Doctoral School of Business and Management

THESIS BOOK

accompanying the Ph.D dissertation
of

Katalin Dobránszky-Bartus

with the title of

Overdue Debt as a Poverty Trap

Supervisors:

Professor Edina Berlinger, Ph.D, Habil.
Professor György Walter, Ph.D, Habil.

Budapest, 2022

Department of Finance

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Table of Content

1. BACKGROUND AND RESEARCH QUESTIONS

In our research, we[1] aim to shed light on the role of overdue debt in reinforcing poverty. This not only helps to better understand the dynamics of the poverty trap induced by overdue debt but also enhances the rediscussing of current policy tools.

1.1. Background

After the financial crisis of 2007-2011, when non-performing loan portfolios have significantly increased - particularly due to foreign exchange loan borrowing -, there were large scale debt consolidation programs. However, these programs allowed debtors who were not in arrears to repay their existing debt with a lump sum, which meant a significant reduction of debt repayment for those who anyhow were able to meet the repayment conditions of their loans and hence excluded those who really needed debt consolidation (Berlinger, Walter, 2015). There were also debt relief programs targeting the poor, but they did not prove successful or were too limited in terms of their timing or of their conditions. Only around 1% of debtors applied for personal bankruptcy which could be because of the lack of understanding of the institution or because the conditions were too restrictive. Similarly, social housing programs for the poor were closed after some years and only a small proportion of applicants were admitted to this program.

Under the Higher Education Excellence Program (FIKP)[2] and as part of the financial liquidity subproject facilitating research on financial inclusion of the disadvantaged societies of Hungary, personal interviews were conducted in small villages in Hungary's most disadvantaged regions. The interviews indicated that households have had large debts for a long time, which they have not been able to repay.

[1] This research has been conducted in collaboration with Edina Berlinger and György Molnár.

[2] This research was supported by the Higher Education Institutional Excellence Program 2020 of the Ministry of Innovation and Technology in the framework of the 'Financial and Public Services' research project at Corvinus University of Budapest.
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With no hope of solving their problems, the interviewees with long outstanding debts said that in order to finance their basic needs they do not take up a declared (i.e., full- or part-time, taxpaying) job as a significant part (33 or 50%) of their salary would be deducted for loan repayment. Additionally, the alternative would be to take a job for a minimum wage outside their villages leading to additional travel costs and reducing their time spent with their families. In practice, they would end up with less disposable income than they earn from public or shadow-market work where they can be paid in cash without further deductions. The interviews also indicated that borrowers with overdue debts try to avoid any interaction with the lender banks. Many do not even think to open a bank account due to fear of deductions, shame, and frustration towards financial services providers and regret their past experiences. The interviewees indicated that this situation creates stress, results in depression and has a direct impact on their- and their families health.

In the meantime, interests on these overdue debts have been accumulating creating a deepening debt trap with diminishing hope that lenders can be ever repaid. The question is raised why lenders do not renegotiate these loans with the borrowers, give partial debt relief and/or relief on the penalty interests, as this at least would cover a part of the outstanding loan.

Based on the indications from the interviews, a detailed and large-sample survey was carried out in 57 small settlements of one of the most disadvantaged areas of Hungary, in Borsod-Abaúj-Zemplén (BAZ) county. The survey targeted financial management questions, also focusing on the impact of overdue debts. 504 respondents reported on 1196 adults and 504 households. The sample is randomly collected and representative of non-urban households (Gosztonyi and Havran 2021).

The results of the survey underline the issues raised by the interviews and show that overdue debt is significant in this part of society. 15% of all adults have overdue debt, 28% of all households have at least one member with overdue debt, and 30% of the surveyed people live in a household with overdue debt. Many of the debtors would be willing to pay to get rid of the problem debt. Interviewees without overdue debt know people in their wider neighbourhood who are suffering from the impacts of overdue debt which contributes to the poverty trap in different ways.

A poverty trap is a situation where a factor creates a mechanism based on positive feedback through which poverty is reproduced or exacerbated (Azariadis 1996). Several researchers examined poverty trap mechanisms (Sen 1999; Banerjee, Banerjee and Duflo 2011; Mullainathan and Shafir 2013; Piketty 2014), but these analyses have not identified the overdue debt as a key driver of the poverty trap. Moreover, most of the empirical research took place in developing countries where the poor have no access to utilities and bank loans which are the main reasons for overdue debt in the case of Hungary.

