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NATIONAL CULTURE, RELIGIOSITY, AND ADULT FINANCIAL LITERACY: CROSS-COUNTRY EVIDENCE FROM OECD/INFE

Master's thesis

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I have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been cited. During the writing process, Artificial Intelligence tools were used to assist with translation and improving sentence structure. The analysis, argumentation, and conclusions presented in this thesis are entirely my own.

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Abstract

This article examines the relationship between national culture, religiosity, and financial literacy among adults using cross-country data from the OECD/INFE 2023 survey. Employing a multilevel modelling approach on a sample of 35,370 individuals across 24 countries, this study integrates four approaches to measuring national culture (Hofstede, Schwartz, Inglehart–Welzel, and Minkov–Kaasa) alongside country-level religiosity. The results show that cultural factors are significantly associated with financial literacy: societies characterized by lower power distance, more secular-rational values, and lower religiosity exhibit higher literacy levels. Among these, country-level religiosity produces the most robust findings. Overall, the findings indicate that culture contributes to cross-country differences in financial literacy, though its effects are closely intertwined with broader socio-economic factors. The study contributes to the literature by adopting a multi-framework approach to culture and explicitly isolating religiosity as a distinct cultural factor.

Keywords: financial literacy, national culture, religiosity, multilevel modelling, cross-country analysis

CERCS classification: S180 Economics, econometrics, economic theory, economic systems, economic policy

1. Introduction

Financial literacy has become a key skill in today's economic life. As financial markets grow more complex and individual responsibility for retirement planning, borrowing, and investment decisions increases, the ability to understand and apply basic financial principles is becoming essential for making sound decisions (Lusardi, 2019). Yet, despite its importance, financial literacy is far from evenly distributed. It varies not just between individuals, but also significantly across countries and the source of this variation is not yet fully understood (Klapper et al., 2015; Klapper & Lusardi, 2019).

Most research explains these differences by pointing to factors like economic development, the quality of institutions, and education systems. But there is growing evidence that less tangible factors such as national culture also play an important role (Cupák et al., 2021; Davoli & Rodríguez-Planas, 2020; De Beckker et al., 2020; Preston et al., 2024; Pulk & Riitsalu, 2024). Culture influences how people think, what they value, and how they approach financial decisions. Because of this, differences in cultural norms may help explain why financial literacy can vary so substantially even between countries with similar levels of economic development (Gorodnichenko & Roland, 2011; Guiso et al., 2006).

However, the existing literature on culture and financial literacy suffers from a notable methodological limitation: the overwhelming majority of studies rely exclusively on Hofstede's cultural dimensions (Ahunov & Van Hove, 2020; Davoli & Rodríguez-Planas, 2020; De Beckker et al., 2020; Ooi, 2018), leaving open the question of whether the observed associations are robust across alternative cultural frameworks or specific to Hofstede's conceptualisation. A notable exception is Pulk and Riitsalu (2024), who examined the relationship between financial literacy and four distinct cultural frameworks (Hofstede, Schwartz, Inglehart–Welzel, and the Minkov–Kaasa revised model) using PISA data from 15-year-old students across 20 countries and found that youth in more individualistic countries exhibit higher financial literacy. Their multi-framework approach represents a meaningful advance, yet it is limited to adolescents and a relatively small country sample.

This study aims to examine the relationship between national culture, including religiosity, and financial literacy among adults. Using individual-level data from the OECD/INFE 2023 International Survey of Adult Financial Literacy across 24 countries, it investigates whether cultural dimensions of four cultural frameworks are systematically associated with cross-national differences in adult financial literacy, after controlling for individual-level sociodemographic characteristics. In addition to the four cultural frameworks, country-level religiosity is incorporated as an additional cultural factor,

recognizing religion as a fundamental component of value systems that may independently influence financial knowledge formation (Fahrati, 2023). A multilevel modelling approach is applied in this study. This is appropriate given the hierarchical structure of the data, where individuals are nested within countries, and aligns with the methodological choices of prior studies in this field (De Beckker et al., 2020; Pulk & Riitsalu, 2024).

This study adds to the existing literature in several important ways. First, it looks at adults using a multi-framework approach to national culture and draws on a dataset that, as far as the author knows, has not been used before at the individual level in cross-country research on financial literacy and culture. Second, unlike the majority of prior multilevel studies that have relied on the 2015 OECD/INFE survey and limited country samples (Cupák et al., 2021; De Beckker et al., 2020), this study leverages the most recent 2023 wave of the survey and a broader set of 26 countries. Third, by introducing religiosity (using importance of religion as a proxy) alongside the four cultural frameworks, the study offers novel evidence on the relationship between religiosity and financial literacy at the country level.

The remainder of this thesis is structured as follows. Section Two reviews the relevant literature on financial literacy, national culture, and religion. Section Three describes the data, measurement of financial literacy, cultural dimensions, and the multilevel model specification. Section Four presents the main results and robustness analyses. Section Five discusses the findings, and section Six concludes and discusses the limitations.

2. Literature review

2.1 Financial literacy: definition, measurement, and cross-country variation

Globally, financial literacy has come to be regarded as a fundamental competency of modern life, playing a critical role in enabling individuals to make informed financial decisions and achieve greater financial well-being (Lusardi, 2019; Lusardi et al., 2014; OECD, 2023b). The significance of financial literacy for individual welfare has been well established in the literature. Lusardi and Mitchell (2014) conceptualize financial literacy as a form of human capital that individuals can invest in to improve their financial decision-making over the life cycle. Their framework shows that differences in financial knowledge lead to systematic variation in key economic behaviours, including saving, investment, and retirement planning. Higher levels of financial literacy are consistently associated with greater wealth accumulation, increased participation in financial markets, and reduced likelihood of costly borrowing decisions (Lusardi, 2019; Lusardi & Mitchell, 2014; Nogueira et al., 2025). Lusardi (2019) argues that financial literacy warrants the same level of

importance as foundational skills such as reading and writing, as its absence leads to poor financial decisions at the individual level and reduced financial market efficiency at the societal level.

There are many ways to define financial literacy; furthermore, no widely accepted framework for measuring it exists. Lusardi and Mitchell (2014) define financial literacy narrowly as knowledge of three fundamental financial concepts: interest compounding, inflation, and risk diversification, reflecting the view that these core concepts underpin most significant financial decisions. One of the most widely used measurement approaches based on this narrow definition is the "Big Three" questionnaire developed by Lusardi and Mitchell (2014) which assesses these concepts through three standardized questions. Despite its simplicity, the Big Three has been widely adopted in financial literacy research across countries and populations (Grohmann et al., 2018; Lusardi & Mitchell, 2014; Van Hove & Ahunov, 2024). A broader alternative is the S&P Global Financial Literacy Survey (Klapper et al., 2015), which follows a similar logic but adds a numeracy question to the same three core topics. It has been used to estimate financial literacy levels across more than 140 countries (Klapper et al., 2015) and has been applied in cross-country research on culture and financial literacy (Ahunov & Van Hove, 2020; Klapper & Lusardi, 2019). Both instruments focus exclusively on financial knowledge and are valued for their cross-country comparability. OECD/INFE takes an broader approach and defines financial literary as “a combination of financial awareness, knowledge, skills, attitudes and behaviours necessary to make sound financial decisions and ultimately achieve individual financial well-being” (OECD, 2020, p. 6). The OECD/INFE 2023 international survey of adult financial literacy measures three areas of financial literacy: knowledge, behaviour and attitudes. Financial knowledge assesses individuals' understanding of basic concepts underpinning sound financial decisions, while financial behaviour evaluates practical money management practices such as budgeting, meeting financial obligations, and seeking information before investing. The attitudes component captures personal dispositions, beliefs, and non-cognitive traits, particularly individuals' orientations toward precautionary saving and long-term financial planning. (OECD, 2023a) While the OECD/INFE framework encompasses all three components, the financial knowledge component has been the primary focus of the majority of prior cross-country studies on financial literacy (e.g., (Ahunov & Van Hove, 2020; De Beckker et al., 2020; Grohmann et al., 2018; Lusardi & Mitchell, 2014; Van Hove & Ahunov, 2024)).

A large body of literature documents substantial heterogeneity in financial literacy across both countries and socio-demographic groups. Financial literacy levels vary systematically by gender (Bucher-Koenen et al., 2017; Ooi, 2018; Preston et al., 2024), age (Finke et al., 2017; Lusardi et al., 2014), education (Lusardi, 2012; Lusardi & Mitchell, 2014), and employment status (De Beckker et al., 2020; Lusardi & Mitchell, 2014), with consistent evidence showing lower levels among women, younger individuals, and the less educated. These disparities are observed both within and across countries and are further shaped by institutional and cultural contexts. Studies using large international datasets show that financial literacy varies systematically across countries and remains strongly associated with financial outcomes even after controlling for differences in economic development, education, and financial infrastructure (Klapper et al., 2015; Klapper & Lusardi, 2019). More recent work confirms that financial literacy is shaped by both formal institutions, such as education systems, and informal factors, including cultural and socialization processes (Cupák et al., 2021; Davoli & Rodríguez-Planas, 2024; De Beckker et al., 2020; Preston et al., 2024; Pulk & Riitsalu, 2024), highlighting the importance of country-specific contexts in understanding financial knowledge disparities.

