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HOUSEHOLD EXPENDITURES AS AN INDICATOR OF LIVING STANDARDS

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ABSTRACT. Expenditures are one of the fundamental indicators of living standards and quality of life. According to Maslow, human needs can be divided into basic and higher-order needs. The structure of expenditures and its changes allow for the identification of economic and social differences between social groups. The study covered the period 2004–2023. The main indicators are the level, structure and relations of expenditures. Households of basic socio-economic groups and by place of residence (rural and urban) were compared. The study showed convergence of the standard of living of rural and urban inhabitants and of farmers and other groups of households. Convergence was primarily the result of a higher dynamics of growth of expenditure of rural in-habitants than of urban inhabitants and of farmers compared to other groups of households. However, significant differences in the expenditure structure remained, with agricultural households characterized by a higher share of basic expenditures, such as food.

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Introduction

Standard of living is a concept generally defined as the quality of existence in terms of the degree to which essential needs are satisfied, the ability to 'arrange one's life,' and the comfort and pleasures of living. In this socio-economic perspective, the standard of living encompasses both the quality and conditions of life, i.e., the overall circumstances characterizing the material, cultural, and social conditions of a society. These include, above all, the financial situation, such as income or wages of the population, working conditions, the level and structure of consumption - particularly the share of food - housing conditions

(including household access to water, gas, electricity, sanitation, and durable consumer goods), as well as the degree and scope of access to healthcare, social services, education, and culture (Piasny, 1993, p. 74).

In this sense, the standard of living depends not only on the extent to which needs are met but also on the resources expended to do so, for example, the amount of time spent working, the burdensomeness of the work, and the way free time is utilized. Therefore, the standard of living is a broad concept that also encompasses specific environmental aspects in which people live, such as clean air and water, as well as safety. Subjective evaluations of life satisfaction, psychological well-being, job satisfaction, social relationships, and the quality of leisure time are also of importance.

In Polish literature, definitions of standard of living, quality of life, and living conditions "are consistent with the concepts of UN expert committees, according to which the notion of standard of living encompasses the overall actual conditions of people's lives, that is, the degree of material and cultural satisfaction of their needs through the flow of paid goods and services as well as those derived from social funds" (Piasny, 1993, p. 74). Living conditions refer to specific material and environmental aspects in which people live, such as access to housing, healthcare, education, clean air and water, as well as safety.

The standard of living is most often identified through the lens of the sequence in which needs are satisfied. The concept of a "need" refers to a state in which a person experiences a lack of something that motivates action, or a state accompanied by a sense of unfulfillment, which drives efforts to address certain deficiencies. Needs are inherent to every individual and constitute an integral part of human life. Satisfying one need often generates the desire to satisfy the next.

The American psychologist Abraham Maslow (1908–1970) formulated a theory in which human needs are arranged in a hierarchy. In 1943, he published his book A Theory of Human Motivation, in which he introduced the "hierarchy of needs," commonly referred to as "Maslow's pyramid." This is the most widely known theory regarding human needs and the motivations guiding human behavior. Based on his research, Maslow classified all human needs into basic (lower-order) needs, which are essential for survival, and higher-order needs. He presented the sequence of needs according to their importance: physiological, safety, belonging and love, esteem, and self-actualization. The foundation of the pyramid consists of physiological needs, which are prerequisites for survival and take priority. These include, among others, the needs for sleep, rest, food and water, breathing, avoidance of cold or heat, procreation, having shelter, and clothing. A person whose basic (physiological) needs are unmet will not consider satisfying higher-order needs (e.g., esteem).

For each individual, Maslow's pyramid may be arranged differently, as people satisfy needs to varying extents. Each person is unique, and therefore needs and requirements differ among individuals, often substantially (Maslow, 1943; Banfield, 1992; Li et al., 2018; Trigg, 2004).

1. Literature review

The standard and quality of life constitute a broad and complex socio-economic category, influenced by multiple factors. A report published in 1954 by the United Nations on the harmonization of definitions and methods for measuring the standard of living of the population already recommended the use of more than 40 different indicators grouped into ten categories. "The indicators proposed by the UN Commission were intended to cover: a) health conditions including demographic factors, b) nutrition, c) education including literacy and professional qualifications, d) working conditions, e) employment status and opportunities, f)

transport, g) housing including household equipment, h) overall consumption and accumulation, i) clothing, j) recreation and entertainment, k) social insurance" (Piasny, 1993, p. 75).

In Poland, the national list of socio-demographic indicators recommended the use of as many as 243 social indicators grouped into 16 subsystems, namely: population and family, science and education, labor force and professional activity, socio-occupational structure of the population, income, consumption, population health, housing conditions, culture, physical culture, tourism, tourism and recreation, time budget of the population, social insurance, municipal services, working conditions and occupational safety, environmental protection, and participation of the population in socio-political life (Piasny, 1993, p. 75).

Many analysts argue that an excessively broad range of analytical indicators and their high level of detail may result in a loss of the overall picture. Therefore, a recommended approach is to use, wherever possible, synthetic indicators. Researchers emphasize that the primary indicators characterizing the standard of living are income level and structure, expenditures, and food consumption. Beyond income, a practical and meaningful indicator is the level and structure of expenditures aimed at meeting needs. Therefore, an important direction of state distributive policy is ensuring of effectiveness of structure of expenditures, particularly, basing on fundamental economic indicators, like the social expenditures multiplier (Yurchyk et al., 2024). The capacity of households to transition from basic to higher-order expenditures is fundamentally shaped by financial inclusion, access to savings mechanisms, and banking stability; these factors enable households to shift consumption patterns and accumulate capital for future needs (Kumaraswamy & Kailasam, 2025).

In Poland, the standard of living has been studied by numerous scholars, including Słaby (1990), Piasny (1993), Chmielewska (2004), Czapiński & Panek (2009), Borys (2015), Panek (2015), Bendkowska et al. (2017), Bywalec (2017), and Chmielewska & Zegar (2020), Jankiewicz & Trojanek (2024). Bywalec points out that "the standard of living should be studied and assessed in three dimensions: wealth, income, and consumption. It is, of course, possible to limit the analysis to only one of these dimensions and draw conclusions about the standard of living, but this would provide an incomplete picture. A comprehensive view of the standard of living and its changes can only be obtained if research simultaneously covers all three dimensions. Despite significant developments in methods and research tools over recent decades, it is still not possible to define universal sets of indicators for characterizing specific areas of social and economic life" (Bywalec, 2022, p. 17).

Apart from income, the primary indicator of the degree to which needs are satisfied is expenditure - its level and structure. Expenditures provide information about the satisfaction of basic needs first (e.g., food, clothing, housing, health, transport), and, as household income improves, higher-order needs (e.g., education, culture, recreation, leisure) can also be addressed.

A "need" is a state in which an individual experiences a lack of something. Life needs vary among individuals, as each person is unique. However, there are universal needs without which a human cannot function. Over the years, numerous theories have been developed regarding needs and their crucial motivational role. One of the most well-known is Maslow's hierarchy of needs. Maslow divided human needs into two primary groups: basic (lower-order) needs and higher-order needs. However, before an individual can pursue higher-order needs, they must first satisfy lower-order needs. In Maslow's hierarchy, physiological needs occupy the lowest level and form the foundation for all other needs. These include fundamental human requirements such as food, water, sleep, breathing, and physical health.

