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# POVERTY AS A CRITICAL CONSTRAINT TO SUSTAINABLE DEVELOPMENT IN UKRAINE

## ABSTRACT

The article is devoted to the study of the relationship between the size and structure of consumer expenditures of Ukrainian households (as characteristics that largely depend on the economic effectiveness and state income policy) and the potential for intensifying household participation in financing the development of the social sphere (as a prerequisite for Ukraine's approach to the trajectory of sustainable economic development). The theoretical background of the study is formed by the works of C. Boulding, W. Nordhaus and H. Hotelling and scholars united by the research paradigm of the Club of Rome.

According to the methodology of sustainable development theories, the authors interpret the spread and deepening of poverty not only as a direct manifestation (result) of negative trends in socioeconomic life but also as a limitation of opportunities for socioeconomic development in Ukraine. Accordingly, the characteristics of the concentration of consumer expenditures of Ukrainian households are used as the main criterion for assessing their potential to participate in shaping the preconditions for overcoming negative trends in economic efficiency and living standards of the general population. To assess the degree of concentration of consumer expenditures in Ukrainian households, the Herfindahl-Hirschman indices and the Entropy indices are calculated.

The size of the entropy indicator of consumer expenditures of Ukrainian households indicates the inconsistency of their economic behaviour with models of inclusive and sustainable development, and the sustainability over the retrospective period indicates the lack of positive trends in activating the role of consumer expenditures in increasing investment in human capital, which makes it impossible for the social sphere to be sustainable in the context of political unrest, a global pandemic and military conflicts and the militarization of the economy.

**Keywords:** poverty, households, consumer spending, concentration, entropy, development, human capital

**JEL Classification:** D12, H52, I31

## INTRODUCTION

The policy of sustainable development embodies the desire of humanity to avoid forced, undesirable, destructive changes for the well-being and capabilities of society, through a timely and conscious response to the risks and challenges that are expected to become more acute in the future. The core of the theoretical justification of sustainable development policy is the underestimation in current indicators of economic reproduction of the significance of the losses that the ecological system suffers from "cowboy wastefulness" in relation to natural resources, and the social integrity and organicity of society – from violations of the principles of social justice and inclusion. It is this aspect of the theory and the relevant policy that we believe is critically important for modern Ukraine: an early response focused on taking into account the future consequences of the current system of priorities for the use of resource potential and reconciling contradictions in the relations of different social groups can avoid catastrophic resource shortages or institutional quality in the future. Accordingly, it is the ability of the tools of the theory of sustainable development to ensure the sensitivity of current public policy to future problems of social development that makes it an extremely important component of theoretical and analytical support for the development and implementation of public

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policy. Indeed, the critical limitations that the militarization of the economy and the destruction of established ecological and social systems impose on the ability to maintain the well-being of Ukrainian households make it extremely difficult to take into account the long-term consequences of current policy parameters.

In particular, in this article we will try to assess both immediate and long-term consequences of the level of well-being observed for Ukrainian households in the pre-war period for the characteristics of the development trajectory achievable for society; determine to what extent the level and sources of improvement of the well-being of Ukrainian households are consistent with the principles of sustainable development; whether it is possible to expect that the adaptation of household behaviour to the available economic opportunities will allow to use the levers and resources of growth and sustainable development in the future.

## LITERATURE REVIEW

The theoretical basis of the concept of sustainable development is traditionally seen as the result of mainly two areas of fundamental research. The first was formed by the works of C. Boulding, W. Nordhaus and H. Hotelling, who laid the theoretical foundations for "economic reproduction and growth in the context of a 'spaceship, not cowboy waste' (Boulding, 1966); defined the principles of taking into account externalities generated by carbon energy and refining indicators of macroeconomic results of the national economy, taking into account the impact of climate change (Ferreira da Cunha and Missemer, 2020; Nordhaus, 1995).

The second group consists of economists who worked under the auspices of the Club of Rome and developed their own conceptual framework for identifying growth, which is coordinated with the rate of reproduction of the resource base of production. At the same time, the concept of sustainability was introduced precisely because of the coordination of growth rates and sources with the ability of the natural system to compensate for anthropogenic impact (Daly, 2002). To a certain extent, this is the reason for the name that has been given to the economists who developed the theoretical basis for the reports of the Club of Rome – "new Malthusians" (Wijkman and Skånberg, 2017).