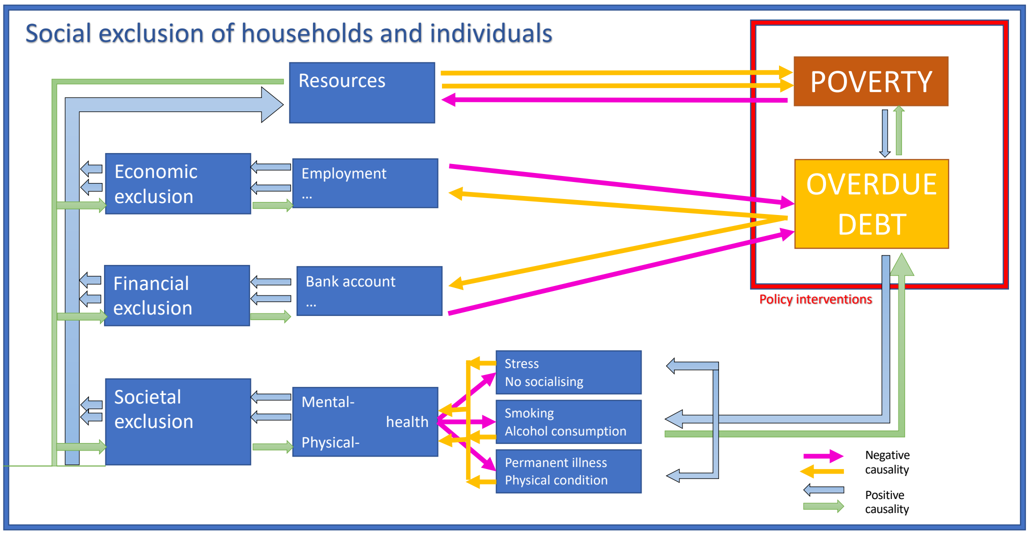
In the above-described Hungarian case, due to long-standing overdue debts, borrowers avoid declared work and electronic payment, instead of trying to make a living from casual work in the black economy and pay for everything in cash. Debtors hiding from debt collection benefit less from the services of the welfare systems (unemployment benefits, health care, pensions, etc.) and from formal financial services (payment services, savings opportunities, loans, etc.). They become more vulnerable and are forced to make worse compromises. Escape from debt collection as a lifestyle severely limits the debtor's and his family members' abilities and opportunities as defined by Sen (2004).

1.2. Research questions

The overarching aim of my thesis is to provide a better understanding of how overdue debt deepens the poverty trap. The main objectives of this research are to understand why the long-lasting overdue debts are not renegotiated between lenders and poor borrowers and to provide empirical evidence how overdue debt impacts the three dimensions of social exclusion: economic exclusion (no declared employment), financial exclusion (no bank account), and societal exclusion (not socializing). Figure 1 below shows how multidimensional poverty and multidimensional social inclusion are interlinked through these elements. Poverty is embedded in social exclusion and can be described through the same dimensions. The direction of the relationships builds two circles. Along the anti-clockwise spiral, poverty is decreasing resources which can lead to financial and economic exclusion and the degradation of well-being, which in turn may lead to increased indebtedness and ultimately to over-indebtedness and overdue debt. Along the clockwise spiral, overdue debt leads to voluntary financial and economic exclusion and causes the degradation of the mental and physical condition leading to decreased resources and deepening poverty which further enhances the risk of overdue debt.

There is extensive research on some elements mainly focusing on analysing the counter-clockwise direction of the causality (pink and green arrows). Based on the interviews, we believe that there is a two-way causality. Our research is focusing on the clockwise direction (yellow and blue arrows).

Figure 1: Poverty trap and the interlinkage between poverty and overdue debt



Source: own analysis.
Note: Social inclusion is multidimensional and is interlinked with multidimensional poverty as defined by Sen, 1999 through different channels: economic inclusion (e.g., employment), financial inclusion (e.g., having a bank account) and mental and physical well-being (health).

The main research question is as follows: What is the impact of overdue debt on multidimensional poverty in the case of individuals living in disadvantaged households? To answer this question, we need to answer the below sub-questions:

1. Why is overdue debt not renegotiated between lenders and poor borrowers?
2. What are the characteristics of individuals/households living in the villages of a disadvantaged region of Hungary (BAZ county)?
3. What is the impact of overdue debt on labour supply?
4. What is the impact of overdue debt on using banking services?

5. What is the impact of overdue debt on the physical and mental health of the borrowers?

Choosing a proxy for each dimension of poverty, economic and financial exclusion and mental and physical well-being, the following specific objectives can be defined:

i. To describe the characteristics of distressed households and individuals with overdue debt and compare their characteristics with households and individuals without overdue debt;
ii. To examine the relationship between overdue debt and employment;
iii. To examine the relationship between overdue debt and the usage of bank account;
iv. To examine the relationship between overdue debt and the health of the debtor;
v. To argue that targeted policy is needed to address the overdue debt of the poorest part of the society;
vi. To articulate the implications of the above findings.

1.3. Relevance of the study

The literature review shows that there is a need for further empirical analysis to better understand the relationships and dynamics between household debt and the dimensions of poverty. We expect that our results provide an insight into how unaddressed overdue debt can lead to an accelerated poverty trap using a representative dataset collected in the most disadvantaged regions of Hungary. Our theoretical model reveals why small debts are not renegotiated by the lender. In light of this market failure, our research aims at finding evidence that overdue debt deepens the poverty trap. Understanding these dynamics, we expect to draw the attention of policymakers to the need of addressing overdue debt in this part of the society with enhanced policy tools. We argue that the state should promote debt relief programs targeting the poor not only for efficiency reasons (for the sake of positive externalities) but also for moral purposes (pillories are unacceptable in modern societies).

