**UNIVERSITY OF ECONOMICS IN BRATISLAVA FACULTY OF NATIONAL ECONOMY**

Registration number:101007/B/2025/421000430956

# EVALUATION OF FINANCIAL LITERACY IN SLOVAKIA DURING THE LAST DECADE

**Bachelor‘s thesis**

2025 Bence Bartal

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# EVALUATION OF FINANCIAL LITERACY IN SLOVAKIA DURING THE LAST DECADE

**Study programme:** Finance, Banking and Investment

**Study field:** 6271 Finance, Banking and Investment

**Study department:** Department of Banking and International Finance

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Bratislava 2025 Bence Bartal

**Affidativ**

**I do hereby solemnly swear this final thesis was completed by me alone, and I have stated all the applied literature.**

Date: ……

## Abstract

This thesis examines the development and current state of financial literacy in Slovakia over the past decade, with a focus on both adult and youth populations. Through a comprehensive analysis of data from the Household Finance and Consumption Survey (HFCS) and the Programme for International Student Assessment (PISA), the work evaluates the ability of Slovak citizens to manage financial resources, understand economic concepts, and make informed financial decisions. The study highlights changes in key indicators over time and compares Slovakia's performance with selected EU countries to provide broader context. Results reveal notable disparities in financial literacy levels based on age, education, and household income, while also identifying areas for improvement in financial education policies. The findings support the need for enhanced financial literacy programs to better prepare Slovak citizens for informed economic participation and long-term financial security.

# Contents

## Introduction

In today's complex economic environment, financial literacy has become an essential skill for individuals of all ages. It equips people with the knowledge and tools needed to make informed and effective decisions regarding personal finances, savings, investment, and debt management. As societies increasingly rely on individual responsibility for financial security—especially in areas such as retirement planning and credit use—the role of financial education and awareness continues to grow in importance.

Slovakia, like many other countries, faces challenges related to the financial competence of its citizens. Over the past decade, various surveys and studies, including the OECD Programme for International Student Assessment (PISA) and the Household Finance and Consumption Survey (HFCS), have provided valuable insights into the level of financial literacy among both students and adults. These data sources help identify strengths and weaknesses in financial understanding, highlighting areas for policy development and educational reform.

This thesis focuses on evaluating the level of financial literacy in Slovakia over the last decade. By analyzing available data and comparing Slovakia's performance with that of selected EU countries, the work aims to provide a clear picture of how Slovak citizens comprehend and apply financial concepts. Through this evaluation, the thesis also aims to raise awareness of the importance of financial education and propose ways to improve it across different population groups.

# 1. Theoretical framework and review of literature

## 1.1 Theories in relation to financial literacy

The traditional microeconomic view of saving and spending decisions suggests that a rational and informed person will save money during times when their income is high, so they can use those savings to maintain their spending when their income decreases, like after retiring. Research shows that this decision-making process, often called life-cycle optimization, is influenced by various factors. These include personal preferences, like how much risk someone is willing to take and how much they value the future compared to the present. Other important factors are the economic conditions, such as whether investments are risky or if it's hard to borrow money, and the availability of social safety nets like welfare programs or Social Security benefits. (Lusardi, A. et al., 2014).

Microeconomic models usually assume that people are capable of creating and following saving and spending plans. This means they would need to perform complex calculations and have a good understanding of financial markets. However, most people don't seem to have much financial knowledge, and gaining this knowledge often involves additional costs. In the past, when governments handled retirement pensions, individual workers didn't need to focus much on the details of their plans. Nowadays, with pensions becoming more personalized, people are responsible for their own saving, investing, and spending money on retirement. This shift highlights the gap between how these models work in theory and how people behave in real life. Exploring this gap can help improve the models and guide policies to address these challenges more effectively. (Lusardi et al., 2023).

Numerous studies have examined the process of acquiring financial knowledge, often identifying courses and targeted education as key drivers of financial literacy. While extensive research exists on the economics of education, comparatively less attention has been given to the specific mechanisms through which individuals develop and apply financial literacy in real-world contexts. Recently, some studies have started looking at why people decide to learn about finances and how financial knowledge impacts saving and investing. For example, Delavande, Rohwedder, and Willis (2008) introduced a simple two-period model showing how people decide to save and split their investments between safe bonds and risky stocks. Their model also includes the idea of learning financial skills, which helps people access higher-return investments by either picking betterassets or working with financial advisers to

lower costs. Hsu (2011) explored financial literacy within households, showing that husbands often focus on financial knowledge while wives start learning about it mainly when it becomes necessary, like before a spouse passes away. Jappelli and Padula (2013) also used a two-period model but extended it to a multiperiod life cycle approach. They found that financial literacy and wealth tend to grow together during a person's working years and then decline after retirement. Additionally, they argued that in countries with strong Social Security systems, people have less incentive to save and build wealth, which means they're also less likely to invest in learning about finances. (Lusardi et al., 2015).

### 1.1.1 The Role of Financial Literacy in Human Capital Development and the Life-Cycle Hypothesis

Human capital theory explains more than just the fact that education level is linked to income. It identifies a specific reason for this connection: education helps individuals develop skills, which then improve their productivity. As a result, higher productivity leads to higher earnings. The theory also provides an explanation for why older people tend to earn more. It suggests that this is because older workers have more on-the-job experience, often referred to as on-the-job training. This training, like education, increases a worker's productivity, which is then rewarded with higher pay. On-the-job training can take two forms: general human capital, which includes skills and knowledge that can be used in various jobs, or specific human capital, which involves skills and knowledge valuable only within a particular company. (Strober, M. H., 1990).

Human capital theory has never been universally accepted among economists, and it has faced criticism from both theoretical and empirical perspectives from the beginning. Theoretical objections have persisted over time and now also focus on issues like differences in earnings based on race and gender. (Strober, M. H., 1990).