2.2 Cultural and religious determinants of financial literacy

Culture is notoriously difficult to define. Hofstede (1984, p. 82) describes it as "the collective programming of the mind which distinguishes the members of one group or society from those of another," while Guiso et al. (2006, p.2) take a narrower view, defining it as “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation.” Despite differences in emphasis, both definitions share a common core: culture captures the stable, collectively held values and beliefs that shape how people think and behave. While the broader relationship between culture and economic outcomes is well established in the literature (Bakas et al., 2020; Fahrati, 2023; Gorodnichenko & Roland, 2011; Guiso et al., 2006; Maridal, 2013; Tabellini, 2010), relatively few studies have examined how cultural factors relate specifically to financial literacy. Some of the related literature centres on the influence of culture on individuals’ financial choices. For example, Ashqar and Lobão (2021) found that in more hierarchical, risk-averse or future-oriented cultures, households are less inclined to take on debt, and that such societies also tend to have lower financial well-being. Seminal work by Guiso et al. (2006) shows that cultural beliefs and preferences influence key economic behaviours such as saving, trust, and financial participation. Pastory and Lwanga (2024) stepwise regression results show a strong negative relationship between uncertainty avoidance and

cryptocurrency adoption, while Byrne and O'Connor (2017) find that dividend payout policies are shaped by the interaction between creditor rights and national culture, with individualism significantly altering how legal protections influence firms' distribution decisions.

Handful of studies have examined whether national culture can explain the gender gap in financial literacy. Davoli and Rodríguez-Planas (2024) find that gender differences in financial literacy among US adults are shaped by the financial literacy gender gap in their country of ancestry, as well as by cultural traits such as patience and altruism, suggesting that these disparities are largely socially constructed. Specifically, higher patience and lower altruism in the country of ancestry are associated with greater financial knowledge among men but not women. Ooi (2018) analysis of microdata from 32,148 individuals across 28 countries show that financial literacy gender gap is narrower in countries that are more masculine, long-term oriented, indulgent and gender egalitarian. Preston et al. (2024) argues that the gender gap in financial literacy is not mainly driven by differences in individual, socio-demographic characteristics, but by differences in how men and women acquire financial knowledge (e.g. social expectations around men as primary financial decision-makers may expose them to more financial learning opportunities from an early age), which reflects cultural influences.

One of the earliest direct empirical tests of relationship between financial literacy and national culture was conducted by Brown et al. (2017) who compared the financial literacy of secondary-school students from the French-speaking region with students in the German-speaking region within Switzerland. They found that cultural upbringing has a measurable and significant impact on financial literacy, even when everything else is held constant. An unique and notable study was carried out by Khenfer (2022) who designed a large scale cross-cultural experiment with participants from the United States and the United Arab Emirates. The findings showed that the effectiveness of financial literacy messages depends on both materialism and cultural context. In the U.S., such messages increase saving mainly among highly materialistic individuals, while in Arab contexts they can backfire by encouraging more spending when materialism is high due to increased financial optimism. Overall, the paper demonstrates that financial education is not universally effective and must be tailored to cultural and psychological factors.

The majority of previous studies rely exclusively on Hofstede's cultural dimensions to explain the relationship between national culture and financial literacy (Ahunov & Van Hove, 2020; Davoli & Rodríguez-Planas, 2020; De Beckker et al., 2020; Ooi, 2018; Van Hove &

Ahunov, 2024). Ahunov and Van Hove (2020) found Hofstede's dimension of power distance to have negative correlation with financial literacy, while De Beckker et al.'s (2020) analysis showed a positive correlation between uncertainty avoidance and financial literacy. There is conflicting evidence whether the effect of Hofstede's individualism dimension on financial literacy is positive or negative. Ahunov and Van Hove (2020) and Pulk and Riitsalu (2024) found individualism to have positive correlation with financial literacy, however, De Beckker et al. (2020) found the opposite — that the relationship is negative. Here it is important to note that when Van Hove & Ahunov (2024) redid their 2020 analysis with different indicators (Big Three and OECD/INFE financial literacy measures instead of the S&P indicator), they found that the previously strong relationship between individualism and financial literacy disappeared. This shows that the earlier conclusion is highly sensitive to how financial literacy is measured, raising serious concerns about robustness.

An important exception in the prior literature is Pulk and Riitsalu (2024) which moves beyond relying solely on Hofstede's dimensions by incorporating four distinct approaches to measuring national culture. Their findings reveal a consistent pattern: cultures that promote individual thought, self-expression, autonomy, and openness to change are systematically associated with higher levels of financial literacy. This is supported by positive effects from secular-rational values and individualism (across multiple frameworks), alongside a negative association with embeddedness, capturing more conservative, group-oriented norms. Given this consistency across diverse cultural indicators, the present thesis adopts a similar multi-dimensional approach to measuring culture, aiming to improve robustness and avoid the indicator sensitivity highlighted in prior studies. The following subsections outline the four cultural dimension frameworks employed in this thesis — Hofstede, Schwartz, Inglehart–Welzel, and Minkov–Kaasa — before turning to religion as a related cultural factor.

2.2.1 Hofstede cultural dimensions

While earlier scholars such as Hall (1959) and Kluckhohn and Strodtbeck (1961) first proposed that cultures could be distinguished along common dimensions, Hofstede (1980) was the first to ground these ideas in large-scale empirical data, producing quantifiable country-level scores that enable systematic cross-national comparison. Hofstede's framework identifies cultural dimensions of power distance, individualism, uncertainty avoidance, masculinity, long-term orientation and indulgence (Hofstede, 2011).

A large power distance reflects societies that accept a highly hierarchical order in which power is distributed unequally, whereas small power distance societies strive for greater equality, with subordinates expecting to be consulted rather than simply instructed. A high score in individualism indicates a preference for a social framework in which individuals are expected to take care of themselves, with personal identity defined in terms of individual attributes rather than group membership. In such societies, expressing one's opinions is encouraged, interpersonal ties are relatively loose, and tasks tend to take precedence over relationships. In contrast, collectivist cultures (indicated by a low score in individualism) integrate individuals into strong, cohesive in-groups that provide protection in exchange for loyalty, where identity is defined through group membership, maintaining harmony is prioritized over expressing personal opinions, and relationships take precedence over tasks. Societies with a high level of uncertainty avoidance feel uncomfortable with ambiguity and unknown. This need for clarity and structure is expressed by maintaining rigid codes of belief and rules, and by disapproving of deviant or unconventional ideas. In contrast, societies with low uncertainty avoidance are comfortable with ambiguity and are more tolerant of deviant ideas and behaviours. Masculinity refers to a societal preference for achievement, material success, assertiveness, and a high degree of social and emotional role differentiation between genders. At the opposite end, feminine societies prefer modesty, caring and sympathy for the others, balance between family and work and minimum role differentiation between genders. The dimension of long-term versus short-term orientation was first integrated into Hofstede's cultural dimensions framework in 1991, and it reflects the level to which societies prioritise the future over the present and the past. Societies with a long-term orientation tend to value perseverance and the willingness to delay short-term gratification for future rewards. In contrast, short-term oriented societies place greater importance on maintaining traditions, fulfilling social obligations, and achieving quick results. Finally, the sixth dimension, added in 2010, is indulgence versus restraint. More indulgent societies allow for more gratification of natural human desires related to fun and enjoying life, whereas more restrained societies try to regulate it by means of strict rules and social norms. (Hofstede, 1984, 2011; Hofstede et al., 2010)

2.2.2 Schwartz cultural dimensions

Schwartz (1992, 1994) proposed an alternative conceptual and operational approach to measuring cultural dimensions, which has since become one of the most widely used frameworks in cross-cultural research. Schwartz (2009, p. 138) views culture as "the rich

complex of meanings, beliefs, practices, symbols, norms, and values prevalent among people in a society." His theory describes three bipolar dimensions that reflect key societal challenges. The first, autonomy versus embeddedness, describes the relationship between the individual and the group. Autonomous cultures emphasize independence and self-expression, whereas embedded cultures stress group cohesion, tradition, and shared goals. The second dimension, egalitarianism versus hierarchy, focuses on how societies organize social relations. Egalitarian cultures value equality and cooperation, while hierarchical cultures accept differences in power and expect people to follow established roles. The third dimension, mastery versus harmony, describes how societies relate to their environment. Mastery emphasizes ambition and actively shaping outcomes, whereas harmony prioritizes balance, adaptation, and preservation. These dimensions form a coherent circular structure in which compatible values are located close together and opposing values are positioned further apart. This interdependent structure distinguishes Schwartz's framework from models such as Hofstede's cultural dimensions theory, which treat dimensions as independent.

Although Schwart's cultural dimensions framework is often used in country-level research, it has only been applied once to explain the relationship between national culture and financial literacy. Pulk and Riitsalu (2024) found that of all Schwartz cultural dimensions, only embeddedness had a statistically significant and negative relationship with adolescent financial literacy scores. Notably, this was also among the most robust findings of their analysis, with the relationship retaining statistical significance regardless of which control variables were included in the regression model.

2.2.3 Inglehart–Welzel cultural dimensions

Inglehart and Welzel (2010, p. 551) describe cultural variables as "deeply instilled attitudes among the public of a society." Their analysis of World Values Survey data reveals two major dimensions of cross-cultural variation: traditional versus secular-rational values and survival versus self-expression values. Societies closer to the traditional pole emphasize the importance of religion, obedience and deference to authority, traditional family values and national pride. In contrast, secular-rational societies put greater emphasis on secularism, personal autonomy, rationality, free thought and cosmopolitanism. Societies that score high on survival values dimension prioritise economic security, social order, and conformity, whereas those that score high on self-expression values emphasise personal autonomy, tolerance of diversity, civic participation, and subjective well-being.

