The Role of Financial Literacy and Self-Efficacy in Household Over-indebtedness

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The level of household indebtedness in most countries has been growing rapidly in recent decades, and the recent pandemic only emphasized this growth and the problem of household budget management, which can lead to over-indebtedness. Previous research shows that a low level of financial literacy can be the reason for excessive credit borrowing and difficulties in meeting credit obligations. However, apart from the importance of financial knowledge in managing personal finances, personal non-cognitive attributes represent an important framework for understanding how household financial decisions are made. Therefore, this paper investigates the impact of financial literacy as well as self-efficacy on household over-indebtedness in Croatia. The study employed a quantitative research design, using the snowball sampling method to recruit the participants. The results confirmed the significance of financial literacy for sound financial decisions as well as the influence of self-efficacy as a personal attribute in preventing over-indebtedness and as a determinant of household financial stability. Additionally, the analysis confirmed the importance of debt structure for household over-indebtedness.

Key words: indebtedness, financial literacy, self-efficacy, loan structure.

JEL codes: D14, G41, G51, G53, J16

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INTRODUCTION

Household indebtedness has become a major concern and one of the biggest challenges in the modern world (Ferreira et al., 2021) since it has a significant negative impact on many individual conditions, from social, economic, physical, and psychological to the overall individual well-being (Cheng et al., 2014; Farrell et al., 2016; Fauzi et al., 2020; Selenko & Batinic, 2011). Previous research provides evidence that excessive debt and financial hardship can ultimately lead to deterioration in poverty, vulnerability, and social isolation (Bejaković & Mrnjavac, 2017). As households nowadays increasingly rely on credit to finance their consumption needs and investments, understanding the factors that influence indebtedness is of high importance. One of the key concepts that has gained considerable attention concerning the financial behaviours of individuals related to credit cards and loan indebtedness in recent years is financial literacy. Financial literacy is a key determinant for better control over personal finances. Researchers indicated that financially illiterate individuals with less financial knowledge are more likely to exhibit bad financial decisions, with short and long-term consequences (Baker et al., 2023; Clark et al., 2021; Demertzis et al., 2020; Lusardi et al., 2021; Pepur et al., 2022). Insufficient financial literacy has been associated with increased debt burdens, higher fees, difficulties in loan repayments, and loan defaults.

However, managing one's finances takes more than financial knowledge and financial literacy (Farrell et al., 2016). Due to the complexity of human nature, researchers are emphasizing that personal attributes should not be neglected as important determinants (Baker et al., 2023). Personal attributes determine a person's decision-making and life choices which in turn can have effects and repercussions on the entire life ahead (Savioni et al., 2022). They determine how individuals manage their finances and make household decisions (Donnelly et al., 2012). Self-efficacy, as a personal non-cognitive attribute, simply defined as the belief in one's ability to perform well (Bandura, 1977), is a worthy framework for understanding how individuals approach household financial decision-making. People vary in their self-efficacy or belief that their actions or effort can influence their future. Regarding household financial decisions, self-efficacy refers to the confidence and belief in one's capability to achieve personal and consequently financial goals (Liu & Zhang, 2021). While previous research has examined the separate roles of financial literacy and self-efficacy in influencing different financial behaviours, there is limited understanding of how these two factors affect household indebtedness. This paper seeks to address this gap by investigating the interplay between financial literacy and self-efficacy in shaping household indebtedness.

Building upon these considerations, this research follows the premise that individual levels of financial literacy and self-efficacy are associated with household indebtedness. Together, when they are at a higher level they lead to a better financial situation and financial stability, which, in turn, have a positive impact on other aspects of life improving overall life satisfaction. Oppositely, when they are at a lower level, these factors diminish financial stability, leading to over-indebtedness and consequently reducing overall life satisfaction. Additionally, we believe that the effects that financial literacy and self-efficacy will have on household financial situations will differ concerning gender dominance in financial decision-making regarding indebtedness (Banerjee et al., 2021; Ke, 2021).