2. METHODOLGY

To answer the research questions, described under section 1.2 of the previous chapter, we developed a theoretical model and conducted an empirical analysis.

2.1. Theoretical model

We build a theoretical model inspired by Akerlof (1978), Tirole (2006), and Mukherjee, Subramanian and Tantri (2018) to derive the sufficient condition for market-based debt relief programs to succeed and to find an explanation why the current market-based debt relief programs may not be fit to address the poorest. Our research adds to the literature on the impact of debt relief programs, which varies between showing the success of large debt reduction programs (Dobbie and Song 2017) and arguing that large-scale debt waiver leads to a worsening economic situation (Kanz 2016). Like Mukherjee et al. (2019), we argue that debt relief programs can be successful depending on the underlying characteristics or situation of the borrowers. Debt reduction could be a rational decision from an economic aspect, as at least part of the debt could be collected by the lender. Voluntary, market-based debt reductions can be Pareto-optimal (Krugman 1988b, Husain 1993 and Hart and Moore 1998). However, debt relief programs have costs, and they increase moral hazard (Tirole 2006; Fudenberg and Tirole 1990). Thus, they soften the budget constraint of existing and potential borrowers (Kornai 1998; Kornai, Maskin and Roland 2003) and can create free lunches for banks profiting from other banks' debt relief programs (Sachs 1990). In addition, it is the payment discipline of not only the borrowers who have received the debt relief that deteriorates in the future (if they expect to be rescued again and again) but also of other previously performing debtors if discounts become known. However, examining the decision of US mortgage debtors on strategic default, Guiso et al. (2013) found that the willingness-to-pay depends also on non-pecuniary factors, such as fairness and morality. Bhutta et al. (2017) also concluded that US mortgage borrowers are reluctant to walk away even if it were beneficial for them, thus, moral hazard can be lower than suspected. This can lead to lower levels of debt relief than the social optimum would explain.

2.2. Empirical analysis

The question underlying our empirical analysis is what would happen if long-standing non-performing loans were renegotiated and (even combined with partial debt relief) restructured, thus averting the looming horror of debt collection over debtors' heads eliminating the reason for hiding from debt collection. The aim of our research is to find out what impact such a program is expected to have on employment, bank account use, and population health. At the same time, we aim to explain that without policy changes, it can be expected from neither the lender nor the debtor to act in a way to reduce the long-term costs for society.

The central question of our study is overdue debts suggesting the enhanced vulnerability of households living in a disadvantaged region. Overdue debt has an impact on poverty through different channels: employment (economic exclusion), financial exclusion and physical- and mental health (societal exclusion). In general, no matter which relationship we look at, the two-way impact is not discussed in detail in the literature. The impact of unemployment (for example Kempson et al. 2004), financial inclusion (for example Demirgüç-Kunt et al. 2018) and health on debt (for example Bridges and Disney 2010; Krumer-Nevo et al. 2017) is widely discussed. However, only most recently have researchers started to recognise the existence of a reverse impact of debt on employment (Dobbieand Song 2017; Verner and Gyöngyösi 2020), on financial inclusion (Krumer-Nevo et al. 2017 and Fernandez-Olit et al. 2018), and on health (for example Gilligan et al. 2018 and Guariglia et al. 2020).

There are few studies with empirical evidence to prove the direct impact of overdue debt on employment, financial inclusion, and on physical health and there is a lack of analysis focusing on distressed households and regions. Regarding employment, Mian and Sufi (2014) and Verner and Gyöngyösi (2020) provides evidence through labour demand channels. Bernstein and Struyven (2017), Herkenhoff (2019), Dobbie et al. (2020) and Bernstein (2021) found empirical evidence that overdue debts have a direct impact on labour supply. However, to our knowledge, there has been no research that addressed the impact of overdue debt on labour supply due to hiding from debt collection. Regarding health issues, many studies focus on mental health and address stress, but to date, we do not know of any studies, which take into account socialising as an indicator of mental health. We would like to strengthen the literature on this account and fill the gap by providing empirical evidence related to the impact of overdue debt on labour supply, the usage of bank accounts and health issues.

We use descriptive statistics to show what types of households have overdue debt. With the guidance of Békés and Kézdi (2021), we look at the causality between overdue debt and employment, overdue debt and bank account, and overdue debt and health with different methods addressing endogeneity. First, based on direct questions in the survey, we are expecting an answer regarding the direction of the causal relationship and the behavioural explanations that mediate the negative effect of overdue debts. Second, we conduct multivariate analyses – with linear probability model, binary logistic model, and probit model – using control variables. Additionally, we analyse the relationship between overdue debt and employment also with the help of instrumental variables.

3. RESULTS

We looked at Hungarian households living in small settlements in the most disadvantaged county of Hungary, Borsod-Abaúj-Zemplén (BAZ) county. We followed the Sen (1985) definition of poverty. In a multidimensional space, we looked at the role of overdue debt in relation to economic exclusion, financial exclusion, and mental- and physical well-being, therefore, contributing to the scarce literature on the interlinkage between the dimensions of poverty especially outside of the developing countries. Hungary, as part of the EU, is a developed country.

