SOURCES OF FINANCING OF HOUSEHOLD DEBT IN POLAND

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Abstract

Research background: This paper analyses the inter-relationships between the sources of financing households’ and the debt burden of indebted households.

Purpose: The aim of the paper is to find out inter-relationships between the sources of financing debt and its burden among indebted households.

Research Methodology: The research is divided into two parts. The first represents household debt in Poland in comparison to Euro area countries on the basis of the Households Finance and Consumption Survey. The second analyses are the data collected by the questionnaire at the beginning of 2018 in the Lubelskie voivodeship using the Tau b Kendall coefficient.

Results: The analysis shows that households in the Lubelskie voivodeship focus their debt on financing their housing and consumption needs, whereby the main source of obtaining credit is commercial banks. However, there is a real risk observed in the concentration of loans in parabanks in general and in the need to use low private loans.

Novelty: The findings show that the picture of household debt requires a thorough analysis in different contexts, as from an initial examination the situation looks relatively good, but when analysing more deeply and dividing households into separate groups with similar characteristics, we find considerable varied problems influencing households’ financial situations and raising the risk following their indebtedness.

Keywords: household debt, indebtedness, debt to income ratio, financial instruments, household finance

JEL classification: D14, G21
Introduction

Household finance has its specifics, as individuals’ decisions and behaviour are determined not only by economic factors but also by sociological and psychological ones. Among the economic factors, for example, there are constraints on households, as well as on individuals’ abilities to borrow (Campbell, 2006). In fact, access to credit may be considered as an indicator of economic well-being, but only provided that consumers have control over their debt (Xiao, 2015).

In many economic theories, borrowing is considered as negative saving. This is the case, for example, in the macroeconomics life-cycle theory of Ando and Modigliani (1963) as well as in the microeconomics theory of consumer and choice. As such, it allows consumers to borrow from future resources to pay for current consumption. However, it imposes constraints on future consumption. There is a recognition that debt can positively influence households’ future well-being along with possibilities of improving it in the future. This improvement will come due to higher income from both education and investment, financed by credit.

The aim of the paper is to find out inter-relationships between the sources of financing debt and its burden among indebted households. The paper presents the literature review on the structure and volume of household debt as part of household finance. The research section shows the results of a pilot research carried out on households in the Lubelskie voivodeship in 2018, which is followed by a discussion of the households’ situations. The last part contains the conclusions.

1. Literature review

It is important to monitor and analyse debt ratio, as it may have an impact on the macroeconomic activity of the economy as a whole, as well as on particular institutional sectors such as households. Debt levels and debt ratios are often estimated with the use of macroeconomics statistics, e. g. national accounts. However, compiling households as a whole has its drawbacks and allows for some specific behaviour of certain groups of households to go undetected (Caju, Roelandt, Nieuwenhuyze, Zachary, 2014). For example, in the life-cycle theory, consumers may smooth their consumption throughout life by building up and paying off debt. However, this theory assumes that the population consists of perfectly rational consumers, which does not hold true, as was proved in the research on the distribution of debt, income and wealth among different groups of households (Meriküll, Rõõm, 2016).
High debt presents a danger for abnormal fluctuations in households’ consumption patterns, thus posing a risk for the economy’s output performance in the country (Prinsloo, 2002).

Scientists have observed that holding debt has an effect not only on consumption but also on households’ portfolio choices, as households incorporate liabilities into their financial decisions on investments (Becker, Shabani, 2010). For example, there is a negative correlation between the volume of liabilities and saving, manifested by lower saving in the presence of higher liabilities (Kukk, 2014).

Consumers wishing to use credit face some constraints called liquidity constraints. The most prominent one is an obligation to collateral borrowing by some marketable assets. The main goal of lenders is to earn on the interest rates from the lending capital. However, the observed trend is to limit the ratio of a borrower’s debt to income (Carroll, 2001). Actually, it was proved that liquidity constraints influence the precautionary saving behaviour of households (Carroll, Kimball, 2001). It was also observed that credit constraints are heterogeneous for households living in different regions of Europe (Le Blanc, Porpiglia, Teppa, Zhu, Ziegelmeyer, 2015).