This study contributes to the literature in several ways. Firstly, the primary research results confirm the theoretical assumption that financial literacy significantly affects the over-indebtedness of households in Croatia. Secondly, we prove that debt structure is also important for individual over-indebtedness. A high proportion of mortgage loans for primary real estate and short-term liquidity loans in total debt indicate a high risk of individual over-indebtedness. Thirdly, theoretical discussion and empirically obtained results confirm the influence of behavioural factors, i.e., self-efficacy, on the risk of over-indebtedness. Adding to the prior finding's new shreds of evidence, our research additionally emphasizes the importance of non-cognitive attributes and financial skills in household financial decision-making. By understanding, the connection between financial literacy, self-efficacy, and household over-indebtedness, policymakers, educators, and practitioners can develop appropriate strategies and interventions to promote financial well-being and alleviate the risks of unnecessary indebtedness.

Following the introduction, the next section discusses problem of indebtedness. The third and fourth parts explain financial literacy and self-efficacy in the context of indebtedness. The fifth section presents the data and the methodology, whereas the sixth section discusses the results. Limitations of the research and the concluding remarks are presented in the final section.

THE PROBLEM OF GROWING HOUSEHOLD OVER-INDEBTEDNESS

The level of household debt has been growing worldwide in the last decades, and during that period household indebtedness reached unprecedented and unsustainable levels, significantly contributing to the onset of the recent financial and economic crisis (Barradas & Tomás, 2023). Numerous European countries on their way towards integration into the EU underwent the implementation of new deregulation frameworks designed to meet European regulations. This process accelerated the financialization of economies, leading to substantial growth of the financial sector and a notable rise in household indebtedness. The process of financialization assumed increased and more significant involvement of households. Households acquired various financial assets and accepted more financial liabilities (Barradas & Tomás, 2023; Romão & Barradas, 2024). On one hand, households became more involved in purchasing different financial products (such as life insurance and pension fund products) and in investing in numerous financial instruments (money market funds, bonds, stocks, cryptocurrencies, etc.). Conversely, households took on more financial liabilities through more available types of credit (housing, consumer, credit cards, bank overdrafts, etc.). This increased engagement, supported with a more than the decade of low interest rates, has led to a rise in the accumulation of households' debt and made them more vulnerable to risks such as an increase in interest rates and/or a decrease in households' income. This situation, in many EU countries, had an important role to the emergence of the financial and economic crisis (Mian & Sufi, 2014; Moore & Stockhammer, 2018; Romão & Barradas, 2024). In the wake of the recent crisis, when consumers' income and expenses were subjected to severe and unexpected shocks, the problem of household over-indebtedness gained more attention, particularly in some countries and among specific population groups (Bejaković & Mrnjavac, 2017; Cesar Leandro & Botelho, 2022; Eurofound, 2020). According to recent research, people aged 25-49 years, women around 50 years of age as well as people with lower financial literacy are among the most vulnerable (Eurofound 2020; Mrnjavac & Bejaković, 2023). Difficulties and consequences arising out of over-indebtedness, such as mental and health problems, unemployment, financial fragility, social exclusion, etc. affect not only individuals and their households, but also the economy as a whole. Over-indebtedness, which may result in an inability to settle debts, can trigger a chain reaction that could lead to financial crises and macroeconomic instability. This situation often necessitates an increase in interest rates, contributing in that way to rising unemployment and poverty in the country.

Although household over-indebtedness is a current and extremely important issue, with wide-ranging consequences, one of the obstacles in dealing with it successfully is the lack of a unique and generally accepted definition of over-indebtedness (EU, 2023; Bejaković & Mrnjavac, 2017; D'Alessio & Iezzi, 2013). The unique definition is a prerequisite for determining the exact number of over-indebted people; however, its absence is a result of the multidimensionality and complexity of the issue itself (Cesar Leandro & Botelho, 2022), and is additionally accompanied by the absence of a consistent set of statistical data (Chen et al., 2023; EU, 2023).

