

DOES A SUSTAINABLE BUDGET EXIST IN HUNGARY? – A PILOT STUDY OF MEASURING OVERSPENDING

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This research is a pre-step of revealing if Hungarian households have a sustainable budget. It is analysed through the overspending behaviour of families. According to the literature review, Reference Budget was defined as the methodology that approaches household budgets from quantitative and qualitative perspectives. The Reference Budget was used in Belgium to describe the poverty line by simulating the needs of different family types and comparing it to their income. The correlation between income and expenditure gives the basic frame of a sustainable budget and overspending. In this pilot study, the different steps of Reference Budget calculations for Hungary will be presented with one family type as the test of methodology. First, the output of the available data from the Central Statistical Office (KSH) in Hungary will be presented by SPSS statistical software. The demographical overview and the statistical analysis of the spending structure of the family types specified by KSH will offer a general picture of Hungarian society. Given that this paper is pilot research, only couples without children were interviewed as the chosen family type, about their needs regarding services and products essential to reaching subsistence levels. The results of this methodological test will be the base for measuring sustainable budgets and overspending in further research.

1. Introduction

The rate of household debts has risen significantly in the last few years. It might be explained by the development of financial institutes and their services; it never was so easy to get a debt like today. On the other hand, welfare is accompanied by more debt. In different life cycles, the families aim to purchase durable goods, like properties and cars. In times of recession, debt also means a safety net. Indebtedness is not sustainable; it causes several economic issues on the macro and micro levels (Dumitrescu et al., 2022).

US government debt was 134 % of the GDP at the end of 2020. It was more than the debt after World War II in 1946 (Reis, 2022). Another study (Sun et al., 2022) examined how financial stress and financial shock correlate and how they reached different households in Australia. Financial stress means difficulty satisfying basic needs, leading to a financial shock. Low-income families and one-parent families with dependent children face both low financial shock; that is, they cannot afford 500 AUD in emergency cases and also face high financial shock, which means they cannot afford 2000 AUD in need. Growing financial stress is caused by the lack of financial literacy, like financial attitude, management and behaviour in Malaysian households (Munisamy et al., 2022).

Further research (Makarenko et al., 2022) on the micro level stated that loans and spent savings were considered disposable resources based on the analysis of The Russia Longitudinal Monitoring Survey-Higher School of Economics. Unfortunately, these savings month by month were not enough for Russian families to quickly purchase a car or other high-value durable goods. Hüttel and Balderjahn (2021) researched the post-pandemic effects on sustainable consumption and the willingness to spend sustainably in Germany.

Their results showed that COVID-19 had a doubled negative impact on sustainable spending habits. These results show that spending is unsustainable on the macro and the micro level.

The current paper is concerned with the pre-step of calculating the sustainable budget for Hungarian families. Measuring a sustainable budget requires getting to know the detailed expenditures of various household types. The identification of expenditure items is realized with the calculation of the Reference Budget. A two-level preliminary research (Vastag and Eisinger-Balassa, 2023) concluded that budgetary analysis is essential in studying families' overspending behaviour. Given the sensitive nature of the topic, calculating Reference Budget (Storms et al., 2014) provides the possibility to understand the different households' spending behaviour. The Reference Budget includes the essential goods and services to reach the subsistence level of living. It can be calculated for an individual or an entire household concerning the geographical area and demographical variables (Deeming, 2020). Many case studies exist in various geographical regions, like in the UK (Bradshaw and Veit-Wilson, 2020), in Ireland (Mahon et al., 2020) and in Japan (Abe and Veit-Wilson, 2020) that aim to help and support the decisions of policymakers by providing the necessary minimal budget of families to decrease and avoid poverty. The references listed above, such as the benchmark paper of Penne et al. (2020), focus on the socio-political aspect of the Reference Budget. They focus on it on the macro level by calculating the Reference Budget and modelling different scenarios with the help of it. The novelty lies in studying sustainable budgets on the individual's level, how they perceive baskets of essential goods and how they plan their budget in Hungary in current economic circumstances. This paper deals with the adequate circumstances income level, which means the sum on the cash account after taxation and includes all affordable services and goods (Storms et al., 2023). The Classification of Individual Consumption According to Purpose (COICOP) is globally used to categorize the household's expenditures (Statistics Division, 2018). This classification and its main groups will be used as a guideline in this study to reveal the necessary items of baskets and facilitates to calculate Reference Budget. This study tests the methodology of calculating a Reference Budget for a selected household type and comparing it with the income from the simulation tool of HHoT (Gasior and Recchia, 2020). This will lead to the conclusion of the chosen household type overspend or not. Based on the results, the aim is to develop an improved method to analyse Hungarian households in an extended paper. This paper includes follows the following structure of introduction, methodology, results and conclusions. The method is based on two main sections; firstly, the available statistical data about households' spending will be analysed with SPSS software. The second part will present the preparation of the focus group discussion in the case of one chosen family type. The products and services from the conversations as essential items for a minimal standard of living will be the base of the Reference Budget for the chosen family type. The Hypothetical Household Tool (Gasior and Recchia, 2020) software will simulate the net income after taxation and social benefits to test and reveal the overspending in the selected family type. As a final step, evaluation comes where the Reference Budget and the net disposal income will be compared, and the results infer spending behaviour and the existence of the overspending phenomenon. The conclusion will phrase the pilot research's main consequences and limitations and state the extended study's expectations.