The fast development of alternative forms of financing, such as social lending and loans from parabanks raises the concerns of supervising authorities presented e.a by the European Commission (Green Paper Shadow Banking, 2012). There are also regulations relating to the protection of consumers against risk of indebtedness or overindebtedness, one of the most important being the Directive 2008/48/EC of the European Parliament and of the Council (Directive on credit agreements for consumers, 2008).

Over the last several years, economists have observed a constant and significant growth of household debt. In the late 1990s, they acknowledged that it had the serious potential to cause problems in the case of adverse changes in households’ financial circumstances (Brown, Taylor, 2008; Zajączkowski, Żochowski, 2007). The same can be observed in Poland. There is a steady growth in household liabilities value (Grejcz, 2017).

On this basis, the author decided to conduct some research to recognize the debt burden of households in reference to the sources of obtaining debt.

2. Research methodology

The research consists of two parts. The first is an analysis of data provided in the Household Finance and Consumption Survey published in 2016 (HFCN, 2016). This is the second out of two waves of the research conducted under the guidance of the European Central
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Bank. The data of this research referring to Poland was collected at the beginning of 2014 and considers household income from 2013.

The other research specifically conducted to analyse household credit was carried out in the Lubelskie voivodeship area in the first quarter of 2018 with the use of an anonymous questionnaire. It accounts for a component of a wider piece of research focusing on the state of household finance and was conducted to explain more thoroughly some of the observed correlations as well as to answer the questions which arose while analysing the HFCS’s results. For the purpose of this paper, only respondents between 18 and 65 years of age who declared active employment were considered. In this manner, the sample of 223 individuals was selected, each of whom represented one household from the Lubelskie voivodeship. Considering that there are 741,600 households in the analysed area, a statistical analysis can be done with a level of confidence of approximately 95% and an expected error rate of 6%.

The respondents differed by gender, age, place of living and education. They also declared the size of their household measured by the number of its members, and they were asked to assess their financial situations.

To investigate the relationships between sources of credit and the debt burden, simple statistical methods were used such as a frequency and percentage structure of responses as well as the correlation between variables. To calculate the correlations, the tau b Kendal coefficient was used as the normal distribution of the data could not be proved. All of the calculations were done with using of the IBM SPSS program.

3. Research findings

3.1. Debt of Polish households in comparison with households from the Euro area

Given a deeper insight into the data provided in the HFCS, it seems obvious that Polish households have much less debt on average than their counterparts in the Euro area countries (Table 1). However, this does not necessarily mean that the financial situation of households in Poland is that much better, as their average assets are lower by more than a half and their average net wealth accounts for about 43% of that in the Euro area. A slightly different situation arises when we focus on medians. The assets and net wealth of Polish households are still lower than in the Euro area but the percentage of households having debts and the outstanding balance on liabilities are higher. This later observation comes mostly from the fact that the distribution of debt by value is unequal in Poland and mostly focused in the households in the two highest deciles by income.
Table 1. Characteristics of households’ situation in Poland and the Euro area in HFCS

| Indicator                                      | Unit       | Means | Medians |
|------------------------------------------------|------------|-------|---------|
|                                                |            | Euro area | PL | Euro area | PL |
| Total assets                                   | thous. EUR | 252.7 | 101.5  | 139.0 | 104.0 |
| Total outstanding balance of households’ liabilities | thous. EUR | 68.2  | 13.8   | 28.2  | 48.5  |
| Households holding debt                        | %          | 42.4  | 37.0   | 42.4  | 45.9  |
| Net wealth                                     | thous. EUR | 223.3 | 96.4   | 104.0 | 71.2  |
| Debt to asset ratio of indebted households      | %          |       |        | 25.7  | 6.8   |
| Debt to income ratio of indebted households     | %          |       |        | 71.8  | 15.2  |

Source: The Household Finance and Consumption Survey. Wave 2, Statistical Tables, December 2016.