Knowledge, skills, and abilities are often seen as an invisible asset that helps organizations stay sustainable. Keeping organizations competitive means investing in continuous education and training to keep up with global technology trends. To maintain a high standard of living, it's important to raise the knowledge, skills, and training levels of the workforce. The "three-legged stool" theory in Human Resource Development (HRD) is a popular concept for improving performance. This theory emphasizes that ethics form the foundation, which is crucial for HRD success. (Jappelli, T., & Modigliani, F, 1998)

Human capital theory offers important insights into the connection between education and earnings, as well as the reasons behind differences in earnings. However, its credibility weakens when it tries to be the sole explanation. While human capital theory primarily emphasizes the supply-side factors of skill and knowledge acquisition, financial literacy must also be considered from a demand perspective—how individuals apply financial knowledge to make informed decisions about saving, investing, and consumption throughout their lives. The life-cycle hypothesis further supports this view by illustrating how financial literacy influences long-term financial planning, wealth accumulation, and retirement security. Additionally, in the real world, there are often feedback effects, meaning supply and demand factors are not as separate as the theory might assume. (Bae, S. O., & Patterson, L., 2014)

The Life-Cycle Hypothesis posits that the main motivation for saving is to accumulate resources for later expenditure and in particular to support consumption at the habitual standard during retirement. According to the model, saving should be positive for households in their working span and negative for the retired ones, and wealth therefore should be humpshaped. Yet, if one looks at the microeconomic evidence on household saving rates by age, dissaving by the elderly is seldom observed. (Jappelli, T., & Modigliani, F, 1998)

In its basic formulation, the LCH posits that saving behavior is forward looking and driven by the desire to prepare for future expenditures above later income throughout life. The main foreseeable event in one's life is old age and retirement. At this time earned income may be expected, on average to dwindle to a level well below active life consumption. This implies that an essential observable implication of the LCH is the existence of phases of life − notably during the retirement period − when consumption tends to exceed earned income financed by negative saving in the form of a reduction in wealth accumulated in the earning span. Refinement of the standard model, allowing for uncertainty, precautionary saving and accidental bequests may affect the age after which one should start observing wealth decumulation. It does not, however, affect the main implication of the theory that individual wealth should eventually tend to fall with age, with saving becoming prevailingly negative. Thus, the widely reported positive saving rates at old ages are interpreted as a strong contradiction of the LCH, and as consistent only with alternative behavioral models of saving. (Lusardi, A. et al., 2015)

## Determinants of financial literacy

Previous studies have taken a multidimensional approach to define and measure financial literacy, often combining one, two, or even three variables. According to the Organization for Economic Cooperation and Development (OECD) and the International Network on Financial Education (INFE), financial literacy is defined as "a combination of awareness, knowledge, skill, attitude, and behavior that allows individuals to make financial decisions and, ultimately, achieve financial wellbeing" (Hung et al., 2012). In 2020, the OECD applied the elements of knowledge, behavior, and attitude in a survey to measure the financial literacy of adults across countries in Asia, Europe, and Latin America. (Dewi et al., 2020)

In the analysis, income is defined as earned income (including both labor and property income) after deducting personal taxes. Household saving is calculated by subtracting consumption from this after-tax income, providing a measure of total family accumulation. This total saving can be further divided into two components, which will be discussed in detail below:

- Mandatory saving: This includes contributions to pension plans minus any pensions received, mainly involving contributions to and from Social Security
- Personal or discretionary saving: This is the leftover amount after taking out mandatory saving, aligning with what the National Income Accounts (NIA) calls "Personal Saving" and the concept mistakenly used in previous studies.

Yusuf et al. (2014) describe demographic factors as characteristics of a population, which include things like gender, marital status, living situation and household composition, language, ethnic background, health and disabilities, education level, employment status and occupation, income, household consumption, and whether people live in urban or rural areas. Each of these factors can significantly influence financial literacy in various ways. .Similarly, Chaudhry et al. (2009) list several socioeconomic factors, such as health, education, housing, employment, income, spending, household property, and assets. They also mention demographic characteristics, including household size and structure, age, and gender. (Dewi, V. I., 2022)

The gender gap in financial literacy is a well-documented phenomenon, with men consistently scoring higher than women across various studies. The research by Rink, Walle, and Klasen (2019) highlights that this gap is influenced by factors such as education, household financial

responsibility, access to information, and cultural norms. One major explanation is that men are more often responsible for household financial decisions, providing them with opportunities to learn through experience. Women in patriarchal societies, where financial management is typically assigned to men, tend to have lower financial literacy, whereas in matrilineal societies where women manage household finances, the gap disappears. Additionally, differences in education levels, English language proficiency, and access to financial information sources, such as newspapers and television, contribute significantly to the gap. Cultural expectations also play a role, as women in patriarchal societies may anticipate relying on male partners for financial decisions, reducing their motivation to acquire financial knowledge. (Rink, U. et al., 2021)

Married individuals often exhibit higher financial literacy, primarily due to shared financial responsibilities and frequent financial discussions within households. The study by Ndou (2023) highlights that financial literacy is closely linked to budgeting, record-keeping, and retirement planning, which are typically more structured within married households. Married individuals may benefit from joint financial decision-making, where they exchange knowledge, manage expenses collectively, and engage in long-term financial planning, such as saving for retirement. Furthermore, having a spouse can provide an additional layer of financial security, reducing financial stress and promoting better money management habits. The findings suggest that financial literacy tends to be higher in individuals who actively participate in household financial decisions, reinforcing the idea that financial discussions and shared responsibilities contribute to improved financial knowledge. (Ndou, A., 2023)

Individuals living independently may develop stronger financial management skills out of necessity, as they are solely responsible for budgeting, saving, and managing expenses. The study by Azeez et al. (2022) highlights that single individuals often face a steeper learning curve in financial literacy, as they must independently make financial decisions without shared household support. In contrast, those living in larger households tend to distribute financial responsibilities among multiple members, which may reduce individual financial engagement but also foster knowledge-sharing within the household. The study further emphasizes that financial literacy levels can be influenced by family size, with smaller households generally displaying higher financial literacy due to greater financial independence and fewer dependents to support. Conversely, larger households may experience financial strain, leading

to limited savings and a lower emphasis on individual financial literacy development. (Abdul Azeez, N. P. et al., 2022)