Figure 1 describes the different steps of the research.



Figure 1: Research's steps

2. Methodology

This part consists of two pillars. One is the statistical overview of the Hungarian Statistical Office's (KSH) data that were only available and processable in the research room of KSH. The spending of different family types on the COICOP's main groups was analyzed using SPSS software. Secondly, a pilot research was carried out by choosing a family type and involving them in a focus group discussion. The pilot study was prepared

based on the reference study of Penne et al. (2020). Focus group discussion provides the space for a casual conversation in a good atmosphere, where the talks led by the moderator can catch the voice of individuals. It also helps the researcher rephrase and rethink the research progress according to the responses (Leavy, 2014). Based on their answers, the basket of essential goods and services was defined as the Reference Budget of the household. The Hypothetical Household Tool software was run on this family type, so the average net income after taxation and with the available social benefits was calculated. In this study, it was not a purpose to analyze the family type's spending behaviours geographically detailed. It will be part of the extended analysis. This paper presents the main insights from the statistical analysis and describes the different steps of the pilot research that will be the base of the large-scale data gathering.

2.1. Statistical overview

KSH's research room provided data about the spending habits of Hungarian families. The latest Household Budget Survey database from 2021 was combined with the different family types of the latest Microcensus from 2016. KSH defined the various family types as single, male under 65y of age; single woman under 65 y of age; single, male 65 and older; single woman 65 and older; single woman 65 and older; two under the age of 65, without children; double, one 65 and older, no children; three or more persons, without children; one adult with one or more children; two adults with one child; two adults with three or more children; three or more adults, with one or more children; other. These family types' spending were categorized in the different COICOP's main groups. In the research room, the cross-tables were created by SPSS to get an overview of spending habits. As a result of the cross-table analysis, the three or more persons without children spent the most summarized, considering all COICOP's groups.

2.2. Pilot research

The pilot research was conducted as focus group discussions with two persons under 65 without children. This type was chosen because they were in the middle range, neither extremely high nor extremely low value, concerning summarized spending in Figure 2.