3.1. Overdue debt is a modern pillory

With the help of the theoretical model inspired by Akerlof (1978) and Tirole (2006), we show that lenders have no interest to offer payment reductions if non-performing borrowers are few, have small debts, and are difficult to reach. Due to moral hazard, it is more beneficial for the lenders to keep these borrowers as deterrents than renegotiating their overdue debts. Calibrating model parameters to poor households struggling with overdue debts in small villages of a disadvantaged rural region in Hungary, we show that this might be the case in our sample too. The regulator needs to step in, as we cannot expect the lender to take into account externalities. Besides accumulating overdue debt, such externalities are for example the decrease of declared employment and hence decreased tax income, the increase of the shadow economy and cash usage, but most strikingly the deteriorating mental and physical health of the borrower and its entire family.

3.2. The impact of overdue debt on employment

When analysing the relationship between overdue debt and employment, we found a strong association. It has been long emphasized that employment affects consumer demand and debt repayment (Kempson et al. 2004). Most of the literature focused on the macro-economic consequences and found that the relationship between employment and debt problems is labour demand-driven (Mian and Sufi 2014; Verner and Gyöngyösi 2020). Recently, researchers started exploring the reverse impact between employment and debt. Mian and Sufi (2014) found that the decline in housing net worth leads to a decline in labour demand. Verner and Gyöngyösi (2020) found evidence that foreign exchange loans lead to a decline in aggregate demand. Some research shows that labour supply can be impacted through housing lock (Bernstein and Struyven 2017), housing debt overhang (Bernstein 2017, 2021), financial distress (Herkenhoff 2019; Dobbie et al. 2020) and the vacancy posting effect (Donaldson et al. 2019; Apergis et al. 2020).

We found that overdue debts reduce the likelihood of having a registered job due to voluntary economic exclusion driven by the fear of debt collection (Berlinger, Dobránszky and Molnár 2021a and Berlinger, Dobránszky and Molnár 2021b). This suggests that debt reduction policies may be beneficial at the level of society.

We found that there is a strong relationship between declared work and overdue debts; on average, ceteris paribus, the probability of having a registered job is 23 percentage points lower in the case of overdue debts. Middle-aged men with more degrees are more likely to have a declared job. The ability-to-pay ratio (total official net income of the household/total living expenses) is not significant for employment either economically or statistically; it is likely that the effect is (partly) overtaken by other variables like overdue debts and education. There is a negative correlation between declared job and the variable "chronic illness". The development of the settlement has a significant direct impact on employment: one standard deviation increase in the value of this variable increases the likelihood of having a registered job by almost 4 percentage points. If we examine the impact of overdue debts only on full-time jobs, we receive similar results.

Our research contributes to the literature on the relationship between indebtedness and employment in three ways: it provides empirical evidence direction with the impact of overdue debt on labour supply, it extends the literature by addressing any type of overdue financial obligation, not only specific consumer or mortgage loan related debt-overhang, and it fills the literature gap by addressing distressed households.

3.3. The impact of overdue debt on financial exclusion

In our analysis, we have chosen the usage of a bank account as a proxy for financial inclusion. Similar to the relationship between overdue debt and employment, there is extensive literature showing that there is a relationship between debt issues and financial inclusion and that financial inclusion has an impact on debt (for example, Fanta and Makina 2019).

We found that overdue debts are negatively related to bank accounts: if an individual has overdue debts, the likelihood of them using a bank account decreases by 9 percentage points on average, ceteris paribus. A declared job increases the chances of using a bank account by 21 percentage points, and, in line with our expectations, the income has a positive impact on bank account ownership. If net income and employment are left out from the model, the coefficient of overdue debts increases to 15 percentage points.

Women are more likely to open a bank account, but this finding is not robust across different model specifications. The use of a bank account initially increases with age, which is consistent with the results of (Illyés and Varga 2015; Horn and Kiss 2019). However, in our sample, there is no subsequent negative effect of age, probably because we only examined those of active age (18–65 years). Education also has a strong effect on our dataset: the higher the degree, the higher the probability of having a bank account, and the magnitude of this effect is similar to the findings of (Illyés and Varga 2015; Horn and Kiss 2019). The coefficients of the variables “ability-to-pay” and “chronic illness” have the expected sign, but they are only significant in model specifications without the net income and employment variables.

Our research fills the conceptual gap in literature exploring the impact of overdue debt on financial inclusion and contributes to the literature providing evidence on the impact of overdue debt in distressed households on financial inclusion.

3.4. The impact of overdue debt on health

To address the third dimension of social inclusion, we also looked at the impact of overdue debt on mental and physical well-being that latter being defined by the so-called unhealth index, which is based on mental and physical health indicators of individuals. The link between household debt and mental and physical health issues (e.g., Bridges and Disney 2010; Sweet et al. 2013; Krumer-Nevo et al. 2017) has been proven in a wast amount of research. There have been attempts to recognise a two-way relationship and the fact that this positive feedback effect can deepen the poverty trap (e.g., Krumer-Nevo et al. 2017; Ntasalaze and Ikhilde 2016), but evidence for this is scarce and mainly focuses on one sub-element of physical or mental health, such as the impact of debt on cancer (for example Gilligan et al. 2018).