Language barriers and cultural differences significantly impact financial literacy by limiting access to financial education and traditional banking services. The study by Shanbhag (2022) highlights that immigrants, ethnic minorities, and low-income households are the most at risk of financial illiteracy and exclusion due to these barriers. Many unbanked individuals avoid traditional banking institutions due to a lack of trust, difficulty understanding financial terminology, and limited access to financial resources in their native language. Additionally, cultural norms influence financial decision-making, with some communities relying more on informal lending or cash-based transactions rather than engaging with formal financial institutions. This exclusion leaves many minority groups vulnerable to high-interest alternative financial services, such as payday loans and check-cashing services, which can lead to chronic debt cycles. The study suggests that targeted financial literacy programs, multilingual financial education, and partnerships between nonprofits and financial institutions are essential in bridging the gap and improving financial inclusion for diverse demographic groups. (Shanbhag, A., 2022)

Health issues and disabilities can significantly impact financial decision-making by limiting earning potential, increasing medical expenses, and restricting access to financial education resources. Individuals with chronic illnesses or disabilities often face reduced employment opportunities, leading to lower income and decreased ability to save or invest. Additionally, high medical costs can create financial strain, making it challenging to engage in long-term financial planning. Moreover, cognitive or physical impairments may hinder financial literacy acquisition, as these individuals may have limited access to financial education programs or difficulty navigating complex financial systems. (Siegfried, C., & Wuttke, E., 2021)

Higher educational attainment is generally associated with greater financial literacy, as individuals with more education often have increased exposure to financial concepts and the critical thinking skills necessary for sound financial decision-making. However, this correlation is not uniform across all demographic groups. Research indicates that African American and Hispanic individuals with higher education levels often exhibit lower financial literacy compared to their similarly educated White counterparts. This disparity is attributed to structural factors such as systemic discrimination and socioeconomic inequalities that diminish

the benefits of education for these minority groups. Therefore, while higher education enhances financial literacy, addressing systemic barriers is essential to ensure equitable financial knowledge across all populations. (Assari, S. et al., 2024).

Full-time employment, especially in professional occupations, is often associated with higher financial literacy. This is due to increased exposure to financial products and employer-sponsored financial education programs, which enhance employees' understanding of financial matters. Research indicates that employer-provided financial education can significantly improve employees' financial knowledge and decision-making abilities, leading to better retirement planning and savings behavior. However, even among accounting professionals, common financial mistakes such as lifestyle inflation and neglecting pension investments persist, highlighting the need for continuous financial education. Therefore, while full-time employment in professional roles provides greater access to financial education, ongoing efforts are essential to maintain and enhance financial literacy. (Clark, R. L., 2023).

Higher-income individuals generally exhibit greater financial literacy, as they have more opportunities to engage with financial planning, investing, and saving strategies. The study by Ndou (2023) highlights that individuals with higher income levels are more likely to participate in formal financial markets, have access to financial advisors, and utilize financial education resources. However, the research also emphasizes that financial literacy is essential across all income levels, as individuals in lower-income brackets often struggle with managing limited financial resources, budgeting effectively, and avoiding high-cost borrowing options. Without adequate financial literacy, even high-income individuals may make poor financial decisions, underscoring the need for financial education for all economic groups. (Ndou, A., 2023).

Spending behavior serves as a reflection of financial literacy levels, with financially literate individuals more likely to budget effectively, save regularly, and avoid excessive debt. The study by Azeez et al. (2022) highlights that individuals with higher financial literacy demonstrate better control over their spending, prioritize essential expenses, and engage in strategic financial planning. Those with lower financial literacy, however, tend to rely on credit more frequently, struggle with managing debt, and exhibit impulsive spending patterns. Furthermore, digital financial literacy plays an increasing role in shaping financial behaviors, as individuals who understand digital finance tools are better equipped to track expenses,

utilize savings mechanisms, and access financial resources efficiently. The findings suggest that promoting financial education can significantly improve responsible spending habits and overall financial well-being. (Abdul Azeez, N. P. et al., 2022)

Individuals in urban areas tend to have higher financial literacy levels compared to those in rural areas, primarily due to greater access to financial institutions, educational programs, and financial services. Urban environments offer more opportunities for financial education, exposure to diverse financial products, and digital financial tools. Conversely, rural areas often face challenges such as lower availability of financial services, inadequate infrastructure, and limited digital literacy, which hinder financial knowledge acquisition. The digital financial divide exacerbates this gap, as individuals in rural areas may struggle with internet accessibility and technological barriers, further limiting their engagement with modern financial tools. (Goyal, M., Aggarwal, R., & Bhagat, S., 2024).

### 1.2.1 Measuring financial literacy

Saving and investment decisions in the life cycle model are based on a few key concepts. These include: (1) the ability to calculate interest rates, such as compound interest; (2) an understanding of inflation; and (3) knowledge of risk diversification. Measuring these concepts as financial literacy metrics can be challenging, but Lusardi and Mitchell (2008, 2011a, 2011c) developed a standard set of questions based on these ideas. They have used these questions in various surveys both in the United States and internationally. (Lusardi, A., & Mitchell, O. S., 2014)

The design of these financial literacy questions was based on four key principles. First is Simplicity: the questions focus on fundamental concepts essential for making financial decisions over time. Second is Relevance: they cover topics that are directly related to everyday financial decisions throughout a person's life and focus on general ideas rather than specific scenarios. Third is Brevity: the number of questions is kept short to encourage widespread use. Finally, there is the Capacity to Differentiate: the questions are designed to distinguish levels of financial knowledge, allowing comparisons between individuals. These principles are reflected in the three financial literacy questions created by Lusardi and Mitchell (2008, 2011a). The questions are as follows:

Suppose you had $100 in a savings account and the interest rate was 2 percent per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

- More than $102
- Exactly $102
- Less than $102
- Do not know
- Refuse to answer

Imagine that the interest rate on your savings account was 1 percent per year, and inflation was 2 percent per year. After 1 year, would you be able to buy:

- More than today with the money in this account
- Exactly the same as today
- Less than today
- Do not know
- Refuse to answer

Do you think the following statement is true or false? "Buying a single company stock usually provides a safer return than a stock mutual fund."

