

FOOD SELF-SUPPLY AND INCOME OF RURAL HOUSEHOLDS

Agnieszka Biernat-Jarka, Paulina Tuka
Warsaw University of Life Sciences – SGGW

Abstract. Food self-supply is one of the ways of satisfying food needs, which is achieved through bypassing the market, in households located in rural areas. The studies conducted in 2011 and 2012 in 1000 households in Mazowieckie Province demonstrated a large scale of self-supply. A significant portion of households declares consumption of fresh fruit and vegetables, as well as homemade preserves produced in their own household. The main objective of this article is to assess the phenomenon of food self-supply of households located in rural areas of Mazowieckie Province, with particular emphasis on their income. Based on the literature and conducted studies, the authors have formulated a hypothesis that the significance of food self-supply in rural households diminishes with the increase in household income.

Key words: food self-supply, natural consumption, household income, rural areas

INTRODUCTION

Households located in rural areas most often opt for a form of self-supply of food as a way to meet their consumption needs [Strzelecka 2012, p. 311]. Self-supply of food (natural consumption, self-consumption) is defined in literature as the part of consumed food which is obtained by the household with the exclusion of the market [Gutkowska 2003, p. 152].

Households which opt for natural consumption are both producers and consumers of food, which results in the significant shortening of the way between production and consumption of food [Rembisz and Floriańczyk 2014, p. 147]. In economic theory, we are dealing with natural consumption if the object of consumption are goods and services produced by the consumer himself/herself, as part of his/her household. On the other hand, we can speak of market consumption if the consumer purchases goods and services

Corresponding author: Agnieszka Biernat-Jarka, Warsaw University of Life Sciences – SGGW, Faculty of Economics Sciences, Nowoursynowska 166, 02-787 Warszawa, Poland, e-mail: biernat-jarka.agnieszka@wp.pl

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on the market, using his/her own money. The foregoing is a division of consumption according to the source of origin of consumer goods, i.e. the manner in which consumer goods and services are sourced [Zalega 2012, p. 25]. The share of market consumption in the total consumption of households increases together with the process of growing globalisation and economic and social development. This phenomenon is usually referred to as commercialisation of consumption (Fig. 1). The degree of commercialisation of consumption varies between different types of households, and primarily depends on the financial status of the household, its development phase, place of domicile, market supply and personal preferences of consumers. On the other hand, the phenomenon of decrease of the share of natural consumption in the overall consumption of households is referred to as denaturalisation of consumption [Bywalec 2007, p. 15]. Between these two types of consumption, natural and market, there is a mutually inverse relationship which indicates that natural consumption increases with a decrease in market consumption and vice versa. To a large extent, the level of natural consumption depends on the activity of the consumer in the market: if such activity is low, the share of natural consumption in household spending is large.

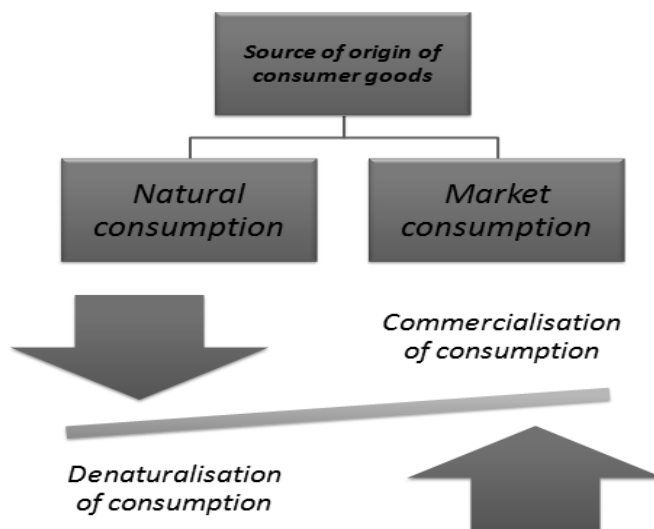


Fig. 1. Classification of consumption by source of origin of consumer goods
 Source: Authors' own study on the basis of Zalega T.: *Konsumpcja. Determinanty, teorie, modele* [Consumption. Determinants, Theories, Models]. PWE, Warsaw 2012, pp. 25–26.