Basic needs also include non-physiological essentials such as housing, clothing and footwear, employment, financial security, and healthcare. Higher-order needs encompass support, protection from threats, belonging, love, and self-actualization.

In the present study, the following needs were selected for analysis:

Basic needs – food; clothing and footwear; housing; health

Higher-order needs – transport and communication; education; recreation and culture; restaurants and hotels

Basic needs are related to human biological survival. Food fulfills a primary function in human life by addressing hunger, providing water and oxygen, and supporting sleep. It is considered a lower-order need, meaning that eating is essential for life. Food is among the most fundamental human needs, alongside shelter and clothing, as it nourishes the body and sustains basic life functions (Maslow, 1943; Banfield, 1992; Li et al., 2018; Trigg, 2004).

Clothing and footwear are also basic needs, particularly in the context of physiological requirements. Meeting these needs, such as protection against cold, rain, and other environmental factors, is necessary for proper functioning and survival. In Maslow's pyramid, "clothing and footwear" are placed at the lowest level alongside physiological needs, forming the foundation for satisfying higher-order needs.

Housing, including its use and amenities, is regarded as a basic need. It satisfies primary living needs, safety requirements, and aspects related to the development of the individual and their family. Modern housing addresses a variety of material, social, and cultural needs. As civilization advances, housing increasingly fulfills complex individual and collective needs. "At the initial stages of human civilization, housing primarily satisfied basic needs such as protection from environmental conditions, rest and sleep, food preparation, and child-rearing. Scientific and technological advancements in construction have progressively raised expectations for housing standards. The concept of housing use has also fundamentally changed: digital networks and media have integrated professional and public life into homes. In contemporary information societies, suburbanization is increasingly observed, with higher-income young city residents moving to single-family homes in suburban or rural areas surrounding major cities" (Gawron, 2012, pp. 7–8, 13, 15).

Health, considered a basic need, falls under both physiological and safety categories. It is seen as a fundamental requirement, necessary for pursuing higher-order needs. Illness can hinder social interactions, self-respect, and opportunities for self-actualization. Therefore, health is recognized as a basic need both biologically and psychologically, and its fulfillment is essential for proper functioning and personal development. Individuals need to feel secure regarding their health and have access to medical care. A lack of health can negatively affect other needs, such as belonging, esteem, and self-actualization. Obvious patterns of changes and their impact on economic behaviour were obtained during pandemic crisis (Baláková et al., 2025; Mishchuk et al., 2023). Besides, some health needs are manifested constantly regardless the economic situation encouraging households for changes in employment and saving (Jarząbek & Stolarska-Szeląg, 2024; Kozłowski & Komorowska, 2024).

Higher-order needs, not classified as basic physiological requirements like food or sleep, play a key role in the development and functioning of humans as social and spiritual beings.

Transport and communication are not considered basic physiological needs, yet they are essential for satisfying secondary needs and for the functioning of society and the economy. Transport enables the movement of people and goods, while communication ensures information transfer. These are critical for education, culture, work, commerce, access to services, and overall social interaction. Transport and communication are closely interconnected; their absence significantly hinders daily functioning and development. Both are key elements of a country's economic infrastructure, supporting education, culture, and

increasingly enabling online shopping, bill payment, and banking services. They facilitate globalization while reducing the reliance on personal transport. Transport has accompanied humanity since the earliest stages of civilization (Truskolaski, 2006).

Culture, defined by Edward Burnett Tylor, a pioneer of cultural anthropology, as "that complex whole which includes knowledge, beliefs, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society"[1] (Tylor, 1893, p. 15), is not a basic physiological need. Culture encompasses both material and immaterial elements that shape human life and social interactions. Cultural values provide members of a society with identity, mutual communication, continuity, and meaning, essential for the survival and proper development of the community. These values may be tangible (e.g., art, literature, food) or intangible (e.g., social norms, ethical standards, religious beliefs).

Education is not a basic physiological need but is essential for personal development and self-actualization, making it a crucial element in the hierarchy of needs. Fulfilling educational needs contributes to feelings of security, belonging, esteem, and enables individuals to reach their full potential.

Recreation (from Latin recreo – to renew, revive) is a form of active leisure undertaken outside professional, social, domestic, and academic obligations. It is not considered a basic physiological need such as food, water, or sleep. Recreation serves the purposes of rest and entertainment; however, it is important for mental health and well-being and may indirectly affect physical health, thus being classified as a psychosocial need. This is consistent with findings that minimalism, framed within the Theory of Planned Behavior and reinforced by collectivist cultural values, can significantly encourage sustainable consumption among Generation Z consumers (Boadziwa Sackey et al., 2025; Chikosha & Potwana, 2021).

2. Methodological approach

The topic of standard of living broadly concerns the economic and social conditions of households according to socio-economic groups (the term "occupational groups" is also used interchangeably). A variety of socio-economic indicators are employed to explain the standard of living of the population. Among these are the level and structure of income as well as the directions of its allocation, which are reflected in the expenditure structure. Expenditures are carried out within the limits of a given income. In the studies discussed in this article, the primary empirical material consists of household budget survey results. These allow for the assessment and comparison of the standard of living among major socio-economic groups of households, as well as residents of rural and urban areas, and for identifying the causes of disparities.

Since 2005, household budget surveys have classified households according to five main socio-economic groups in the country. These are: employee households, farmer households, self-employed households, pensioner and retiree households, and households sustained from non-earning sources (the latter are few in number and therefore not published). Studies on the standard and quality of life are conducted using a representative and rotational method, which allows generalization of the obtained results to all households in the country with a specified error margin. The primary indicators used include the change index (comparison with the level in previous years) and the diversification index (comparison with

[1] Sir Edward Burnett Tylor (b. October 2, 1832 – d. January 2, 1917) was an English archaeologist, anthropologist, and ethnologist, recognized as a representative and pioneer of cultural anthropology. In 1912, he was knighted in recognition of his scientific contributions. He is the author of the work published in 1871 entitled Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art and Custom, which examines the development of belief systems, language, art, and customs.

levels across different household groups). In the present study, the primary indicator of standard of living was selected from the consumption dimension, i.e., expenditures - their level, structure, changes, and interrelations.

For the purposes of this study, data from Statistics Poland (GUS) for the years 2004–2023 (X1…X20) were used, covering the period in which Poland was a member of the EU. This selection allows tracing how household expenditures of farmers changed relative to other occupational groups under relatively stable geopolitical conditions. Such an approach enables capturing potential differences in the dynamics of transformations and their structure. Changes will be described using the variability index and the coefficient of variation, calculated as:

$$v = s / \bar{x} * 100\%$$

where s = standard deviation, and $\bar{x}$ is the arithmetic mean. Changes in expenditure structure will be analyzed using Spearman's rank correlation coefficient and OLS regression. This approach allows not only for assessing the strength and direction of covariation between variables but also for determining the extent to which the model explains this covariation.