We found that overdue debts destroy health. The size effect of overdue debts on health is comparable to that of a vocational exam or a high school diploma after completing elementary school. Age is not significant, but gender is, women have slightly worse health in this sample. Education matters again, the more someone studies, the healthier they live. Similarly, the ability-to-pay ratio, which is a more balanced family budget, has a positive impact on health too. Net income is irrelevant, and surprisingly, declared work has a weak negative impact on health. Having had a foreign currency loan in the past has no significant impact. Similarly, the settlement development is not significant, and controlling for this effect at the district level instead of the settlement level does not significantly change the results.

Our research, in this regard, contributes to the literature and fills the gap by providing empirical evidence related to the impact of overdue debt on mental and physical well-being.

To sum up the impact of overdue debt on social inclusion factors and according to our estimations, overdue debts reduce the likelihood of having a registered job by nearly 14 percentage points. Not having a registered job reduces the probability of owning a bank account by 22 percentage points and, in addition, overdue debts further decrease the probability by 5 percentage points. In addition, overdue debt also has a negative effect on the health of those living in the same household as the debtor, and this negative effect is greater than what a combined high school diploma and diploma could compensate for (0.4 versus 1.08-0.72 = 0.36).

Overdue debts, thus, slow down economic growth not only through labour demand, as Verner and Gyöngyösi (2020) have shown, but also through labour supply. Furthermore, overdue debts not only have a short-term effect after the crisis but bears an impact on economic activity for decades.

3.5. Limitations of the research

Our database is restricted to the rural settlements of a disadvantaged county in Hungary. It would be important to extend this research to national or even to regional level analyzing the role of overdue debt of distressed households in inducing poverty trap.

Furthermore, the information provided by this database may be limited in terms of the variables. First, variables that are used for calibrating the theoretical model may not be the best fit. Measuring the ability and willingness to pay, which is a crucial element may not be fully reliable and well defined. It is also questionable how to measure best the personal cost of becoming a bad borrower. It should be also noted that the assumptions of the theoretical model may be restrictive, for example, on the homogeneity of the good and bad borrowers or on the effect of policy interventions addressing the personal cost of becoming a bad borrower, which in our case is implicit.

Second, there may be variables that could be left out as confounders. Personality traits could be one example of such variables. This, on the one hand, can cause bias in our results, but it also suggests the need for further research focusing on the different personality traits of people living in poverty. The further bias of our findings may occur due to the fear of the respondents. Although there is no reason to assume that the respondents did not answer honestly, not paying debt may be seen as a shameful act. Additionally, it can create a fear of debt collection. This could lead to underestimated results if respondents do not or only partially share information on overdue debt.

Additionally, there might be other channels through which overdue debt has an impact on the dimensions of social inclusion. For example, overdue debt can also impact labour supply through deteriorating creditworthiness (Dobbie et al. 2020) or through deteriorating an employee's chances of finding, retaining, or selecting work conditions (Herkenhoff, 2019) and finally through the deterioration of collateral value in case of mortgage loans (Bernstein and Struyven 2017). The in-depth interviews confirmed that the channel we examined – i.e., voluntary exclusion due to fear from deduction - is relevant in this relationship. Nevertheless, extending the research towards additional channels would contribute further to this field.

There are also two methodological remarks which are worth further attention. First, one might argue that the usage of bank account is not an appropriate proxy for financial inclusion, as financial inclusion itself is also multidimensional (Honohan 2008; Allen et al. 2012; Chan 2017). Given that the availability of other financial inclusion indicators is restricted and that the main aim of this research was to see if overdue debt causes voluntary exclusion, based on (Kempson et al. 2000; Devlin 2005; Fitzpatrick 2015 and Krumer-Nevo et al. 2017) we used this variable to describe the financial inclusion dimension. Second, it may be questioned whether the used instrumental variable is fit for the purpose. Although in our database, both statistically and logically, we can assume that the perceived social aversion with regards to overdue debts affects the repayment of loans but does not directly affect employment, only through overdue debts, and hence it is fit for becoming an instrumental variable when analysing the impact of overdue debt on employment. The instrumental variable, however, should be reconsidered if the research is extended to other populations.

3.6. Answering the research question

Taking into consideration the literature in the field, our findings and the limitations of our research, and in response to the research question, we conclude that overdue debt has a negative impact on economic- and financial inclusion through voluntary exclusion driven by the fear of debt collection. Overdue debt also has a negative impact on physical- and mental health due to stress initiated by debt overhang and the lack of socializing.

4. MAIN REFERENCES

Akerlof, G.A., 1978. The market for „lemons": quality uncertainty and the market mechanism. Diamond, P., Rothschild, M. (Eds.), Uncertainty in Economics. Academic Press, 235–251. https://doi.org/10.1016/B978-0-12-214850-7.50022-X

Allen, F., Demirguc-Kunt, A., Klapper, L. and Peria, M.M., 2012. Foundations of financial inclusion. Policy Research Working Paper, 6290.