Inglehart–Welzel framework has the advantage of covering a broader set of countries than any of the other cultural frameworks discussed in this paper. Furthermore, Steenkamp and Geyskens (2012) notes that political scientists and sociologists often prefer to use Inglehart–Welzel cultural dimensions over Hofstede dimensions, whereas scholars of management and marketing often prefer the latter. Therefore, considering both approaches provides a more comprehensive view of national culture. Finally, Pulk and Riitsalu (2024) results showed a statistically significant positive relationship between adolescent financial literacy scores and both self-expression and secular-rational values, with the effect of secular-rational values remaining statistically significant after robustness checks were included in the regression model.

2.2.4 Minkov–Kaasa revised Hofstede model

Minkov and Kaasa (2022a, p. 129) define culture as "a pattern of values, beliefs, and attitudes that distinguish one group of people from another, be it a country, a region, or some other group." Minkov and Kaasa (2022b) revised the original Hofstede framework by reducing it to two core dimensions that best capture cross-cultural variation: individualism–collectivism (IDV-COLL) and a reconceptualized long-term orientation dimension, now termed flexibility–monumentalism. Importantly, the definitions of these dimensions are also revised. Individualism–collectivism retains its focus on the relationship between the individual and the group, but the revised operationalization shifts emphasis toward freedom from traditional social norms — such as attitudes on divorce, abortion, and personal lifestyle choices — as the primary marker of individualism, rather than the workplace-derived preferences used by Hofstede. The flexibility–monumentalism dimension, in turn, captures the extent to which societies encourage adaptability, self-improvement, and pragmatism (flexibility), as opposed to preserving stable identities, pride, and consistency in beliefs and behaviour (monumentalism). The revision of dimension definitions is the reason why the revised scores produce notably different country rankings than Hofstede's original index.

These revised dimensions serve as one of the cultural frameworks adopted in the present study, following the approach of Pulk and Riitsalu (2024), who found a statistically significant and positive relationship between adolescent financial literacy scores and both the IDV-COLL and flexibility–monumentalism dimensions, with the effect of individualism–collectivism remaining statistically significant after robustness checks were included in the regression model.

2.2.5 Religiosity

In addition to the four cultural frameworks, this study incorporates country-level religiosity as a separate cultural factor. The primary motivation for doing so is methodological: the importance of religion is already embedded within the Inglehart–Welzel secular-rational dimension, which combines religiosity with other elements such as national pride, deference to authority, and traditional family values. While this composite dimension captures a broad orientation toward tradition versus secularism, it does not isolate the specific contribution of religion alone. By including importance of religion as a standalone predictor, this study tests whether the pure religiosity signal carries an independent relationship with financial literacy (one that may be stronger or distinct from what the broader composite dimension captures).

There are compelling theoretical reasons to expect such a relationship. Religion shapes economic behaviour through multiple channels. Agarwala et al. (2018) find that religiosity is associated with lower materialism, greater risk aversion, and stronger frugality norms, with major world religions encouraging restraint in consumption and contentment. These value orientations may reduce the motivation to actively acquire financial knowledge, as financial decision-making is less likely to be driven by wealth accumulation goals in more religious societies. At the same time, Wijaya et al. (2024) find that centering one's life around religion is associated with reduced financial anxiety through the protective function of faith, which may similarly reduce the perceived need to develop financial competencies.

Research shows that higher religiosity is linked to weaker financial outcomes. At the country level, Amissah and Świerczyńska (2021) use World Values Survey data to show that higher intensity of religiosity is on average negatively associated with financial development. At the individual level, Xu et al. (2022) find that religious beliefs inhibit stock market participation among urban households in China. They point to a key mechanism: time spent on religious activities may limit opportunities to build financial literacy, which in turn lowers participation in financial markets.

The relationship between religion and financial literacy has received very limited direct attention in the literature. Rehman and Mia (2024) identify religious factors (particularly Islamic financial literacy principles which prohibits practices like interest) as an underexplored determinant of financial literacy that deserves further investigation, suggesting that religious context may shape both the content and acquisition of financial knowledge. Given the scarcity of direct evidence, examining the importance of religion as a country-level predictor offers a novel contribution to the existing literature.

3. Data and methodology

3.1 Data

This study uses individual-level data from the OECD/INFE 2023 International Survey of Adult Financial Literacy (OECD, 2023a). The dataset provides harmonized cross-country information on financial literacy, collected using a standardized methodology across participating economies. A combination of face-to-face, telephone, and online questionnaires was used to collect responses from adult participants across 39 countries with a minimum achieved sample size of 1,000 participants per country (OECD, 2022).

While the OECD/INFE 2023 report, aggregate country-level tables, and accompanying documentation are publicly available, access to the individual-level data was obtained directly from the OECD upon request for academic research purposes. The present study obtained survey data of 26 participating countries (Austria, Brazil, Chile, Croatia, Costa Rica, Cyprus, Estonia, Finland, France, Greece, Hong Kong, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Peru, Philippines, Poland, Romania, Saudi Arabia, Sweden, Uruguay). Although the analysis is based on relatively small sample of 26 countries, which limits cross-national generalizability, it exceeds those employed in prior multilevel studies on financial literacy. For example, Nicolini et al. (2013) examined financial literacy differences between Italy, Canada, US and the UK. Pulk and Riitsalu (2024) analysed PISA financial literacy survey data of 20 countries. Cupák et al. (2021) and De Beckker et al. (2020) both assessed the 2015 OECD/INFE International survey individual level data from 12 countries. Ahunov and Van Hove (2020) had one of the largest datasets of 92 countries; however, their analysis relied on aggregated financial literacy data, whereas the present study utilises both individual-level and country-level data to estimate multilevel models. It is worth noting that the 26 countries in the sample are not globally representative. While Europe and Latin America are well represented, the sample contains no countries from Africa, and coverage of Asia and the Middle East is limited to three countries (Hong Kong, Philippines, and Saudi Arabia), which limits the cross-national institutional variation available for macro-level predictors.

The OECD/INFE 2023 survey comprises a set of financial literacy questions alongside a broad set of socioeconomic variables. An overview of the financial knowledge questions in the OECD/INFE survey on financial literacy can be found in appendix A. The construction of the final analytical dataset required a comprehensive and systematic data harmonization process across all country-specific survey files to ensure full cross-country

comparability. The work began with an extensive review of each national questionnaire, including careful translation where necessary, to identify differences in wording, response scales, coding schemes, and variable availability. This step was essential, as even seemingly identical questions often exhibited subtle inconsistencies in response categories or encoding across countries. Several major shortcomings were found. Most notably, the financial literacy questions in the Costa Rica and Uruguay surveys were modified in ways that rendered them incomparable to other countries, and they were therefore excluded from the analysis. Additionally, France was missing the urban-rural place of residence variable entirely. Finally, differences in the operationalization of the income variable across country surveys were too substantial to allow for meaningful standardization.

A unified data structure was designed, and all country datasets were transformed to conform to a common schema. A series of recoding and variable engineering steps were applied. Categorical variables with country-specific labels were mapped into internationally comparable groupings, through steps such as collapsing detailed education categories into primary, secondary, and tertiary levels, and aggregating employment statuses into analytically meaningful groups (e.g., employed, self-employed, retired, and not working). To ensure compatibility across datasets, survey weights were standardized, with default weights assigned where none were provided. A few countries (e.g., Brazil, Cyprus) had included respondents aged 15–17 in their surveys. As the focus of this study is on adult financial literacy, these respondents were removed from the analysis. The final dataset consists of 35,370 individuals from 24 countries.

3.2 Measures

3.2.1 Financial literacy score

Given that none of the country datasets contained pre-computed financial literacy scores, composite scores were calculated from the underlying survey items. The OECD/INFE definition of financial literacy has received criticism in the literature (De Beckker et al., 2020; Di Salvatore et al., 2018). In particular, Di Salvatore et al. (2018) argue that the shortcomings of OECD methodology should be addressed to strengthen its measurement capacity and improve cross-country comparability. The main critiques are as follows (Di Salvatore et al., 2018):

- the behavioural and attitudinal components indicators are grounded in policy-driven heuristics that may lack broader generalizability;

- defining universally “good” financial behaviour fails to account for meaningful variation across life cycle stages, individual preferences, and differing institutional and economic contexts — for instance, treating a high propensity to save as universally desirable disregards the implications of life-cycle theory;
- the risk of artificially inflating financial literacy gaps, given that individuals with higher financial knowledge are inherently more likely to exhibit behaviours classified as "correct" within the scoring methodology;
- behavioural measures should focus exclusively on choices that are directly attributable to the individual, such as cross-checking financial records or consulting multiple sources before investing.
- the attitudinal questions in the survey are of questionable validity.

In light of the aforementioned criticisms and given that the majority of existing literature concentrates on financial knowledge (Ahunov & Van Hove, 2020; De Beckker et al., 2020; Grohmann et al., 2018; Lusardi & Mitchell, 2014; Van Hove & Ahunov, 2024), the present study focuses exclusively on the financial knowledge component of financial literacy. This decision is also warranted on practical grounds. Existing scoring methodology would need to be substantially revised — retaining only appropriate behavioural and attitudinal items and reconsidering how much each item contributes to the composite score. This represents a considerable methodological undertaking that goes well beyond the scope of the present study. Furthermore, constructing a composite financial literacy score that incorporates behavioural and attitudinal items would require an immense amount of additional data processing: each of the country-specific survey files would need to be individually processed to extract the relevant items, in some cases translated, and finally harmonized to ensure comparability. Critically, each additional survey item incorporated into the composite score introduces a new source of cross-country incomparability, as differences in how questions are interpreted, translated, and contextualized across national surveys compound with every item added. Restricting the analysis to the seven financial knowledge questions, which are factual and objectively scored, substantially reduces this comparability problem and produces a cleaner and more defensible measure for cross-country research. While the author acknowledges the conceptual validity of the OECD/INFE definition, which recognises both knowledge and behaviour as essential dimensions of financial literacy, the behavioural and attitudinal components require further methodological refinement before they can be reliably

employed in cross-country comparative research and are therefore beyond the scope of the present study.

