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Household Production Satellite Account as an Integral Account for Estimating Value Added in the National Economy

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Abstract

Aim: Satellite accounts provide an integrated economic framework that complements the System of National Accounts (SNA) by capturing economic activities not fully represented in core statistics. This study presents the Household Production Satellite Account (HPSA) as an example of best practices in extending official statistics. The primary goal is to estimate the monetary value of domestic work and household production (market and non-market) in Poland, contributing to an extended GDP model.

Methodology: Following the ESA 2010 methodology, this study applies the input and replacement cost methods to assess unpaid labour, using the specialist wage approach to estimate housework value.

Results: In 2023, Poland's GDP was PLN 3,410.1 billion, with non-SNA household production accounting for additional 46.5% to GDP. The value of domestic labour was PLN 1,605.9 billion, representing 79.9% of non-market household production. When using an extended economic framework, household production constituted 34.6-36.5% of the national economy.

Implications and recommendations: The results highlight the substantial contribution of household production, often overlooked in economic assessments. Regular valuation of satellite accounts, as recommended by Eurostat and UNECE, would improve economic analysis. Integrating these accounts into national statistics provides a more comprehensive view of household contributions, reducing distortions in economic indicators.

Originality/value: The most anticipated outcome of the analysis was the estimation of the gross value added of non-market household production and its comparison to the GDP for the total national economy across from 2003 to 2023.

Keywords: household production, input method, satellite accounts, time use survey, unpaid work

1. Introduction

The value of household production is a significant component of value added and ultimately of GDP, yet has not had its full reflection in national statistics. A great amount of that production, i.e. the non-market household production, is invisible for the market, because of the lack of market transactions taking place within households. The volume, scope and the economic value of total market and non-market household production can be compiled and presented in the Household Production Satellite Account (HPSA).

Satellite accounts are comprehensive supplementary tables to the national accounts, which are developed non-observed in the economy market and non-market flows and stocks of the field (i.e. agricultural, environmental, culture, education, health, social protection, sport, tourism) or sector (households, social economy). The first concepts were discussed in the 1980s, 1990s, but satellite accounts as an additional supporting tool for official accounts was already recommended in SNA 1993 and ESA 1995 (Eurostat, 1996).

The satellite accounts concept assumes that supplementary tables to the core accounts will elaborate or modify the tables and accounts in the central framework to serve specific data needs – ESA 2010: 22.02 (Eurostat, 2013). The satellite accounts may provide more detailed information on stocks, flows, transactions, monetary (public), and non-monetary (private) transfers within households and between them.

This paper presents the advantages of using satellite accounts frameworks to better understand the links between visible (market) and invisible (non-market) household production. This approach is an ongoing measurement of actual volume and monetary value of domestic work. The proposed approach shows an improvement in explaining estimates of household production and the impact of households on the national economy using macroeconomic variables, e.g. by applying the same methodology in basic accounts. The main advantage of the research is the use of satellite accounts for regular calculations in the form of supplementary tables that can predict outcomes in terms of social and economic well-being.

The motivation and contribution of this research was to explore a complementary compilation to the national statistics which covers the integrated economic accounts, providing a total overview of all economic flows and stocks in the household sector.

2. Literature Review

The significant value of unpaid domestic work has long been recognized. One of the pioneering estimates was made in the early 1910s, and reflected the value of household work in the United States using a method based on the wage of a housekeeper (Mitchell, 1912). Mitchell argued that when compared to businesses producing goods or services for the market, households are inefficient in the production of domestic services.

The most important assumptions for the valuation of domestic work and home production were made by Reid (Reid, 1934), who argued that sufficient information about household well-being could be obtained if only paid and unpaid work were included in the total household production. None of these productions were able to generate a full picture of the social and economic conditions of households.

The estimation of Mitchell and Reid was later revised by Havrylyshyn, who calculated that the monetary value of household production accounted for as much as 36 per cent of the Gross National Product (Hawrylyshyn, 1976). This proportion of home production to the extended GDP remains consistent.

Becker, the Nobel prize winner, was the continuator of Reid's concept of household production (Becker 1965, 1973, and 1990). According to Becker, households play a dual role in the economy, they are both

producers and consumers. This concept is known as Becker's theory of the dual role of households in the economy, where household members produce and sell the market goods, i.e. agricultural production (fruits, vegetables, cereal grain, seeds, meat) or provide services, i.e. childcare, adult care, care of dependants, cooking, cleaning, making textiles or clothes, gardening. They also consume their products regardless of the place where they are made, or outside their household, as well as generate products and services for separate households (grandparents or neighbours).