After all, mathematical models that compare the rate of increase in the scale of natural resource extraction necessary to maintain the current rate of consumption expansion with the reserves of absolutely limited natural resources and, in general, the ability of ecosystems (as a source of resources and conditions necessary for the functioning of production) to reproduce are a traditional "Malthusian" tool. Thus, Malthus' theory was based on what seemed to be a transparent and convincing contrast between the growth rate of needs (which, according to the model of demographic reproduction before industrial society, was set at a geometric progression, in line with population growth) and the growth rate of production capabilities (which, given the pronounced capital deficit and the dominance of material production, was set at an arithmetic progression). Hence, there was a seemingly "perfect" justification of the pattern of poverty, first, and second, of catastrophic mechanisms of population reduction: The "surplus" produced by favourable conditions of reproduction is naturally eliminated through famine, epidemics, or wars (Malthus, 1798). A practically "Malthusian" theory of developmental constraints for countries with predominantly agricultural production was formulated by H. Leibenstein in the twentieth century: increasing yields reduce mortality, and the corresponding increase in population leads to the fragmentation of land and destroys the basis for yield growth (Leibenstein, 1957).

Fortunately, the explanatory power of the above theories is very limited in a society with a developed industrial complex, and more importantly, with a sufficiently adaptive system of institutions capable of providing sufficient attractiveness and resources for innovative economic activity. For example, it was institutional changes that turned Malthusian predictions into a classic example of a gloomy warning being successfully refuted by history: radical changes in gender relations, the growth of women's employment outside the household and child-rearing destroyed the "inseparable" link between income growth, a decrease in infant mortality, and accelerated population growth, according to Malthus. Thus, it is important that without a change in the institutions (formal and informal rules that led to high fertility) that ensured the "demographic transition" and stabilization of population against the background of rapid growth in productivity, income, and quality of life, neither the formation of a mass consumer society (Rostow, 1960) nor the emergence of a welfare state (Pigou, 1920) could have become a reality, and the dire Malthusian predictions had every chance of coming true.

Similarly, Leibenstein's model of development blockage implicitly assumes institutional stability: society faces the link between "population growth - land fragmentation and productivity decline" postulated by Leibenstein only if it is unable to transform the forms of management and avoid fragmentation of typical land tenure by replacing small farms with large agricultural enterprises. Such a replacement poses its own risks and problems (Meier et al., 1995), but three fundamental principles are important for the methodology of our study, which stems from both Malthusian and behavioural modern theories of differentiation of the level of development of national economic systems.

First, poverty is a significant constraint on development, narrowing the range of policy choices and the ability to intensify such development to the limit (Adelman, 2021; OECD, 2012; Stiglitz, 2013; Verba, et al., 2023). At the same time, poverty is interpreted primarily on the basis of deprivation from quality, i.e., those that truly ensure high social and professional mobility of education and medicine (Deaton, 1997), financial services, primarily affordable credit (Duflo, 2018), and administrative services that allow for prompt asset management and change of their forms with minimal risks (Soto, 2017).

Secondly, the actions of households in poor countries (respectively, countries with weak institutions), which are quite rational in terms of personal well-being, block the opportunities for social development, often through forms of adaptation to the opportunities provided by the policy, which are not expected by policymakers, and more often, the provision of which is only declared (Meier et al., 1995; Verba, et al., 2023; Deaton, 1997).

Finally, thirdly, despite the fact that households choose a certain model of behaviour (including the one that blocks the levers of development activation envisaged by policymakers) under the direct pressure of resource constraints, primarily the lack of income to invest in human capital, in fact, the decisive reasons that block their ability to engage in the processes of generating impulses for growth and development are institutional barriers, in particular those related to the shortcomings of public policy (Deaton, 1997; Duflo, 2018; Soto, 2017).

For Ukraine, the problem of the lack of household resources to contribute to the formation of the development resource potential has been repeatedly emphasized by domestic scientists (Verba et al., 2023; Kyrylenko et al. 2024). They substantiated the significant negative impact of the monopoly of budget expenditures as a source of financing for the social sphere on the effectiveness of the development of investments in human capital (Verba et al., 2023a). Of course, with the beginning of the full-scale military invasion of Russia, the limitations faced by the policy of sustainable development of the Ukrainian economy, due to the inconsistency of the structure of the population's consumer expenditures with the requirements of the sustainable development model, and due to the weak sensitivity of such expenditures to the levers of state financial policy (Yurij, 2008), became even more significant. In essence, the life activities of Ukrainian households, and state social policy (Sydorova, 2017) have become assigned towards meeting basic needs, which directly contradicts the structural changes envisaged by the sustainable development model.