The term over-indebtedness has become commonly used to describe the increase in a number of households facing insufficient financial resources to fulfill their obligations (Eurofound, 2020). Efforts have been made within the European Union to establish standardized criteria and content for over-indebtedness. However, the consensus in the literature regarding a unified definition of over-indebtedness and consequently its measurement has not yet been achieved (see more on this debate in articles i.e.: Bejaković & Mrnjavac, 2017; D'Alessio & Iezzi, 2013; Eurofound, 2020; Petrov, 2021). The various indicators, each with its specific features, shed light on distinct aspects of the phenomenon of indebtedness, each offering valuable insights into this multidimensional phenomenon (D'Alessio & Iezzi, 2013).

Numerous studies have examined the causes of household over-indebtedness and pointed to the influence of the above-mentioned macroeconomic factors such as interest rates, employment, wages, inflation, real income, real GDP, aggregate consumption, income distribution, and aggregate savings (i.e. (Barradas & Tomás, 2023; Biyanwila & Anuradha, 2023; EU, 2023; Romão & Barradas, 2024). Apart from macroeconomic factors, according to the literature, demographic and behavioural factors also determine household over-indebtedness. Significant demographic factors include age, gender, income, education level, family size, marital status, religion, and household savings (Biyanwila & Anuradha, 2023; EU 2023; Kurowski, 2021).

Upon reviewing the results of the existing empirical research, it becomes evident that macroeconomic and demographic factors play significant roles in all economies, both developed and developing. Despite numerous studies investigating the causes of household over-indebtedness in these contexts, many economies still struggle to find effective solutions to this issue. The rising prevalence of household over-indebtedness cannot be solely attributed to macroeconomic and demographic determinants (Rahman et al., 2020).

Therefore, a deeper investigation of behavioural aspects could greatly enhance our understanding of the diverse range of reasons behind household over-indebtedness. Namely, behavioural factors influence individual decision-making processes, and consequently household over-indebtedness is an extreme result of this process (Biyanwila and Anuradha, 2023). Among behavioural factors, such as risk perception, materialism, and emotions, Biyanwila and Anuradha (2023), include also financial literacy, however, financial literacy is a much broader, multidimensional concept.

FINANCIAL LITERACY IN THE CONTEXT OF INDEBTEDNESS

Financial literacy encompasses knowledge, attitudes, and behaviours related to finance (OECD, 2005). According to the OECD's (2013) commonly cited definition, financial literacy is a process in which consumers/investors enhance their understanding of financial products and concepts. Individuals acquire the essential skills and confidence to enhance their awareness of financial risks and opportunities, make informed decisions, locate assistance, and implement effective measures to enhance their financial well-being through access to information, guidance, and/or objective advice (Vehovec, 2011; OECD, 2005).

This definition reflects the comprehensive understanding of financial literacy as a combination of knowledge, attitudes, and appropriate behaviour, enabling individuals to navigate changing environments and achieve personal benefits in evolving circumstances. The importance of financial literacy and its promotion has been driven by globalization trends, financial market integration, and technological development and innovation. These have resulted in a growing number of sophisticated financial products and services, as well as channels for their distribution to end-users. In such circumstances, individuals have more opportunities to manage their finances independently, but they are also faced with challenges in choosing appropriate financial products/services due to the increasing availability and volume of information about each product/service. Therefore, in addition to acquiring additional and specific knowledge, individuals need to develop skills necessary for selecting and understanding various pieces of information all to be prepared to make quality financial decisions in changing circumstances and minimize unfavourable outcomes that may hinder the achievement of their goals.