Becker's assumptions regarding the household production model have been the subject of numerous discussions and research by economists, mainly in the context of the limitations of GDP as an insufficient measure of socio-economic development. Economists, statisticians and business practitioners agreed that household products (goods and services) made at home have a significant economic value and underestimated volume, even if they do not register in macroeconomic indicators such as value added, gross domestic product, national account (Stiglitz et al., 2009; Folbre, 2006; Gershuny, 2005 and 2000).

Following several years of research conducted under the Framework Research Programme, the Eurostat working group developed the first methodological manual, *Proposals for a Satellite Account of Household Production* (Eurostat, 1999). This marked the introduction of the satellite accounts concept for fields or sectors that were significant but had not been adequately represented in national accounts. The goal was to develop a methodology for the satellite account of household production that would enable all European countries to create comparable and harmonised accounts in this area. A broad discussion ensued regarding the methodology for estimating household production, ultimately leading to the adoption of the *input method*.

This concept of the Household Production Satellite Account (HPSA) was implemented by Varjonen in Finland, who was also a pioneer of the concept and served as an expert at Eurostat, as well as being a member of the Eurostat Satellite Accounts Working Group (Varjonen et al., 1999). Varjonen and her team have made significant contributions to the development of global methodology and best practices for the organization and production of satellite accounts as a tool supporting national statistics. The Finnish HPSA has also developed a data entry method for calculating the value of housework. Unpaid work is the main component (input data) for valuing time spent on housework. The Time Use Survey (TUS) took into account the distribution of time, which provided valuable data for analysis.

The HPSA standard for Finland has been published many times, and it is the most popular and comprehensive document that can serve as a model for other European countries and for the rest of the world. To date, regular calculations of domestic work and household production have been carried out in 1998, 2001, 2006, 2010, 2014, 2020 (Varjonen & Aalto, 2006, 2010; Varjonen et al., 1999, 2012; Soinne et al., 2014).

For several decades, the valuation of unpaid household work and non-market household production has been conducted in Europe and in some other countries around the world. Other estimates using the *input method* of non-market household production were also carried out in Germany in 2001 (Varjonen & Rüger, 2008). Subsequent estimates were made in Spain in 1995, 2002-2003 (Casero & Angulo, 2008; Duran, 2007), France in 2010 (Poissonnier & Roy, 2013), Hungary in 2007, and 2009--2010 (Szép, 2003), and in Poland for 2011, 2013, 2016 (Błaszczak-Przybycińska, 2007 and 2008; Marszałek, 2015; Błaszczak-Przybycińska & Marszałek, 2015, 2019). More recently, the value of unpaid household work and non-market household production was also presented in Switzerland in 2020 (FSO, 2022) and for Poland in 2023 (GUS, 2025).

The other perspective of valuation was presented in the UK (Holloway et al., 2002; Fender, 2012), using the *output method* which is more appropriate to estimate the final production of household activities and compare them with the official statistics, i.e. GDP. This method determines the value of the final products produced in a household. The output method of determining macroeconomic indicators, among which GDP is also calculated, allows for estimating the value of most market goods and services, but also non-market ones. While it is possible to estimate the value of a cooked meal, quantify the

weight of laundry washed, assess the value of preserves, or estimate the cost of self-conducted housing construction and renovations, there are numerous challenges in determining the value of many other activities, including those related to child and adult care, as well as volunteering.

In the last decade, in addition to the household production satellite account, which is the most advanced satellite account, other satellite accounts have been developed.

Satellite accounts of sectors or fields are an important part of statistics, whose role is steadily increasing. Knowledge is being developed and, as a result, the demand for satellite accounting research results from various users is growing, as confirmed by the satellite accounts published in Poland so far, including those for the social economy (Goś-Wójcicka et al., 2021), social protection (GUS, 2021), tourism (Stowarzyszenie na Rzecz Badania, Rozwoju i Promocji Turystyki, 2017; Dziedzic et al., 2007 and 2009), culture (GUS 2024b), education (GUS 1999, Rejn & Żółkiewski, 1997), sports (Ministerstwo Sportu i Turystyki, 2017), and health (GUS, 2020).