## AIMS AND OBJECTIVES

Accordingly, the aim of this article is to test the tools for empirical assessment of the adequacy of the size and structure of household consumer expenditures to the requirements of sustainable development of the national economy and to find reserves for increasing the effectiveness of government policy to empower households to participate in improving the conditions for financing the social sphere, increasing the rate of human capital accumulation and bringing Ukraine closer to the trajectory of sustainable economic development.

## METHODS

We view poverty as a key element of the system of constraints that society faces in accumulating resources for growth and transforming the results of such growth into a driving force for social development. The theoretical background of this vision is related to the "microeconomic models of development" that were initiated by E. Engel (Chai, Moneta, 2012) and later became the basis for assessing the results of public policy that are directly manifested in changes in living standards, the volume and structure of consumer spending, and the economic well-being of households (Cline, 2004).

To estimate the prevalence of poverty, we use the share of households whose equivalent total per capita income is less than the actual subsistence level. This characterization somewhat underestimates the poverty incidence even by the monetary criterion, since it does not take into account the share of income used for non-consumption expenditures. After all, the level of monetary well-being is directly manifested through consumer spending, and not all households whose total income exceeds the subsistence level spend enough to maintain the level of consumption set out in the subsistence level. The source of data is the State Statistics Service of Ukraine's data on consumer expenditures of households with different equivalent total per capita incomes (SSU, 2014 – 2024).

To assess the depth of poverty, we use an indicator directly related to economic well-being - the amount of household consumption expenditures. To ensure its comparability with the size of the actual subsistence minimum, we used the following formula to determine the consumer expenditures per person ( $CSpc$ ):

$$CSpc = \frac{CShh}{NPe}, \quad (1)$$

where:  $CShh$  – household consumption expenditures, UAH/month;  $NPe$  – average equivalent household size, persons;

This indicator is then compared with the actual subsistence minimum to determine the relative depth of poverty, i.e. the percentage of actual consumption expenditure per person of equivalent household size that is insufficient to bring this expenditure equal to the actual subsistence minimum:

$$CSR = 100 - \frac{CL}{CSpC} \times 100, \quad (2)$$

where:  $CL$  – actual subsistence minimum (monetary poverty line), UAH/month.

The resulting indicator is interpreted as the microeconomic depth of poverty – it reflects the ratio of actual expenditures of a representative household to the monetary poverty standard and, accordingly, does not take into account the prevalence of poverty as a factor in the scale of resources needed to compensate for the shortfall in actual expenditures to the monetary poverty standard for all households with equivalent per capita incomes below this standard. A similar indicator is provided for in the "Methodology for Comprehensive Poverty Assessment" approved by the Order of the Ministry of Social Policy of Ukraine, where it is referred to as "the average income deficit of the poor" (MSPU, 2017).

To determine the depth of poverty at the macro level (i.e., taking into account both the gap between the expenditures of a representative household and the monetary poverty standard and the number of households whose actual consumer expenditures are less than the actual subsistence level), a macroeconomic indicator of the scale of resources needed to compensate for the expenditure gap of all households was calculated:

$$GT = \frac{(CL - CSPhh) \times NPhh}{CShh \times Nhh} \times 100, \quad (3)$$

where:  $CSPhh$  – Specific consumer expenditures per capita for "poor" households (those whose equivalent average per capita income is less than the actual subsistence level), UAH/month;  $NPhh$  – the number of "poor" households (those whose equivalent average per capita income is less than the actual subsistence level);  $Nhh$  – is the total number of households;  $CShh$  – average consumer expenditures for all households, UAH/month.

The numerator of this expression is essentially the same as the indicator "total income deficit of the poor – the amount of money that the poor population of the country as a whole, lacks to reach the defined poverty line" in the methodology of comprehensive poverty assessment (MSPU, 2017). Accordingly, this indicator characterizes the share of total expenditures of all households in Ukraine that should be added to the consumer expenditures of poor households to ensure that the latter are equal to the subsistence level (to achieve the formal sign of the elimination of monetary poverty).

To assess the degree of concentration of consumer expenditures of Ukrainian households, we calculated the Herfindahl-Hirschman and Entropy indicators (Nakonechnyi et al., 2004), the formulas for calculating which for our study (based on the database we have formed) are as follows.

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Herfindahl-Hirschman index:

$$HHK = \sum_{i=1}^{12} \sigma^2, \quad (4)$$

where:  $\sigma$  – the specific weight of the ionic group of goods in the aggregate consumer spending of households.