- True
- False
- Do not know
- Refuse to answer

The first question tests numeracy, or the ability to perform a simple calculation involving compound interest rates. The second question assesses an understanding of inflation, specifically in the context of a basic financial decision. The third question is a combined test of knowledge about stocks and stock mutual funds, as well as risk diversification. To answer this question, it's necessary to understand what a stock is and that a mutual fund consists of multiple stocks. These concepts are important because, as discussed in theoretical models, many retirement savings decisions involve interactions with financial markets. Understanding the stock market and being able to differentiate between varying levels of financial knowledge is crucial for making informed decisions. (Lusardi, A., & Mitchell, O. S., 2014)

# 2. Aims and Data

## 2.1 Aim of the Thesis

The primary aim of this thesis is to evaluate the level of financial literacy in Slovakia over the last decade by analyzing key trends and patterns using data from the OECD PISA financial literacy assessments and the Household Finance and Consumption Survey (HFCS). This work focuses on the observation and evaluation of how financial knowledge has changed over time, examine household financial behavior, and position Slovakia's financial literacy levels within the broader context of the EU. Specifically, the study aims to identify trends in financial literacy among both Slovak households and students, compare Slovakia's performance with OECD and EU countries, and analyze factors such as household savings habits, investment participation, and debt management strategies.

## 2.2 Data

The Household Finance and Consumption Survey (HFCS) is a large-scale, harmonized European survey coordinated by the European Central Bank (ECB). It aims to collect detailed microeconomic data on household finances, including assets, liabilities, income, and consumption patterns. The survey provides a comprehensive picture of how households across the Eurozone manage their finances. Slovakia has participated in multiple waves of this survey, with the most recent conducted in 2021 under the supervision of the National Bank of Slovakia (NBS).

The Programme for International Student Assessment (PISA), conducted by the Organisation for Economic Co-operation and Development (OECD), is a global study that evaluates the skills and knowledge of 15-year-old students in multiple domains, including financial literacy. Slovakia participated in the financial literacy assessments in 2012, 2015, and 2018, allowing us to analyze trends over time. The Slovak Ministry of Education, MINEDU.SK, is responsible for Slovakia's participation in PISA and the integration of financial literacy into the national education curriculum. The PISA financial literacy assessment is crucial for understanding the financial capabilities of young people, who will soon enter adulthood and face real financial responsibilities. The results provide insights into how well Slovak students are prepared to make informed financial decisions.

## 2.3 Methodology

This methodology allows for an in-depth evaluation of financial literacy trends in Slovakia over the past decade using well-established datasets. The primary sources of data include the OECD PISA Financial Literacy Assessments (2012, 2015, 2018), which measure financial knowledge among 15-year-old students, providing insights into their ability to manage personal finances, understand financial risks, and make informed financial decisions. Additionally, the Household Finance and Consumption Survey (HFCS, 2021) offers valuable data on household financial behavior, including wealth distribution, investment patterns, and debt management, helping to assess financial literacy levels among the adult population. By leveraging these internationally recognized datasets, this study ensures the reliability and comparability of findings across different time periods and countries.

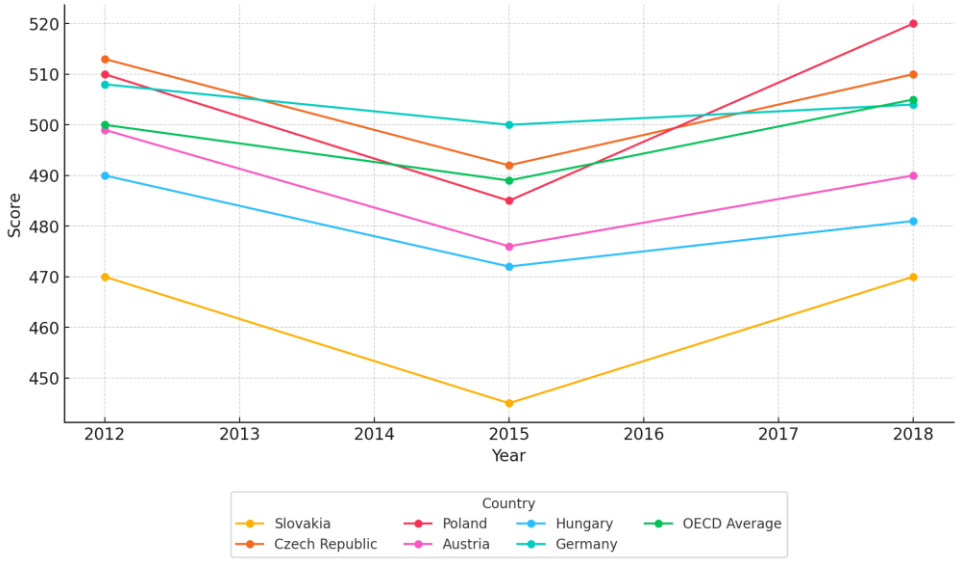
To analyze the data, the study utilizes descriptive and comparative statistical methods, supplemented by visual data representations to highlight key trends. Descriptive analysis will be used to summarize financial literacy scores over time, examine the percentage of Slovak students performing below Level 2 proficiency. Comparative analysis will assess Slovakia's financial literacy standing in relation to its neighboring EU countries (Czech Republic, Poland, Austria, and Hungary) and the OECD average, allowing for a broader contextual understanding. To enhance clarity, various data visualization techniques will be employed, including line charts to illustrate financial literacy trends over time, bar charts to compare Slovakia with other countries. These visual tools will help identify patterns and key differences, making the results more accessible and interpretable.

# 3.Results and discussions

## 3.1 Financial Literacy Among Middle-School Students

The Programme for International Student Assessment (PISA) is an international study conducted by the OECD that evaluates the educational performance of 15-year-old students in various subjects, including financial literacy. The financial literacy assessment measures students' ability to understand financial concepts, apply them to real-life situations, and make informed financial decisions. This is particularly relevant for Slovakia, as it provides insights into how well the education system prepares students for financial independence. By analyzing PISA financial literacy data, policymakers can identify strengths and weaknesses in Slovakia's financial education and develop targeted strategies for improvement.