The financial literacy score used in this study was constructed using an Item Response Theory (IRT) framework, drawing methodological inspiration from large-scale international assessments such as Programme for International Student Assessment (PISA), where IRT constitutes the standard approach for measuring latent competencies from test items (Okubo, 2022). Specifically, a two-parameter logistic (2PL) IRT model was estimated using seven financial knowledge questions (QK1–QK7), each coded as 1 for a correct response and 0 otherwise. This approach represents a deliberate methodological choice relative to prior research using OECD/INFE International Survey of Adult Financial Literacy data, such as De Beckker et al. (2020) , which constructed a financial literacy index using Principal Component Analysis (PCA). While the use of PCA in that study is methodologically reasonable as a data reduction technique that captures common variance across items, it relies on assumptions of continuous variables and linear relationships and assigns weights based on covariance structures rather than measurement properties. In contrast, IRT is specifically designed for dichotomously scored test data — and while not all OECD/INFE questions are binary in their original form, they are conventionally scored as correct or incorrect prior to analysis — and explicitly models the probability of a correct response as a function of an unobserved latent trait (financial literacy), while simultaneously accounting for differences in item difficulty and discrimination (Okubo, 2022). This allows for a more theoretically grounded and interpretable measurement, where items contribute to the index based on their ability to differentiate between respondents of varying literacy levels, rather than merely their statistical correlation with other items.

The IRT model was estimated on pooled respondent-level data across all countries to ensure that the resulting financial literacy scores are expressed on a common latent scale and are thus directly comparable across populations. Item fit statistics indicated good fit (item RMSEA < 0.03). Overall model fit was acceptable (RMSEA = 0.07, SRMSR = 0.046, CFI = 0.94), supporting the use of a unidimensional financial literacy construct. Together, these results indicate that the selected items provide a coherent and reasonably well-fitting measure of a single underlying financial literacy construct. Differences in financial literacy are expressed in standard deviation units of the latent ability scale (θ), where higher values indicate higher levels of financial literacy. The standard deviation of the estimated latent scores is slightly below one (SD = 0.81), reflecting the expected shrinkage of empirical Bayes estimates in short IRT scales. Country-level characteristics, including mean IRT theta

scores (θ) averaged across respondents within each country, are presented in Table 1. To assess the robustness of the results, a simple sum-score index was constructed by summing correct responses across the financial literacy items. Regression analyses using this alternative financial literacy measure as the dependent variable yielded results consistent with those obtained using the IRT-based index, confirming that the main findings are not driven by the specific measurement approach. Figure 1. shows the distribution of financial literacy scores averaged by country. Scores were rescaled to 0–100 for visualization purposes; original IRT logit scores used in all analyses.

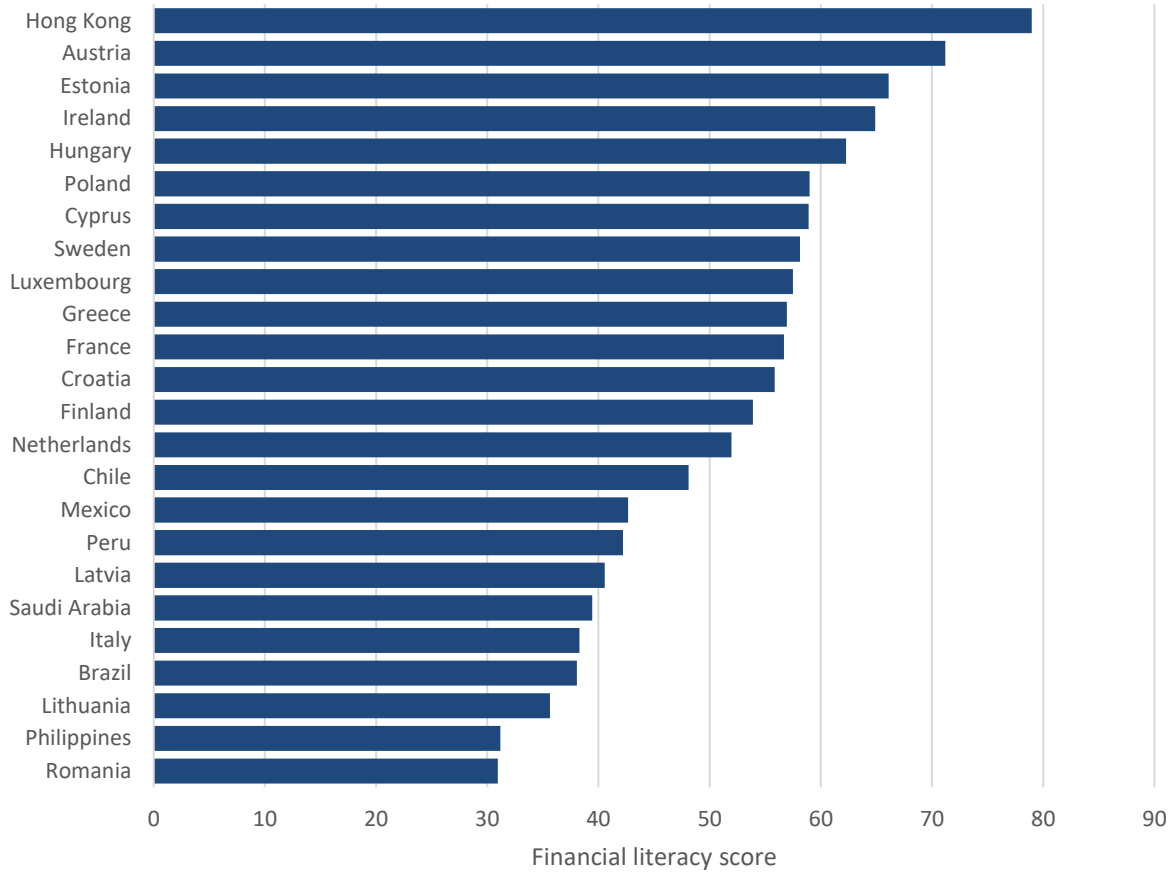

Figure 1. Average financial literacy scores across sample countries

Source: Compiled by the Author using data from the OECD/INFE 2023 financial literacy survey

3.2.2 Culture and religion

Unlike the vast majority of studies examining the relationship between culture and financial literacy, which rely exclusively on Hofstede's cultural dimensions (Ahunov & Van Hove, 2020; Davoli & Rodríguez-Planas, 2020; De Beckker et al., 2020; Pastory & Lwanga,

2024; Van Hove & Ahunov, 2024), this study adopts four distinct approaches to measuring national culture, in line with Pulk and Riitsalu (2024). These include Schwartz (2008), Inglehart–Welzel culture dimensions from World Value Survey Database (2022), Hofstede (2011) and Minkov and Kaasa (2022) models.

The analysis utilizes the most recent available scores for each cultural dimension. The full list of unstandardized cultural dimension scores can be found in appendix B. It should be noted that not all cultural dimensions are available for every sample country. Cyprus lacks Hofstede cultural dimension scores, Latvia lacks Minkov-Kaasa scores, and Lithuania Schwartz dimension scores. Both Schwartz and Minkov–Kaasa scores are unavailable for Luxembourg, while only Inglehart–Welzel cultural dimension scores are available for Saudi Arabia. Consequently, the country-level sample size differs across the four cultural dimension framework models.

Since the cultural indices were measured on different scales, they were standardized to ensure comparability and facilitate interpretation. The seven Schwartz cultural value dimensions — Embeddedness, Intellectual Autonomy, Affective Autonomy, Hierarchy, Egalitarianism, Harmony, and Mastery — were subjected to principal component analysis (PCA) prior to inclusion in the multilevel model. This decision was motivated by both statistical and theoretical considerations. Statistically, with only 24 countries at Level 2, the multilevel model can reliably accommodate no more than two to three country-level predictors without risking overfitting and unstable estimates (Maas & Hox, 2005; Snijders & Bosker, 1999; Stegmueller, 2013). Including all seven dimensions simultaneously would far exceed this limit, and correlation analysis confirmed that several dimension pairs exhibited severe multicollinearity — most notably Embeddedness and Intellectual Autonomy ($r = -0.87$, $p < .001$) and Embeddedness and Affective Autonomy ($r = -0.80$, $p < .001$) — making their independent effects statistically impossible to disentangle at this sample size (complete correlation analysis results can be found in appendix C). Crucially, however, the application of PCA to the Schwartz framework is not merely a statistical remedy but is theoretically grounded in the structure of the framework itself. Schwartz (1992, 1994) explicitly theorized his values as forming a motivational continuum arranged in a circumplex, in which adjacent dimensions are compatible and opposing dimensions are in conflict. This circumplex structure implies that most meaningful cross-cultural variation can be captured by a small number of underlying bipolar axes running through the circle, and that the intercorrelations among dimensions are a theoretical property of the framework rather than a statistical artifact. PCA is therefore the methodologically appropriate technique for operationalizing the

Schwartz framework at the country level, as it recovers these underlying axes empirically (Davidov et al., 2009; Schwartz & Fischer, 2011). The application of PCA is further supported by empirical precedent in the cross-cultural literature. Witte et al. (2020) employed PCA to extract country-level cultural value dimensions from Schwartz's framework, recovering a two-dimensional structure. Similarly, Minkov and Kaasa (2024) demonstrated that applying principal component analysis to Schwartz's cultural dimensions at the national level yields a coherent two-dimensional model of national culture.