Financial literacy plays an extremely important role concerning household finance and debt management. Financially literate individuals can make informed borrowing decisions by understanding financial product terms and comparing options effectively. Financial literacy enables effective debt management through budgeting, prioritizing repayments, and utilizing strategies like debt consolidation. Additionally, financially literate individuals understand the risks of excessive debt, encouraging prudent borrowing habits and maintaining a balance between debt and income (van Rooij et al., 2011; van Rooij et al., 2012). Studies show that people with a higher financial and debt literacy are less affected by over-indebtedness (Kurowski, 2021), and are more resilient during financial crises, relying less on debt by leveraging savings and insurance coverage. In the situation of experience with housing loans, borrowers who have a higher financial literacy are characterized by much fewer problems with debt repayment (Lusardi & Tufano, 2015). Furthermore, financial literacy promotes long-term financial planning; encouraging saving (Lusardi et al., 2017) and financial market investments (Khan et al., 2020) for future goals instead of relying solely on borrowing. Thus, improving financial literacy can lead to more responsible borrowing decisions, reducing some specific risky paying and borrowing behaviours (Xiao et al., 2014) which in the end diminishes the risk of excessive indebtedness and promote overall financial well-being.

In contrast, low financial literacy, lack of experience in dealing with numerous new financial products and their utilization, together with liberalized access to debt financing and changed economic circumstances can alter households' economic behaviour (Bejaković & Mrnjavac, 2017). Lower financial literacy causes individuals to finance themselves at a greater cost, incurring higher fees and using high-cost borrowing (Lusardi & Tufano, 2015). Limited financial knowledge among borrowers can result in taking out loans households are not able to repay. This situation is particularly pertinent during times of crises (i.e. recent pandemic), which can exacerbate over-indebtedness. Those who are unprepared for unforeseen financial challenges are especially vulnerable to becoming over-indebted. Therefore, financial education stands as a key factor in preventing problems with settling household debts during financial crises (Kurowski, 2021; Pepur et al., 2022).

Relevant studies investigating the link between financial literacy and debt behaviour have been mostly focused on American households. However, our research aims to investigate a similar relationship within the context of Croatia. Research on financial literacy as a determinant of household indebtedness is still relatively rare in less developed countries and in the context of Central and Eastern European countries (except for i.e. Kurowski (2021) for Poland). According to Bejaković & Mrnjavac, (2017), in this region, during the pre-crisis period, there was a significant increase in household debt alongside real growth in household disposable income, substantial economic expansion, and a notable decline in banks' interest rates. However, household debt indicators deteriorated notably as overall household debt outpaced income growth. This raised concerns regarding the potential consequences of further increasing the debt burden – excessive debt can result in financial stress, reduced ability to save, and difficulty in meeting debt obligations, which can ultimately lead to a household's financial instability.

Building upon the above-explained consideration, we propose the following hypothesis:

H1: ***Financial literacy has a significant positive impact on decrease of household indebtedness in Croatia.***

SELF-EFFICACY IN THE CONTEXT OF HOUSEHOLD INDEBTEDNESS

Self-efficacy, as conceptualized by Bandura (1989), is a personal non-cognitive attribute, representing one's "belief about their capabilities to exercise control over events that affect their lives" (p. 1175). It encompasses not only the confidence and ability to successfully and skillfully accomplish tasks but also the proficiency to handle risky and challenging actions and choices in achieving their goals. It measures how strongly people believe that their efforts will influence future outcomes (Kuhnen & Melzer, 2018). The concept originates from Albert Bandura's Social Cognitive Theory (1989), which emphasizes the role of social interaction, observational learning, and cognitive processes in shaping human learning and behaviour. According to this theory, individuals' actions are not solely determined by external factors but are influenced by their perceptions, thoughts, and emotional responses.

Although self-efficacy is often assigned the same meaning as other similar "self" concepts (e.g. self-esteem, self–confidence, self-compassion, self-control, self-regulation, etc.) they represent slightly different ideas. Though related, since they represent self-related personality factors, these concepts have nuanced differences. Self-efficacy, as proposed by Bandura (1977), encompasses aspects such as confidence, motivation, and the ability to navigate life's challenges effectively, to meet a given set of situational demands (Bayraktar & Jiménez, 2020) and it serves as a strong protective factor at the individual level in personal decision-making (Fernández-López et al., 2022).