The Inter-Secretariat Working Group on National Accounts (ISWGNA), assisted by the Advisory Expert Group on National Accounts (AEG), oversaw the overall 2008 SNA updated programme (UN Statistics Division, 2024). Currently, the work on completing and modifying the framework, sequence of accounts, methods, kind of transactions, links to functions, links to industries or products, and other modelling instructions is in progress. Moreover, the concept of satellite accounts is being modified and adapted to a new perspective of calculations in the official statistics (UN Statistics Division, 2024).

Satellite accounts provide a wider perspective and generate potential for the economy of more advanced estimates of household production. This concept provides both official data and comparable statistics based on the methods used in the national accounts framework and procedures.

3. Methodology

3.1. Household Production Satellite Account

The fundamental assumption of satellite accounts is that they can meet specific data needs by providing more detail, by rearranging concepts from the central framework and/or by providing supplementary information, such as non-monetary flows and stocks. Moreover, satellite accounts provide basic tables to extended statistics for extended accounts. They can be compiled and published on annual or quarterly basis, but should be adjusted to the field (i.e. agricultural, environmental, culture, education, health, social protection, sport, tourism) or sector (households, social economy) characteristics, hence longer intervals than once every five to ten years are appropriate – see the Appendix.

Satellite accounts are also known as the sequence of extended household accounts or supplementary tables, and show how the production of sector or field links up with the SNA household accounts. The structure of the tables is applicable to both the input and output approaches, even though the hypothetical values are linked to the table of input approach based production and income generation accounts (Eurostat, 2003).

The national accounts framework consists of: (a) integrated economic accounts providing an overview of all economic flows and stocks; (b) an input-output framework providing an overview of the supply and use of goods and services in current prices and in volume terms; (c) tables linking the industry information in the input-output framework with the institutional sector accounts; (d) tables on expenditure by function of government, households and corporations; (e) tables on population and employment. In national statistics accounts and tables can be calculated on an annual or quarterly basis, and be national or regional – see ESA 2010: 22.03 (Eurostat, 2013).

The Household Production Satellite Account (HPSA) is the well-recognised satellite account which combines the final results of market and non-market household production, and organized in the

similar structure used in the national accounts. The HPSA offers a different picture of economic development compared to the core accounts and it is presented in the structure of an integrated economic accounts, providing an overview of all economic domestic flows and stocks. The scheme of the final structure of main categories, which are calculated in HPSA, is presented in Figure 1.

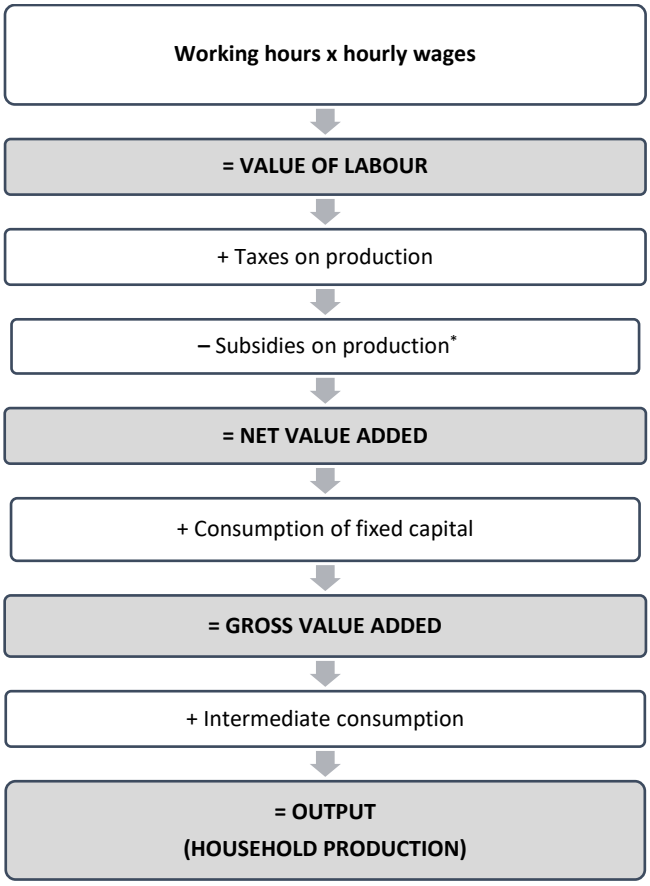

Fig. 1. The Household Production Satellite Account structure

Source: own compilation based on Varjonen et al. (1999, p. 30).