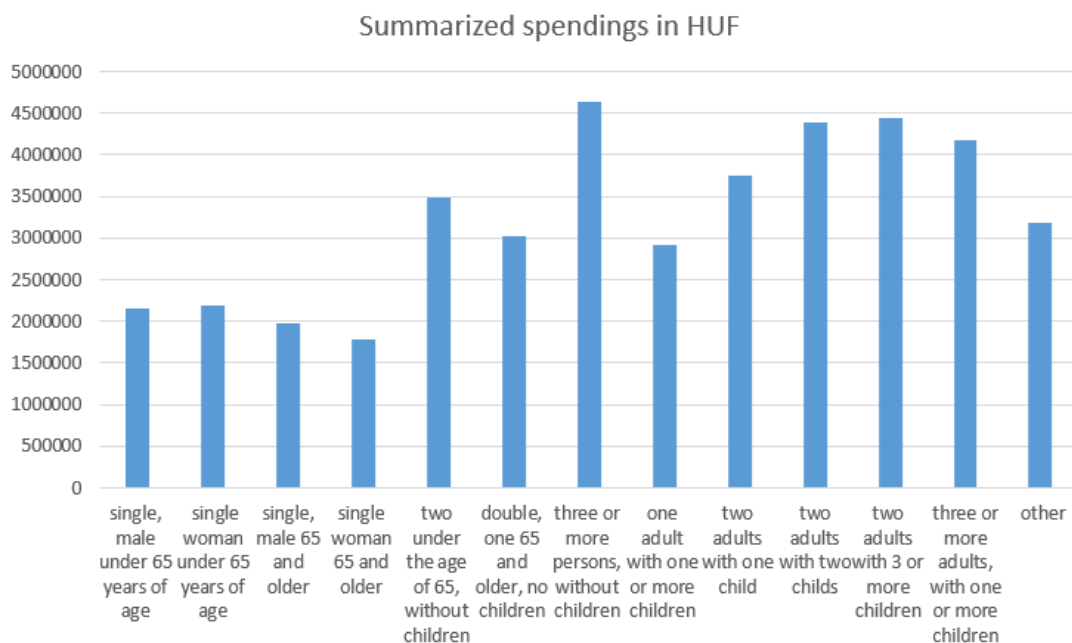


Figure 2: Summarized annual spending per family type in HUF

The couples were asked about their spending habits. First, they needed to place their household's total income on a scale (Hungarian Statistical Office, 2023) and declare how satisfied they are with their income on a Likert- scale from 1 to 10, where one was not at all, and 10 was satisfied. After it, they gave their associa-

tions hearing the expressions of overspending and family budget. They were asked what the essential products and services were based on the COICOP structure they could not live without. They were also asked if the brand is critical in choosing where they shop and why they chose those stores. Based on the answers, the products and services were selected for further analysis that appeared in every response. These items were priced with the help of the Hungarian government's price tracker site (arfigyelo.gvh.hu). The non-food product's prices were compared based on the stores the participants highlighted as the place of purchase. The lowest cost was calculated into the Reference Budget. With the help of the HHoT simulation tool, the net income was counted for two-earner adults above 25 y without children.

3. Discussion

The members of focus group discussions were all between 25-40 y with active employment status as white-collar workers. They placed their incomes between 500,001 – 1,000,000 HUF and 1,000,001 – 2,000,000 HUF. Their satisfaction rate was 6.8 on average. The results of association tasks are presented in Figures 3 and 4. The most common words were unnecessary things and impulse buying in case of overspending; while hearing the expression family budget, the participants referred to common budget and utilities.



Figure 3: Word cloud of overspending's associations



Figure 4. Word cloud of family budget's associations

Table 1 describes the monthly spent value in HUF for each classification of the COICOP structure. Food and non-alcoholic beverages; Housing services, water, electricity, gas and other fuel; Travel and transport; Communication and Other products and services were the categories where every participant spent money regularly. 351,389 HUF was calculated as the Reference Budget for two under 65 y without children households.

Table 1: Spent value monthly in the COICOP classification

Category	Spent value in HUF
Food and non-alcoholic beverages	95,640
Alcoholic beverages, tobacco products and drugs	none
Apparel and footwear	none
Housing services, water, electricity, gas and other fuel	130,000
Furnishing, household equipment, dwelling maintenance	none
Healthcare	none
Travel and transport	50,000
Communication	15,000
Recreation and culture	none
Education	none
Hospitality and accommodation services	none
Social care	none
Other products and services	30,749
TOTAL	351,389

After the calculation and the concerned social benefits, couples without children above 25 y are not allowed to receive tax allowances for young people under 25 y or any family allowances (Hegedűs and Szívós, 2023). Based on the Country Report (Hegedűs and Szívós, 2023), Hungary's minimum wage was 200,000 HUF in 2022. However, the simulation tool used the average income of 794,624 HUF for two persons. Personal income tax (16 %) and Employee Social Insurance Contributions (18.5 %) were deducted from the tax base during taxation. Employer Social Insurance Contributions were defined as 103,301 HUF. The net disposable income resulted in 520,478 HUF.