The PCA was conducted on country-level standardized Schwartz scores across the 21 countries. The analysis yielded two dominant components accounting for 73.5% of total variance. Inspection of the component loadings confirmed that both components replicate Schwartz's theorized primary axes. The first component (53.0% of variance) opposed Embeddedness (loading = +0.50) and Hierarchy (+0.41) against Intellectual Autonomy (-0.46), Affective Autonomy (-0.37), and Egalitarianism (-0.32), corresponding to Schwartz's Conservation versus Openness to Change axis, which captures the degree to which cultures emphasize maintaining tradition, social cohesion, and group boundaries versus valuing independent thought, personal pursuits, and tolerance of difference (Schwartz, 1994). The second component (20.5% of variance) opposed Mastery (+0.61) against Harmony (-0.53), corresponding to Schwartz's Self-Enhancement versus Self-Transcendence axis, capturing the degree to which cultures value assertive mastery over the social and natural environment versus harmonious integration with it (Schwartz, 2009). These two components, from this point forward referred to as Conservation-Openness and Mastery-Harmony, were used as country-level predictors in the multilevel models.

To capture cross-country differences in religiosity, data from the World Value Survey Database (2022) were used, as it provides internationally comparable measures of individual values and beliefs across a broad set of countries. The variable measuring the importance of religion in one’s life was selected as the primary proxy for country-level religiosity. This choice is motivated by the fact that it directly reflects the subjective prominence of religion, which is more closely aligned with cultural norms and value systems. Alternative indicators such as religious attendance, denominational affiliation, or the share of religious population were not preferred because they capture different and often narrower aspects of religion. For instance, attendance may be driven by social conventions or institutional factors rather than personal belief, while affiliation reflects formal identification rather than intensity of religiosity. As a result, these measures can be less comparable across countries with different religious traditions and institutional contexts. The importance of religion provides a more

consistent and theoretically relevant measure of how strongly religious values are embedded in everyday life, making it a more suitable indicator for cross-country cultural analysis.

In the World Value Survey, respondents are asked to evaluate how important religion is to them on a four-point scale: “very important,” “rather important,” “not very important,” and “not at all important.” To construct a country-level measure of religiosity, this study calculates the share of respondents in each country who report that religion is either “very important” or “rather important” in their lives. This percentage is used as a proxy for the overall importance of religion within a society. The religiosity variable was standardized to ensure comparability with other country-level cultural indicators and to allow interpretation of coefficients in terms of standard deviation changes.

3.2.3 Control variables

In line with previous studies (Ahunov & Van Hove, 2020; Brown et al., 2018; Cupák et al., 2021; De Beckker et al., 2020; Pulk & Riitsalu, 2024), the analysis controls for several individual- and country-specific determinants of financial literacy. At the individual level, sociodemographic variables of gender, age, education level, employment status, and urban–rural residence are included. Previous studies consistently find evidence of a gender gap in financial literacy, with men scoring higher than women on average (Bucher-Koenen et al., 2017; Cupák et al., 2021; De Beckker et al., 2020; Ooi, 2018) , as well as a strong positive effect of education on financial literacy (De Beckker et al., 2020; Lusardi, 2012). Previous research reveals a hump-shaped relationship between age and financial literacy (Cupák et al., 2021; De Beckker et al., 2020; Finke et al., 2017; Lusardi et al., 2014), which Finke et al. (2017) attribute to the natural decline in both fluid and crystallized intelligence in old age. Both Cupák et al. (2021) and De Beckker et al. (2020) find that individuals who are not working exhibit significantly lower financial literacy on average compared to employed and retired individuals. Jappelli (2010) finds a positive correlation between the share of the urban population and financial literacy, arguing that more intense social interactions may be associated with higher financial literacy levels. However, De Beckker et al. (2020) find no statistically significant relationship between urban–rural residence and financial literacy.

The urban–rural residence variable was unavailable for France. Including this variable would therefore reduce the country sample from 24 to 23 countries. To retain the full country coverage, the main models exclude the urban variable. Regression analyses including the urban variable show that the estimated coefficients of the other individual-level predictors

remain largely unchanged and that the effect of urban residence is positive but negligible. Therefore, excluding the variable does not materially affect the results.

At the country level, the analysis controls for the PISA math score, GDP per capita (PPP), life expectancy, Gini coefficient, and the share of internet users in the population. PISA math score is included as a proxy for the cognitive skills produced by national education systems. International standardized test scores such as PISA are widely used in the literature as comparable measures of cognitive skills across countries. For example, Hanushek and Woessmann (2008) show that such test scores are strongly associated with economic outcomes and provide a more informative measure of human capital than years of schooling. Similarly, Jappelli (2010) demonstrates the relevance of standardized cognitive measures for analysing cross-country variation in financial literacy. The PISA mathematics score is used, as it captures numeracy skills that are particularly relevant for financial decision-making. Math scores are drawn from the 2022 wave of the Programme for International Student Assessment (PISA, 2023).

GDP per capita (PPP) in constant 2021 international dollars is used to control for economic development, as is standard in cross-country studies of financial literacy. As GDP per capita is significantly right-skewed, it is log-transformed before being included in the model. The inclusion of the Gini coefficient as a control variable is motivated by its widespread use in previous studies (Ahunov & Van Hove, 2020; Peng et al., 2018; Pulk & Riitsalu, 2024; Van Hove & Ahunov, 2024) and their reasoning for doing so. For instance, Peng et al. (2018) found a higher Gini coefficient to be negatively associated with the financial literacy. Ahunov and Van Hove (2020) justify its inclusion by hypothesising that in societies with high income inequality, a larger share of the population may struggle to invest in their financial education. In this analysis, the Gini coefficient is rescaled to percentages. Additional indicators of economic development are included as robustness checks, namely life expectancy and the share of internet users in the population. These control variables are selected based on associations documented in prior research using the OECD/INFE dataset (Cupák et al., 2021; De Beckker et al., 2020).

Data for GDP per capita (PPP), life expectancy, Gini coefficient, and the share of internet users in the population was obtained from the World Bank Databank (World Bank, 2022). Country-level macroeconomic indicators were matched to the survey fieldwork year (2022) to ensure temporal alignment between contextual variables and individual responses. When 2022 data were unavailable, the closest preceding year was used.

Table 1

Country-level variable data and IRT theta scores (θ) across the available dataset.

Country	Financial literacy score (IRT)	GDP per capita PPP (2021)	GINI	PISA math score	Life Expectancy	Internet users %	Importance of religion (%)
Austria	0.56	65,695	30.9	487	81.3	93.6	43
Brazil	-0.30	18,554	52	379	74.9	80.5	84.6
Chile	-0.05	29,569	43	412	79.2	93.5	55
Croatia	0.15	39,864	30	463	77.6	82.1	63
Cyprus	0.22	50,624	31.5	418	80.4	89.6	79.7
Estonia	0.42	43,129	32.3	510	77.8	91.5	22.9
Finland	0.10	57,068	27.9	484	81.2	93.0	31.7
France	0.17	53,674	31.2	474	82.1	85.3	37.1
Greece	0.17	35,831	33.4	430	80.8	83.2	81.6
Hong Kong	0.81	64,037	51.8	540	83.7	95.6	30.6
Hungary	0.31	40,611	30.6	473	75.9	89.1	45.1
Ireland	0.38	123,219	29.9	492	82.5	96.6	44.9
Italy	-0.30	52,333	33.7	471	82.7	85.1	65.3
Latvia	-0.24	37,719	33.7	483	74.3	91.0	35.2
Lithuania	-0.37	46,651	36.6	475	75.6	87.7	45.3
Luxembourg	0.19	132,571	34.1	483	82.9	98.2	39
Mexico	-0.19	21,392	43.5	395	74.0	78.6	74.6
Netherlands	0.05	71,324	25.7	493	81.6	92.5	26.1
Peru	-0.20	15,560	40.3	391	76.8	74.7	78.7
Philippines	-0.49	9,457	40.7	355	69.5	75.2	97.4
Poland	0.23	43,405	28.9	489	77.2	86.9	78.1
Romania	-0.50	39,257	32.3	428	75.2	85.5	80.3
Saudi Arabia	-0.27	67,179	45.6	389	77.3	100.0	97.4
Sweden	0.20	63,088	31.6	482	83.1	95.0	28

Note: 2022 values used wherever possible. When 2022 data were unavailable, the closest preceding year was used. GDP per capita (PPP) shown in constant 2021 international dollars.

Source: Compiled by the author based on World Bank (2022), World Value Survey Database (2022), PISA (2023), OECD (2023)

3.3 Model

To examine the relationship between financial literacy and cultural factors, a multilevel modelling approach was employed. This is appropriate given the hierarchical structure of the data, where individuals are nested within countries. Ignoring this structure would violate the assumption of independent observations and potentially lead to biased standard errors (Goldstein, 2011). We estimate the following model:

$$FL_{ij} = \beta_0 + \beta_1 X_{ij} + + \beta_2 Z_{ij} + u_j + \varepsilon_{ij}$$

FL_{ij} – financial literacy score for individual i in country j as dependent variable

X_{ij} – independent variables at individual level

Z_{ij} – independent variables at country level

u_j – random intercept capturing unobserved country-level heterogeneity

ε_{ij} – individual-level error term

Similarly to De Beckker et al. (2020) and Pulk and Riitsalu (2024), the predictive power of the models is assessed using the intraclass correlation coefficient (ICC):

$$ICC = \frac{\sigma_u^2}{\sigma_u^2 + \sigma_e^2}$$

σ_u^2 – between-country variance (variance of the random intercept)

σ_e^2 – within-country variance (individual-level residual variance)

Separate models are estimated for three cultural frameworks: Schwartz, Inglehart–Welzel, and Minkov–Kaasa. For the Hofstede framework, each cultural dimension is included interchangeably in the baseline model, rather than all dimensions being entered simultaneously. This approach is in line with Ahunov & Van Hove (2020), Byrne & O'Connor (2017), Ghoul & Kwok (2012), Ooi, (2018) and Tadesse & Kwok (2006).