The HPSA deviates from the core national statistics structure because it is adjusted to the unique characteristics of the sector. Some methods are changed and transformed to household specific, but this guarantees the improvement of the link with economic theory concepts such as welfare or other knowledge economy and business investments used in national or European economic policy. The Household Production Satellite Account contains a table showing the link between its major aggregates and those in the core framework.

The household sector is the most differential sector in the national economy. According to the European System of Accounts, ESA 2010 methodology (Eurostat, 2013), the household sector (S.14) covers "individuals or groups of individuals as consumers and as entrepreneurs producing market goods and non-financial and financial services (market producers) provided that the production of goods and services is not by separate entities treated as quasi-corporations. It also includes individuals or groups of individuals as producers of goods and non-financial services for exclusively own final use" (Eurostat, 2013).

Moreover, households play a dual role in the economy: producers and consumers (Becker, 1965). On the one hand, household members produce and sell their own goods on market, i.e. agricultural production (fruits, vegetables, cereal grain, seeds, meat) or provide market services, i.e. childcare, adult care, dependent persons care, cooking, cleaning, making textiles or clothes, gardening. On the

other hand, they also consume their products regardless of the place they are made, in the same household or outside it (grandparents' or neighbours') (Błaszczak-Przybycińska & Marszałek, 2019).

In that economic perspective, households are also engaged in value-added formation, so they generate social welfare. That significant role of that sector is also visible in GDP if one takes into account the non-market household production to the general market production. This concept is known as the extended GDP model – see Figure 2.

<table>
<tr><td colspan="2">GDP for the economy
(market production)</td><td>Non market production</td></tr>
<tr><td>GDP</td><td colspan="2">Household sector</td></tr>
<tr><td>(without household sector)</td><td>Gross value added</td><td>Gross value added</td></tr>
<tr><td></td><td>Market
household production</td><td>Non market
household production</td></tr>
<tr><td colspan="2">100.0%</td><td>+ approx. 40-45%</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3">Extended GDP</td></tr>
<tr><td colspan="3">GDP + non market household production</td></tr>
<tr><td>Market production</td><td colspan="2">Household production</td></tr>
<tr><td>(without household sector)</td><td colspan="2">(market + non market)</td></tr>
<tr><td>approx. 60-70%</td><td colspan="2">approx. 30-40%</td></tr>
</table>

Fig. 2. The extended GDP model

Source: own compilation based on Varjonen & Aalto (2006, p. 31) and Błaszczak-Przybycińska & Marszałek (2019, p. 73).

3.2. The Input Method and Replacement Cost Approach

The foremost assumption to valuing domestic work is to decide which type of method and approach should be applied. In the previous analyses the *input method* and *output method* were applied. The input method is even better recognised and recommended on calculating the monetary value of domestic work based on time use data. The time use survey provided the harmonised data for EU countries of main indicators: time spent, time participation, and participation rate.

The time spent is the main component in estimating the market value of domestic work. In the input method two different approaches can be applied: the *alternative cost method* or the *market cost method*. The *market cost method* is that housework done by a household member could be provided by a paid domestic staff, referring to the 'third party criterion' (known also as productivity criterion or the Reid criterion) (Eurostat, 1999).

The *market cost method* can be based on the *generalist's* or *specialist's wages*. The *generalist's wages approach* is simpler to apply on estimating the total value of unpaid work, because it uses the single average wage per hour of paid domestic staff multiplied by the total time spent on domestic work (Varjonen et al 2014; Soinne 2021).

The *specialised worker's wages approach* needs consideration in defining the standards for the work done at home. It requires the decisions of e.g. whether to use the wages of a cook or kitchen helper to calculate the value of preparing food, planning the menu, deciding ingredients or washing up the dishes in households. This approach is more advanced than the generalist's wages one but it provides more accurate estimation results (Błaszczak-Przybycińska & Marszałek 2015, 2019, 2020a, 2020b).

The starting point to compile the integrated economic accounts of the HPSA is to estimate the value of home production and calculate its main components, namely domestic labour, intermediate consumption and capital consumption (depreciation).