Another issue is the relation of debt to assets and to income in households being in debt. The debt to assets ratio in Poland is 3.8 times lower than in the Euro area. The difference in debt to the income ratio is even higher and amounts to 4.7 times more.

3.2. Characteristics of household debt in the Lubelskie voivodeship

The Lubelskie voivodeship is one of 16 voivodeships in Poland. It belongs to the poorest regions in the country measured by GDP per capita. According to the Central Statistical Office data for 2016, the disposable income per capita of households in this voivodeship is about 88% of the country average (the Central Statistical Office, 2017a), and its GDP per capita is only 68.9% of the average (the Central Statistical Office, 2017b).

The respondents declared all types of debt existing in their households. The most common appears to be a mortgage, accounting for over 24% of the respondents. Then comes cash credit and credit card debt, both accounting for 14.8%. The least popular proves to be consolidation credit, taken by less than 1% of the respondents.

In Poland, there is a lower differentiation in financing institutions than in other countries such as, for example, Germany (Korzeniowska, Węclawski, 2016). The highest assets by a value level are held by commercial banks followed by community banks and credit unions. Community banks and credit unions are much smaller than commercial banks, and the first ones are often located in rural areas. This, in part, determines the sources of obtaining funds in the form of loan or credit, as presented in Table 2.
Table 2. Sources of obtaining debt by households (percent of all respondents. The respondents gave multiple responses)

| Sources of debt       | Percent of the respondents |
|-----------------------|-----------------------------|
| Commercial bank       | 55.20                       |
| Private loan          | 25.10                       |
| Community bank        | 13.00                       |
| Hire purchase         | 9.90                        |
| Credit union          | 2.70                        |
| Parabank              | 0.90                        |

Source: own calculations on the basis of the results of the questionnaire.

More than 55% of the respondents declared borrowing from commercial banks, which was to be expected as these banks are the most important institutions in the banking system. Next, there are private loans from family, friends or delayed payments to shopkeepers, which made up 25.1% of the responses. The last one is usually performed for the poorest people by grocers and is often on the boundary of legality due to tax policy. The respondents prefer to take credit than use hire purchase, as that form of financing debt is used by only 9.9% of them. Only 2.7% of the respondents are clients of credit unions and 0.9% borrow from parabanks.

An important aspect of household financial situation is the volume of its debt and the ratio of debt to personal income, although 46.1% of the respondents do not follow this relation or do not want to reveal it for different reasons (Table 3).

Table 3. Debt volume in relation to household income (percent of all respondents)

| Volume of debt                  | Percent of the respondents |
|---------------------------------|-----------------------------|
| Hard to say or no answer        | 46.1                        |
| More than 3 years of income     | 5.4                         |
| From 1 to 3 years of income     | 4.5                         |
| From 0.5 to 1 years of income   | 10.3                        |
| From 3 to 6 months of income    | 5.8                         |
| From 1 to 3 months of income    | 9.9                         |
| Up to 1 month income            | 17.9                        |

Source: own calculations on the basis of the results of the questionnaire.

From the groups which declared their debt volume, the largest (17.9%) has small debts of up to 1 month of their income. This is followed by 10.3% of the respondents – people whose
debt is placed between 6 to 12 months of their income and 9.9% of these who have to pay off from 1 to 3 months of their income.

As mentioned earlier, debt burden is important in relation to constraints on household budgets limiting their consumption spending. On the one hand, the data show that the problem is not highly significant in the analysed Polish region, as the biggest group of 59% declared that their instalments and other payments account for up to 10% of their monthly income (Table 4), but on the other hand, we must take into consideration low incomes in this area, which means that even smaller debts put significant constraints on households’ budgets.