Entropy index:

$$EI = \sum_{i=1}^{12} \sigma \times \frac{1}{\ln(\sigma)} \quad (5)$$

Both indicators are presented both in absolute terms and as a percentage of the maximum possible value (the Herfindahl-Hirschman index, when using percentage weights, reaches a value of 10 thousand in the case of full concentration of distribution, and the entropy index for the case of 12 commodity groups has a maximum possible value of 2.485).

To ensure the comparability of household consumer expenditures over time, all indicators (total expenditures and by individual product groups) are presented in constant prices - the prices of the base year, while inflation of the base year was not taken into account (2014 figures are used in the calculations in actual prices). To convert nominal indicators into real ones (in prices of the base year), the basic consumer price indices for each year were used, both for total consumer expenditures and for expenditures in each of the 12 main product groups.

## RESULTS

The indicators of poverty incidence and depth in Ukraine, calculated in accordance with the provisions set forth in the Methodology section, are summarized in Table 1.

**Table 1. Characteristics of the prevalence and depth of poverty in Ukraine.** (Source: calculated by the authors based on SSSU, 2014 – 2022)

	2014	2015	2016	2017	2018	2019	2020	2021
Share of households with average per capita equivalent total income below the subsistence level, % of total	7.00	5.14	48.19	32.53	26.36	23.32	29.45	23.50
Average monthly equivalent expenditures per person in "poor" households, UAH	951.30	1053.1	1666.86	1868.11	2133.32	2389.13	2630.43	3085.08
Depth of poverty (shortfall of actual expenditures per person to the subsistence level, %)	19.11	14.20	36.92	36.49	34.62	34.74	31.63	25.01
Depth of poverty at the macro level, % (percentage of total consumer expenditures of all households required to compensate for the gap between the expenditures of the poor and the subsistence level)	1.20	0.56	23.04	13.77	9.67	7.73	9.35	5.68

Table 1 shows that the dynamics of poverty prevalence and depth are related. Thus, the poverty prevalence (the share of households with equivalent consumption expenditures below the actual subsistence level) from a rather moderate 7% in 2014 and 5.1% in 2015 is rapidly increasing to 48.2% in 2016. Similarly, the poverty depth (the percentage of actual expenditures below the subsistence level) from moderate values in 2014 (19.1%) and 2015 (14.2%) increased radically in 2016 (to 36.9%) and remains high in 2017 (36.5%).

We deliberately analyze the changes in the prevalence and depth of poverty that occurred in Ukraine after the start of the full-scale war separately from the main retrospective period (Table 2). First, the system of factors that influence these indicators and the role of state policy as the factor of the population's living conditions, have fundamentally changed. Military-political factors replace the influence of economic factors that determine the patterns of "everyday peaceful life" and the dynamic series containing indicators of both peace and war years loses its integrity – it contains indicators that are not comparable with each other through differences in conditions of their formation.

Accordingly, the tasks, opportunities, and priorities for using state regulation of household incomes and living standards in peace and wartime are incomparable. Therefore, we do not include the prevalence and depth of poverty indicators in Ukraine after the start of the full-scale invasion in the general line of our analysis. After all, the issues of our article concern precisely the patterns and trends that are observed in the conditions of ordinary, peaceful life and are not observed in a period when the tasks of sustainable development give way to the tasks of survival, and the usual rational behaviour of a typical consumer, whose participation in financing development resources is determined by economic motivation, becomes inaccessible to many or unacceptable for ethical reasons.

Secondly, due to the fact that the State Statistics Service of Ukraine is deprived of the opportunity to update data on the expenses and resources of households of Ukraine due to the impossibility of conducting a sample survey of living conditions while preserving its methodological integrity and comparability with studies of previous years. This is precisely the reason why we refer to the data from sample surveys conducted by public organizations (Poruch, 2023).

**Table 2. Characteristics of the prevalence and depth of poverty in Ukraine after the start of full-scale invasion.** (Source: calculated by the authors based on Poruch, 2023)

	2022	2023
Share of households with average per capita equivalent total income below the subsistence level, % of total	54.5	50.2
Average monthly equivalent expenditures per person in "poor" households, UAH	2890.2	3240.5
Depth of poverty (shortfall of actual expenditures per person to the subsistence level, %)	55.5	53.6
Depth of poverty at the macro level, % (percentage of total consumer expenditures of all households required to compensate for the gap between the expenditures of the poor and the subsistence level)	–	–

In 2016, the macroeconomic indicator of poverty depth (the percentage of consumer expenditures of all households that is necessary to compensate for the shortfall in consumer expenditures of all "poor" households to the subsistence level) peaked: it reached 23.0% against 0.6% in 2015.

