in l	10.6	6.9	6.1
Beer from malt in l	77.5	90.2	98.5
Cigarettes containing tobacco or mixtures of tobacco in units	1927	1805	1345

Source: *Rocznik Statystyczny RP 2009*, GUS, Warszawa 2009, p. 65; *Rocznik Statystyczny RP 2018*, GUS, Warszawa 2018, p. 69.

It results from the data in Table 2 that between 2004 and 2017 there was a decrease in consumption of carbohydrate products, such as: potatoes (by 33 kilo) and grains of cereals (by 17 kilo). Further on the decreased consumption could be noticed in the following: eggs (by 72 pieces), vegetables (by 6 kilo), fruit (by 2 kilo), wines (by 4.5 l) and tobacco products (by 582 pieces). While the increase was noted in: milk (by 44 l), sugar (by 6.9 kilo), meat (by 2.8 kilo), beer (by 21 l) and high-pro- of alcoholic beverages (by 0.8 l). Those changes – in physiologists' opinion – have double meaning, positive and negative. Broadly speaking, in the opinion of the case researchers, the decrease of carbohydrate products consumption – in general or in

relation to consumption of other valuable articles e.g.: low fat meat – proves that the life level in Poland was improved¹⁰.

Between 2004 and 2017 the significant progress in level of equipping with durable consumer goods in Poland was visible. The improvement was noted in the level of equipping with the basic household appliances and in the luxury equipment. Possessing a private car became popularized, as well as having modern communication and recreation appliances, household appliances and others. The state of possession was improving year by year in quantitative and qualitative sense as well. Each year Polish people purchased more and more multifunctional goods, stylized, individual, versatile, esthetic, eco-products and others. The improvement of the condition of possessing the durable consumer products is a positive phenomenon. It proves the existence of consumption modernization and simultaneously it gives expression to better fulfillment of consumption needs in Poland, confirming the improvement in life conditions as well¹¹.

Summary

Particular research tools concerning the use of consumption measures as measures of socio-economic development underwent many phases of growth and decline of scientists' interest. In the last 25 years, however, significant progress has been made in studying this phenomenon using consumption measures. There was an improvement in the number of sources of information, accuracy of measurements and general knowledge about various elements of the living conditions of the population and their factors. Jointly, this justifies the use of consumption indicators to research and assess socio-economic development.

Taking into account the current socio-economic problems resulting from crisis, integration, economies transformation and other, there was a constantly growing need to measure the changing economic reality with the use of diverse range of measures treating the economic development in a complex manner. It should be added, that the official statistics are accompanied for many years by social skepticism. However, those are measures possessing rich methodological basis, long research tradition, the continuity of realization, simplicity, the reliability of calculations and impartiality. The consumption indicators can be included into this group. They may be based on the national account systems or on the household budget surveys. In the present study, the first source was taken into account. The consumption indicators as the measures of economic development describe the changes in this development

¹⁰ C. Bywalec, *Konsumpcja a rozwój gospodarczy i społeczny*, Wydaw. C.H.Beck, Warszawa 2010, pp. 272-273.

¹¹ U. Grzeża, *Racjonalność konsumpcji w Polsce po 25 latach transformacji*, [in:] E. Kieźel, A. Burgiel (ed.), *Wiedza ekonomiczna konsumentów a racjonalność ich zachowań*, Wydaw. C.H.Beck, Warszawa 2017, pp. 190-193.

relatively well. These measures are relatively simple to use and easy to interpret. Analyzing the changes in time with their use, the improvement of value each year indicates by itself to the development. However, it needs to be kept in mind that these are the measures describing the material dimension of functioning of consumption entities. What is more, it is difficult to relate, in a direct and measurable way, the changes in consumption to economic development. Some of the conclusions are made on the basis of logical factors and not precise calculations. It is an effect of a situation where not all objects can be brought to a common denominator, which is e.g.: currency, piece or kilogram. Despite all of these reservations, it was accepted in the present study that the measure of obtained economic development are positive changes in structure of consumption expenditures and natural consumption.

In sum, based on the analysis, it can be stated that starting from accession to the European Union, the Polish consumption developed in value-related and quantitative and it reached the level higher than this from 2004. This is evidenced by decrease of food indicator value and the increase of free choice expenditures indicator value. The share of the indispensable expenditures, including food and non-alcoholic beverages, housing, water, electricity, gas and other fuels, decreased in the year 2004-2017 from 42.4% to 37.5%. The positive quantitative and qualitative changes occurred as well. They related to food consumption, the progress in equipping in durable goods and as a result – the general modernization of consumption model in Poland.

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Author's resume:

Dr hab. Urszula Grzega, Professor at University of Economic in Katowice, Department of Consumption Research.

Nota o Autorze:

Dr hab. Urszula Grzega – prof. UE Katowice, Katedra Badań Konsumpcji.

Contact/Kontakt:

dr hab. Urszula Grzega, prof. UE
Uniwersytet Ekonomiczny w Katowicach
Katedra Badań Konsumpcji
ul. 1 Maja 50
40-287 Katowice
e-mail: ugrzega@ue.katowice.pl