The formulas for estimating the domestic labour in specialist's wages are calculated in analogical sequence according to time use survey data: daily, weekly and monthly perspective and hourly average wages of professions from the structure of wages and salaries by occupations for October 2022 (Błaszczak-Przybycińska & Marszałek, 2019, pp. 63-65).

The final wages for each type of activity to estimates of 2023 were adjusted according to wages' indicator:

$$i_w = \frac{v_n}{v_{10.2022}}, \tag{1}$$

where i_w – monthly index of average earnings in 2023 in comparison to October 2022, v_n – monthly employees' average gross earnings from January to December 2023 (Table 9, GUS, 2024a), $v_{10.2022}$ – value of employees' average gross earnings in October 2022.

The first stage of the estimation covered calculating the average time per day for each of the 46 specified activities. The average time of *a-th* activity duration in *j-th* activity group for all days of the week was calculated separately for all selected groups of respondents based on time spent on each activity. Each single activity was calculated separately and finally grouped into six categories: providing a home, providing food, providing clothes, childcare and adult care, pet care, help for other households.

The intermediate consumption, according to the core accounts and ESA 2010, is recorded as "completely used in the production process" at the end of the period (Eurostat, 2013). In HPSA the intermediate consumption was estimated independently for individual groups according to the classification of using household domestic work. The monthly household expenditure for each final good or service were identified and calculated separately. The sum of the expenditures on products in the same categories was calculated for six categories, the same as for domestic work. The data were obtained from the household budget survey (HBS):

$$IC = i_{pop} \sum \bar{e}_a, \tag{2}$$

where IC – total intermediate consumption in households for people aged 15 years and more, i_{pop} – index of population for people aged 15 years and more (without people with disabilities), $\sum \bar{e}_a$ – yearly sum of average expenditures on consumption for *a-group* of activities (household upkeep – providing a home, food preparation – providing food, making and caring for textiles (clothes and shoes) – providing clothes, childcare and adult care, pet care, and help for other households – volunteer work).

The HPSA 2023 for Poland presents the estimates of consumption of fixed capital according to formula (3) (Marszałek, 2015):

$$C = \sum c_i * hh * hh_{xi} * d_{xi} * p_{xi}, \tag{3}$$

where c_i – yearly capital consumption for people aged 15 years and more in *i-class*, hh – number of households, hh_{xi} – percentage of households having *x-good* in *i-class*, d_{xi} – percentage of depreciation *x-good* in *i-class*, p_{xi} – average price of *x-good* in *i-class*.

The estimates of domestic labour, intermediate consumption and capital are the main components on calculating the value added of non-market household production in the HPSA.

4. Results: The Sequence of the Household Production Satellite Account

The Time Use Survey is a representative survey, and provides micro data of time spent, time participation and participation rate by age, gender and social-economic group of household. The HPSA delivers data for the whole household sector, including individual and collective households; there is no division into household types.

The average time participation of household and family care in Poland has been quite stable during the last three decades with disparities in time distribution on these activities between women and men – see Figure 3.