Individuals vary in their levels of self-efficacy across different life domains and situations. These differences reflect their confidence in themselves, their belief in their capacity to manage their actions, accomplish tasks, or achieve objectives, as well as in their conviction that their efforts can influence their surroundings and outcomes. According to the Social Cognitive Theory (1989), a higher level of self-efficiency can lead to greater motivation, persistence, effort, and desire in pursuing one's goals or tasks regardless of the complexity of the situation he or she is facing. Therefore, it becomes a crucial determinant of one's behaviour. Naturally, given that self-efficacy serves as a guiding force in behaviour shaping, it extends its influence to various aspects of life, including financial behaviours such as risk-taking, decision-making, persistence in overcoming financial challenges, financial goal-setting, financial resilience, etc. Therefore, in the context of household financial decisions, it denotes the confidence and belief in one's ability to accomplish personal and consequently financial objectives (Liu & Zhang, 2021).

This paper examines self-efficacy within the context of household indebtedness, observing it as a behavioural control construct that refers to an internal locus of control (Sotiropoulos & d'Astous, 2013, p. 183). It is observed as a strong predictor of an overall propensity toward household indebtedness. Researchers pointed out that individuals with a higher sense of self-efficacy are typically more capable of insight and analysis, and can make more accurate long-term financial decisions (Liu & Zhang, 2021). The greater one's belief in oneself, the more favourable future financial situation will be. People with a high degree of self-efficacy have a belief that their decisions based on financial knowledge will help them secure their financial future (Lone & Bhat, 2024; Netemeyer et al., 2017).

Some decisions are made rationally and deliberately, supported with analysis, and some are made spontaneously; automatically, and emotionally. Decisions based on rationality are reactive and long-term goal-oriented, while decisions based on emotions associated with spontaneous behaviour are mainly short-term goal-oriented (Loewenstein et al., 2015). Individuals with a higher sense of self-efficacy can generate positive expectations of their management ability and respond to challenges more rationally with confidence and self-control (Kuhnen & Melzer, 2018). It can be noted that the concept of self-efficacy provides a worthy framework for understanding how individuals approach household financial decision-making. As Bandura (1994) portrays, individuals who have a greater sense of self-efficacy in their financial management capacities are more likely to accomplish more favourable personal financial outcomes.

Building upon these considerations, this research followed a premise that self-efficacy is associated with household indebtedness, and therefore the following hypotheses have been proposed:

H2: ***Self–efficacy has a significant positive impact on decrease of household indebtedness.***

METHODOLOGY

The results highlighted in this paper are a segment of a comprehensive study directed towards analysing financial decision-making within Croatian households. This study emphasizes on exploring the relationship between savings, asset investment, and over-indebtedness in conjunction with the financial literacy and socio-psychological traits of individuals. The research utilized a quantitative approach, employing the snowball sampling technique for participant recruitment. The study took place from January to May 2023. Primarily data collection was conducted through using a self-administrated online structured questionnaire. Social media platforms were utilized as a means of reaching out to potential respondents. Participation in the survey was both anonymous and voluntary. The findings discussed in the paper are derived from a pool of 833 valid responses.

The questionnaire was structured into three sections. The first section aimed to collect data on the social and demographic characteristics of the respondents. In the second section, participants responded to statements concerning household indebtedness. This section included five questions regarding the structure of household debt, such as the share of mortgage in total household debt for primary and secondary homes, the share of debt from credit lines/overdrafts, the share of credit card debt, and the share of other non-mortgage debt. These questions were adapted from the Croatian National Bank survey (CNB, 2020). To measure the perceived household over-indebtedness, we employed the statement: "We were in delay in settling current obligations." Participants were requested to provide ratings for these statements using a 5-point Likert scale.