Apergis, E., Apergis, N., Young, W., 2020. Investigating the impact of auto loans on unemployment: the US experience. Applied Economics 52, 6306–6319. https://doi.org/10.1080/00036846.2020.1789548

Azariadis, C., 1996. The economics of poverty traps part one: complete markets. Journal of economic growth, 1(4), 449-486. https://doi.org/10.1007/BF00150197

Banerjee, A.V., Banerjee, A., Duflo, E., 2011. Poor economics: A radical rethinking of the way to fight global poverty. Public Affairs.*

Banerjee, A.V., Duflo, E., 2007. The Economic Lives of the Poor. Journal of Economic Perspectives 21, 141–168. https://doi.org/10.1257/jep.21.1.141*

Barry, B., 1998. Social exclusion, social isolation and the distribution of income. *

Békés, G. and Kézdi, G., 2021. Data Analysis for Business, Economics, and Policy. Cambridge University Press. *

Berlinger, E., Dobránszky-Bartus, K. and Molnár, G., 2021a. Lejárt tartozások fogságában. Közgazdasági Szemle, 68(7-8), 709-735. https://doi.org/10.18414/KSZ.2021.7-8.709

Berlinger, E., Dobránszky-Bartus, K. and Molnár, G., 2021b. Overdue Debts and Financial Exclusion. Risks, 9(9), 158. https://doi.org/10.3390/risks9090158

Berlinger, E., Walter, Gy., 2015. Income-contingent repayment scheme for non-performing mortgage loans in Hungary. Acta Oeconomica 65, 123–147. https://doi.org/10.1556/032.65.2015.s1.8

Bernstein, A., 2017. Negative Equity, Household Debt Overhang, and Labor Supply. Journal of Finance. http://leeds-faculty.colorado.edu/AsafBernstein/Asaf_Bernstein_NegativeHomeEquityHouseholdDebtOverhangLaborSupply_201907.pdf *

Bernstein, A., 2021. Negative home equity and household labor supply. The Journal of Finance, 76(6), 2963-2995. https://doi.org/10.1111/jofi.13070*

Bernstein, A., Struyven, D., 2017. Housing Lock: Dutch Evidence on the Impact of Negative Home Equity on Household Mobility (SSRN Scholarly Paper No. ID 3090675). Social Science Research Network, Rochester, NY. https://doi.org/10.2139/ssrn.3090675*

Bhutta, Neil, Jane Dokko, and Hui Shan, "Consumer Ruthlessness and Mortgage Default during the 2007 to 2009 Housing Bust" Journal of Finance 72.6 (2017) 2433-2466. https://doi.org/10.1111/jofi.12523

Bridges, S., Disney, R., 2010. Debt and depression. Journal of Health Economics 29, 388–403. https://doi.org/10.1016/j.jhealeco.2010.02.003

Bridges, S., Disney, R., 2004. Use of credit and arrears on debt among low-income families in the United Kingdom. Fiscal Studies 25, 1–25. https://doi.org/10.1111/j.1475-5890.2004.tb00094.x*

Caplan, M.A., Birkenmaier, J., Bae, J., 2021. Financial exclusion in OECD countries: A scoping review*. International Journal of Social Welfare 30, 58–71. https://doi.org/10.1111/ijsw.12430

Chan, S., 2017. Financial exclusion: an empirical studz of household access to financial services in Austrlia. Doctoral dissertation. http://unsworks.unsw.edu.au/fapi/datastream/unsworks:45834/SOURCE02?view=true

Demirgüç-Kunt, A., Klapper, L.F., Singer, D., Ansar, S., Hess, J. 2018. The Global Findex Database 2017, Measuring Financial Inclusion and the Fintech Revolution. World Bank Group, Washington. http://documents1.worldbank.org/curated/en/332881525873182837/pdf/126033-PUB-PUBLIC-pubdate-4-19-2018.pdf. *

Demirgüç-Kunt, A., Klapper, L.F., Singer, D., 2013. Financial Inclusion and Legal Discrimination Against Women: Evidence from Developing Countries (SSRN Scholarly Paper No. ID 2254240). Social Science Research Network, Rochester, NY.

Devlin, J.F., 2005. A Detailed Study of Financial Exclusion in the UK. J Consum Policy 28, 75–108. https://doi.org/10.1007/s10603-004-7313-y

Dobbie, W., Song, J., 2020. Targeted Debt Relief and the Origins of Financial Distress: Experimental Evidence from Distressed Credit Card Borrowers. American Economic Review 110, 984–1018. https://doi.org/10.1257/aer.20171541*

Dobbie, W., Song, J., 2017. Targeted Debt Relief and the Origins of Financial Distress: Experimental Evidence from Distressed Credit Card Borrowers, Working paper, Washington Center for Equitable Growth, Washington. https://equitablegrowth.org/wp-content/uploads/2017/07/07252017-WP-targeted-debt-relief-and-financial-distress.pdf *