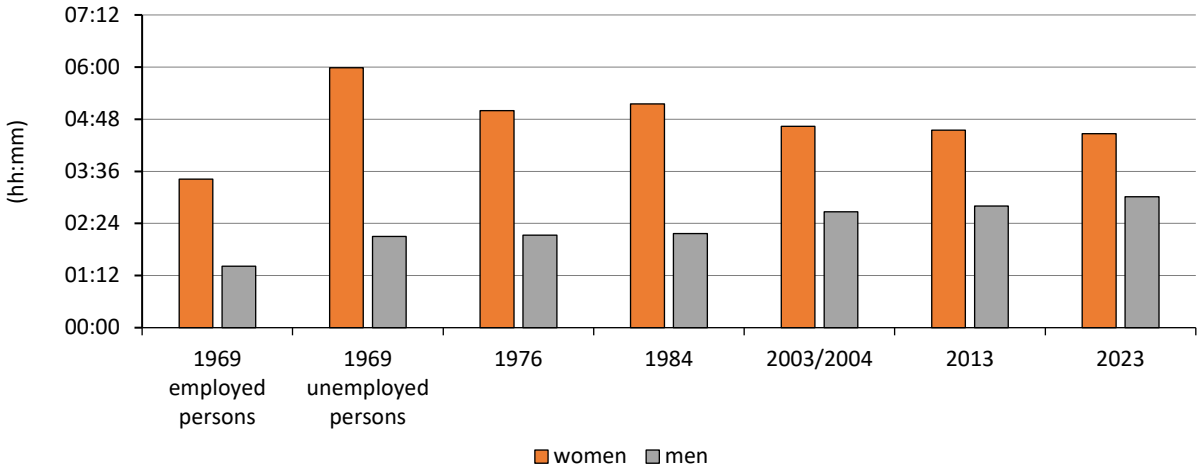

Fig. 3. Participation time of household and family care in Poland, 1969-2023 (hh:mm)

Source: own calculations.

Note that in the analysed period, there was a decrease in the differences between women and men in terms of, among others, time spent on professional and household work. There is still a significant difference in fulfilling household duties, but the ongoing social changes, including changes in childcare patterns, significantly determine the distribution of time in households – see Figure 3.

The extended tables of the Household Production Satellite Accounts generated the total overview of the main economic measures. The gross value added of household production was PLN 1 743.7 billion, of which PLN 158.5 billion (9%) was included in the core national accounts. The value of labour, the main component of non-market gross value added, was estimated at approximately PLN 1 605.9 billion, accounting for 79.9% of non-market household production – Table 2.

Table 2. Estimates of household production and their value in the Household Satellite Account for Poland in 2023 (in million PLN)

Specification			**Value of the components of home production (million PLN)**		
			SNA**	**Non-SNA**	**Total**
Value of labour (working hours x hourly wage of professions)*			◦	*1 605 873**	*1 605 873**
Paid domestic staff (SNA)			336	◦	336
Housing services produced by owner- occupiers, e.g. rents (SNA)			88 621	◦	88 621
Own-account house construction			25 222	◦	25 222
Agricultural produce for own use, fishing, hunting and berry picking, net mixed income (SNA)			24 840	11 947	36 787
Taxes on production			2 614	1 632	4 247
Subsidies on production			-21 933	-90 467	-112 400
Current Accounts	**Generation of income account**	**Net value added**	**119 700**	**1 528 985**	**1 648 686**
		Consumption of fixed capital (depreciation)	38 838	56 213	95 051
	Production account	**Gross value added**	**158 539**	**1 585 198**	**1 743 737**
		Intermediate consumption	**643 651**	**425 135**	**1 068 786**
		Output (household production)	**802 189**	**2 010 334**	**2 812 523**

* Value of labour was estimated based on Time use survey 2013 (GUS 2015). Time use data 2023 are unavailable till Statistics Poland official publication planned for Q2 2025.
** SNA data were estimated based on the National Accounts estimates for 2023.

Source: own calculations (revised and updated in accordance with the National Accounts data for 2023).

The most significant category of domestic work is providing food, which encompasses both market household products (e.g. agricultural products for own use, fishing, hunting, berry picking) and non-market services such as cooking, food management, shopping, and related services. The second most important category is childcare and adult care, which requires substantial time and diverse skills. Consequently, from 2013 to 2023 in Poland, the wage rates used to estimate the value of this work also increased – see Figure 4.