Subsequently, there was a gradual decline in both the prevalence and depth of poverty (with the exception of 2020, when the share of households with consumer expenditures below the subsistence level reached 29.5%), while the microeconomic characteristic of poverty depth decreased in 2021 to 23.5% (the average consumer expenditures of households with equivalent per capita incomes below the actual subsistence level lagged behind this social standard by 23.5%), and the macroeconomic characteristic of poverty depth - to 5.7% (the gap between consumer expenditures of all "poor" households and the subsistence level was slightly less than 6% of total household expenditures).

We can see that the years of moderate growth (2017-2021) did not compensate for the significant expansion and deepening of poverty that occurred in the crisis years of 2015-2016, and as of 2021, the prevalence of poverty was radically higher than in the baseline year of 2014 (23.5% of households with consumer expenditures below the subsistence level vs. 7.0% in 2014) and the depth of poverty significantly exceeded the baseline level (25% in 2021 vs. 19.1% in 2014). At the same time, the macroeconomic indicator of poverty depth (which takes into account both the size of the gap between the expenditures of "poor" households and the subsistence level and the number of such households), although significantly reduced compared to the most problematic years, is still radically higher in 2021 than in the baseline year of 2014 (5.7% vs. 1.2%).

Accordingly, to formally "solve the problem of poverty" in 2021, almost 5 times the share of household resources (the share of public resources) was needed than was sufficient to increase consumer spending of all households to a level not less than the subsistence level in 2014.

## DISCUSSION

We believe that the current situation with both poverty and the available resources of society to compensate for the gap in the context of war and militarization of the economy could not improve in 2021.

Accordingly, the events of 2016-2017 radically exacerbated poverty in Ukraine: both the prevalence and depth of poverty increased significantly. The very fact of such a large-scale and rapid increase (the prevalence of poverty in 2016 is 9.4 times higher than in 2015, the depth of poverty is 2.6 times higher, the share of actual consumer expenditures of all households necessary to compensate for the gap for all poor households has increased 41 times) indicates that the monetary poverty indicator alone does not exhaust the characteristics of the role of poverty among the constraints on Ukraine's socio-economic development. After all, such high increases mean that even in the years when the formal (monetary) poverty rate was much lower, there were no significant qualitative differences between the economic opportunities, lifestyle, and quality of human capital inherent in the relatively few poor and the broader population not formally belonging to this category. Accordingly, even in the "best" years in terms of poverty, there was always a large "reserve army" of poverty, whose members did not have sufficient economic opportunities to integrate into the processes of generating growth resources and turning such growth into a source of development. After all, the level of income that determines the structure of expenditures and the parameters of economic behaviour (consumer and investment, educational, professional mobility, social activity, etc.) critical for participation in development processes remains insufficient for those households that are not formally poor according to the monetary criterion.

The above suggests that assessing the role of poverty as an obstacle to sustainable growth and development requires a wider range of indicators than those used in most studies on this issue, such as (Titiunykova and Pyvovarova, 2018; Pavliuk and Novak, 2019; Voitovych and Brychka 2022; Fatyukha and Zdorova, 2020). In particular, neither the prevalence

of monetary poverty nor the prevalence of signs of deprivation in terms of access to various types of goods reflects the real potential for participation in innovative development processes. After all, even with access to education or medical services, the availability of certain technical channels of information exchange does not have a reliable correlation with the demand in the production centres that form the driving forces of development.

Accordingly, we consider it expedient to expand the range of indicators that will be taken into account to assess the role of poverty and in its functional meaningful interpretation – as a limited choice, limited ability to invest in the development of one's own human potential and improve one's position in the system of the social division of labour (Sen, 1999) in the system of obstacles to sustainable development in Ukraine.

In particular, one of the basic signs of poverty (universal and independent of the quality of national standards for measuring monetary poverty, including the quality of the subsistence minimum used to determine absolute monetary poverty in Ukraine) is a high concentration of consumer expenditures on commodity groups related to meeting basic needs, in particular, food (Clements et. al., 2004). The share of expenditures on food ranges from 54% (in 2015) to 46.9% (in 2021), as shown in Table 3.

