

ECONOMIC DEVELOPMENT AS A DETERMINANT OF FINANCIAL EDUCATION IN OECD MEMBER STATES

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Abstract: : Against the backdrop of growing international interest in financial education, this study examines the relationship between the level of socioeconomic development and the level of financial education in the countries included in the Organisation for Economic Co-operation and Development (OECD) study. The empirical investigation is grounded in data concerning financial literacy scores and Gross Domestic Product (GDP) per capita. The methodological framework includes descriptive statistical analysis, Pearson correlation analysis, and the estimation of a simple linear regression model aimed at examining the hypothesis of a positive relationship between economic development and financial literacy. The empirical findings indicate a positive and statistically significant association between economic development and financial literacy, suggesting that countries with higher GDP per capita generally record superior levels of financial literacy. Moreover, the study underlines the role of macroeconomic factors in explaining cross-national differences in financial literacy levels.

JEL classification: G53, E21, O50

Key words: financial education, investments, financial well-being, financial literacy, financial behavior, financial attitudes, OECD.

1. INTRODUCTION

There is growing international discussion about financial education. Everything associated with this phenomenon aims to foster a prosperous and financially equitable society. By fostering a solid financial culture, financial education aims to help reduce economic inequalities, support sustainable economic development, and encourage economic and social responsibility (Ionescu and Ștefan, 2025).

To achieve this goal, it is necessary to develop a well-structured plan through which the adult population can acquire new financial knowledge that they can then apply in their daily lives. Against the backdrop of the need for financial education among adults in Romania, a National Financial Education Strategy 2023–2030 was developed, through which the main entities in the financial markets provide a clear and concise contribution to addressing this need.

This paper explains the three pillars on which the OECD report (2023) is based: financial knowledge, financial behavior, and financial attitudes. The main objective of

this study is to examine the extent to which the level of economic development influences financial literacy at the country level. The analysis is based on a sample of 39 countries included in the OECD study (2023). In order to investigate the relationship between economic development and financial literacy, the research employs a quantitative approach grounded in statistical and econometric methods.

The empirical analysis is based on secondary data from international institutional sources. The OECD study (2023) provides indicators on financial education, and data on GDP per capita are drawn from the International Monetary Fund's (IMF, 2024) World Economic Outlook database. The analytical methodology includes the use of descriptive statistics to characterize the distribution of variables, the calculation of the Pearson correlation coefficient to assess the strength and direction of the linear relationship between variables, as well as the estimation of a simple linear regression model to assess the extent to which the economic development of OECD countries influences financial education.

In terms of research originality, the present study provides a contemporary perspective on the relationship between economic development and financial literacy by examining the three core dimensions included in the OECD assessment (2023): financial knowledge, financial behavior, and financial attitudes.

By delivering a comparative analysis that may support the formulation of more efficient strategies aimed at enhancing financial literacy and economic performance within the analyzed countries, this study provides an original synthesis of these key dimensions.

The research is structured into several sections, namely: Introduction, a review of the literature in the field of financial education, research methodology, results obtained and discussions regarding these, highlighting the links between financial education, economic development, and performance.

The main objective of this study is to examine the extent to which the level of economic development influences financial literacy at the country level.

2. REVIEW OF THE SCIENTIFIC LITERATURE

Financial education may be understood as a framework of best practices designed to support the achievement of financial well-being (Cohen, 2018), while financial literacy is the ability to apply a range of financial knowledge in making sound financial decisions (Hung, Parker & Yoong, 2009; Lusardi, 2012). Furthermore, financial education is viewed as a first step toward understanding the financial system. Good governance can be built on the foundation of financial education because it has a major impact on the size of the life insurance market, for example, and many findings indicate positive support for the development of this sector (Drăcea et al., 2024).

Due to rising inflation, interest rates, and prices for nearly all the necessities of daily life (food, clothing, cars, appliances, real estate, etc.), and attempts at financial fraud, it has been concluded that there is a global need for increased financial education among adults (Lusardi & Mitchell, 2007, 2011, 2014).