Figure 1: Average Financial Literacy Scores in Selected Countries (2012–2018)

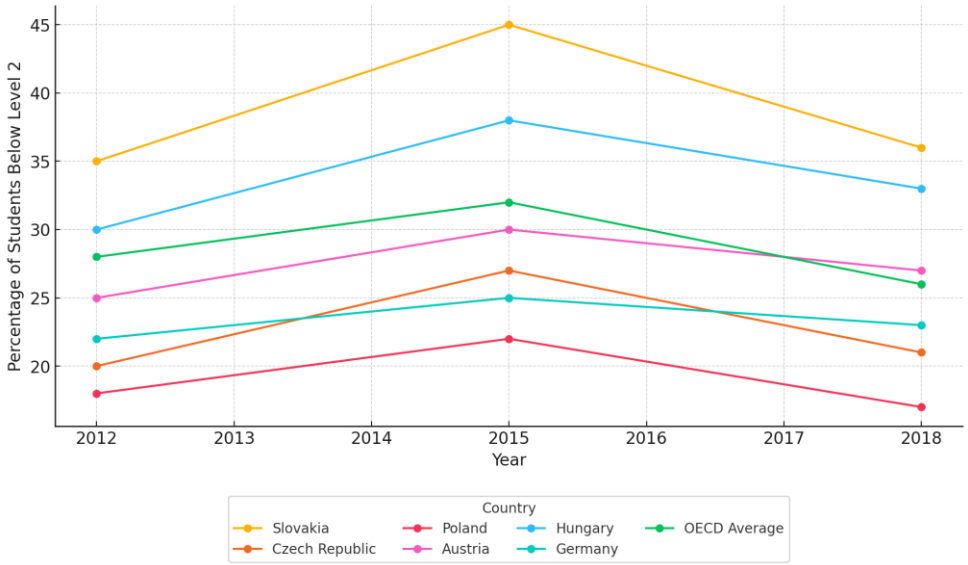



*Source: OECD PISA Financial Literacy Assessments 2012, 2015, 2018.*

Figure 1 presents the development of average financial literacy scores among 15-year-old students in Slovakia, selected EU countries, and the OECD average across the 2012, 2015, and

2018 PISA assessments. Over this period, Slovakia consistently scored below the OECD average. The most significant decline occurred in 2015, when the Slovak average dropped to 445 points, far below the OECD average of 489 that year. This dip may reflect policy gaps or limited integration of financial literacy into the school curriculum during that period. While Slovakia recovered slightly by 2018, reaching 470 points, it still lagged behind its regional peers. Notably, the Czech Republic and Poland demonstrated stronger and more consistent performance, maintaining or improving their scores across all three cycles. For example, Poland increased its average from 510 in 2012 to 520 in 2018, reflecting a systematic effort in educational reforms. Austria and Germany remained relatively stable, slightly outperforming the OECD average, whereas Hungary's results fluctuated around the lower end of the spectrum. This comparison highlights Slovakia's persistent gap in equipping students with essential financial knowledge and suggests a need for targeted policy improvements to align more closely with best practices observed in neighboring EU countries.

Figure 2: Percentage of Students Below Level 2 in Financial Literacy (2012–2018)



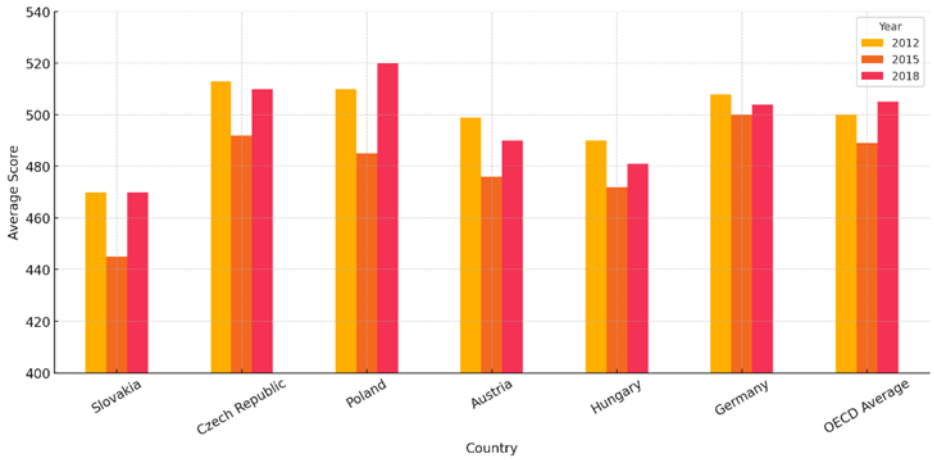

*Source: OECD PISA Financial Literacy Assessments 2012, 2015, 2018.*

Figure 2 shows the percentage of 15-year-old students in Slovakia and selected EU countries who scored below Level 2 in financial literacy during the PISA assessments of 2012, 2015,

and 2018. In the PISA framework, Level 2 represents the baseline level of financial literacy proficiency. Students performing at or above this level are expected to demonstrate at least basic knowledge and understanding of common financial terms and concepts, and to apply such knowledge in simple, familiar contexts. Falling below this level indicates a limited ability to make sound financial decisions, even in straightforward situations, which poses risks for long-term financial well-being. In Slovakia, the proportion of students below Level 2 peaked at 45% in 2015, a significant increase from 35% in 2012, before improving slightly to 36% in 2018. Despite the improvement, more than one-third of Slovak students remained below the basic proficiency threshold in the most recent cycle. This signals a continued challenge for the Slovak education system in ensuring financial preparedness among youth. In contrast, countries like Poland and the Czech Republic consistently reported lower shares of underperforming students, with Poland reducing this figure to 17% by 2018. Germany and Austria maintained relatively stable and moderate levels throughout the period, while Hungary showed consistently high rates, though slightly below Slovakia's 2015 peak. The OECD average also declined over time, dropping from 28% in 2012 to 26% in 2018, suggesting that while some countries have made progress, others—including Slovakia—continue to struggle. This trend underscores the importance of integrating practical financial education early in the curriculum to reduce the risk of financial exclusion among future adults. It also highlights the urgency for targeted interventions in Slovakia to prevent long-term socioeconomic disadvantages stemming from poor financial skills.