Table 4. Debt burden on households’ budgets

| Part of income used to pay off debt | Percent of the respondents |
|------------------------------------|-----------------------------|
| Less than 10%                      | 59                          |
| 10–20%                             | 24                          |
| 20–30%                             | 14                          |
| 30–40%                             | 2                           |
| 40–50%                             | 1                           |

Source: own calculations on the basis of questionnaire results.

Approximately 83% of indebted respondents have to pay off less than 20% of their income monthly and up to 3% are heavily burdened with debt, which constrains between 30% to 50% of their income.

4. Results

One of the aspects of the research was to analyse where the respondents look for credit to finance particular aims and how their debt burden is divided between lenders (Table 5).

The negative correlation of private loans with durable goods and housing purchasing goes in line with the burden of such debt. It is mostly a short term, small loan (up to 10% of households’ income) to cover any temporary shortages of cash. Usually, it is paid off as soon as the next income is in the borrowers’ accounts.

Parabanks have easy access and very attractive starting terms of contracts but they offer limited funds for a very short term. That is why the loans offered by them are positively correlated with holidays and fixed fees as a way of financing extra spending or emergency funds. Parabanks often service overindebted or people with too low an income to get a loan from banks, which is confirmed by the positive correlation of borrowing from parabanks with the
very high debt burden of more than 30% of monthly income. These loans are used occasionally, as in the case of holidays, or for getting emergency funds to cover fixed fees when there are no other cheaper sources to gain additional funds.

Table 5. Correlation between aims of debt, debt burden and source of financing (tau b Kendal coefficient)

| Aim of debt                          | Commercial bank | Community bank | Credit union | Parabank | Private loan |
|-------------------------------------|-----------------|----------------|--------------|----------|--------------|
| Fixed fees                          | 0.049           | 0.216**        | 0.049        | 0.141*   | -0.066       |
| Durable goods purchase              | -0.024          | 0.117          | 0.082        | -0.059   | -0.175**     |
| Housing estate purchase             | 0.348**         | -0.076         | 0.046        | -0.050   | -0.207**     |
| Renovation                          | 0.006           | 0.355**        | 0.007        | -0.040   | -0.131       |
| Health                              | 0.080           | 0.158*         | 0.090        | -0.022   | -0.036       |
| Purchase or rental of working tools | -0.020          | 0.356**        | -0.032       | -0.018   | -0.112       |
| Holiday                             | 0.137*          | 0.031          | -0.025       | 0.307**  | -0.088       |
| Stocks purchase                     | -0.010          | -0.037         | 0.278**      | -0.009   | -0.055       |
| Children’s education                | -0.086          | 0.281**        | -0.038       | -0.022   | -0.084       |

| Debt burden on monthly income       |                 |                |              |          |              |
|-------------------------------------|-----------------|----------------|--------------|----------|--------------|
| Less than 10%                       | -0.334**        | -0.109         | -0.142*      | -0.017   | 0.401**      |
| Between 10 and 20%                  | 0.186**         | 0.097          | -0.028       | -0.053   | -0.250**     |
| Between 20 and 30%                  | 0.215**         | 0.070          | 0.169*       | -0.039   | -0.237**     |
| Between 30 and 40%                  | 0.054           | -0.052         | 0.186**      | 0.346**  | -0.078       |

Correlation significant with * p = 0.05, ** p = 0.01, two-sided.

Source: own calculations using the IBM SPSS.

There are significant differences in financing specific aims with funds from commercial banks, community banks and credit unions. The source of these differences may be characteristics of households, their place of living, income, number of members, etc. For example, housing purchase is mostly financed by a commercial bank while renovation is significantly correlated with financing by a community bank. Another interesting fact is that there was no statistically significant correlation between debt burden level and borrowing from a community bank which implies that there is no concentration of clients with a particular financial situation, as can be observed among other lenders.