Kaiser et al., (2022) addressed a problem of considerable importance, namely that the effectiveness of financial education does not live up to expectations regarding desirable financial behaviors.

We need to understand the correlation between the two elements of financial education, namely: financial knowledge and financial behavior.

Although at first glance we tend to believe that if we possess financial knowledge, we automatically exhibit financial behavior that is entirely different from those who lack this knowledge, reality shows us that this is not quite the case (Stolper & Walter, 2017), as several factors are involved, such as: satisfaction derived from earned income, the need to belong to certain groups, emotional regulation, desire resources. As well as the estimation of a simple linear regression model to evaluate the extent to which the control variable influences the dependent variable, daily obligations, etc., with society often conflicting with each of our aspirations, since on a subconscious level we all wish to improve our lifestyle in one way or another.

When discussing vulnerable groups, Bucher-Koenen and Lusardi (2011) evaluated financial education in Germany in their study and showed that the level of basic financial knowledge is low among women, people with low levels of education, and especially residents of the eastern part of the country. If this is evident in a developed economy, it is certainly even more so in developing countries. An example of solutions for vulnerable groups is provided by Sherraden's (1991) work, which proposes an alternative public policy model focused on asset building for low-income individuals in the U.S. rather than traditional policies based exclusively on income.

Additionally, the OECD has conducted two studies assessing the level of financial literacy, one in 2020 and the other in 2023.

The OECD study (2023) focused on three components:

1. Financial literacy

This enables individuals to manage financial difficulties, compare financial products and services in order to make appropriate and well-informed financial decisions, and respond to events that could jeopardize their financial well-being (OECD, 2023).

2. Financial behavior

Individuals' financial well-being, both in the short and long term, is largely influenced by their behaviors and financial decisions (Xiao, 2016). Certain behaviors, such as delaying bill payments, poor planning, or failing to plan for future expenses, or choosing financial products that promise a "get-rich-quick" scheme (rapid wealth accumulation with minimal investment), are just a few examples that can negatively impact a person's financial situation and well-being.

3. Financial Attitudes

The OECD questionnaire (2023) includes several questions to measure respondents' attitudes toward money and financial planning. The questionnaire required respondents to indicate their level of agreement or disagreement with several statements, including:

- "I prefer spending rather than saving";
- "I tend to focus on the present and let the future take care of itself";
- "Money is meant to be spent."

Responses were measured using a five-point Likert scale, where 1 indicated strong agreement and 5 indicated strong disagreement. The attitude score was calculated as the average response to these attitude questions (Siminică et al., 2024).

According to the OECD survey (2023), conducted across 39 countries and economies, including 20 OECD member states, the average financial literacy score recorded was 63 points out of a maximum of 100. Furthermore, only around 34% of adults reached the minimum benchmark level of financial literacy, defined as obtaining at least 70 out of 100 points.

In order to assess financial literacy, methods had to be found to measure it. Thus, Atkinson and Messy (2012) addressed all three components of the OECD studies in their paper and found the following: a large portion of the population exhibits low financial knowledge, financial behavior can be improved and will directly impact decision-making and savings planning, and financial attitudes vary substantially both between countries and among population segments.

Sidor & Manate (2023) aptly noted that financial education has two key characteristics:

- a person's maximum capacity to understand financial information;
- the extent to which a person can use this information to manage their own finances.

Young people will soon be the primary financial decision-makers and will need to navigate a complex economic environment (Oberauch, Kaiser & Lusardi, 2024); however, a lack of financial literacy at this age can lead to serious long-term problems, such as:

- debt;
- difficulty saving;
- failure to distinguish between needs and wants;
- poor investment decisions disguised as personal development or arguments lacking a solid economic foundation.