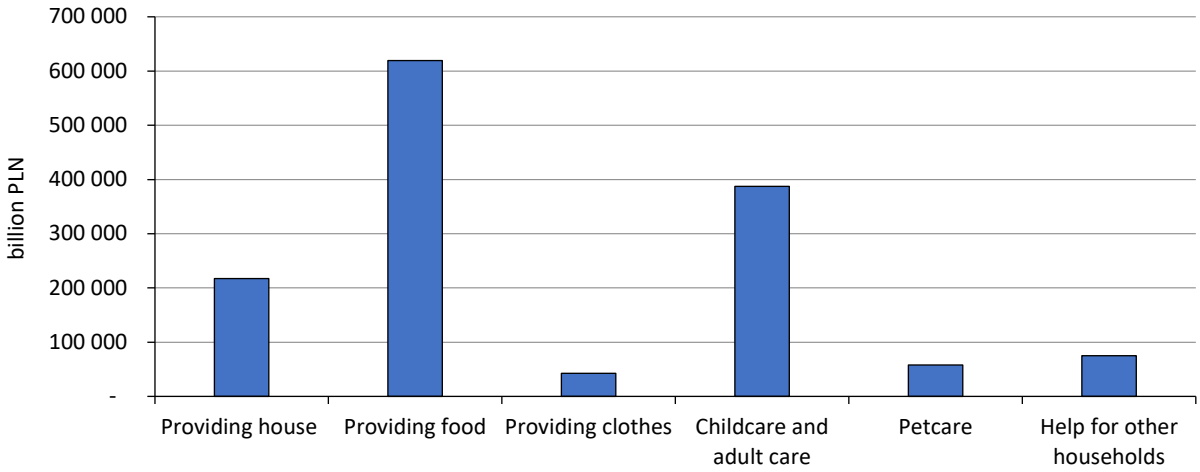

Fig. 4. Value of domestic labour by group, Poland, 2023 (billion PLN)

Source: own calculation based on Statistics Poland data of Time Use Survey 2013, GUS (2024c) and GUS (2024a).

In 2023, the national accounts GDP was estimated at PLN 3 410.1 billion[1], hence non-SNA household production accounted for 46.5% of GDP (see Approach 1 in Table 3).

Working with the extended concept of economy that includes non-market household production, the results are rather different. In this case household production accounted for one-third or 34.6-36.5% of the national economy (see Approach 2 in Table 3).

Table 3. Structure of gross value added of household production in comparison to GDP and extended GDP for Poland in 2011-2023 (in %)

Year	Gross Value Added of non-market household production in relation to GDP (Approach 1)	Household Production (market + non-market) in extended GDP (Approach 2)
2011*	44.7	36.5
2013**	40.4	34.6
*2023****	*46.5*	*34.9*

* based on Marszałek (2015): Time Use Survey 2003/2004, National Accounts 2011.
** based on Błaszczak-Przybycińska and Marszałek (2015): Time Use Survey 2013, Part 1, National Accounts 2013.
*** estimates based on own calculations TUS 2013,[2] National Accounts, 2023.

Source: own calculations.

[1] Announcement of President of Statistics Poland of 15 May 2024 on gross domestic product in 2023: Statistics Poland informs that gross domestic product in 2023 was PLN 3 410,1 bn, Statistics Poland / Latest statistical news / Communications and Announcements / List of Communiques and Announcements / Average monthly gross wage and salary in enterprise sector in the first quarter of 2011 (03/12/2024).

[2] Polish Time Use Survey 2023 data were in the Statistics Poland publishing process, while the individual data of TUS Poland 2023 are unavailable to external analysis until 2027 (status as of 11 February 2025).

Which of these two methods is preferable? To determine the impact on the current GDP if a significant share of household production were to be transferred to market production, the first approach would probably be more appropriate. On the other hand, if household production is considered an essential component of the extended economy, the second approach provides a more accurate illustration. Generally, the value of household production has been compared to national accounts GDP figures rather than the extended economy – see Figure 5.

Fig. 5. Extended GDP for Poland (million PLN), 2011-2023

* 2023 is forecasted on TUS 2013 data, wages (GUS, 2024a, 2024c).

SNA hh production = market household production; non SNA hh production = non-market household production

Source: own calculations.

5. Discussion and Conclusions

The purpose of this paper was to estimate the gross value added (GVA) of non-market household production and compare it with the Gross Domestic Product (GDP) calculated by Statistics Poland for the total national economy from 2003 to 2023. The author applied the input method and the generalist's wages approach to calculate domestic labour, the main component of value added of non--market household production. In earlier international and Polish studies, the input method was the most recommended approach to estimating domestic labour and non-market (invisible) household production. Both, domestic labour and household production may be presented in the satellite accounts, additional to core accounts extended tables which present the total overview of visible and invisible flows, inter and intragenerational transfers between households.

This paper also confirmed that the Household Production Satellite Account (HPSA) for Poland in 2023 provides valuable information and monitoring changes in economic development. The ratio of gross value added to GDP was almost stable in the period 2003–2023, but may change rapidly depending on changes in demographic processes, economic conditions, climate and the environment.

In the future, the aim is to compile satellite accounts on a regular basis at a five-year intervals or more often using data from the national accounts and other data of public statistics. The extended national accounts that incorporate non-market production will also facilitate comparisons of economic development over time. Note that some of the changes seen in GDP were simply due to the fact that part of the domestic work done in households has shifted to the markets and vice versa. The analogy can be also observed in fields such as agriculture, education, tourism and sport.