Natural consumption primarily relates to food and occurs, in most cases, in rural areas. According to the data provided by GUS (Main Statistical Office), in Poland, due to considerable fragmentation in agriculture, in 2013, almost every fifth individual agricultural farm produced goods mainly for the purposes of consumption by its own household [Characteristics... 2014, p. 154]. When it comes to urban households, the object of such consumption involves fruit and vegetables grown in the so-called allotment gardens and small livestock bred at home.

The changes that manifest themselves in the functioning of households in conditions of globalisation and market changes are related, i.a., to food issues. As a result, there are changes in the structure of consumption and the structure of spending (purchase of food). Moreover, there is a growing willingness among members of households to produce food on their own, due to a healthy lifestyle or food safety.

The level of satisfaction of food needs, as observed by consumers, is a result of many determinants, both objective and subjective. Research conducted by I. Ozimek and M. Jeżewska-Zychowicz shows that the level of satisfaction of food needs depends mainly on the income status, and to a lesser degree, on the age, level of education and place of residence [Ozimek and Jeżewska-Zychowicz 2001, p. 24]. Thus, the degree of economic development of the country and the level of income earned by society are important factors affecting the share of self-supply in food consumption. It is assumed that transition from self-supply of food to more frequent purchases on the market, accompanying growing incomes and economic development of the country, is an important feature of changes in food sourcing [Zalega 2011, p. 121]. It has been observed that an improved financial condition of a farmer household implies a lower percentage of households making use of self-supply [Stanisławska 2014, p. 195]. Periods of economic crisis are usually an exception to this rule, with the increased consumption of products originating from the household itself. Such a phenomenon was observed by B. Chmielewska, who conducted surveys in families associated with agriculture, mainly with dual employment, who are most affected by rising unemployment, and in an attempt to reduce their maintenance costs, return to self-supply of food [Chmielewska 2000, p. 125]. In turn, the economic development of the country and a high standard of living of population contribute to the reduction in self-consumption, and thus, to the increase in market purchases as a source of food. On the other hand, it has been determined that tradition and food consumption patterns, developed over the years, may have a stronger influence on the formation of natural consumption than the level of income itself [Tracy 1997, pp. 101–102].

In terms of self-supply of food or services, particular attention should be given to the role of women. As housewives, they take care of their home gardens and orchards, i.e. the source of food used mainly for the purpose of self-supply of the household. They also perform care and educational functions in terms of upbringing their children and taking care of the elderly. In addition, they run the household and maintain social ties [Michalska 2013, p. 127].

MATERIAL AND METHODS

1000 households located in the rural areas of Mazowieckie Province were surveyed. The study was carried out within the framework of the grant awarded by the Ministry of Science and Higher Education, grant number N N114 115439, titled “Living Conditions and Work of Women in Rural Areas”, in 2011 and 2012.

The study population consisted of 1000 households. Replies were given by 77% women and 23% men, residents of selected municipalities and rural communes of Mazovia. In the study population, the largest group were people with secondary education (40%) and vocational education (39.2%). There were fewer people with higher education

(10.5%) and primary education (9.9%). Almost half of the respondents came from households composed of 3–4 persons (49.3%), and a slightly smaller group were respondents who came from households composed of 5–6 persons (30.1%) and 1–2 persons (16.6%). Only 4% of the respondents represented households composed of 7 and more people. Among the respondents, in every fifth household (19%) there were no children, and in every fourth (26.2%) there was only one child, while in 36% of the households there were two children. In nearly 19% of the households there were three or more children. In total, there were 16.9% of household without any freehold, or perpetual usufruct of, land. The other households owned freehold land or perpetual usufruct. Nearly 1/3 of the respondents had farms with an area ranging from 5 to 10 ha. A slightly smaller group were respondents who owned farms with an area ranging from 2 to 5 ha (26.6%) and from 10 to 15 ha (17.8%). The smallest farms, up to 2 ha, were owned by 12.1% of the total number of respondents, and the largest farms, i.e. over 50 ha – by less than 1%. In the survey, the average monthly income per person in the household over the last year was adopted as the indicator of income amount. Four income categories were distinguished:

- below PLN 500;
- from PLN 501 to 700;
- from PLN 701 to 1,400;
- above PLN 1,401.