Furthermore, financial education, as well as the attitudes toward money observed within the family, influence both young people and children in their decision to start saving or to understand appropriate long-term financial systems, as shown in the works of Bongini & Cucinelli (2019), Cole, Sampson & Zia (2011), Grohmann, Kouwenberg & Menkhoff (2015). Furthermore, Campbell (2006) emphasizes that understanding household behaviors is the foundation of effective policies regarding saving, investing, and consumer protection. He also notes that household finance is a distinct area of financial economics, with specific empirical and theoretical issues. Moreover, van Rooji, Lusardi & Alessie (2011) note that individuals with poor financial literacy tend to avoid investing in financial markets because a large proportion of households do not understand financial instruments or their risks and benefits.

Two of the major advantages of future generations are that they have a partner that constantly adapts—artificial intelligence (Luckin et al., 2016)—and the fact that they assimilate knowledge much more easily than those from older generations (Kirschner & Bruyckere, 2017).

The ability to understand financial information depends on the existence of an adequate level of financial education tailored to activities such as making investments, purchasing insurance products, or participating in privately managed pension schemes. These examples illustrate the extent to which financial education influences an individual's capacity to properly assess and manage financial situations.

On the other hand, financial knowledge only has an impact to the extent that it is actually put into practice (Fernandes, Lynch & Netemeyer, 2014; Hastings, Madrian & Skimmyhorn, 2013; Willis, 2011). An individual's lifestyle, financial discipline, as well as their family situation or workplace are just a few factors that can influence the extent to which a person can apply their knowledge regarding the management of their own budget (Bai, 2023). Furthermore, as Willis (2011) states in his work, **The Financial Education Fallacy**, financial education is not the sole factor in improving

consumers' financial lives because certain companies use financial education to create marketing opportunities. Consumers with self-control issues more frequently use expensive and easily accessible credit products. Furthermore, a lack of self-control leads to a higher probability of defaulting on consumer loans and experiencing excessive financial pressure, as shown in Gathergood's (2012) study.

To understand the importance of financial education among the adult population, we extracted articles on the topic from the Scopus database to conduct a bibliometric analysis. Thus, we identified a total of 170 papers in the Scopus database, most of which were published after 2020, though there are also titles referencing works published between 1992 and 2013. I wanted to gain the most up-to-date understanding of what financial education entails and which factors influence the level of financial education at the macro level. The citation count of the articles indexed in the Scopus database varies between 0 and 100 citations for most publications issued after 2020, while one article published in 2014 stands out with a total of 1.127 citations.

To perform the bibliometric analysis shown in Figure 1, we used the VOSviewer software and a series of keywords, such as: financial education, financial literacy, financial behavior, financial well-being, and financial knowledge.

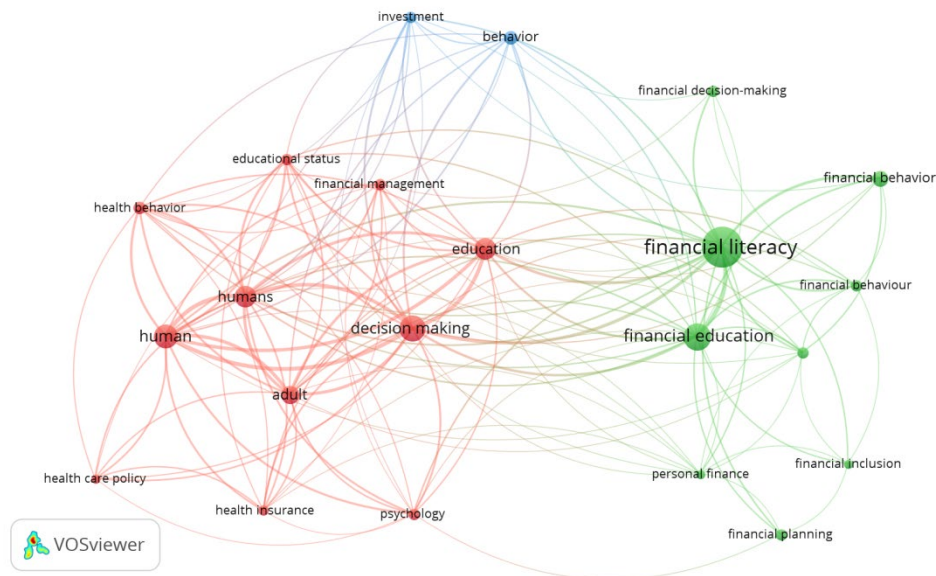


Figure 1 – Bibliometric analysis of keyword connections in the 170 scholarly articles (network visualization)