Donaldson, J.R., Piacentino, G., Thakor, A., 2019. Household Debt Overhang and Unemployment. The Journal of Finance 74, 1473–1502. https://doi.org/10.1111/jofi.12760*

Fanta, A.B., Makina, D., 2019. 11 - Unintended Consequences of Financial Inclusion, in: Makina, D. (Ed.), Extending Financial Inclusion in Africa. Academic Press, 231–256. https://doi.org/10.1016/B978-0-12-814164-9.00011-6*

Fernández-Olit, B., Martín Martín, J.M., Porras González, E., 2019. Systematized literature review on financial inclusion and exclusion in developed countries. International Journal of Bank Marketing 38, 600–626. https://doi.org/10.1108/IJBM-06-2019-0203*

Fernández-Olit, B., Paredes-Gázquez, J.D., de la Cuesta-González, M., 2018. Are Social and Financial Exclusion Two Sides of the Same Coin? An Analysis of the Financial Integration of Vulnerable People. Soc Indic Res 135, 245–268. https://doi.org/10.1007/s11205-016-1479-y

Fitzpatrick, K., 2015. The effect of bank account ownership on credit and consumption: Evidence from the UK. Southern Economic Journal 82, 55–80. https://doi.org/10.4284/0038-4038-2013.027

Fudenberg, D., Tirole, J., 1990. Moral Hazard and Renegotiation in Agency Contracts. Econometrica 58, 1279–1319. https://doi.org/10.2307/2938317

Gilligan, A.M., Alberts, D.S., Roe, D.J. and Skrepnek, G.H., 2018. Death or debt? National estimates of financial toxicity in persons with newly-diagnosed cancer. The American journal of medicine, 131(10), 1187-1199.

Gosztonyi, M. and Havran, D., 2021. Highways to Hell? Paths Towards the Formal Financial Exclusion: Empirical Lessons of the Households from Northern Hungary. The European Journal of Development Research, 1-34.

Guariglia, A., Monahan, M., Pickering, K., Roberts, T., 2021. Financial health and obesity. Social Science & Medicine 113665. https://doi.org/10.1016/j.socscimed.2020.113665

Guiso, L., Sapienza, P. and Zingales, L., 2013. The determinants of attitudes toward strategic default on mortgages. The Journal of Finance, 68(4), pp.1473-1515. https://doi.org/10.1111/jofi.12044

Hart, O., Moore, J., 1998. Default and Renegotiation: A Dynamic Model of Debt*. The Quarterly Journal of Economics 113, 1–41. https://doi.org/10.1162/003355398555496

Herkenhoff, K.F., 2019. The Impact of Consumer Credit Access on Unemployment. The Review of Economic Studies 86, 2605–2642. https://doi.org/10.1093/restud/rdz006*

Honohan, P., 2008. Cross-country variation in household access to financial services. Journal of Banking & Finance, 32(11), 2493-2500. https://doi.org/10.1016/j.jbankfin.2008.05.004

Horn D., Kiss H.J., 2019. Kinek nincs ma bankszámlája Magyarországon? Hitelintézeti szemle 18, 35–54. https://doi.org/10.25201/HSZ.18.4.3554

Husain, A.M., 1993. Debt relief schemes and welfare. Journal of International Money and Finance 12, 632–643. https://doi.org/10.1016/0261-5606(93)90029-B

Illyés. T., Varga, L., 2015. Mutasd mivel fizetsz, megmondom, ki vagy. – A pénzforgalmi szokásokat befolyásoló szociodemográfiai tényezők. Hitelintézeti szemle, p.26.

Kanz, M., 2016. What Does Debt Relief Do for Development? Evidence from India's Bailout for Rural Households. American Economic Journal: Applied Economics 8, 66–99. https://doi.org/10.1257/app.20130399

Kempson, E., McKay, S. and Willitts, M., 2004. Characteristics of families in debt and the nature of indebtedness (No. 211). Leeds: Corporate Document Services.

Kornai, J., 1998. The Place of the Soft Budget Constraint Syndrome in Economic Theory. Journal of Comparative Economics 26, 11–17. https://doi.org/10.1006/jcec.1997.1505

Kornai, J., Maskin, E., Roland, G., 2003. Understanding the Soft Budget Constraint. Journal of Economic Literature 41, 1095–1136. https://doi.org/10.1257/002205103771799999

Krugman, P., 1988a. Financing vs. forgiving a debt overhang. Journal of development Economics 29, 253–268. https://doi.org/10.1016/0304-3878(88)90044-2

Krumer-Nevo, M., Gorodzeisky, A. and Saar-Heiman, Y., 2017. Debt, poverty, and financial exclusion. Journal of Social Work, 17(5), 511-530. https://doi-org.kuleuven.e-bronnen.be/10.1177/1468017316649330*

Levitas, R., Pantazis, C., Fahmy, E., Gordon, D., Lloyd-Reichling, E. and Patsios, D., 2007. The multi-dimensional analysis of social exclusion.