3. Conducting research and results

Between 2004 and 2023, household expenditures increased across all socio-economic groups, with the highest growth observed in households of manual workers (161.6%) and pensioner households (161.1%). A substantial increase was also recorded among farmer families (145.6%), exceeding the national average growth of 135.4%. In the remaining household groups, growth dynamics were lower: for retirees, expenditures increased by 108.6%; for all employees, by 123.4%; for non-manual employees, by 86.4%; and for self-employed households, by 117.8% (Table 1).

At the beginning of EU accession, household expenditures accounted for over 90% of their incomes in all socio-economic groups. In the post-accession period, this situation improved significantly. The share of total expenditures in income decreased on average from 94.3% in 2004 to 61.1% in 2023. A reduction in the share of expenditures relative to income was observed in all socio-economic household groups, with the highest decline among farmers, by 42.9 percentage points (from 93.8% to 50.9%). The share of expenditures on food and non-alcoholic beverages within total expenditures also decreased across all household groups, except for non-manual employees, self-employed households, and retirees, where an increase was recorded (Table 1).

Table 1. Household expenditure levels (2004–2023, current prices)

Gospodarstwa domowe	2004	2023	2004	2023	2004	2010	2015	2020	2023	2023 / 2004 %
	Share of total expenditures in income (%)		Share of food expenditures in total expenditures (%)		Average total monthly expenditures per person (PLN, current prices)					
Grand total	94,5	61,1	28,1	27,2	695	991	1091	1210	1636	235,4
Employees	91,8	60,2	25,4	26,6	718	979	1076	1186	1604	223,4
- manual labour positions	92,9	59,7	31,2	30,0	518	740	842	976	1355	261,6
- non-manual labour positions	91,0	60,6	21,5	24,4	973	1288	1361	1374	1814	186,4
Farmers	93,8	50,9	37,9	31,9	507	757	779	840	1245	245,6
Self-employed	91,4	56,2	23,4	23,5	855	1207	1311	1412	1862	217,8
Retirees and pensioners	97,7	67,3	29,9	29,6	761	1041	1181	1321	1738	228,4
- retirees	96,4	66,8	28,9	29,4	838	1085	1221	1336	1748	208,6
- pensioners	101,1	74,8	32,4	31,8	619	866	997	1200	1616	261,1

Source: own study based on GUS data (Household budgets).

Changes in the above indicators between 2004 and 2023 - namely, the decrease in the share of total expenditures in income and the reduction in the share of food expenditures in total expenditures - indicate an improvement in the standard of living, particularly for agricultural families, assuming that this was accompanied by growth or stability in savings. Conversely, if savings decrease, "one may speak of a tendency for increased current consumption expenditures at the expense of saving" (Bylok, 2004, p. 317).

However, in three household groups - non-manual employees, retirees, and the self-employed - an increase in the share of food expenditures in total expenditures was observed. This increase, despite higher household affluence, is likely explained by the purchase of a wider range of food products, including luxury and therefore more expensive items.

Analysis of household expenditure structures indicates an improvement in the standard of living in the post-accession period following Poland's EU membership (Tables 2 and 3). In 2023, compared to 2004, households spent less on basic products, particularly food, and more on higher-order needs, among which the most notable increase was in expenditures on the category labeled "restaurants and hotels." The opening of borders and the development of tourism services increased demand for individual trips as well as group excursions and pilgrimages. This is associated with the need to allocate a larger portion of household income to cover costs of staying away from home, often at the expense of other important needs. At the same time, these expenditures serve an important role in activating local communities, particularly among the elderly and socially isolated, thus promoting social cohesion (Chmielewska, 2025). The clustering of Ukrainian regions based on tourism development demonstrates how statistical segmentation can clarify spatial disparities - an approach equally relevant in evaluating household spending patterns (Shpak et al., 2022; Termosa, 2017).

Table 2. Household expenditure structure (2004–2023, current prices)

Household groups	2004	2005	2006	2010	2015	2020	2021	2022	2023	Increase (+) Decrease (-) 2023-2004
	Structure in % (Total expenditures = 100%)									
Expenditures on basic needs										
Food and non-alcoholic beverages										
Grand total	28,1	28,1	27,1	24,8	24,0	27,7	26,4	26,7	27,2	(-)
Employees	25,4	26,3	25,5	23,5	22,9	26,8	25,6	26,0	26,6	(+)
- manual labour positions	31,2	32,0	30,5	28,0	26,6	29,9	28,7	29,3	30,0	(-)
- non-manual labour positions	21,5	21,9	21,6	20,1	20,1	24,8	23,7	23,9	24,4	(+)
Farmers	37,9	36,1	35,2	31,5	31,3	35,2	32,3	32,1	31,9	(-)
Self-employed	23,4	23,6	22,6	21,0	20,5	24,0	23,6	23,5	23,5	(+)
Retirees and pensioners	29,9	30,4	29,6	28,1	26,6	30,2	28,7	29,2	29,6	(-)
- retirees	28,9	29,5	28,9	27,7	26,3	30,1	28,5	29,1	29,4	(+)
- pensioners	32,4	33,2	24,4	30,3	28,7	31,3	30,3	30,6	31,8	(-)
Clothing and footwear										
Grand total	4,9	5,1	5,4	5,3	5,4	4,1	4,4	4,2	3,8	(-)
Employees	5,7	5,8	6,1	5,9	6,1	4,7	5,0	4,6	4,2	(-)
- manual labour positions	4,9	5,2	5,5	5,1	5,5	4,2	4,4	4,2	3,7	(-)
- non-manual labour positions	6,2	6,3	6,7	6,5	6,5	5,0	5,3	4,9	4,5	(-)
Farmers	5,3	5,3	5,7	5,2	5,6	4,5	4,4	4,7	4,2	(-)
Self-employed	6,0	6,7	7,1	6,8	6,6	5,1	5,5	4,9	4,6	(-)
Retirees and pensioners	3,4	3,3	3,5	3,1	3,5	2,3	2,5	2,6	2,4	(-)
- retirees	3,4	3,3	3,5	3,1	3,6	2,3	2,5	2,6	2,4	(-)
- pensioners	3,3	3,2	2,6	3,1	3,2	2,1	2,3	2,4	2,2	(-)
Use and equipment of dwelling/house (total)										
Grand total	20,3	19,6	19,7	20,2	20,1	18,8	19,0	19,0	24,7	(+)
Employees	19,3	18,4	18,4	18,8	19,0	17,9	17,8	18,1	24,1	(+)
- manual labour positions	21,0	19,6	19,9	20,8	20,7	18,9	18,9	19,2	24,7	(+)
- non-manual labour positions	18,1	17,5	17,2	17,3	17,7	17,3	17,1	17,3	23,7	(+)
Farmers	14,0	16,6	16,3	18,5	17,2	16,1	19,1	16,7	23,1	(+)

Self-employed	17,3	16,6	16,9	17,3	17,9	16,5	16,4	16,2	22,2	(+)
Retirees and pensioners	23,9	22,8	23,3	24,3	23,5	22,2	23,0	23,4	27,5	(+)
- retirees	23,8	22,6	23,0	24,1	23,3	22,1	22,9	23,2	27,5	(+)
- pensioners	24,3	23,4	18,6	25,6	24,5	23,1	23,5	25,0	28,6	(+)
					Health					
Grand total	5,0	5,0	4,9	4,8	5,3	5,3	5,6	5,5	5,2	(+)
Employees	3,6	3,6	3,6	3,8	4,3	4,2	4,6	4,7	4,3	(+)
- manual labour positions	3,2	3,2	3,2	3,3	3,9	3,9	4,1	4,3	4,0	(+)
- non-manual labour positions	3,9	4,0	4,0	4,2	4,7	4,5	5,0	4,9	4,5	(+)
Farmers	4,1	3,7	3,6	3,7	4,3	4,5	4,1	5,1	4,4	(+)
Self-employed	3,5	3,4	3,5	3,9	4,4	4,5	4,8	4,8	4,6	(+)
Retirees and pensioners	8,2	8,4	8,1	7,8	8,1	8,5	8,6	8,3	7,9	(-)
- retirees	8,4	8,6	8,3	7,8	8,2	8,5	8,7	8,4	8,0	(-)
- pensioners	7,6	7,7	5,7	7,5	7,8	8,7	8,0	7,2	7,4	(-)

Source: own study based on GUS data (Household budgets).