Source: data obtained from Scopus; bibliometric analysis performed using VOSviewer software

Figure 1 illustrates the co-occurrence network of the keywords: financial education, financial literacy, financial behavior, financial well-being, and financial knowledge, and highlights the relational structure of the analyzed literature as well as how these concepts are interconnected.

The size of the nodes reflects the frequency of occurrence of the terms, and the thickness of the links indicates the intensity of co-occurrence between them (Manual_VOSviewer_1.6.20). Furthermore, the color coding suggests the existence of distinct yet interdependent thematic clusters.

In Figure 1, we can distinguish two types of connections between nodes: thick lines and thin lines.

- Thick lines indicate strong connections, meaning these terms frequently appear together in the analyzed papers.
- Thin lines, such as the one between “financial planning” and “psychology,” suggest a somewhat weaker connection, highlighting that financial planning data is an important tool in research but does not constitute the main topic of discussion.

The first relevant element I wish to address is the role of the concept “education,” which functions as a bridge concept linking multiple thematic areas of the network. The “education” element is centrally positioned but does not play a dominant role, indicating that education is a cross-cutting mechanism connecting socio-demographic, behavioral, and financial perspectives. The mediating function of education suggests that it is both an explanatory variable and an instrument of intervention.

The cluster centered on “decision making” occupies a strategic position in the network because it connects the human dimension (human, adult, psychology) with the financial domain itself. This indicates that the decision-making process is in fact a space of convergence between cognitive, financial, and educational factors, which confirms an integrative approach in the analyzed research. The multiple connections of this node suggest that financial decisions are very rarely isolated and that in most cases they are correlated with various individual traits and educational contexts.

The socio-demographic area structured around terms such as “human,” “humans,” and “adult” is strongly interconnected internally, yet also maintains real links with the concepts of “education” and “decision making.” This configuration indicates that the literature focuses on the adult population not only as a generic factor in studies but also as a distinguishing element in the analysis of financial behaviors and competencies. The presence of links to “educational status” reinforces the idea of a stratified approach that considers educational level as a major explanatory factor.

Another distinct aspect of the network is the psychological and health sphere (psychology, health behavior, health care policy, and health insurance). Although these nodes are located further on the periphery, they are connected through decision-making and education, indicating that the literature explores the transfer of financial competencies to decisions regarding health or insurance. The peripheral positioning of the psychology and health sphere points to the conceptual expansion of the field toward interdisciplinary analyses.

The main cluster of the bibliometric analysis is the financial one, which is organized around “financial literacy” and “financial education.” The analysis reveals a dense network structure, alongside well-defined connections with the behavioral dimension, particularly financial behavior. Likewise, the links are clear with applied concepts such as “personal finance,” “financial planning,” and “financial inclusion.” The distribution of the clusters suggests that financial literacy is used in the literature both as a subject of study and as a predictor of specific financial behaviors and outcomes.

Another important element is the placement of the concepts “investment” and “behavior” in the upper part of the network. This element connects several distinct clusters. Their placement indicates their role as concepts that facilitate the transition

between behavior-oriented literature and literature focused on complex financial outcomes, such as investments. These emerge as an advanced application of financial literacy and are mediated by behavior and decision-making.

Overall, the network structure suggests the existence of a multilayered conceptual framework, in which financial literacy serves as the integrating center of an ecosystem of educational, behavioral, cognitive, and sociodemographic factors. The network highlights both the dominant themes and the mechanisms through which they are interconnected, thus providing a solid foundation for the development of theoretical models and empirical hypotheses in future research.