**Table 3. The specific weights of the main commodity groups in the consumer expenditures of Ukrainian households.** (Source: calculated by the authors based on (SSSU, 2014 – 2022))

	2014	2015	2016	2017	2018	2019	2020	2021
Consumer spending	100	100	100	100	100	100	100	100
Food and soft drinks	52.9	54.0	52.3	50.8	49.9	47.8	49.1	46.9
Alcoholic beverages, tobacco products	4.1	3.9	3.6	3.9	4.0	3.8	4.1	3.5
Clothes and shoes	7.4	6.9	6.9	7.0	6.8	6.5	5.7	5.7
Housing, water, electricity, gas and other fuels	10.9	12.5	13.8	14.7	14.8	16.5	16.9	17.8
Household items, household appliances, etc. same	2.8	2.3	2.1	2.5	2.6	2.2	2.6	2.6
Health care	4.2	4.4	5.1	4.6	4.8	4.8	5.0	5.4
Transport	5.0	4.3	4.3	4.3	4.3	5.5	4.5	5.2
Connection	3.4	2.9	2.9	3.0	3.1	3.4	4.1	4.0
Recreation and culture	2.1	1.8	1.8	2.0	2.1	2.0	1.8	1.9
Education	1.4	1.4	1.2	1.3	1.2	1.3	1.0	1.2
Restaurants and hotels	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.02
Various goods and services	6.0	5.7	5.8	5.9	6.2	6.2	5.1	5.7

The unavailability of data on the structure of consumer spending from the State Statistics Service for 2022-2023 does not allow us to continue the dynamic series for years after the start of a full-scale invasion. However, data from sample surveys conducted by public organizations (Poruch, 2023) allow us to expect a radical increase in the prevalence of poverty and an aggravation of the problem of its depth. In particular, 28% of respondents answered, that they "Do not have the opportunity to consume dishes with meat, chicken, fish (or their vegetarian equivalent) at least once every two days," that is, they experience economic restrictions, which indicate an extreme level of poverty that poses physiological threats to the health of respondents, not simply limits their social mobility. In general, 41.7% of respondents indicated that they spend more than 60% of the family budget on food, which convincingly indicates: that poverty has acquired critical importance among the constraints faced by development policy.

Despite the positive dynamics (reduction of this share by 6 percentage points compared to 2014), there is still a pronounced dominance of expenditures to meet basic (physiological) needs, which is a fundamental sign of poverty. Similar results regarding the leading sign of poverty prevalence and the lack of economic opportunities for households to actively participate in financing the expansion of human capital stocks in the economy were obtained by the authors of the article (Verba et. al., 2023). However, we would like to clarify the results obtained by the authors of the above-mentioned publication, since their assessment of "the changing, mostly positive, but insufficient dynamics of the share of expenditures on food" does not take into account the main factor that actually caused the decrease in the share of expenditures on food: This is a significant increase in prices (both absolute and relative, i.e. the share of price growth that exceeds the general consumer price index) for the commodity group "Housing, water, electricity, gas and other fuels", which includes utility costs.

It is important that for a large part of consumers (primarily residents of apartment buildings whose communications do not allow them to regulate the volume of heating services consumption), the demand for the relevant services is practically inelastic, which essentially allows them to consider additional costs for such services as “absolutely necessary”, i.e., inevitable for the consumer. Accordingly, the rapid growth of utility debt, which was observed in the years of particularly dynamic growth and was also interpreted by a number of researchers as an important sign of negative trends in the welfare of the general population (Honcharuk, 2023), is direct and convincing evidence of the prevalence of poverty in the interpretation associated with the inability of households to allocate the resources necessary to improve their social status. After all, the lion's share of consumer expenditures serves to satisfy basic needs: the sum of expenditures in the product groups “food and non-alcoholic beverages” and “housing, water, electricity, gas and other fuels” reaches 64.7%.

Based on the data in Table 2, a certain decrease in the share of food expenditures over the period 2014-2021 has the main reason: an increase in the share of expenditures for “housing, water, electricity, gas and other fuels.” This means that the decline in the share of food expenditures from 52.9% to 46.9% does not reflect an improvement in welfare, as predicted by abstract models of microeconomic development mechanisms (Clements et. al., 2004), but rather the forced displacement of one type of expenditure on basic necessities by another. Due to a significant rise in the price of goods and services of the commodity group “housing, water, electricity, gas and other fuels” (in the system of relative prices for 2014-2021, they rose by 235 pp, i.e., the basic growth rate of prices for “housing, water, electricity, gas, and other fuels” is 235 pp higher than the general consumer price index), even a significant reduction in the scale of their consumption (by 9.6% compared to the base year 2014) did not prevent the growth of the share of expenditures on relevant goods in the consumer budget of Ukrainian households. From 10.9% in 2014, it increased to 17.8%, i.e., by 6.9 percentage points. This growth fully absorbs the reduction in the share of food expenditures (6.0 percentage points) over the same period.