## 3.3 Comparison with other countries

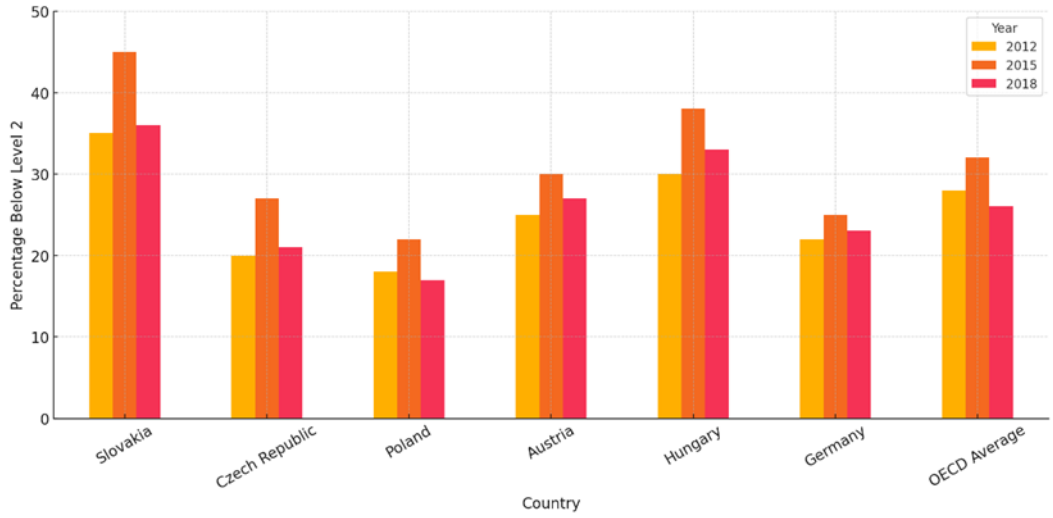
Figure 3: Comparison of Average Financial Literacy Scores in Slovakia, Neighboring Countries, and OECD (2012–2018)




*Source: OECD PISA Financial Literacy Assessments 2012, 2015, 2018.*

Figure 3 presents a comparison of average financial literacy scores among 15-year-old students in Slovakia, selected Central European countries, and the OECD average for the years 2012, 2015, and 2018. The data clearly reveals a performance gap between Slovakia and its regional peers. In 2012, Slovak students scored 470 points, already below the OECD average of 500. This gap widened in 2015 when Slovakia's average dropped sharply to 445—the lowest among all countries shown—before partially recovering to 470 in 2018. Despite this improvement, Slovakia remained behind all other countries in the group across all three assessments. In contrast, the Czech Republic and Poland consistently scored above the OECD average. The Czech Republic maintained strong performance throughout the years, with scores of 513 in 2012 and 520 in 2018. Similarly, Poland performed well, peaking at 520 in 2018, suggesting sustained policy efforts to promote financial literacy through education. Germany and Austria also showed steady results near or slightly above the OECD average, with Germany remaining particularly consistent. Hungary's performance, while slightly below the OECD average, remained more stable than Slovakia's and avoided the sharp decline observed in 2015. This comparative analysis highlights the structural weaknesses in Slovakia's approach to financial education, particularly between 2012 and 2015. It underscores the urgent need for curriculum reform and institutional support to enhance financial capability among young people. Learning from successful models in countries like Poland and the Czech Republic could offer valuable insights into improving Slovakia's performance in future PISA cycles.

Figure 4: Percentage of Students Below Level 2 in Financial Literacy in Selected Countries (2012–2018)




*Source: OECD PISA Financial Literacy Assessments 2012, 2015, 2018.*

Figure 4 shows the proportion of 15-year-old students in Slovakia, neighboring countries, and the OECD average who scored below Level 2 in financial literacy in the 2012, 2015, and 2018 PISA assessments. According to the OECD framework, Level 2 represents the minimum proficiency threshold required for students to demonstrate basic understanding of common financial terms and the ability to apply that knowledge to simple real-life scenarios. Students who perform below this level are considered financially vulnerable, as they may struggle to understand interest rates, identify financial risks, or manage basic budgeting tasks. In Slovakia, the share of students below Level 2 proficiency was persistently high and peaked at a staggering 45% in 2015, far above the OECD average of 32%. Although there was some improvement in 2018—dropping to 36%—more than one-third of Slovak students still lacked even the most basic financial skills. This pattern aligns with the earlier observed dip in average scores and suggests systemic issues in financial education during that period. By contrast, countries like Poland and the Czech Republic consistently maintained lower proportions of low-performing students. Poland, in particular, reduced this share to just 17% by 2018, reflecting the effectiveness of its early and structured financial literacy initiatives. The Czech Republic also performed well, with consistently low percentages of students below Level 2, reinforcing its position as a regional leader in financial education. Austria and Germany followed a similar trend, maintaining moderate and relatively stable levels of low-performing students. Hungary, while showing some fluctuation, performed slightly better than Slovakia but still faced higher-than-average vulnerability among students. These findings further emphasize the need for Slovakia to adopt more comprehensive and systematic financial

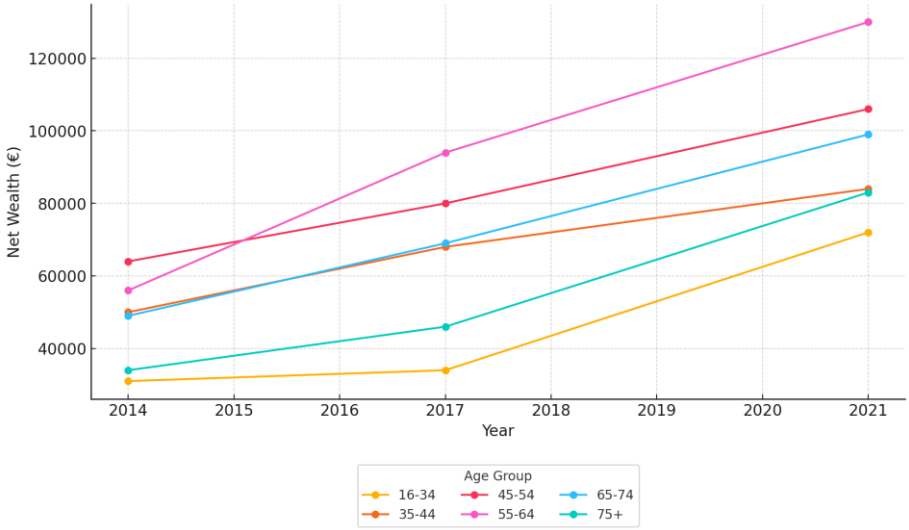
education strategies. Reducing the share of low-performing students is critical not only for individual financial well-being but also for ensuring a more financially literate and economically resilient population in the long run.