3. RESEARCH METHODOLOGY

The research methodology is based on the use of statistical and econometric techniques to examine the influence of economic development, expressed through GDP per capita, on the level of financial literacy, measured by the financial literacy score, across the countries included in the OECD study (2023). Specifically, this involves: determining the Pearson correlation coefficient (r) to assess, initially, the strength and direction of the relationship between the two variables analyzed, followed by the development of a linear model regression model to quantify the extent to which the level of financial literacy in the OECD is influenced by the degree of economic development of the countries, in which the financial literacy score represents the dependent variable, while GDP per capita is treated as the independent variable. The financial literacy score is a composite indicator determined by the OECD (2023) by aggregating the following components: financial knowledge, financial behavior, and financial attitudes.

The equation of the simple linear regression model, using the ordinary least squares (OLS) method, is of the form:

$$Score = \alpha + \beta * \ln(GDP_i) + \epsilon_i,$$

where:

- *Score* – financial literacy score;
(dependent/explained variable)
- α – intercept (model constant) → estimated value of the score when $\ln(GDP_i) = 0$;
- β – regression coefficient → shows how the financial literacy score changes with an increase in GDP per capita (in the log-linear model, the interpretation is: the change in the score with a percentage increase in GDP)
- $\ln(GDP_i)$ – the natural logarithm of GDP per capita for country i (independent / explanatory variable);
- ϵ_i – error term → includes the influence of other unobserved factors affecting the score;
- i – the index identifying each country participating in the OECD study within the sample.

Therefore, in order to examine the relationship between financial literacy and GDP per capita, the analysis was based on the following variables:

- the financial literacy score, considered as the dependent variable, according to OECD (2023);

- the natural logarithm of GDP per capita for 2023, used as the independent variable.

Table A1 analyzed a series of data points, including: the financial literacy score for the 39 countries participating in the OECD study (2023), ranging from 42/100 (minimum) in Yemen to 76/100 (maximum) in Germany; the GDP per capita for each participating country, expressed in U.S. dollars (USD); the natural logarithm of the aforementioned data. To obtain the logarithmic value, the calculation formula provided by Microsoft Excel “=LN(numeric value)” was used.

Table 1 – Descriptive statistics for the data in Table A1

Variable	Media	Standard deviation	Minimum	Maximum	Skewness	Kurtosis
financial literacy score	60.38	6.67	42	76	-0.15	0.67
GDP per capita (USD)	29703.68	26664.17	540.77	129810.32	2.04	5.39
ln(GDP per capita)	9.85	1.07	6.29	11.77	-1.06	2.03

Source: as determined by the author

Table 1 presents descriptive statistics for the variables used in the analysis. There is a pronounced positive skewness and high kurtosis for the GDP per capita (USD) variable, indicating the presence of outliers. Logarithmic transformation reduces these characteristics and results in a distribution closer to normality.

4. RESULTS AND DISCUSSION

In light of the research objective and the proposed research methods, we first calculated the Pearson correlation coefficient (r) to measure the strength and direction of the linear relationship between the two continuous variables. The value of this coefficient was 0.586.

The GDP per capita variable was subsequently transformed using the natural logarithm to reduce the asymmetry of the distribution and the influence of outliers, in accordance with standard practices in the economic literature.

Next, the Pearson correlation coefficient was calculated for the financial literacy score and 2023 GDP per capita (in logarithmic form), using the formula provided by Microsoft Excel. This indicates a value of $r = 0.700$, suggesting a strong positive correlation between the two indicators, according to Cohen (1988) and Evans (1996). The findings indicate that countries characterized by higher levels of economic development generally record superior financial literacy scores. (Lusardi & Mitchell, 2014; OECD, 2023).

The value of the coefficient of determination ($R^2 = 0.700^2 = 0.49$) indicates that approximately 49% of the variation in the financial literacy score is statistically associated with the variation in GDP per capita (in logarithmic form). However, the identified correlation does not imply a causal relationship, and the results should be interpreted in an exploratory manner.