Mian, A., Sufi, A., 2014. What Explains the 2007–2009 Drop in Employment? Econometrica 82, 2197–2223. https://doi.org/10.3982/ECTA10451*

Mian, A., Sufi, A., Verner, E., 2017. Household Debt and Business Cycles Worldwide*. The Quarterly Journal of Economics 132, 1755–1817. https://doi.org/10.1093/qje/qjx017*

Mukherjee, S., Subramanian, K., Tantri, P., 2019. Borrowers' Distress and Debt Relief: Evidence from a Natural Experiment. The Journal of Law and Economics. https://doi.org/10.1086/701902*

Mullainathan, S., Shafir, E., 2013. Scarcity: Why having too little means so much. Macmillan. *

Ntasalaze, L., Ikhide, S., 2016. Household Over-indebtedness: Understanding its Extent and Characteristics of those Affected. Journal of Social Sciences 48, 79–93. https://doi.org/10.1080/09718923.2016.11893573

Ong, Q., Theseira, W., Ng, I.Y.H., 2019. Reducing debt improves psychological functioning and changes decision-making in the poor. PNAS 116, 7244–7249. https://doi.org/10.1073/pnas.1810901116*

Ozili, P.K., 2020. Financial inclusion research around the world: A review. Forum for Social Economics 0, 1–23. https://doi.org/10.1080/07360932.2020.1715238*

Piketty, T., 2014. Capital in the Twenty-First Century: a multidimensional approach to the history of capital and social classes. The British journal of sociology 65, 736–747.

Sachs, J.D., 1990. A Strategy for Efficient Debt Reduction. Journal of Economic Perspectives 4, 19–29. https://doi.org/10.1257/jep.4.1.19

Saunders, P., 2011. Down and out: Poverty and exclusion in Australia. Policy Press. *

Sen, A., 2004. Capabilities, lists, and public reason: continuing the conversation. Feminist economics, 10(3), 77-80. https://doi-org.kuleuven.e-bronnen.be/10.1080/1354570042000315163

Sen, A.K., 1999. Development as Freedom Oxford University Press Shaw TM & Heard.

Sweet, E., Nandi, A., Adam, E.K., McDade, T.W., 2013. The high price of debt: Household financial debt and its impact on mental and physical health. Social Science & Medicine 91, 94–100. https://doi.org/10.1016/j.socscimed.2013.05.009

Tirole, J. 2006. The Theory of Corporate Finance, Princeton University Press, Princeton, New Jersey

Verner, E., Gyöngyösi, G., 2020. Household Debt Revaluation and the Real Economy: Evidence from a Foreign Currency Debt Crisis. American Economic Review 110, 2667–2702. https://doi.org/10.1257/aer.20181585*

5. RELATED PUBLICATIONS

Journal articles

Berlinger, E., Dobránszky-Bartus, K. and Molnár, G., 2021a. Lejárt tartozások fogságában. Közgazdasági Szemle, 68(7-8), 709-735. https://doi.org/10.18414/KSZ.2021.7-8.709

Berlinger, E., Dobránszky-Bartus, K. and Molnár, G., 2021b. Overdue Debts and Financial Exclusion. Risks, 9(9), 158. **https://doi.org/10.3390/risks9090158**

Other Publications

Berlinger, E., Dobránszky-Bartus, K., Molnár, G., 2020. Modern pillories: overdue debt of the poor. Conference presentation. In: Kondor, Gábor; Dömötör, Barbara; Havran, Dániel (szerk.) 11th Annual Financial Market Liquidity Conference Budapest, Magyarország: Corvinus University of Budapest, Foundation of the Department of Finance (2020) p. 12 , 1 p.

Berlinger, E., Dobránszky-Bartus, K., Molnár, G., 2020. The effect of NPL on employment and financial inclusion. Conference presentation. Magyar Közgazdasági Egyesület XVI. Évi konferencia

Dobránszky-Bartus, K. 2020. The effect of NPL on employment and financial inclusion. Studz and conference presentation. XVIII MKE-PTE Nyári Mūhelykonferencia, 2020

Berlinger, E., Dobránszky-Bartus, K., Molnár, G., 2020. The impact of over-due debt - a reverse impact study. Study and conference presentation. PRMIA Hungary Chapter Research Conference, 2020, 21 October, 2020

Dobránszky-Bartus, K., Krenchel, J. V. 2019. Datio in solutum and non-performing loans. Conference presentation. In: Bódog, Ferenc; Csiszár, Beáta (szerk.) VIII. Interdiszciplináris Doktorandusz Konferencia 2019: absztraktkötet=8th Interdisciplinary Doctoral Conference 2019: Book of Abstracts Pécs, Magyarország : Pécsi Tudományegyetem Doktorandusz Önkormányzat (2019) 185 p. p. VIII. Interdiszciplináris Doktoranduszkonferencia, 2019 Absztraktkötet Paper: Pécsi Tudományegyetem Doktorandusz Önkormányzat , 132 p.

Berlinger, E; Dobránszky-Bartus, K ; Molnár, G. 2021 Lejárt tartozások fogságában: életeket tesz tönkre a nagy adósság Magyarországon. Online blog. KRTK Blog - Portfolio.hu (2021.12.19.),