In the third section of the survey, participants were asked to respond to the "Big Five" questions on financial literacy (Angrisani et al., 2023). These questions encompass inquiries about interest rates, risk, inflation, bonds, and compound interest, and are widely accepted worldwide as a good indicator of an individual's financial literacy. The number of correct answers to the "Big Five" questions posed determines the value of the financial literacy index used in further analysis. The perceived self-efficacy scale (General Self-Efficacy Scale-GSE) was adopted from Schwarzer and Jerusalem (1995), and respondents were required to indicate on a 5-point Likert scale how much each item relates to them personally.

The General Self-Efficacy (GSE) scale is a self-administered questionnaire designed to assess general self-efficacy as an operative concept. It consists of 10 items (e.g., "I can always solve difficult problems if I try hard enough"). It reflects the sense of personal activity or the belief that one's actions play a key role in achieving desired outcomes. A higher score, obtained by averaging responses to all statements, indicates a greater sense of general self-efficacy. The sample characteristics are outlined in Table 1.

The majority of respondents are female (73%), with males comprising a smaller proportion (26.8%). The survey specifically targeted individuals aged eighteen and above, categorizing them into four age groups: young adults aged 18 to 35 years, middle-aged adults aged 35-45 years, older adults aged 46-65 years, and the final group consisting of individuals older than 65 years, representing retirees. Within these age categories, the highest proportion of responses comes from the young adult group (38.55%), followed by the older adult group (31.2%), while retirees represent the smallest portion (1.3%). The sample structure based on education is predominantly composed of individuals with a higher education level (66.3%), followed by those with secondary education (33.5%), while respondents with only primary education constitute a mere 0.2%. This structure is expected, considering the dominance of a younger population in the sample, which tends to have a higher level of education in the Republic of Croatia. Most respondents live with others in their households (83.8%) and hold employment (85.6%), indicating they earn their own incomes. This offers a solid foundation for exploring how individual personalities impact household financial decision-making and consequent household indebtedness.

Table 1
Sample Characteristics

Variables	Frequency	Percentage	Mean	Median	Std. Dev	Range
Gender			1.73	2.00	0.443	1
Male	223	26.8				
Female	608	73.0				
Age			1.95	2.00	0.865	3
18-35	321	38.5				
36-44	241	28.9				
45-65	260	31.2				
65+	11	1.3				
Education			2.66	3.00	0.479	2
Elementary school	2	0.2				
Secondary education	279	33.5				
University education	552	66.3				
Family status			1.84	2.00	0.369	1
Living alone	135	16.2				
Living with adult	698	83.8				
Number of household members			3.34	3.00	1.297	4
Living alone	49	5.9				
2 household members	184	22.1				
3 household members	210	25.2				
4 household members	247	29.7				
5 and more	135	16.2				
Working status			1.14	1.00	0.351	1
Engaged in the labour market	713	85.6				
Not engaged in the labour market	120	14.4				

RESEARCH RESULTS AND DISCUSSION

In the subsequent stage, we analysed the obtained results to explore the relationship between personal characteristics, self-efficacy, financial literacy, and indebtedness. Our assumptions suggest that higher levels of financial literacy, along with confidence and belief in one's capability to achieve goals, will lead to more favourable financial behaviour and the accumulation of positive financial outcomes. These assumptions are supported by the findings presented in Table 2. The results presented in the table are the results of the estimated Multivariate Linear Regression model in the statistical software SPSS 23.

Unemployment and low housing affordability are often highlighted as significant determinants of over-indebtedness (Du Caju et al., 2016), but they are not significant in Croatia. The unusual result regarding employment is likely due to the significant share of the informal economy and the substantial income that the population receives from property rentals to tourists in Croatia and connected informal work (EC, 2023). The positive impact of many household members on over-indebtedness indicates the financial burden that larger families carry. Additionally, the negative impact of family status, measured by living with a partner older than eighteen, indicates that the financial life of single-parent families is extremely challenging. The results of the variable Housing costs in the model, measured with ownership of real estate without the obligation to pay rent or a mortgage, are not significant for household over-indebtedness. This is evidently due to the large proportion of real estate ownership among Croatians and the tradition of inheriting such property across generations (Bejaković & Mrnjavac, 2019; Smiljanić & Perić, 2022).