The largest group were respondents from households with the average monthly income per person over the last year ranging from PLN 701 to 1,400 (34.7%), and the smallest group – with the average monthly income per person over the last year above PLN 1,401 (12%). In every third household, the gross income per person ranged between PLN 501–700, and nearly in every fifth – the monthly income per person amounted to less than PLN 500 (Table 1).

Table 1. The amount of income generated by surveyed households

Income category	Number of households	Structure (%)
Below PLN 500	178	17.8
PLN 501–700	328	32.8
PLN 701–1 400	347	34.7
Above PLN 1 401	120	12.0
No response	27	2.7
Total	1 000	100.0

Source: Authors' own study based on surveys.

Given the declared income of households, the largest group of respondents were from households in which the main source of income was the sale of farm produce (36.9%) (Table 2). Regular employment (other than self-employment) was the main source of income of 35.8% of the surveyed households. Disability or retirement pension was the only source of income for almost every tenth household. Just over 5% of respondents declared that they earned their living with the income from self-employment, which is a very low percentage. In the future, this share should increase with the continuing support of entrepreneurship in rural areas and farmers seeking additional sources of income

Table 2. Main source of income generated by surveyed households

Main source of income in the household	Number of households	Structure (%)
Sale of farm produce	369	36.9
Regular employment	358	35.8
Disability pension, retirement pension	96	9.6
Self-employment	56	5.6
Regular employment and sale of farm produce	56	5.6
Regular employment and self-employment	44	4.4
Other	21	2.1
Total	1 000	100.0

Source: Authors' own study based on surveys.

by developing non-agricultural activities. Recently, we have observed increasing occupational mobility among rural residents, hence 4.4% of respondents earn their incomes both in regular employment and self-employment. Another group of respondents, representing 5.6% of the total number of people who participated in the survey, is composed of people involved in two types of employment, with the predominant source of income in the form of agricultural activity and regular (paid) employment. According to the focus survey conducted on a group of mayors (heads of local rural governments), such dual employment in villages is a desirable form of gaining sources of income [Qualitative Research Report... 2007, p. 5]. Other sources of income included profits from investments or savings deposits, small paid jobs or social benefits.

RESULTS OF OWN STUDIES

Food self-supply is an important element of the structure of household budgets, and in particular, farmers, residents of rural areas and less affluent people. In the survey, respondents were asked to what extent they supply (produce) their own fresh food and homemade preserves. This question was answered by 985 respondents. Figure 2 indicates a high level of declared food self-supply in the surveyed households in the rural areas of Mazowieckie Province. In the analysed period, every fifth household produced all the fresh fruit and vegetables as well as homemade preserves consumed and produced by itself. Approximately 44% of household members produced almost half of the food consumed by the household, and only 10.6% of respondents in the surveyed households did not produce any food for their own needs.

Data presented in Table 3 show that the share of food self-supply in the surveyed households decreases with the increase in average household income. Among the more affluent families, the significance of natural consumption is disappearing, which may result from both quantitative and qualitative changes in the availability and diversity of product assortment on the market. In every fourth household with income below PLN 500, the family produces its own food and preserves. Every second respondent, both in the first and second category of household income, declares that almost half of the food is produced on his/her own farm (Fig. 3).