Table 3. Household expenditure structure (2004–2023, current prices)

Household groups	2004	2005	2006	2010	2015	2020	2021	2022	2023	Increase (+) Decrease (-) 2023-2004
	Structure in % (Total expenditures = 100%)									
	Expenditures on higher-order needs									
	Transport and Communication (combined)3									
Grand total	13,7	14,2	13,9	13,9	13,8	13,7	14,2	14,1	13,2	(-)
Employees	15,3	16,1	15,6	15,2	15,2	15,1	15,6	15,0	14,3	(-)
- manual labour positions	13,4	13,8	14,0	14,0	14,6	15,2	16,2	15,4	14,8	(+)
- non-manual labour positions	16,6	17,9	16,9	16,1	15,6	15,0	15,2	14,8	14,0	(-)
Farmers	14,9	14,6	15,9	15,8	15,9	15,0	15,4	16,9	14,3	(-)
Self-employed	18,8	17,7	16,7	16,2	14,7	14,4	14,2	14,6	13,2	(-)
Retirees and pensioners	10,1	10,3	10,0	10,1	10,3	10,1	10,5	10,9	10,1	b.z.
- retirees	10,2	10,6	10,2	10,4	10,4	10,3	10,6	11,0	10,3	(+)
- pensioners	9,6	9,5	7,1	8,7	9,2	8,8	9,1	9,8	8,5	(-)
	Recreation and Culture									
Grand total	6,8	6,8	7,1	8,0	6,7	5,7	6,0	6,1	6,2	(-)
Employees	8,0	7,6	7,8	8,8	7,2	5,9	6,3	6,5	6,3	(-)
- manual labour positions	6,3	5,9	6,1	6,8	5,4	4,8	4,8	5,0	4,6	(-)
- non-manual labour positions	9,2	8,9	9,2	10,3	8,6	6,7	7,2	7,4	7,3	(-)
Farmers	4,5	4,3	4,5	5,1	4,8	4,0	4,2	3,8	5,2	(+)
Self-employed	8,9	9,5	9,7	10,4	8,9	7,9	8,1	7,8	8,7	(-)
Retirees and pensioners	5,2	5,4	5,6	5,8	5,2	4,5	4,7	4,6	4,8	(-)
- retirees	5,4	5,6	5,8	5,9	5,3	4,5	4,7	4,7	4,9	(-)
- pensioners	4,7	4,7	4,0	5,3	4,7	4,6	4,3	4,2	4,6	(-)
	Education									
Grand total	1,5	1,3	1,4	1,3	1,0	1,0	1,1	1,2	0,9	(-)
Employees	2,2	1,8	1,9	1,7	1,3	1,2	1,4	1,5	1,0	(-)
- manual labour positions	1,5	1,2	1,3	1,1	0,7	bd	0,8	0,8	0,6	(-)
- non-manual labour positions	2,6	2,3	2,4	2,1	1,8	1,6	1,7	1,9	1,3	(-)
Farmers	1,0	1,0	1,1	0,7	0,6	0,5	0,3	0,5	1,0	b.z.
Self-employed	2,1	1,8	1,8	1,6	1,5	2,1	2,4	1,9	1,6	(-)
Retirees and pensioners	0,5	0,4	0,4	0,3	0,2	0,1	0,1	0,1	0,1	(-)
- retirees	0,4	0,4	0,4	0,3	0,2	0,1	0,1	0,1	0,1	(-)
- pensioners	0,6	0,4	0,4	0,3	bd	bd	bd	bd	bd	bd
	Restaurants and hotels									
Grand total	1,8	1,9	2,0	2,3	4,2	3,8	4,1	4,6	5,1	(+)
Employees	2,2	2,1	2,3	2,6	4,5	4,2	4,4	5,1	5,4	(+)
- manual labour positions	1,7	1,8	1,9	1,8	3,6	3,0	3,1	4,1	3,6	(+)
- non-manual labour positions	2,6	2,4	2,6	3,2	5,2	4,9	5,3	5,7	6,6	(+)
Farmers	0,6	0,7	0,6	0,8	1,9	1,4	1,5	2,7	3,0	(+)
Self-employed	2,6	2,7	2,7	3,6	5,6	5,4	6,1	6,3	7,8	(+)
Retirees and pensioners	1,0	1,0	1,1	1,2	2,8	2,5	2,7	2,9	3,3	(+)
- retirees	0,9	1,0	1,1	1,2	2,7	2,4	2,6	2,9	3,3	(+)
- pensioners	1,2	1,3	1,0	1,3	3,1	3,1	3,0	3,5	3,3	(+)

Source: own study based on GUS data (Household budgets).

Similar to income, the expenditures of agricultural households show a significant disparity compared to other socio-economic groups (Table 4). The smallest disparity was observed in spending on food and non-alcoholic beverages, while the largest occurred in non-basic needs such as education, recreation and culture, as well as restaurants and hotels.

Table 4. Relations of Average Monthly Expenditures per Person in Farmers' Households Compared to Other Socio-Economic Groups, 2004–2023 (current prices, Expenditure Parity Index*)

Household groups	2003	2004	2005	2006	2010	2015	2020	2021	2022	2023
	Expenditure Parity Index of Farmers' Households in Relation to the Expenditures of Other Household Groups (%)									
	Total Expenditures									
Grand total	72	73	77	77	76	71	69	72	78	76
Employees	68	71	78	78	77	72	71	73	80	78
- manual labour positions	92	98	106	104	102	93	86	88	94	92
- non-manual labour positions	51	52	57	58	59	57	61	64	71	69
Farmers	56	59	61	60	63	59	59	63	70	67
Self-employed	66	67	72	72	73	66	64	65	71	72
Retirees and pensioners	59	61	66	67	70	64	63	65	70	71
- retirees	81	82	88	67	87	78	70	72	76	77
	Food and non-alcoholic beverages									
Grand total	102	99	100	100	97	93	88	88	94	89
Employees	108	106	108	108	104	99	93	92	99	93
- manual labour positions	121	119	120	120	115	109	101	99	103	98
- non-manual labour positions	95	92	94	95	92	89	87	87	95	90
Farmers	97	96	95	93	94	91	87	87	96	91
Self-employed	89	85	85	85	82	78	74	74	78	77
Retirees and pensioners	83	79	81	82	80	76	73	73	78	77
- retirees	100	96	97	96	91	85	79	77	79	77

Note: The expenditure parity index was calculated as the ratio of the average monthly expenditures of farmers' households (per person) to the average monthly expenditures of households belonging to particular socio-economic groups (per person), expressed as a percentage.