The analysis of PISA financial literacy data from 2012 to 2018 reveals persistent challenges in Slovakia's financial education system. Slovak students consistently scored below the OECD average, with a notably high share performing below Level 2 proficiency. While there was some improvement after 2015, Slovakia continues to lag behind regional peers such as the Czech Republic and Poland, who have demonstrated stronger and more stable outcomes. These findings highlight the urgent need for Slovakia to strengthen its financial literacy curriculum and adopt targeted interventions. Drawing inspiration from successful educational models in neighboring countries could support more effective policy development and help ensure that future generations are better equipped to make informed financial decisions.

## 3.4 Financial Literacy among Adults

The Household Finance and Consumption Survey (HFCS), coordinated by the European Central Bank (ECB), is a detailed dataset that examines the financial situation and behavior of households in the euro area and several other European countries. It provides essential information on income, assets, liabilities, consumption, and financial literacy. In Slovakia, the HFCS allows researchers to gain a deeper understanding of how adults manage their money, make financial decisions, and plan for their financial futures. The inclusion of standardized financial literacy questions also enables comparisons between countries, offering a broader perspective on Slovakia's position within the European context. Given that adult financial literacy plays a crucial role in economic resilience and personal well-being, analyzing HFCS data is key to understanding the strengths and weaknesses of financial knowledge and behavior among Slovak adults.

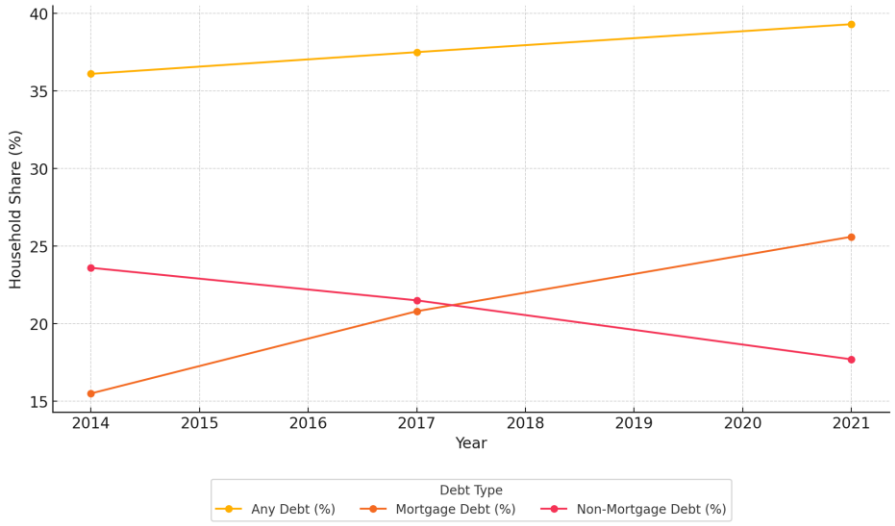
Figure 5: Median Household Net Wealth by Age Group (2014-2021)




*Source: HFCS 2021, NBS.*

Figure 5 shows older age groups tend to have higher net wealth, which aligns with life-cycle theories of saving and wealth accumulation. Wealth has grown significantly over time for younger households (16–34), with over 100% nominal increase between 2017 and 2021. Financial literacy is often associated with the ability to accumulate and manage wealth. The sharp increase among younger groups may reflect increased homeownership and access to credit—but not necessarily better financial decisions. If younger households are taking on more mortgage debt without understanding interest rates, inflation, or investment risk, the improved wealth statistics may mask vulnerabilities, especially if their financial literacy remains low.

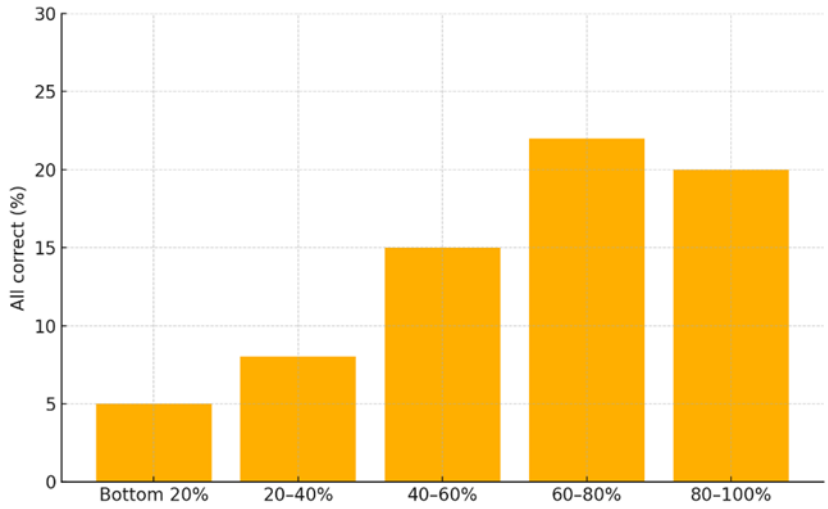
Figure 6: Household Indebtedness Trends in Slovakia (2014-2021)




*Source: HFCS 2021, NBS.*

The share of households with mortgage debt has grown from 15.5% (2014) to 25.6% (2021). Non-mortgage debt (like consumer loans) has declined. The rise in mortgage debt suggests broader access to credit—especially among young households. But without strong financial literacy, households may underestimate repayment risks, interest rate effects, or overextend themselves. The HFCS confirms that many households don't understand basic concepts like interest rates or inflation (FL1, FL2). This mismatch is critical when evaluating financial resilience.