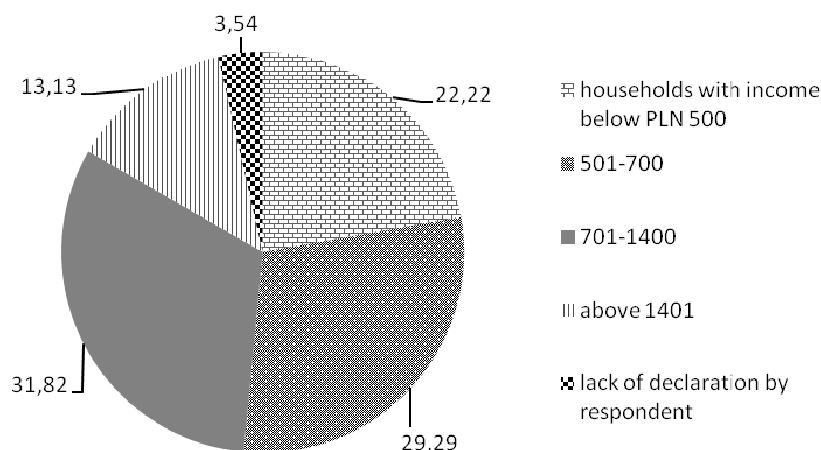


Fig. 2. Degree of food self-supply in surveyed households

Source: Authors' own study based on surveys.

Table 3. The amount of generated income and the share of food self-supply in the consumption of surveyed households

Specification	All the food		Almost half of the food		A portion, less than half of the food		None		Total number of households	
	number	%	number	%	number	%	number	%	number	%
Total	198	20.1	429	43.6	254	25.8	104	10.5	985	100
Income categories of households										
Above PLN 500	44	24.6	83	46.4	35	19.6	17	9.5	179	100
PLN 501–700	58	18.0	167	51.7	78	24.1	20	6.2	323	100
PLN 701–1 400	63	18.5	139	40.9	94	27.6	44	12.9	340	100
Above PLN 1 401	26	21.7	30	25.0	42	35.0	22	18.3	120	100
No response	7	30.4	10	43.5	5	21.7	1	4.3	23	100

Source: Authors' own study based on surveys.

The largest group of respondents who do not produce food for their own needs belongs to the income category of households generating an average monthly income in excess of PLN 1,401 per person.

In the households, where people earn their living from the sales of farm produce, food self-supply has the greatest influence on the food consumption patterns (Table 4). In every second household in this group, almost half of the food is produced in the form of self-supply, while 29.7% of respondents declared a 100% share, and 19.5% declared less than half of the share of self-supply. In the other groups of households, the importance of natural consumption is less pronounced, but still at a fairly high level.

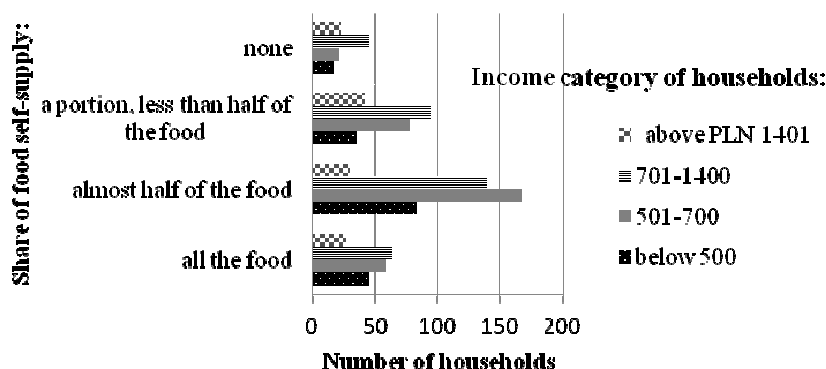


Fig. 3. Share of food self-supply in surveyed households according to income category
 Source: Authors' own study based on surveys.

Table 4. Main sources of generated income and share of food self-supply in the consumption of surveyed households

Specification	All the food		Almost half of the food		A portion, less than half of the food		None		Total number of households	
	number	%	number	%	number	%	number	%	number	%
Total	198	20.1	429	43.6	254	25.8	104	10.5	985	100
Sale of farm produce	108	29.7	179	49.2	71	19.5	6	1.6	364	100
Regular employment	49	13.9	124	35.1	123	34.8	57	16.1	353	100
Disability or retirement pension	12	12.6	41	43.2	25	26.3	17	17.9	95	100
Self-employment	11	21.2	20	38.5	7	13.5	14	26.9	52	100
Regular employment and sale of farm produce	7	11.9	37	62.7	14	23.7	1	1.7	59	100
Regular employment and self-employment	8	18.2	17	38.6	11	25.0	8	18.2	44	100
Other source of income	3	16.7	11	61.1	3	16.7	1	5.6	18	100

Source: Authors' own study based on surveys.