Source: own study based on GUS data (Household budgets).

Between 2004 and 2023, the average monthly expenditures of farmers' households were the lowest among the studied socio-economic household groups, amounting nominally to PLN 768, which represented 74.0% of total expenditures. Farmers' expenditures in individual categories, relative to other household groups, were generally the lowest or among the lowest. The smallest differences were observed in the category of food and non-alcoholic beverages, where farmers' households spent 94.1%; only manual workers spent less on food in nominal terms. Similar to disparities in tourism-related development revealed through differentiated indicator analysis in Slovakia, variations in household expenditures may reflect broader socio-economic imbalances (Matijová et al., 2023). Studies also show that satisfaction and value perception influence consumers' willingness to pay in tourism contexts, suggesting similar mechanisms may operate in general household expenditure decisions (Rita et al., 2024). Relatively small differences were also noted in expenditures on transport and communication (82.1%). (Table 5).

Table 5. Average nominal total expenditures of households (per capita) in Poland, 2004–2023 (PLN – average per month per person)

Specification	Grand total	Households, of which					
		of employees			of farmers	of the self-employed	of retirees and pensioners
		total	in				
			manual labour positions	non-manual labour positions			
Total (PLN)	1038	1030	817	1277	768	1236	1121
Ratio of farmers to given group (%)	74,0	74,6	94,0	60,1	100,0	62,2	68,5
Food and non-alkoholic beverages (PLN)	270	254	233	279	254	274	320
Ratio of farmers to given group (%)	94,1	99,8	108,7	91,1	100,0	92,6	79,3
Alcohol and tobaco (PLN)	27	28	26	30	20	30	29
Ratio of farmers to given group (%)	72,1	70,8	74,8	66,3	100,0	65,6	68,8
Clothes and shoes (PLN)	51	56	40	75	40	75	34
Ratio of farmers to given group (%)	79,2	71,2	100,0	53,2	100,0	53,2	117,1
Housing costs (PLN)	257	246	203	295	169	280	314
Ratio of farmers to given group (%)	65,7	68,8	83,2	57,2	100,0	60,3	53,9
Health (PLN)	53	42	30	56	33	51	92
Ratio of farmers to given group (%)	61,6	78,2	109,2	59,1	100,0	64,5	36,0
Transport and communications (PLN)	144	157	120	201	118	193	115
Ratio of farmers to given group (%)	82,1	75,3	98,8	58,7	100,0	61,4	103,0
Recreation and culture (PLN)	70	75	46	108	36	110	58
Ratio of farmers to given group (%)	51,3	47,9	77,5	33,2	100,0	32,4	61,3
Education (PLN)	12	16	8	25	6	23	2
Ratio of farmers to given group (%)	46,7	36,0	75,3	23,2	100,0	25,5	235,9
Restaurants and hotels (PLN)	37	41	25	58	13	62	26
Ratio of farmers to given group (%)	35,6	32,7	53,9	22,9	100,0	21,6	52,1
Other (PLN)	116	115	86	150	79	137	131
Ratio of farmers to given group (%)	68,1	68,7	91,5	52,7	100,0	57,6	60,3

Source: Autor's own calculations.

Between 2004 and 2023, a similar pace of expenditure growth was observed within individual expenditure categories and across socio-economic household groups. However, significant differences were also noted from the perspective of the economic and social situation of farmers and the processes influencing it. During the study period, the average annual growth rate of total household expenditures amounted to 4.6%, while for farmers' households it was 4.8%.

The average annual growth rate of farmers' household expenditures was higher than the national average in all examined categories, except for food and non-alcoholic beverages, as

well as alcoholic beverages, tobacco products, and narcotics. The relatively low expenditures in these two categories may result from the specific nature of agricultural activities, which allow for partial self-sufficiency, the characteristics of neighborly relationships enabling barter exchange, and the fact that food accounts for a larger share of the expenditure basket in farmers' households than in the general population. In the case of alcohol and tobacco, the informal economy may also play a role.

The largest differences were observed in the categories of education and restaurants and hotels, where the positive growth rate of farmers' household expenditures exceeded the national average by 3.5 and 3.2 percentage points, respectively. A higher positive growth rate was also noted for recreation and culture and housing-related expenditures (by 1.5 percentage points). The fastest average annual growth among farmers' households was recorded for restaurants and hotels (14.1%), housing (6.0%), and recreation and culture (5.6%).

For total expenditures, the highest average annual growth rates were recorded in the categories of restaurants and hotels (10.6%), "other" (5.1%), and health (4.8%). The highest average annual growth rates in housing, education, and recreation and culture may be attributed to rising costs and modernization, as well as reflecting the convergence of living standards between rural and urban areas (Table 6).

Table 6. Average annual growth rate of household expenditure in Poland in 2004-2023 (%)

Specification	Grand total	Households, of which					
		of employees			of farmers	of the self-employed	of retirees and pensioners
		total	in				
			manual labour positions	non-manual labour positions			
Total (PLN)	4,6	4,8	5,2	3,3	4,8	4,2	4,4
Food and non-alkoholic beverages (PLN)	4,4	3,9	5,0	4,0	3,9	4,2	4,4
Alcohol and tobaco (PLN)	4,4	4,2	4,6	2,9	4,2	3,8	5,0
Clothes and shoes (PLN)	3,2	3,5	3,6	1,6	3,5	2,8	2,6
Housing costs (PLN)	4,5	6,0	5,0	3,3	6,0	4,2	4,2
Health (PLN)	4,8	5,3	6,4	4,1	5,3	5,8	4,2
Transport and communications (PLN)	4,4	4,6	5,8	2,4	4,6	2,3	4,5
Recreation and culture (PLN)	4,1	5,6	3,4	2,1	5,6	4,1	4,0
Education (PLN)	1,6	4,9	0,1	-0,6	4,9	2,9	-3,5
Restaurants and hotels (PLN)	10,6	14,1	9,5	8,4	14,1	10,3	11,1
Other (PLN)	5,1	5,0	6,5	3,4	5,0	4,8	4,8

Source: Autor's own calculations.

Between 2004 and 2023, the volatility of farmers' household expenditures amounted to 27.7%, which was 1.6 percentage points higher than the overall coefficient of variation (26.1%). This suggests that farmers' expenditures may have been more sensitive to economic fluctuations than those of other occupational groups. The lowest volatility was observed among the wealthiest groups, namely non-manual workers and self-employed individuals, which may indicate the resilience of these households' budgets to external economic conditions.

The coefficient of variation of farmers' household expenditures was higher than the average in all categories except for food, where V=22.7% compared to 27.2% for total household expenditures in this category. This may be associated with the low elasticity of

demand for food and lower income levels, which make food expenditures less subject to strong fluctuations.