One of the limitation of this concept is that satellite accounts are presented as only supplementary and irregular calculations. If satellite account are implemented as regular and permanent calculations carried out within the framework of public statistics (national accounts), they will provide a crucial and valuable source of data to the regional and international comparisons of economic and social welfare. Satellite accounts provide the content to monitor shifts, public and private monetary and non--monetary transfers of goods and services, but also generate the integration of different accounts, both core and extended. Both accounts describe the entire economy and monitor all changes taking place in the regions and the country, based even on subtle changes in the demographic structure, the labour market, the economy and the environment.

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Rachunek satelitarny produkcji domowej jako trwały element szacunku wartości dodanej w gospodarce

Streszczenie

Cel: Celem artykułu jest oszacowanie wartości dodanej i PKB w zakresie rynkowej i nierynkowej produkcji domowej, prezentowanej w satelitarnym rachunku produkcji domowej. Rachunki satelitarne uzupełniają oficjalne statystyki o wartość nierynkowej produkcji zrealizowanej w sektorach lub dziedzinach. Określenie wartości nierynkowej produkcji domowej w Polsce oraz jej porównanie do PKB dostarcza kluczowych informacji o sytuacji społeczno-ekonomicznej gospodarstw domowych.

Metodyka: W analizie zastosowano metodę nakładu (*input method*), w której wartość pracy domowej, stanowiącej około 80% całkowitej wartości produkcji domowej, oszacowano na podstawie badań budżetu czasu. Wykorzystano również inne źródła, takie jak badania budżetów gospodarstw domowych, struktura wynagrodzeń według zawodów oraz rachunki narodowe. Do wyceny pracy domowej użyto metody stawek rynkowych, zapewniającej bardziej precyzyjne wyniki niż metoda stawki jednolitej.

Wyniki: W 2023 r. wartość PKB Polski wyniosła 3 410,1 mld zł, a nierynkowa produkcja domowa stanowiła dodatkowe 46,5% w relacji do PKB. Wartość pracy domowej oszacowano na 79,9% nierynkowej produkcji gospodarstw domowych. W modelu rozszerzonego PKB łączną wartość produkcji domowej (rynkowej i nierynkowej) oszacowano na poziomie 34,6-36,5% PKB.

Implikacje i rekomendacje: Wyniki wskazują, że nieuwzględnianie nierynkowej produkcji domowej może prowadzić do błędnych wniosków na temat sytuacji gospodarczej. Eurostat i UNECE zalecają regularne kalkulacje rachunków satelitarnych, by dostarczać pełniejszy obraz gospodarki. Włączenie tych danych do rachunków narodowych, bez nadmiernego obciążania systemu statystycznego, pozwala na lepszą ocenę wkładu gospodarstw domowych w gospodarkę.

Oryginalność/wartość: Włączenie do rachunków narodowych wyceny nierynkowej produkcji domowej w postaci rachunku satelitarnego nie obciąża nadmiernie systemu statystyki społecznej, ponieważ dane, które są w nim wykorzystywane pochodzą z innych dostępnych źródeł statystyki publicznej.

Słowa kluczowe: produkcja domowa, rachunki satelitarne, budżet czasu ludności, metoda nakładu, nieodpłatna praca domowa

Appendix

Overview of satellite accounts and their major characteristics

Eight characteristics of satellite accounts								
Special sector account								
	Functional accounts	Links to industries or products	Links to institution-nal sectors	Inclusion of non--monetary data	Extra detail	Supple-mentary concepts	Experimental results and more us of modelling	Part of EU transmission programme
1. Satellite accounts described in Chapter 22 (ESA 2010)								
Agricultural		x		x	x	x		x
Environmental	x	x		x	x	x	x	x
Health	x	x		x	x			x
Household production			X	x	x		x	
Labour and SAM		x	X	x	x			
Productivity and growth		x		x	x	x	x	x
R&D	x	x		x	x		x	
Social protection	x			x	x			x
Tourism	x	x		x	x			x
2. Satellite accounts describes in other chapters								
Balance of payments			X		x			x
Government finance			X		x	x		x
Monetary and financial statistics, and flow of funds			X		x	x		x
Supplementary pension table			X		x	x	x	x

Source: own compilation based on Eurostat (2013, p. 468).