The lowest share of self-supply in fresh food and homemade preserves has been declared by respondents from the group of households involved in regular employment or conducting their own business (self-employment) – Figure 4. In 2012, consumption of all the farm produce was declared by 29.7% of respondents from typically agricultural farms, 21.2% of self-employed respondents, and 13.9% of respondents from households involved in regular employment. Furthermore, a significant portion of respondents (62.7%) from households combining two types of employment declared consumption of almost half of the food produced for the purpose of self-supply.

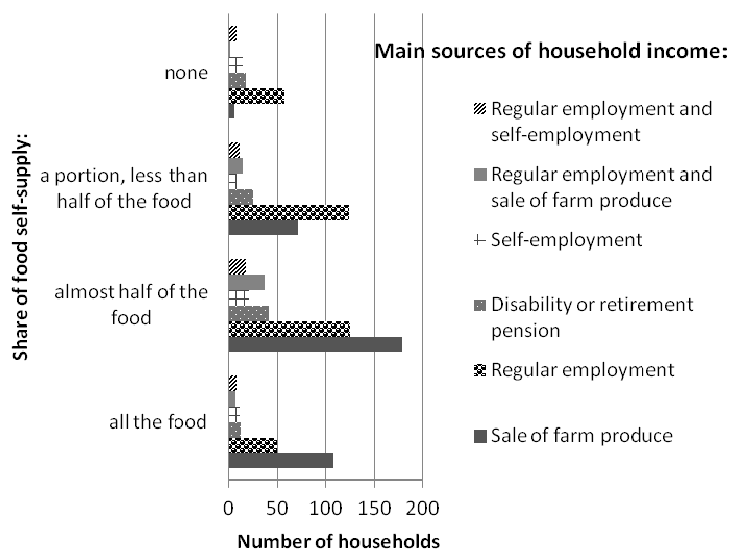


Fig. 4. Share of food self-supply in surveyed households as per main source of income
Source: Authors' own study based on surveys.

CONCLUSIONS

The surveys confirm the hypothesis adopted in the introduction to this article. Indeed, the significance of food self-supply in rural households diminishes with the increase in household income. This is due to the change in the consumption pattern in households, located in rural areas, in which people earn the highest income and there is a growing consumption of more expensive food products purchased on the market [Gulbicka and Kwasek 2007, p. 19]. In the households of farmers, there is also a notable shift from food self-supply to increased purchases on the market, although this group of households still demonstrates a very high level of natural consumption in terms of food. Recently, some households have returned to self-consumption due to the nutritional value of such food products or care about the health of family members and the condition of the natural environment.

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SAMOZAOPATRZENIE ŻYWNOŚCIOWE A DOCHODY WIEJSKICH GOSPODARSTW DOMOWYCH

Streszczenie. Samozaopatrzenie żywnościowe to jedna z form zaspokajania potrzeb żywnościowych, która uzyskiwana jest z pominięciem rynku w gospodarstwach domowych zlokalizowanych na obszarach wiejskich. Na podstawie badań przeprowadzonych w latach 2011 i 2012 w 1000 gospodarstwach domowych w województwie mazowieckim wykazano, że skala samozaopatrzenia jest bardzo duża. Znaczna część gospodarstw domowych deklaruje spożycie świeżych owoców i warzyw oraz przetworów domowych wytworzonych we własnym gospodarstwie domowym. Podstawowym celem artykułu jest ocena zjawiska samozaopatrzenia żywnościowego gospodarstw domowych położonych na obszarach wiejskich województwa mazowieckiego ze szczególnym uwzględnieniem uzyskiwanych przez nie dochodów. Na podstawie studiów literaturowych oraz przeprowadzonych badań sformułowano hipotezę, iż wraz ze wzrostem dochodu w gospodarstwie domowym maleje znaczenie samozaopatrzenia żywnościowego w wiejskich gospodarstwach domowych.

Słowa kluczowe: samozaopatrzenie żywnościowe, spożycie naturalne, dochody gospodarstw domowych, obszary wiejskie

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