The observed relationship may also be influenced by other structural factors, such as the institutional framework, the level of development of the financial system,

human capital, or the socio-cultural characteristics of each economy. Consequently, the analysis justifies the development of multivariate econometric models that allow for the control of confounding factors and the testing of more robust hypotheses regarding the relationship between financial education and economic performance.

It is important to emphasize that a correlation does not prove a cause-and-effect relationship. Furthermore, the Pearson coefficient measures a linear relationship, whereas in reality non-linear relationships may also exist.

Table 2. Results of the simple linear regression (OLS), with the dependent variable being the financial literacy score

Variable	Coefficient	Std. Error	t-stat	p-value
ln(PIB)	4.35	0.75	5.83	<0.01
Constant	17.56	7.41	2.37	0.023

Source: as determined by the author

Based on the estimated coefficients, the econometric model can be expressed as follows:

$$\widehat{Score}_i = 17.56 + 4.35 \cdot \ln(GDP_i)$$

The results presented in Table 2 reveal a positive and statistically significant coefficient for the explanatory variable ($\beta = 4.35$; $p < 0.01$). In addition, the coefficient of determination ($R^2 = 0.485$) indicates that nearly 48.5% of the variation observed in financial literacy scores can be explained by changes in GDP per capita expressed in logarithmic form. The fact that the 95% confidence interval for the β coefficient remains entirely positive further supports the reliability of the estimated relationship.

From an economic perspective, the estimated coefficient suggests that increases in GDP per capita are associated with statistically significant improvements in financial literacy levels.

The results support the hypothesis of a structural link between the level of economic development and financial education, with a direct causal relationship, meaning that the overall objective of this paper is validated.

Financial education contributes to the development of financial well-being through multiple dimensions. In this context, financial education and financial inclusion represent two interrelated factors that have a significant influence on economic development, as well as on individual and societal well-being; The correlation between the two variables—financial education and the level of economic development—contributes to a country's overall economic health because it facilitates access to financial resources essential for consumption as well as investment, as demonstrated by Ichim & Neagu (2025) and Hosen et al. (2025). Furthermore, through a well-developed financial education, individuals can make informed economic decisions, which leads to a more efficient use of financial resources.

Because the entire process is interconnected, the practice of financial education implicitly leads to GDP growth. Financial stability is one of the goals of financial education because a good understanding of the risks associated with various financial products can be achieved through financial education.

Financial inclusion, supported by financial education, provides the population with access to the resources needed to start businesses or develop professional skills.

This access leads to job creation, thereby helping to reduce the unemployment rate and increase consumption, which has a positive impact on the economy.

5. CONCLUSIONS AND RECOMMENDATIONS

Financial education serves as a guide to best practices for each of us, and in the long term, the results will certainly be visible and satisfactory.

Based on the findings of the OECD report (2023) and an analysis of our country's specific context, the following recommendations are proposed to improve financial education at the national level: Financial education concepts should be promoted more vigorously, with clear budgets allocated; Establishing departments within financial institutions to generate statistical reports on financial education and, based on these, develop projects aimed at improving the level of financial education; Developing best-practice guides that are easily accessible to everyone via online platforms; Creating short video clips (2–5 minutes) to be disseminated via social media platforms such as Facebook, LinkedIn, Instagram, TikTok, and YouTube; Developing dedicated television programs.

Despite its contributions, this research has certain limitations, primarily due to the analysis focusing solely on economic development, without including other factors that could affect financial literacy, such as individuals' lifestyles, the general level of education, income inequality, and the structure of the labor market, etc. Future research could explore and deepen the understanding of how financial education impacts the development of the insurance and capital markets, or private pensions, with a focus on purchasing behaviors, the level of financial protection and the extent to which financial products are understood. Through this approach, the study aims to contribute to the development of an integrated perspective regarding the role of financial education in both individual and socio-economic development.

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