Table 2
Linear regression results explaining the role of financial literacy and self-efficacy on household over-indebtedness

Model	B	Std. Error	Beta	t	Sig.
Constant	1.336	0.399		3.347	0.001
Sex	-0.058	0.075	-0.028	-0.779	0.436
Age	0.053	0.040	0.049	1.322	0.186
Family status	-0.167	0.095	-0.066	-1.749	0.081
Number of households members	0.059	0.027	0.084	2.166	0.031
Education	-0.033	0.074	-0.017	-0.452	0.651
Working status	0.157	0.099	0.059	1.589	0.112
Housing costs (paying rent or mortgage vs. owner without mortgage)	0.125	0.085	0.054	1.471	0.142
Share of the mortgage in the total debt of the household (for the primary home)	0.065	0.025	0.094	2.560	0.011
Share of the mortgage in the total debt of the household (for the second home or another real estate)	-0.017	0.047	-0.014	-0.367	0.714
Share of debt by credit lines/overdrafts in the total debt of the household (e.g., on the bank account, non-purpose loans, consumer loans)	0.167	0.038	0.192	4.415	0.000
Share of credit card debt in total household debt	0.115	0.045	0.115	2.546	0.011
Share of other non-mortgage debt in total household debt (e.g., car loan)	0.054	0.041	0.048	1.302	0.194
Financial literacy	-0.079	0.024	-0.129	-3.358	0.001
Self-efficacy	-0.094	0.047	-0.073	-1.993	0.047
R			0.388		
R^2			0.151		
Adjusted R^2			0.837		
F change			8.577		
Sig			0.000		

Regarding the household debt structure, we obtained significant positive results for the share of the mortgage for the primary home, share of debt by credit lines/overdrafts, and share of credit card debt in total household debt for risk of over-indebtedness of household. The results for the share of the mortgage for the second home or another real estate and the share of other non-mortgage debt, such as a car loan, are not significant. The significant positive impact of the share of the mortgage in the total debt for the primary home on household over-indebtedness is a result of rising property prices and increasing housing unaffordability in Croatia (Kunovac & Zilic, 2022). Additionally, the perceived financial burden of a mortgage depends on the population's perception. Results of Georgarakos et al. (2010) indicate that in EU countries where a smaller proportion of the population has a housing loan, individuals perceive the burden of the mortgage more strongly. Croatia is a country where a small proportion of the population has a mortgage for the property they reside in. Positive and significant results for the share of debt by credit lines/overdrafts and the share of credit card debt in total household debt for the risk of over-indebtedness indicate that people in financial trouble often choose short-term borrowing options to finance their current expenses. These results are supported by research from the Croatian National Bank (CNB, 2023), which confirms poor financial behaviours among the Croatian population, especially in consumption. Impulsive consumer decisions can lead to increased credit card debt and, ultimately, problems meeting current obligations.

The significant and negative results for the variable "financial literacy index" confirm the significance of financial literacy for making sound financial decisions, consistent with previous research (Li et al., 2020; Lusardi & Messy, 2023; Pepur et al., 2022). Borrowing itself is not necessarily a poor financial decision, but how money from loans is spent/invested is extremely important for an individual's financial well-being. Poor estimation of future income from work or investment in assets, impulsive spending, insufficient savings, and lack of funds for unexpected life situations can lead individuals to excessive indebtedness. High debt burden and delays in meeting obligations undermine the personal financial well-being of individuals, as well as their physical and mental health (Baker et al., 2023; Ferreira et al., 2021).