The highest volatility among farmers' households was observed in the categories of restaurants and hotels (76.8%) and health (35.9%). These two categories also exhibited the highest volatility for total household expenditures, although the variability of farmers' households was significantly higher, exceeding the overall figures by 21.5 and 1.7 percentage points, respectively. Similarly, the volatility of farmers' household expenditures was considerably higher than the overall average in the categories of housing maintenance costs (by 6.8 percentage points), recreation and culture (by 9.3 percentage points), and education (by 12.0 percentage points). These changes indicate the occurrence of a convergence process during the study period (Table 7).

Table 7. Coefficient of variation of household expenditure in Poland in 2004-2023 (%)

Specification	Grand total	Households, of which					
		of employees			of farmers	of the self-employed	of retirees and pensioners
		total	in				
			manual labour positions	non-manual labour positions			
Total (PLN)	26,1	26,1	30,7	20,1	27,7	23,8	27,3
Food and non-alkoholic beverages (PLN)	27,2	27,2	29,6	23,7	22,7	24,2	26,9
Alcohol and tobaco (PLN)	22,4	22,4	27,0	18,1	26,8	20,6	30,7
Clothes and shoes (PLN)	20,1	20,1	25,0	15,7	24,0	19,4	19,6
Housing costs (PLN)	25,0	25,0	29,2	19,4	31,8	23,8	26,3
Health (PLN)	34,2	34,2	40,0	27,3	35,9	34,5	28,5
Transport and communications (PLN)	25,1	25,1	35,2	16,2	30,3	16,7	29,1
Recreation and culture (PLN)	20,9	20,9	23,4	17,6	30,2	23,8	24,3
Education (PLN)	17,8	17,8	12,7	10,1	30,8	25,2	37,3
Restaurants and hotels (PLN)	55,3	55,3	58,5	49,9	76,8	57,1	65,0
Other (PLN)	29,3	29,3	37,9	21,9	30,6	26,6	28,9

Source: Autor's own calculations.

During the period 2004–2023, the average annual growth rates of total basic and higher-order expenditures of farmers' households and households overall were comparable. In both cases, however, the growth rate of basic expenditures was noticeably higher (by 1.0 percentage point) than that of higher-order expenditures. The coefficient of variation (V) for farmers' households and households overall also differed noticeably during the study period (by 1.6 percentage points), amounting to 27.7% and 26.1%, respectively. Higher-order expenditures of farmers' households exhibited significantly higher volatility (by 1.3 percentage points) compared to households overall.

Distinct differences were also observed between basic and higher-order expenditures (5.3 percentage points for farmers and 4.6 percentage points overall), with the gap being larger in farmers' households (by 0.9 percentage points). During the study period, the average share of basic expenditures in the expenditure structure of farmers' households amounted to 80.0%, which was 5.3 percentage points higher than in the expenditure structure of households overall.

In nominal terms, differences in farmers' household expenditures were substantial: basic expenditures were on average 20.8% lower, and higher-order expenditures 41.6% lower (26.0% lower on average) compared to households overall. Nevertheless, nominal expenditures

of farmers' households grew noticeably faster than those of households overall: for basic expenditures, the growth rate difference was 9.6 percentage points, and for higher-order expenditures 18.6 percentage points (9.8 percentage points on average).

These observations indicate that, during the study period, a convergence of expenditures occurred; however, farmers' households' expenditures remained noticeably lower, with a larger proportion allocated to basic expenditures (Table 8).

Table 8. Volatility index of total household expenditure and farmers' households in 2004-2023

description	change	avg. (nominal)	avg. share	CAGR	CV
farm householdings					
basic	236,2	614 PLN	80,0%	104,6	26,8%
higher-order	284,0	154 PLN	20,0%	105,6	32,1%
total	245,3	768 PLN	100,0%	104,8	27,7%
total householdings					
basic	226,6	775 PLN	74,7%	104,4	26,2%
higher-order	265,4	263 PLN	25,3%	105,3	30,8%
total	235,5	1038 PLN	100,0%	104,6	27,3%
difference (farm/total)					
basic	9,6 pp.	-20,8%	5,3 pp.	0,2 pp.	0,6 pp.
higher-order	18,6 pp.	-41,6%	-5,3 pp.	0,3 pp.	1,3 pp.
total	9,8 pp.	-26,0%	0,0 pp.	0,2 pp.	0,4 pp.

Source: Autor's own calculations.

Between 2004 and 2023, differences in household expenditure structures were observed across occupational groups. During the study period, expenditures on food and beverages accounted for an average of 33.1% of farmers' household expenditures, the highest share among all groups, and 7.1 percentage points higher than the average for households overall. This indicates a relatively low level of wealth in farmers' households compared to other occupational groups.

In other expenditure categories, the structure of farmers' household expenditures did not deviate as markedly from the average. Nevertheless, significant differences were observed in specific categories: expenditures on housing maintenance were 2.8 percentage points lower, recreation and culture 2.0 percentage points lower, restaurants and hotels 1.9 percentage points lower, while transport and communication were 1.5 percentage points higher. The lower share of expenditures unrelated to basic subsistence needs further confirms differences in living standards between farmers' households and other occupational groups (Table 9, Figure 1).

Table 9. Structure of household expenditures in Poland in 2004-2023 (avg., %)

Specification	Grand total	Households, of which					
		of employees			of farmers	of the self-employed	of retirees and pensioners
		total	in				
			manual labour positions	non-manual labour positions			
Total (%)	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Food and non-alkoholic beverages	26,0	24,7	28,6	21,8	33,1	22,2	28,6
Alcohol and tabaco	2,6	2,7	3,2	2,3	2,6	2,4	2,6
Clothes and shoes	4,9	5,5	4,9	5,9	5,2	6,1	3,1
Housing costs	24,8	23,8	24,8	23,1	22,0	22,7	28,0
Health	5,1	4,1	3,7	4,4	4,3	4,1	8,2
Transport and communications	13,9	15,2	14,7	15,8	15,4	15,6	10,2
Recreation and culture	6,7	7,3	5,7	8,5	4,7	8,9	5,2
Education	1,2	1,6	0,9	1,9	0,8	1,8	0,2
Restaurants and hotels	3,6	4,0	3,0	4,6	1,7	5,0	2,3
Other	11,2	11,2	10,6	11,7	10,3	11,1	11,7

Source: Autor's own calculations.

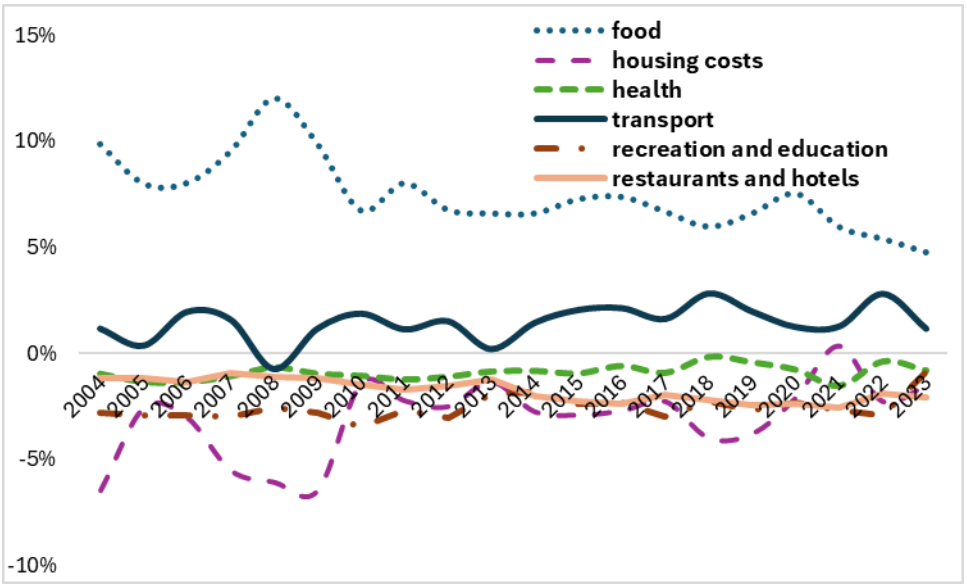

Figure 1. Difference in the structure of household expenditure between farmers and total in 2004-2023

Source: Autor's own calculations.