Despite the fact that formally, the growth of the share of expenditures on the commodity group “housing, water, electricity, gas and other fuels” brings the structure of consumer expenditures of Ukrainian households closer to similar indicators of European countries (in the EU countries it ranges from 18 to 26% (Eurostat, 2024), the content of this trend has nothing to do with the formation of a structure of consumer expenditures (and, accordingly, forms of household participation in the formation of sources of economic growth) close to that of developed countries.

After all, the high concentration of consumer expenditures remains the leading feature of their structure throughout the entire retrospective period (two groups of indicators of the concentration of consumer expenditures of Ukrainian households are shown in Table 4).

**Table 4. Quantitative estimates of the concentration of consumer expenditures of Ukrainian households for the retrospective period.**  
(Source: calculated by the authors based on (SSSU, 2014 – 2022))

	2014	2015	2016	2017	2018	2019	2020	2021
Herfindahl-Hirschman index (HH)	3091.8	3224.09	3081.34	2955.50	2878.69	2728.33	2847.53	2674.59
HH, in % of the maximum value	30.92	32.24	30.81	29.55	28.79	27.28	28.48	26.75
The entropy value of	1.71	1.66	1.68	1.72	1.74	1.76	1.73	1.77
Entropy as % of the maximum value	68.68	66.83	67.79	69.10	69.89	71.01	69.73	71.42
Share of the three product groups with the largest share in consumer spending	71.17	73.37	73.05	72.45	71.61	70.83	71.76	70.35
The four largest	77.13	79.02	78.88	78.33	77.78	77.07	76.83	76.10
The five largest	82.13	83.42	83.98	82.94	82.57	82.56	81.81	81.51

The unavailability of data on the structure of consumer spending from the State Statistics Service for 2022-2023 does not allow us to continue the dynamic series for years after the start of a full-scale invasion.

The relatively small Herfindahl-Hirschman concentration coefficient, which is also decreasing over time (from 3091.8, i.e., 30.9% of the possible maximum in 2014 to 2674.6, i.e., 26.7% of the maximum in 2021), is due to the large fragmentation of the part of expenditures that remain after meeting the priority needs. Namely, this share includes all expenditures that have the potential to expand human capital stocks and increase the spatial, professional, and social mobility of the population.

For example, the share of expenditures on education decreased by 0.2 percentage points, or 10.5%, between 2014 and 2021. Similarly, the share of spending on leisure and recreation decreased from 2.1% to 1.9%, i.e., by 0.2 percentage

points, or almost 8%. According to traditional microeconomic models of development, the growth in the share of expenditures on these commodity groups is the result of a really significant (for households' participation in the processes of accumulating resources for development) increase in income. The absence of such positive structural shifts indicates that the growth of households' economic opportunities that we have recorded (total consumer expenditures in constant prices increased by 9.4%) has no significant positive impact on their participation in human capital investment. Thus, important conditions for sustainable development (in Ukraine, at least the transformation of growth into development), such as the involvement of the general population in the investment expansion of human capital stocks and the use of commercial mechanisms to improve the resource provision of the social sphere, were unfortunately not observed during the retrospective period.

A more adequate characterization of the concentration of consumer expenditures of Ukrainian households is provided by the entropy indicator since its size reflects rather the diversity of the specific weights of different commodity groups in total consumer expenditures: the greater the diversity, the greater the gaps between high and low values, the less important the entropy indicator becomes. Namely, the diversity is small, because the high share of food products clearly stands out among others, we do not observe, and the vast majority of gaps are small because in 2021, spending on ten of the twelve product groups was within 6%. This is exactly what the high value of the entropy coefficient reflects (from 69% of the maximum possible for 12 product groups in 2014 to 71.4% in 2021). The structure of the distribution of expenditures between all expenditures critical for economic growth and development (education, healthcare, recreation and culture), those important for spatial and professional mobility (transportation, communications, hotels and restaurants), and other types of expenditures remains degenerate throughout the entire retrospective period. This indicates the obviously high importance of the limitations that the low incomes of the vast majority of the population impose on the possibilities of forming the resource prerequisites for growth and development. After all, perhaps the main feature of sustainable development is that the impulses for it are formed by a wide range of participants in the processes of increasing productive capacity, which actually provides a wide range of beneficiaries of growth as a necessary condition for its sustainability and transformation into development, primarily through positive changes in the structure of household consumption expenditures.