With 24 countries at the second level, the multilevel model meets the commonly cited threshold of 20–30 higher-level units needed for unbiased estimation of random effects (Snijders & Bosker, 1999; Stegmueller, 2013), yet the relatively modest number of level-2 units imposes practical constraints on model specification: to maintain a defensible ratio of higher-level units to level-2 parameters and avoid overfitting, country-level predictors were introduced in separate models rather than all simultaneously, with no more than one macro-level variable included with culture dimension variables at the same time.

Given the relatively small number of countries, statistical significance at the 10% level is also considered indicative of suggestive relationships. Standard errors and inference are interpreted with caution due to the limited country-level sample size.

To account for potential sampling differences, models incorporating normalized survey weights were estimated alongside unweighted multilevel models. The results of the two specifications were compared to assess the impact of weighting on the estimates. The comparison indicated that weighting had a negligible effect on the results: estimated variance components, the overall mean, and country-level random effects were highly similar across models. In particular, the correlation between the country-level random intercepts from the weighted and unweighted models was very high ($r = 0.99$). At the same time, the inclusion of survey weights in multilevel models is not straightforward, as standard estimation approaches do not fully account for complex survey design features. In such cases, weights may not be incorporated in a theoretically consistent manner and can introduce additional estimation noise without clear benefits. Given the negligible empirical differences between weighted and unweighted specifications, and the methodological limitations associated with incorporating survey weights in multilevel models, the main analyses in this study rely on the unweighted models. This approach is consistent with prior cross-national multilevel research, where unweighted models are often preferred when weighting does not materially affect the results (e.g., (Pfeffermann et al. (1998)). Weighted models were nevertheless estimated as a robustness check and confirmed that the substantive conclusions remain the same.

4. Results

4.1 Base model results

Multilevel regression results examining the relationship between cultural dimensions — as well as the importance of religion — and financial literacy scores from the OECD/INFE 2023 survey are depicted in Table 2. First, a random intercept model without any predictor variables was estimated, yielding an intraclass correlation coefficient (ICC) of 0.170. The ICC of 0.170 indicates that 17% of the total variance is explained by variance between countries. Next, a baseline model including individual-level predictors (i.e., gender, age, education, and employment status) was estimated. The ICC increased slightly to 0.191 after accounting for individual-level characteristics, consistent with the expected reduction in within-country residual variance. This suggests that demographic composition partially explains within-country variation in financial literacy, while between-country differences remain largely unexplained by individual-level factors alone.

Table 2

Main results of various cultural dimension models with financial literacy score as dependent variable

	Baseline model	Schwartz	Hofstede	Inglehart–Welzel	Religion
Between-country variance	0.115	0.101	0.096	0.094	0.084
Individual-level variance	0.487	0.470	0.489	0.487	0.487
ICC	0.191	0.175	0.164	0.160	0.147
Statistically significant culture dimension		Mastery-Harmony 0.11* (0.06)	Power distance -0.13** (0.06)	Secular-rational 0.14** (0.07)	Importance of religion -0.17*** (0.05)
Gender (reference category: Female)	0.19*** (0.01)	0.18*** (0.01)	0.18*** (0.01)	0.18*** (0.01)	0.18*** (0.01)
Age (reference category: 18–29)					
30–49	0.12*** (0.01)	0.11*** (0.01)	0.11*** (0.01)	0.12*** (0.01)	0.12*** (0.01)
50–69	0.18*** (0.01)	0.17*** (0.01)	0.17*** (0.01)	0.18*** (0.01)	0.18*** (0.01)
70+	0.11*** (0.02)	0.11*** (0.02)	0.10*** (0.02)	0.11*** (0.02)	0.11*** (0.02)
Educational level (reference category: Primary)					
Secondary	0.37*** (0.02)	0.37*** (0.02)	0.35*** (0.02)	0.36*** (0.02)	0.37*** (0.02)
Tertiary	0.62*** (0.02)	0.63*** (0.02)	0.62*** (0.02)	0.62*** (0.02)	0.62*** (0.02)
Employment (reference category: In-paid employment)					
Self-employed	-0.06*** (0.01)	-0.05*** (0.01)	-0.04*** (0.01)	-0.06*** (0.01)	-0.06*** (0.01)
Retired	-0.05*** (0.01)	-0.06*** (0.01)	-0.04*** (0.02)	-0.05*** (0.02)	-0.05*** (0.02)
Other not working	-0.14*** (0.01)	-0.15*** (0.01)	-0.13*** (0.01)	-0.14*** (0.01)	-0.14*** (0.01)
Number of countries in the analysis	24	21	22	24	24

Note: Only statistically significant measures are depicted. The Minkov–Kaasa cultural dimension model results are excluded from this table, as neither dimension was statistically significant. Dependent variable is the IRT financial literacy score. Standard error in parentheses. Abbreviations: ICC, intraclass correlation coefficient

*p < .10; **p < .05; ***p < .01.

Source: Author's calculations

Across all model specifications, individual-level control variables exhibit stable and highly significant effects. Men scored approximately 0.18–0.19 points higher on the latent financial literacy scale than women (≈ 0.23 standard deviations after accounting for shrinkage), corresponding to a moderate effect size. Financial literacy also increases with age, peaking among individuals aged 50–69 (β ≈ 0.17–0.18), while those aged 70+ exhibit slightly smaller but still significant advantages relative to the youngest age group. Educational attainment emerges as the strongest predictor, with secondary education associated with an increase of approximately 0.35–0.37 points and tertiary education with an increase of about 0.62–0.63 points in the latent literacy scale, (≈ 0.77 SD — nearly a full standard deviation of the latent score distribution) indicating large and highly robust effects. Relative to those in paid employment, the self-employed and retired scored modestly lower (β ≈ −0.05 to −0.06), while those otherwise not working showed a more pronounced deficit (β ≈ −0.13 to −0.15).

Next, a model for each of the four culture dimension frameworks was constructed with framework dimensions as country-level predictor variables. Out of two Schwartz cultural dimensions, Mastery-Harmony dimension remained statistically significant ($p < 0.10$). Since all cultural dimensions are standardized, a coefficient of $\beta = 0.11$ implies that a one standard deviation increase in the Mastery–Harmony dimension is associated with a 0.11-unit increase in financial literacy (θ). It suggests that countries more oriented toward mastery (as opposed to harmony) tend to have higher financial literacy.

For the Hofstede framework, a correlation analysis was conducted initially (see Appendix D), after which six separate models were estimated, each including a single cultural dimension in the baseline model. Out of the six dimensions, only power distance remains statistically significant ($p < 0.05$). The corresponding model coefficients and intraclass correlation coefficient (ICC) are reported in Table 2. Hofstede's power distance dimension is negatively associated with financial literacy ($\beta = -0.13$), indicating that more hierarchical societies are associated with lower levels of financial literacy. Similarly, the Inglehart–Welzel cultural dimension of Secular-rational values is positively related to financial literacy ($\beta = 0.14$, $p < 0.05$), implying that more secular and rational value systems are linked to higher literacy levels. It is important to note that negative value for the secular-rational dimension is associated with traditionalism. Traditional values emphasize the importance of religion, parent-child ties, deference to authority and traditional family values (Inglehart & Welzel, 2010). These findings are closely related, as Hofstede's power Distance

and the Inglehart–Welzel secular–rational dimension capture overlapping aspects of societal hierarchy and authority structures. Societies characterized by high power distance tend to emphasize deference to authority and acceptance of unequal power distribution, which aligns with more traditional value systems reflected in lower (i.e., more traditional) secular–rational scores. Conversely, societies with low power distance are typically more egalitarian and place less emphasis on hierarchical authority, which corresponds to more secular and rational value orientations. This conceptual overlap is also supported empirically, as the correlation analysis reveals a strong negative relationship between power distance and secular–rational values (see appendix E). Taken together, these results suggest that the observed effects are not independent but rather reflect a common underlying cultural dimension related to hierarchy versus egalitarianism, which appears to play a significant role in shaping financial literacy outcomes.

Neither of the Minkov–Kaasa cultural dimensions were found to be statistically significant. In the final specification, the baseline model was extended to include the importance of religion as a country-level independent variable. The importance of religion exhibits a negative association with financial literacy ($\beta = -0.17$, $p < 0.01$), representing the largest effect among the contextual variables. This finding suggests that higher levels of societal religiosity are associated with lower financial literacy.

The inclusion of cultural dimensions systematically reduces the intraclass correlation coefficient (ICC) from 0.191 in the baseline model to between 0.147 and 0.179 in the extended models, indicating that cross-country differences in financial literacy are partially explained by cultural and religious factors. However, a non-negligible share of variance remains at the country level, suggesting that additional macro-level determinants may also play a role.