In 2004, within the expenditure structure of farmers' households, the share of spending on food and non-alcoholic beverages was 9.8 percentage points higher than the share of this category in the expenditure structure of households overall in Poland. Conversely, the share of expenditures related to household equipment and maintenance was significantly lower (by 5.9 percentage points); spending on recreation and culture, as well as restaurants and hotels, was also lower (by a combined 3.6 percentage points).

By 2023, the share of expenditures on food and beverages in farmers' households remained noticeably higher than in households overall, but the difference had decreased to 4.7 percentage points. The share of expenditures related to housing maintenance in farmers' households relative to households overall declined markedly (difference of –1.6 percentage points). However, substantial differences persisted in the share of spending on recreation and culture, as well as restaurants and hotels (–3.1 percentage points).

These observations indicate that differences in expenditure structures decreased over the study period, with farmers' household expenditures becoming more similar to the overall household pattern. This reflects a process of convergence. Nevertheless, food continues to occupy a larger share in farmers' household expenditures, while restaurants, hotels, and recreation and culture represent a smaller share, indicating disparities in income, lifestyle differences, variation in available services, and differences in access to these services (Table 10).

Table 10. Structure of household expenditure of farmers and total households in 2004 and 2023 (%)

Description	Farm households	Total households	Difference (pp.)	Farm households	Total households	Difference (pp.)
	2004			2023		
Food and non-alkoholic beverages	37,9	28,1	9,8	31,9	27,2	4,7
Alcohol and tobaco	2,9	2,7	0,2	2,6	2,6	0,0
Clothes and shoes	5,3	5,1	0,2	4,2	3,8	0,4
Housing costs	18,7	24,6	-5,9	23,1	24,7	-1,6
Health	4,1	5,0	-0,9	4,4	5,2	-0,8
Transport	14,9	14,2	0,7	14,3	13,2	1,1
Recreation	4,5	6,8	-2,3	5,2	6,2	-1,0
Education	1,0	1,3	-0,4	1,0	0,9	0,1
Restaurants and hotels	0,6	1,9	-1,3	3,0	5,1	-2,1
Other	10,1	10,2	-0,1	10,3	11,2	-0,9

Source: Autor's own calculations.

During the study period, the most significant changes in the expenditure structure of farmers' households were observed in the categories of food and housing. The share of spending on food decreased by 6.0 percentage points, whereas the share of spending on housing increased by 4.4 percentage points. The marked decline in the share of food expenditures can be interpreted as an illustration of Engel's law, while the increase in housing-related spending may reflect rising maintenance costs (energy and utility prices, property taxes), as well as improvements in living standards.

Changes in the expenditure structure of farmers' households during the study period were partly similar to those observed for households overall (noting that this aggregate includes farmers' expenditures), yet notable divergences were observed. First, the reduction in the share of food expenditures among farmers was substantially greater than for households overall (by 5.1 percentage points). Second, in farmers' households, the share of housing-related expenditures increased strongly (by 4.4 percentage points) while it decreased slightly in households overall (by 0.5 percentage points). An increase in spending on recreation was also observed among farmers, despite a decline in its share across households overall. Third, the rise in spending on restaurants and hotels was noticeably smaller among farmers' households than in the general population (by 0.9 percentage points). In the remaining expenditure categories, changes in the structure were largely similar between the two groups.

These observations indicate a shift in lifestyle among farmers and a convergence of living standards during the study period (Figure 2).

The covariation relationships in the expenditure structure of farmers' households were examined, specifically regarding the share of spending on food relative to other expenditure categories. According to Engel's law, the share of expenditures on food declines as household income increases, even if nominal food expenditures rise. Tracking the relationships among the shares of individual expenditures can thus provide insights into changes in income, living standards, and lifestyle.

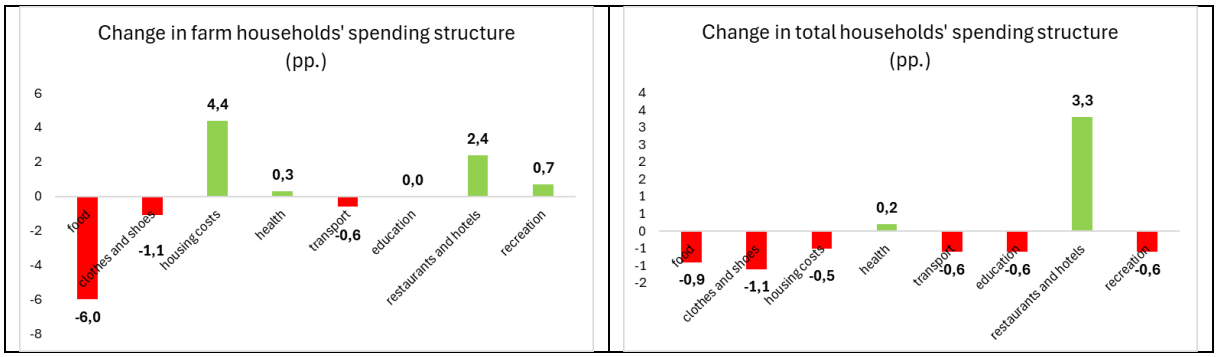

Figure 2. Change in farmers' and total households' spending structure
Source: Autor's own calculations

During the period 2004–2023, changes in the expenditure structure of farmers' households exhibited a strong and statistically significant interdependence between the categories "food and non-alcoholic beverages" and "restaurants and hotels" ($R = -0.77$; $R^2 = 0.59$). The correlation is negative, indicating that as the share of food expenditures decreases, spending on restaurants and hotels increases. The model is well-fitted, explaining 59% of the observed variation. On average, a 0.77 percentage point decrease in the share of food expenditures corresponds to an approximate 1.0 percentage point increase in spending on restaurants and hotels.

In the case of the categories "food and non-alcoholic beverages" and "transport and communication," a moderately strong and statistically significant relationship was observed during the study period ($R = -0.63$; $R^2 = 0.40$). Again, the correlation is negative, implying that a decrease in the share of food expenditures is associated with an increase in spending on transport and communication. The model is moderately well-fitted, explaining 40% of the variation. On average, a 0.63 percentage point decrease in the share of food expenditures corresponds to an approximate 1.0 percentage point increase in spending on transport and communication (Figure 3).

These findings suggest the occurrence of a convergence process over the study period and may indicate changes in lifestyle, including greater mobility and diversification of consumption patterns.