## CONCLUSIONS

The high variability in both the scale and depth of poverty among Ukrainian households suggests that a meaningful analysis of poverty should not be limited to monetary poverty rates. After all, the positioning of a household relative to the formal income (expenditure) line does not guarantee certain qualitative characteristics of economic opportunities, lifestyle, and quality of human capital, which are necessary to involve the general population in creating the resource base for growth and subsequently ensure a wide range of its beneficiaries. Accordingly, there is a large "reserve army" of the poor, whose representatives did not have sufficient economic opportunities to include their economic behaviour (consumption and investment, i.e., educational, professional mobility, social activity, etc.) in the processes of forming growth resources and transforming such growth into a source of development, a wide range of beneficiaries of which would be the basis for its sustainability.

The stability of the entropy of consumer spending in Ukrainian households indicates that the actual economic mechanisms of household participation in shaping the preconditions and impulses for growth and development remain blocked, making external investment or public budget expenditures virtually the only source of positive dynamics in periods when investment-intensive economic growth outweighed the negative impact of political unrest, military conflicts and militarization, or a global pandemic. However, such an exclusive role of the state budget or external investments that do not have a positive impact on the economic role of households directly contradicts the principles of sustainable development: concentrated sources of growth lead to the concentration of its benefits and block poverty reduction.

The decline in the share of two product groups in total consumer expenditures, the expansion of consumption in which actually embodies critical aspects of household participation in ensuring sustainable development (namely, spending on education and recreation and culture) clearly does not fit into traditional models of household participation in economic development through investment in human capital. Thus, in terms of the functional aspect of poverty (the structure of consumer expenditures that blocks household participation in the processes of generating resources to increase the efficiency of the economic system), there have been no positive trends over the retrospective period, i.e., signs of overcoming the monopoly of public spending and external investment as sources of growth and development.

The results obtained evidence in favour of revising the priorities of state income policy and targeting it to strengthen households' role among participants in development resources endowment. However, the choice of specific levers for

implementing such an updated system of priorities requires further research, in particular on the sensitivity of household consumer spending and its structure to various levers of influence, such as reducing the tax pressure on personal income, regulating (limiting growth) prices, direct dating, and the most promising, in our opinion, is promoting the expansion of demand for skilled labour by reducing the tax pressure on the payroll.

## ADDITIONAL INFORMATION

### AUTHOR CONTRIBUTIONS

All Authors have contributed equally.

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The Authors declare that there is no conflict of interest.

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## БІДНІСТЬ ЯК КРИТИЧНА ПЕРЕШКОДА ДЛЯ СТАЛОГО РОЗВИТКУ В УКРАЇНІ

Статтю присвячено дослідженню взаємозв'язку розміру та структури споживчих витрат домогосподарств України (як характеристик, що значною мірою залежать від економічної ефективності й політики доходів держави) та потенціалу активізації участі домогосподарств у фінансуванні розвитку соціальної сфери (як передумови виходу України на траєкторію сталого економічного розвитку). Теоретичне підґрунтя дослідження сформовано роботами К. Боулдінга, В. Нордхауза й Х. Хотеллінга та вчених, об'єднаних дослідницькою парадигмою Римського клубу.

Відповідно до методології теорій сталого розвитку, автори трактують поширення та поглиблення бідності не лише як прямий прояв (результат) негативних тенденцій у соціально-економічному житті, а й як обмеження можливостей соціально-економічного розвитку України. Відповідно, характеристика концентрації споживчих витрат домогосподарств України використана як основний критерій оцінки їхнього потенціалу до участі у формуванні передумов для подолання негативних тенденцій економічної ефективності та рівня життя широких верств населення. Для оцінки ступеня концентрації споживчих витрат домогосподарств України розраховано індекси Герфіндала-Гіршмана та індекси ентропії.

Розмір ентропійного показника споживчих витрат українських домогосподарств свідчить про невідповідність їхньої економічної поведінки моделям інклюзивного та сталого розвитку, а сталість у ретроспективному періоді свідчить про відсутність позитивних тенденцій щодо активізації ролі споживчих витрат у збільшенні інвестицій, у людському

капіталі, що внеможлиблює сталість соціальної сфери в умовах політичних заворушень, глобальної пандемії та військових конфліктів і мілітаризації економіки.

**Ключові слова:** бідність, домогосподарства, споживчі витрати, концентрація, ентропія, розвиток, людський капітал

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