4.2 Models with robustness checks

The robustness analyses, which incorporate additional country-level controls including GDP per capita, income inequality (GINI), educational performance (PISA mathematics scores), internet penetration, and life expectancy, provide a more nuanced assessment of the relationship between cultural context and financial literacy. Country-level robustness checks were added interchangeably (no more than one country-level control at a time). Results of robustness analysis are depicted in Table 3. It is important to note that individual-level predictors are included in every model. As the coefficients and statistical significance of individual-level variables did not change regardless of which country-level

control was included, the results for individual-level variables are omitted in Table 3. The Base model column in the results table presents the results of models in which a specific country-level control was included alongside individual-level variables.

Table 3

Results for multilevel analysis of financial literacy scores, with country-level robustness checks added interchangeably

	Base model	Schwartz	Hofstede	Inglehart–Welzel	Minkov-Kaasa	Religion
1. GDP per capita						
ICC	0.17	0.14	0.16	0.16	0.16	0.15
GDP per capita	0.23* (0.11)	0.36** (0.14)	0.20 (0.15)	0.12 (0.13)	0.24 (0.18)	0.07 (0.12)
Statistically significant culture dimension				Secular-rational 0.12* (0.07)		Importance of religion -0.15** (0.07)
2. GINI						
ICC	0.2	0.18	0.16	0.17	0.17	0.15
GINI	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Statistically significant culture dimension		Mastery-Harmony 0.11* (0.59)	Power distance -0.16** (0.07)	Secular-rational 0.14* (0.07)		Importance of religion -0.18*** (0.06)
3. PISA math						
ICC	0.13	0.11	0.13	0.13	0.14	0.13
PISA math	0.004*** (0.001)	0.004*** (0.001)	0.004** (0.002)	0.004** (0.002)	0.005** (0.002)	0.004* (0.002)
Statistically significant culture dimension						
4. Internet user percentage						
ICC	0.18	0.12	0.15	0.16	0.14	0.15
Internet user percentage	0.02* (0.01)	0.03*** (0.01)	0.02 (0.01)	0.01 (0.01)	0.03* (0.01)	0.00 (0.01)
Statistically significant culture dimension		Mastery-Harmony 0.09* (0.04)		Secular-rational 0.12* (0.07)		Importance of religion -0.16*** (0.07)
5. Life Expectancy						
ICC	0.14	0.13	0.14	0.14	0.14	0.13
Life Expectancy	0.05*** (0.01)	0.07*** (0.02)	0.05** (0.02)	0.05** (0.02)	0.05** (0.02)	0.04** (0.02)

Statistically significant culture dimension						
Number of countries in the analysis	24	21	22	24	22	24

Note: Only statistically significant culture dimension measures are depicted. Standard errors in parentheses. Abbreviations: ICC, intraclass correlation coefficient

*p < .10; **p < .05; ***p < .01.

Source: Author's calculations

While the inclusion of country-level controls does not alter the direction of the estimated cultural effects, their statistical significance and magnitude are sensitive to the specific controls introduced. Cultural dimensions and the importance of religion remain statistically significant in several specifications, such as those controlling for GDP per capita, Internet user percentage and income inequality, but lose significance when accounting for variables capturing broader socio-economic development and cognitive skills, such as PISA mathematics scores and life expectancy. This pattern can be explained by the strong correlations between cultural variables and macro-level development indicators. As shown in the Appendix E correlation matrix, financial literacy is highly correlated with PISA mathematics performance ($r = 0.69$) and life expectancy ($r = 0.65$), while cultural dimensions—especially Inglehart secular-traditional dimension — and religiosity are also strongly associated with these variables (e.g., $r = 0.79$ between secular-traditional dimension and PISA, and $r = -0.84$ between religiosity and PISA). This suggests that cultural dimensions are closely intertwined with broader processes of economic development, education, and institutions. As a result, when these highly correlated variables are included simultaneously in the model, the independent effect of culture becomes more difficult to identify, leading to a reduction in statistical significance.

Importantly, the consistency in the direction of coefficients across all specifications indicates that the relationship between cultural dimension and financial literacy is stable, even if its statistical strength varies depending on model specification. The results therefore suggest that cultural factors contribute to explaining cross-country differences in financial literacy, but that their effects are partly mediated or shared with other macro-level characteristics, particularly those related to human capital and development.

5. Discussion

This chapter places the empirical findings in the context of existing research on culture and financial literacy and discusses their theoretical implications. Across four different approaches to measuring national culture and the separately incorporated religiosity factor, a notable pattern emerged. National cultures that emphasize secularism, rationality, personal autonomy and challenge traditional norms and hierarchical structures tend to be associated with higher average financial literacy. This is supported by the positive association between the Inglehart–Welzel secular-rational dimension and financial literacy, the negative association between Hofstede's power distance dimension and financial literacy, and the negative association between country-level religiosity and financial literacy.

The direction and significance of Hofstede's power distance dimension aligns with Ahunov and Van Hove (2020) and Van Hove and Ahunov (2024) both of whom documented a negative relationship between power distance and financial literacy. A potential explanation is that in high power distance cultures, individuals are accustomed to deferring to authority and accepting decisions made by others, while low power distance societies encourage personal responsibility which may motivate individuals to develop financial knowledge. An alternative explanation, which appears compelling at first glance, is that this relationship is largely driven by differences in economic development: in the present sample, power distance is strongly negatively correlated with GDP per capita (see Appendix E), suggesting that more hierarchical societies also tend to be less economically developed. Since financial literacy is itself closely linked to income levels, education systems, and financial market development, the observed association may partly reflect structural differences rather than a direct cultural effect — a reading supported by the loss of significance when GDP per capita is added as a control. However, the convergence of significant effects across three conceptually distinct indicators — power distance, secular-rational values, and religiosity — all pointing in the same direction, suggests that the underlying hierarchy-versus-egalitarianism dimension has a genuine relationship with financial literacy that goes beyond economic development alone.

The negative association between country-level religiosity and financial literacy is the largest effect among all cultural factors examined in this study, suggesting that religiosity captures meaningful cross-country variation in financial literacy that other cultural dimensions do not fully account for. It is also among the more robust findings as the relationship remains statistically significant even after controlling for income inequality, GDP per capita, and the share of Internet users. The mechanisms discussed in section 2.2.5

offer a potential explanation for this negative relationship, including reduced motivation for wealth accumulation (Agarwala et al., 2018), the time trade-off identified by Xu et al. (2022), and the broader negative link between religiosity and financial development found by Amissah and Świerczyńska (2021). However, when PISA mathematics scores are included as a control, the religiosity variable loses its statistical significance. At the same time, religiosity and PISA math scores are very strongly negatively correlated in the sample ($r = -0.84$), indicating that they capture closely related cross-country differences. This high degree of overlap creates multicollinearity, which makes it difficult to distinguish their separate effects in the regression. Therefore, the loss of statistical significance should be interpreted with caution, as it does not necessarily imply that cognitive skills fully explain the relationship or that religiosity has no independent role. Rather, the results suggest that the association between religiosity and financial literacy is closely tied to differences in cognitive skills and education quality, but the data does not allow these effects to be cleanly separated.

A unifying mechanism that may help explain why secular-rational values and lower religiosity are both positively associated with financial literacy is the distinction between agency and fatalism. Kaasa and Welzel (2023) and Minkov and Kaasa (2022a) describe how secular-rational cultural dimension is closely tied to a broader logic in which individuals believe they can and should shape their own lives through deliberate effort and rational decision-making. In contrast, traditional and highly religious cultures tend toward a more fatalistic or faith-based orientation, where outcomes are more likely to be attributed to external forces, divine will, or fate rather than to individual effort and acquired knowledge. This distinction is directly relevant to financial literacy: in cultures where personal agency is emphasized, individuals have stronger reason to invest in financial knowledge, as they perceive financial outcomes as something they can influence through informed decision-making. In more fatalistic cultural contexts, by contrast, the perceived returns to acquiring financial knowledge may be lower, weakening the incentive to develop financial competencies in the first place.

The absence of a statistically significant effect for Hofstede's individualism dimension is one of the more unexpected findings of this study, given that Ahunov and Van Hove (2020), De Beckker et al (2020) and Pulk and Riitsalu (2024) all found the effect statistically significant. However, looking more closely at the prior literature, the result is less surprising than it initially appears. First, the existing evidence is conflicting: Ahunov and Van Hove (2020) and Pulk and Riitsalu (2024) found individualism to have positive association with financial literacy, while De Beckker et al. (2020) found that the relationship is negative.

The most probable explanation for these discrepancies lies in the substantial differences in country samples across studies. De Beckker et al. (2020) are limited to just 12 countries, which constrains both statistical power and cross-national variation. Pulk and Riitsalu (2024) country sample has a notable lack of collectivistic East Asian countries which according to OECD/INFE 2023 International Survey of Adult Financial Literacy (OECD, 2023a) exhibit a high level of financial literacy (e.g. South Korea, Hong Kong, Thailand), while at the same time having a substantial concentration of highly developed individualistic Anglo-Saxon countries such as the United States, Australia, and Canada. The present study's country sample, being more heavily weighted toward European countries with relatively compressed individualism scores, may similarly lack the cross-national variation needed to detect a reliable effect. Taken together with the finding that when Van Hove & Ahunov (2024) replicated their 2020 analysis using two alternative financial literacy measures the effect of individualism disappeared entirely, the evidence suggests that the relationship between individualism and financial literacy is neither robust across measurement approaches nor stable across different country samples.

In contrast to Pulk and Riitsalu (2024), neither the individualism–collectivism nor the flexibility–monumentalism dimension of the Minkov–Kaasa framework was statistically significant in any of the models estimated in this study. The non-significance of the individualism–collectivism dimension is arguably consistent with the Hofstede individualism result discussed above: both dimensions broadly attempt to capture a similar aspect of culture, and if Hofstede's individualism dimension does not reach statistical significance in this analysis, it follows logically that the conceptually related Minkov–Kaasa individualism–collectivism dimension would not either.