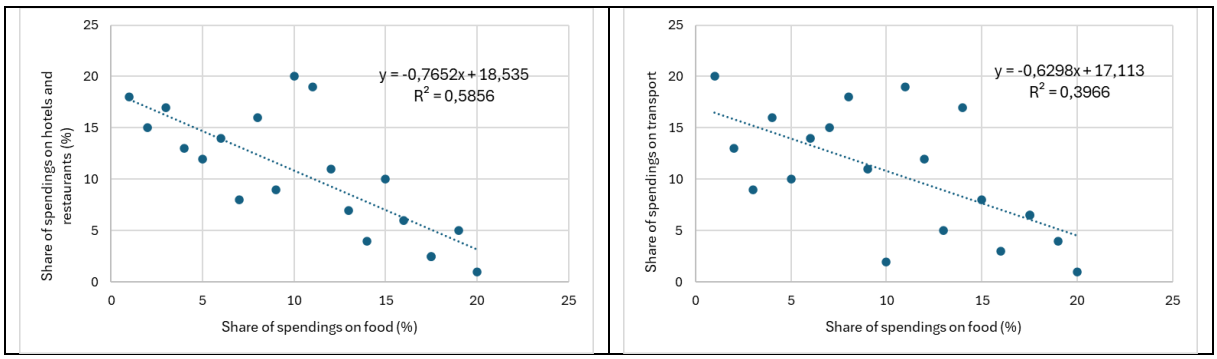

Figure 3. Relation between the share of farmers' households' spending on food and beverages and on hotels and reastaurant and on transport
Source: Autor's own calculations

During the period 2004–2023, changes in the expenditure structure of farmers' households exhibited a strong and statistically significant interdependence between the categories "food and beverages" and "alcohol and tobacco products" ($R = -0.87$; $R^2 = 0.76$).

The correlation is negative, indicating that as the share of spending on food decreases, expenditures on alcohol and tobacco products increase. This may reflect rising incomes and changing consumer preferences, as alcohol and tobacco are often considered luxury goods.

In the case of the categories "food and beverages" and "other" (miscellaneous), a strong and statistically significant co-variation was also observed (R = -0.72; R^2 = 0.52), which can similarly be associated with income growth allowing for increased spending on non-essential goods. In both cases, the results suggest patterns that warrant further investigation, which are beyond the scope of the present study (Figure 4).

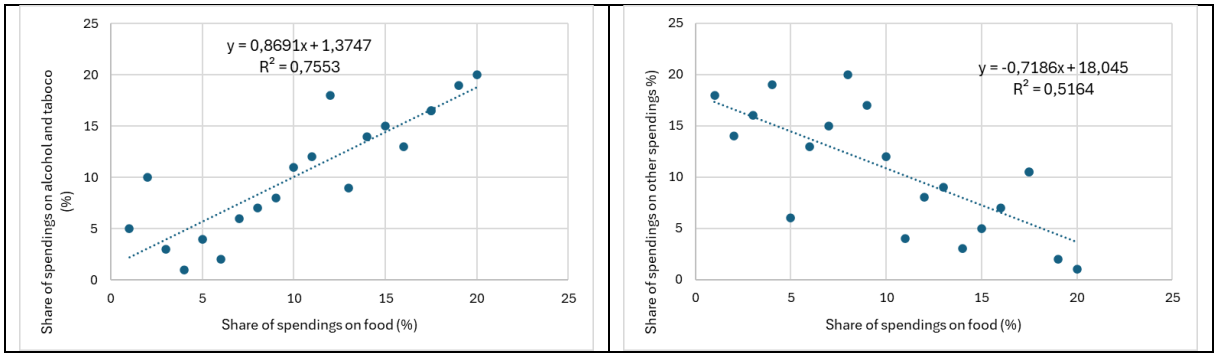

Figure 4. Relation between the share of farmers' households' spending on food and beverages and on alcohol and tobacco products and on other spendings
Source: Autor's own calculations

A moderately strong, yet statistically significant, co-variation was also observed between the share of expenditures on food and education, as well as recreation, and on education alone. The correlation was negative in the first two cases and positive in the last. This indicates that a decrease in the share of spending on food was associated with an increase in the share of spending on education and recreation, while an increase in the share of spending on food corresponded with a rise in expenditures on health.

For the remaining expenditure categories, no statistically significant co-variation was observed (Table 11).

Table 11. Matrix of linear relationships in the expenditure structure of agricultural households from 2004 to 2023

Food and beverages		
Description	R=	R^2=
Clothes and shoes	-0,39	0,15
Housing costs	-0,43	0,19
Health	-0,55	0,30
Recreation and culture	-0,45	0,20
Education	0,48	0,23

Source: Autor's own calculations

Conclusion

Based on the results of the conducted research and on the basis of literature sources the following changes occurred:

Nominal expenditures of farmers' households were the lowest among the examined occupational groups during the study period, accounting for 74.0% of total household expenditures. The closest similarity in nominal terms was observed in food expenditures

(94.1%), while the lowest similarity was noted for restaurants and hotels (35.6%). This indicates a lower standard of living.

Total expenditures of farmers' households grew slightly faster than those of households overall (4.6% vs. 4.4% annually on average). Expenditures on restaurants and hotels as well as housing maintenance grew faster, while spending on food increased more slowly. This reflects improvements in rural income levels and changes in lifestyle.

The variability of total expenditures in farmers' households was noticeably higher than for households overall (V=27.7% vs. V=26.1%). Food and beverage expenditures were less variable (by 4.5 percentage points), whereas expenditures on restaurants and hotels (+21.6 pp) and recreation and culture (+9.3 pp) were substantially more variable. This suggests the occurrence of a convergence process and changes in lifestyle.

The average share of basic expenditures in the structure of farmers' household expenditures amounted to 80.0%, which was 5.3 percentage points higher than the share in households overall. In nominal terms, the differences in farmers' household expenditures were considerable: basic expenditures were on average 20.8% lower, while non-basic expenditures were 41.6% lower (26.0% lower on average).

The structure of farmers' household expenditures changed over the period. The share of expenditures on food and beverages decreased most sharply (by 6.0 percentage points), while the importance of expenditures on housing maintenance (+4.4 pp) and restaurants and hotels (+2.4 pp) increased significantly. This reflects improvements in farmers' household income and changes in lifestyle.

As a result of changes in the expenditure structure of farmers' households, this structure approached that of households overall, while significant differences remained. In particular, the share of food and beverage expenditures continued to be higher in farmers' households than in households overall, averaging 7.1 percentage points higher during the study period, decreasing from 9.9 pp in 2004 to 4.7 pp in 2023.

During 2004–2023, changes in the expenditure structure of farmers' households demonstrated a strong and statistically significant interdependence between the categories "food and beverages" and "restaurants and hotels" ($R=-0.77$; $R^2=0.59$), as well as between "food and beverages" and "transport and communication" ($R=-0.63$; $R^2=0.40$). In both cases, the correlation was negative, i.e., a decrease in the share of food expenditures was associated with an increase in expenditures on restaurants and hotels, as well as transport and communication. The high goodness-of-fit of the models supports the conclusion that this co-variation confirms a convergence process and may indicate changes in lifestyle and increased mobility.

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