The results of models also emphasize the importance of self-efficacy as a personal attribute in preventing over-indebtedness and as a determinant of household financial stability. The significant negative impact of the self-efficacy indicator suggests that individuals with greater belief in themselves and their success indeed have fewer problems with over-indebtedness. Previous research has confirmed the link between financial self-efficacy and lower levels of indebtedness (Farrell et al., 2016; Liu & Zhang, 2021; Noor et al., 2020). Our findings indicate that it's not just about having faith in one's financial knowledge and abilities, but in life in general. Indebtedness and subsequent possible over-indebtedness depend not only on knowledge and one's assessment of financial abilities but also on a continuous dedicated struggle for a better future that begins with belief in oneself and one's abilities.

CONCLUSION, IMPLICATIONS AND FUTURE RESEARCH

The findings underscore the significance of financial literacy and self-efficacy in preventing households from becoming over-indebted. This emphasizes the notion that individuals with greater financial knowledge tend to make more informed financial decisions, leading to reduced risk of excessive debt. Additionally, the study confirms that certain types of debt, like mortgages for primary homes, credit card debt and short-term credit lines, are more likely to lead to over-indebtedness, while others, like mortgages for non-primary real estate, may not have a significant impact. This insight provides a nuanced understanding of how different debt structures can affect personal finance.

The results also highlight the importance of self-efficacy as a personal attribute in preventing household over-indebtedness. They suggest that individuals with higher self-efficacy are less likely to face over-indebtedness, indicating that a strong belief in one's abilities contributes to better personal financial management. Namely, by building self-efficacy and a sense of control over their financial situation, individuals may be better equipped to manage their debts and improve their overall financial well-being. The study results suggest that boosting self-efficacy could be a valuable strategy for improving financial outcomes.

Given the significant impact of financial literacy and self-efficacy, as well as the importance of debt structure, the findings suggest that policymakers and educators should focus on improving financial education and promoting self-efficacy. This could involve creating targeted financial literacy programs, offering resources for better financial planning, and developing initiatives to boost confidence in personal financial management. The relationship between self-efficacy and over-indebtedness underscores the importance of evaluating self-efficacy when assessing a person's creditworthiness by financial institutions.

The increasing complexity of managing personal finances in today's settings calls for a deeper understanding of the factors contributing to over-indebtedness. Overall, the study suggests that improved financial literacy and increased self-efficacy can lead to better financial outcomes and reduced over-indebtedness. In addition, these results suggest that future studies should examine the risks of over-indebtedness that may arise from high personal self-efficacy when it is not matched with sufficient financial literacy.

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Sažetak

ULOGA FINANCIJSKE PISMENOSTI I SAMOEFIKASNOSTI U PREZADUŽENOSTI KUĆANSTVA

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Razina zaduženosti kućanstava u većini zemalja ubrzano raste tijekom posljednjih desetljeća, a nedavna pandemija samo je naglasila taj rast i problem upravljanja kućnim budžetom koji može dovesti do prezaduženosti. Dosadašnja istraživanja pokazuju da niska razina financijske pismenosti može biti razlog prekomjernog kreditnog zaduživanja i poteškoća u podmirivanju kreditnih obveza. Međutim, osim važnosti financijskog znanja u upravljanju osobnim financijama, osobna nekognitivna obilježja predstavljaju važan okvir za razumijevanje načina donošenja financijskih odluka u kućanstvu. Stoga ovaj rad istražuje utjecaj financijske pismenosti kao i samoefikasnosti na prezaduženost kućanstava u Hrvatskoj. U istraživanju se koristio kvantitativni dizajn istraživanja, koristeći metodu uzorkovanja snježne grude za regrutiranje sudionika. Rezultati su potvrdili značaj financijske pismenosti za zdrave financijske odluke kao i utjecaj samoefikasnosti kao osobine u sprječavanju prezaduženosti i kao odrednice financijske stabilnosti kućanstva. Također, analiza je potvrdila važnost strukture duga za prezaduženost stanovništva.

Ključne riječi: zaduženost, financijska pismenost, samoefikasnost, struktura zajma.