Table 2: Net disposable income after taxation in a household of two earners without children (based on the data of HHoT simulation)

Concept	Baseline
Income components in HUF	
Earnings	794,624
Taxes	-127,140
SIC employees	-147,005
Disposable income	520,478
SIC employers	103,301
Tax wedge in %	42.04
Marginal tax rates in % -earner 1 (100 % average salary)	
Taxes	16
SIC employees	18.5
Marginal tax rates in % -earner 2 (150 % average salary)	
Taxes	16
SIC employees	18.5

4. Conclusions

This paper aimed to describe the households' spending according to the available statistical data. Three or more persons without children spent the most, but the two adults with two or more children families were right after them concerning spending. For the pilot research, two persons under 65, without children, were chosen as a family type in the middle range of expenditures. The involved couples were asked about their baskets that contained the essential goods and services. Based on their answers, Reference Budget was defined as 351,389 HUF as the monthly budget to reach the minimal standard of living. HHoT calculated 520,475 HUF as disposable income for two –earners in one household without children. That might lead to the conclusion that a two-earner family with an average salary does not overspend. Nonetheless, after paying the rental fee or loan, purchasing groceries and maintaining one car, only 169,086 HUF is the budget for recreation, savings and vis significant situations. These results might suggest that the spending of couples without children do not overspend and their budget is sustainable, but it is not black or white. Ariely (2017) calls the attention to daily cognitive distortions that impact financial decision-making. Mental accounting categorizes the different expenses that would have been given out from various pockets. It gives the illusion of spending only a little on anything. The alternate costs and the value of different goods and services might help the customers get into the trap of overvaluing something, paying its price, and resigning other things at the end of the month. E-pockets, automated invoicing, and credit cards are the painkillers for paying. These methods ignore the physical contact with money and distort the value of goods and services.

Drawing a parallel between the statistical data and the calculated budget, the statistical data showed a discrepancy. The annual spending was 3,500,000 HUF divided by monthly; it is 291,666 HUF. The difference might come from the different economic circumstances (database of 2021) and the deviations of geographical regions This phenomenon begins at the micro level, but the analyzed literature shows that it can also cause enormous problems on higher levels. The budget serves as a map of income and expenditures. Making it sustainable for households might be a task and ethical issue for financial institutes and the government.

Are the different applications of commercial banks efficient, that aim to facilitate to be aware of spending and savings? How the government paper construction help the savings and decrease overspending behavior? To answer these questions, further research is suggested that helps to understand the spending behavior of Hungarians.

Several gaps should be filled in the extended paper. A more elaborate methodology can measure sustainability and overspending. Once the pilot research was limited to a few couples in one region, it should be extended to the entire country and measure the differences by region. Spending might show diversities by region. Other variables are the family types of KSH (Figure 2). All should be involved in focus group discussions in every region so their preferences might also be revealed. Using HHoT to define the average income will help to describe the overspending behaviour. Measuring a sustainable budget is planned in two steps. First, a summarized overview of the Hungarian population's greenhouse gas emissions will be calculated. This will be compared to other European countries' emissions. The second step requires a Reference Budget because it is estimated due to the cheapest products on the market. Still, as a second scenario, a sustainable budget will be calculated, where only the products will be considered that have an eco or sustainable label. Computing the different scenarios for various household types in other regions will show if the Hungarians can afford sustainable consumption or not. This paper shed light on the methodology's limitations and the topic's novelty. The reference Budget is approached mainly from regulations and taxation points of view. In further research, the measurement of sustainable budget and the existence of overspending will be in focus based on the experience of the focus group discussions. The more the individual's hidden motivations and reasons for overspending can be understood, the easier it will be to go against it.

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