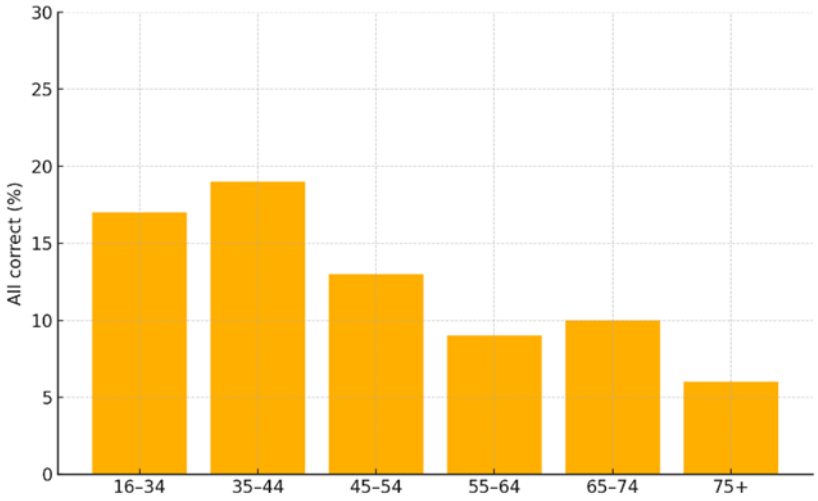
Figure 7: Financial Literacy by Income Percentile




*Source: HFCS 2021, NBS.*

This chart shows that financial literacy improves with household income. Just 5% of adults in the bottom 20% of the income distribution answered all financial questions correctly, compared to over 20% in the top two quintiles. Higher income often correlates with greater access to financial products (like credit, insurance, or investment), prompting individuals to learn and engage more with financial information. This supports the idea that economic well-being can both result from and contribute to better financial knowledge.

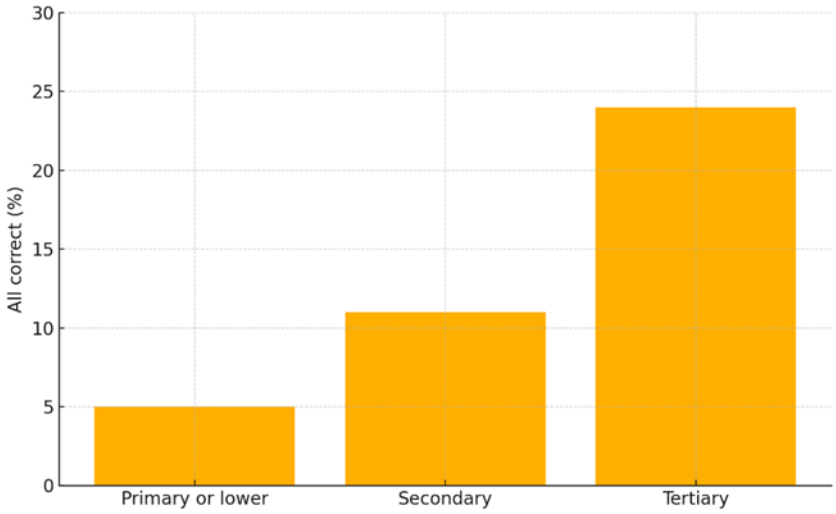
Figure 8: Financial Literacy by Age Group




*Source: HFCS 2021, NBS.*

Here, financial literacy peaks at age 35–44 (19%) and drops in older groups, reaching just 6% for those aged 75+. Middle-aged adults are likely more financially active—dealing with mortgages, saving for children's education, or planning retirement—so they may be more financially informed. In contrast, older adults may face cognitive decline or may have learned financial habits in a different economic context, making it harder to adapt to newer, more complex financial systems.

Figure 9: Financial Literacy by Education Level




*Source: HFCS 2021, NBS.*

Education has a powerful effect on financial literacy. Only 5% of adults with primary education answered all questions correctly, compared to 24% of those with a university degree. Education improves critical thinking and numeracy—skills that are directly tied to understanding interest rates, inflation, and investment risks. The ability to process information and make reasoned decisions is foundational for sound financial behavior, making this a key policy area for improving literacy levels.

The HFCS 2021 data reveals a strong connection between financial literacy and key demographic factors such as income, age, and education. Adults with higher income and education levels consistently demonstrate greater financial knowledge, while older individuals and those with lower socioeconomic status show significantly lower proficiency. These disparities are reflected in patterns of wealth accumulation, credit use, and investment behavior. Although household wealth and access to credit have increased—especially among younger age groups, this does not necessarily imply improved financial understanding. The findings underscore the importance of targeted financial education initiatives, particularly for vulnerable groups, to enhance financial decision-making and promote long-term economic stability across the Slovak population.

# 4. Conclusion

This thesis evaluated the level of financial literacy in Slovakia over the past decade by analyzing both student and adult populations using internationally recognized datasets—namely the OECD Programme for International Student Assessment (PISA) and the Household Finance and Consumption Survey (HFCS). The findings clearly reveal that Slovakia faces substantial and persistent challenges in equipping its citizens with adequate financial knowledge. Among 15-year-old students, the analysis of PISA data from 2012 to 2018 shows that Slovakia consistently underperforms compared to the OECD average and its regional neighbors, such as the Czech Republic and Poland. A particularly worrying trend is the high and persistent share of students performing below the baseline Level 2 proficiency, indicating limited ability to make basic financial decisions. Despite some improvement after 2015, these findings suggest systemic weaknesses in financial education at the secondary level. For adults, HFCS 2021 data highlights significant disparities in financial literacy related to income, age, and education. Individuals with lower income or educational attainment are more likely to lack essential financial knowledge, which can affect their long-term financial security and resilience. Although there has been growth in household wealth and access to credit, especially among younger adults, this does not necessarily translate into better financial decision-making without adequate financial literacy.

Overall, the thesis concludes that Slovakia's financial literacy outcomes are shaped by both structural and educational factors. Strengthening financial education—especially in schools and for vulnerable adult populations, should be a key policy priority. Targeted reforms informed by successful models in neighboring countries could enhance both financial knowledge and behavior, contributing to greater economic resilience and individual well-being in the long run.

While this study provides a detailed overview of financial literacy trends in Slovakia, future research could focus on assessing the effectiveness of specific financial education programs implemented in schools or workplaces. Moreover, qualitative studies exploring individual financial decision-making processes would complement quantitative surveys and provide deeper insights. Finally, as digital finance continues to grow, studying digital financial literacy in different demographic groups would be an important area for future investigation.

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