Analysing the correlation between households’ characteristics and sources of financing debt, we can note some regularity although it has to be noted than the coefficients are not higher then 0.3 (Table 6).
Table 6. Correlation between households’ characteristics and sources of financing (tau b Kendal coefficient)

| Households’ characteristics | Commercial bank | Community bank | Parabanks and instalment plans | Private loan |
|-----------------------------|-----------------|----------------|-------------------------------|--------------|
| Gender (1 = F; 2 = M)       | 0.056           | –0.013         | –0.014                        | 0.040        |
| Age (ascending from 1 to 6) | 0.027           | 0.117          | –0.04                         | –0.042       |
| Place of living (1 = rural; 5 = large city) | 0.085            | –0.214**       | 0.133*                        | 0.001        |
| Self-assessment of financial situation (ascending from 1 to 5) | 0.009            | –0.097         | 0.193**                       | –0.021       |
| Education (ascending from 1 to 5) | 0.138*            | –0.226**       | 0.122                         | –0.083       |
| Number of people in the household (ascending from 1 to 5) | –0.024            | 0.221**        | 0.058                         | –0.192**     |

Correlation significant with * p = 0.05, ** p = 0.01, two-sided.
Gender, age and education refer to the respondent representing a household.
Source: own calculations using the IBM SPSS.

The clients of commercial banks tend to live in larger towns and cities and have higher levels of education. On the other hand, community banks’ clients come from rural areas and small towns and they have lower education as well as larger families. There is also the difference in looking for financing by commercial or community banks depending on the main source of income. People who mainly earn wages are more prone to borrow from a commercial bank (for these two variables tau b = 0.187, p = 0.01) and do not want to use community banks (tau b = –0.330, p = 0.01). Farmers, on the other hand, prefer borrowing from community banks (tau b = 0.512, p = 0.01) and are slightly unwilling to borrow from commercial banks (tau b = –0.169, p = 0.05). Parabanks and instalment plans are used as the sources of financing more often by people living in larger towns and cities and these who assess their financial situation to be higher. This can be explained by broader access to parabanks and shops offering instalment plans in cities. Private loans are more popular between debtors with smaller families or those who are single. Also, a positive correlation was observed between self-employed and borrowing privately (tau b = 0.134, p = 0.05) with a negative correlation of respondents with this main source of income and borrowing from commercial banks (tau b = –0.135, p = 0.05). The statistically significant correlation between households’ characteristics or their main source of income and credit unions has not been found.

Conclusions

The concluded research confirms the necessity of analysing household debt on both the macroeconomic and microeconomic level. The macroeconomic level refers to an association
of the whole household sector with an economy; while on the other hand, the microeconomic level shows the specific behaviour of individuals which in the process of aggregating data would go undetected.

The research presents a picture of household debt in one of the poorer Polish regions, as such, it results refer to a local region, although it can be compared with similar regions within the European Union to draw conclusions about the similarities in household behaviour under comparable socio-economic constraints.

The results show the differences among households with varied socio-economic characteristics in their preferences in acquiring debt. It was found that there is an inter-relationship between place of living and preferences in funding sources. There is also a significant relationship between debt burden and preferred financing institution.

The analysis shows a level and structure of debt obtained from different sources. The calculations suggest that there are serious constraints on households’ possibilities to acquire debt due to income not being sufficient enough. A high number of private loans, as well as a relatively high correlation between them and low debt burden, suggest the need to borrow very often to cover temporary shortages of funds. Furthermore, some cause for concern is the correlation between loans from parabanks and the debt burden being higher than 30% of households’ income, particularly considering a statistically significant correlation between loans from parabanks spent on fixed fees which puts a household at risk of insolvency. This risk is strengthened if we take under consideration combined data about debt volume and debt burden in relation to households’ income.

Considering the problems pointed out in the research as well as the ones presented in the literature, which can arise from households’ indebtedness and following it consumption constraints the presented results indicate that there is a risk that they may appear among households in Poland. So the need arises for further research to provide data to analyse households’ financial situation, in order to recognize and prevent these risks for the country’s economy.

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