Regarding the Schwartz framework, the Mastery–Harmony dimension shows a weak positive association with financial literacy ($p < 0.10$), suggesting that cultures oriented toward mastery, personal agency, and achievement may be associated with slightly higher financial literacy. However, given the marginal significance level and the loss of this effect under stricter robustness checks, this finding should be treated as tentative at best.

Regarding individual-level variables, the results demonstrate a robust alignment with prior literature. The gender gap in financial literacy is confirmed, consistent with Bucher-Koenen et al. (2017), Ooi (2018) and Preston et al. (2024). The relationship between age and financial literacy follows the hump-shaped pattern documented in prior studies (Cupák et al., 2021; De Beckker et al., 2020; Finke et al., 2017) peaking among individuals aged 50–69. Educational attainment emerges as the single strongest individual-level predictor, consistent

with De Beckker et al. (2020) and Lusardi (2012). Finally, the effect of employment status is also significant: individuals who are not working exhibit notably lower financial literacy relative to those in paid employment, in line with (Cupák et al., 2021; De Beckker et al., 2020).

6. Conclusions and limitations

6.1 Conclusion

This study set out to examine whether national culture and religiosity are associated with cross-country differences in adult financial literacy. Using individual-level data from the OECD/INFE 2023 International Survey of Adult Financial Literacy across 24 countries and a multilevel modelling approach, the study examined cultural dimensions drawn from four distinct frameworks (Hofstede, Schwartz, Inglehart–Welzel, and Minkov–Kaasa) alongside country-level religiosity as a standalone cultural factor. The results reveal a coherent pattern. Cultures that emphasize secularism, rationality, egalitarianism, and personal autonomy tend to exhibit higher average financial literacy, while cultures characterized by hierarchy, tradition, and religiosity tend toward lower levels. The Inglehart–Welzel secular-rational dimension and country-level religiosity produce the most robust and largest effects among all cultural factors examined, with both retaining statistical significance after controlling for economic development. Taken together, the convergence of these indicators around a tradition-versus-secularism axis lends credibility to the overall conclusion and reduces the likelihood that any single finding is a statistical artifact. The agency-versus-fatalism distinction is proposed as a probable unifying theoretical mechanism: in cultures where individuals believe they can shape their own outcomes through deliberate effort, the motivation to invest in financial knowledge is stronger, while in more fatalistic or tradition-bound cultures the perceived returns to such investment may be lower.

The findings carry a meaningful practical implication. If cultural orientations shape the motivation to acquire financial knowledge, then financial literacy interventions designed without accounting for cultural context are likely to be less effective. Policymakers and educators need to address underlying motivational barriers before knowledge-based interventions can take hold, rather than assuming that access to financial education alone is sufficient. This is consistent with the broader finding in the literature that financial education is not universally effective and must be tailored to cultural context.

6.2 Limitations and future research

This study has several limitations. The country sample remains modest and geographically uneven, with strong European representation limiting the generalizability of the findings. The cross-sectional design means that while the study identifies associations between culture and financial literacy, it cannot establish causality. Additionally, the study focuses on the financial knowledge component of financial literacy, leaving the behavioural and attitudinal dimensions unmeasured. This choice is methodologically justified given the significant validity concerns surrounding the behavioural and attitudinal components of the OECD/INFE framework in cross-country comparative research, and the substantial scoring and data harmonization effort their inclusion would require. At the same time, financial knowledge is only one dimension of financial literacy, and cultural orientations may well shape financial behaviour and attitudes in ways that this study is not positioned to capture. Whether cultural effects differ across these dimensions remains an interesting and open empirical question for future research. Furthermore, as more countries participate in the OECD/INFE survey in future waves, expanding the country sample beyond its current European concentration would substantially improve both statistical power and the generalizability of conclusions about cultural effects. Finally, future research adopting longitudinal or quasi-experimental designs would allow stronger causal claims to be made about the direction of the culture-financial literacy relationship.

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Appendices

Appendix A: Financial knowledge questions in the OECD/INFE 2023 survey

Question number	Topic	Question	Answer options
QK1	Time-value of money	Imagine that the <brothers> have to wait for one year to get their share of the $1,000 and inflation stays at <X> percent. In one year's time will they be able to buy:	a) More with their share of the money than they could today b) The same amount **c) Less than they could buy today**
QK2	Interest paid on a loan	You lend €25 to a friend one evening and he gives you €25 back the next day. How much interest has he paid on this loan?	Open response. Correct answer is zero.
QK3	Simple interest	Imagine that someone puts $100 into a <no fee, tax free> savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account, and they don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?	Open response. Correct answer is €102.
QK4	Compound interest	And how much would be in the account at the end of 5 years?	**a) More than €110** b) Exactly €110 c) Less than €110 d) It is impossible to tell from the information given
QK5	Risk and return	Is the following statement true or false? An investment with a high return is likely to be high risk.	**a) True** b) False
QK6	Definition of inflation	Is the following statement true or false? High inflation means that the cost of living is increasing rapidly.	**a) True** b) False
QK7	Diversification	Is the following statement true or false? It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stock and shares.	**a) True** b) False

Note: Correct answers of multiple-choice questions are in bold. Answer options such as "Don't know" and "Refused to answer" are omitted.

Source: Compiled by the author using OECD (2022) Survey Toolkit

Appendix B: Culture dimension scores

	Schwartz		Minkov–Kaasa		Inglehart–Welzel		Hofstede					
	OP	**MA**	**IDV-COLL**	**FLX-MON**	**SELF**	**RAT**	**PD**	**IV**	**MC**	**UC**	**LT**	**IG**
Austria	2.26	0.98	95	-2	1.94	0.61	11	55	79	70	60	63
Brazil	-1.06	0.57	-56	-83	-0.09	-0.31	69	38	49	76	44	59
Chile	-0.56	-1.01	-8	-153	-0.11	0.21	63	23	28	86	31	68
Croatia	-2.04	1.09	-33	-32	0.08	0.09	73	33	40	80	58	33
Cyprus	-2.23	-0.52	-24	-97	-0.5	-0.41						
Estonia	-1.10	-1.24	39	108	0.7	0.89	40	60	30	60	82	16
Finland	1.89	-0.63	88	71	2.45	0.8	33	63	26	59	38	57
France	2.28	0.85	86	57	1.9	0.46	68	71	43	86	63	48
Greece	0.35	1.39	30	17	-0.29	0.27	60	35	57	112	45	50
Hong Kong	-3.41	2.02	-5	199	-0.06	1.46	68	25	57	29	61	17
Hungary	0.05	-1.06	72	-9	0.02	0.59	46	80	88	82	58	31
Ireland	-0.03	2.06	27	17	1.13	-0.85	28	70	68	35	24	65
Italy	2.00	-1.16	5	-36	0.8	0.35	50	76	70	75	61	30
Latvia	-0.89	-1.89			-0.05	0.84	44	70	9	63	69	13
Lithuania			15	10	-0.18	0.86	42	60	19	65	82	16
Luxembourg					1.38	0.33	40	60	50	70	64	56
Mexico	-1.35	-1.46	-63	-104	0.23	-1.06	81	30	69	82	24	97
Netherlands	1.58	1.60	182	87	2.39	1.16	38	80	14	53	67	68
Peru	-3.02	1.33	-117	-187	-0.56	-1.06	64	16	42	87	25	46
Philippines	-3.10	-1.02	-126	-4	0.11	-1.41	94	32	64	44	27	42
Poland	-2.33	0.06	-15	9	0.6	-0.43	68	60	64	93	38	29
Romania	-1.12	0.45	-19	-64	-0.8	-0.39	90	30	42	90	52	20
Saudi Arabia					-0.42	-1.5						
Sweden	2.67	0.36	133	21	3.11	1.11	31	71	5	29	53	78

Abbreviations: Schwartz (OP, openness; MA, mastery), Minkov–Kaasa (FLX–MON, flexibility–monumentalize; IDV–COLL, individualism–collectivism), Inglehart Welzel (RAT, secular-rational; SELF, self-expression), Hofstede (IG, indulgence; IV, individualism; LT, long-term orientation; MC, masculinity; PD, power distance; UC, uncertainty avoidance).

Source: Compiled and calculated (Schwartz dimensions) by the author based on: (Hofstede, 2015; Minkov & Kaasa, 2022b; Schwartz, 2008; World Value Survey Database, 2022)

Appendix C: Correlations between country-level financial literacy scores and Schwartz cultural dimensions

Variable		1	2	3	4	5	6	7
Financial literacy	1	—						
Embedded	2	-0.30	—					
Intellectual Autonomy	3	0.14	-0.87***	—				
Hierarchy	4	0.03	0.55**	-0.49*	—			
Egalitarianism	5	-0.06	-0.59**	0.50*	-0.34	—		
Harmony	6	-0.28	-0.32	0.37	-0.78***	0.25	—	
Mastery	7	0.13	0.12	-0.23	0.25	-0.05	-0.47*	—
Affective Autonomy	8	0.38	-0.80***	0.72***	-0.44*	0.28	0.15	0.00

Note: Correlations are calculated using Pearson's correlation coefficient. Financial literacy scores are averaged at the country level.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix D: Correlations between country-level financial literacy scores and Hofstede cultural dimensions

Variable		1	2	3	4	5	6
Financial literacy	1	—					
Power Distance	2	-0.48*	—				
Individualism	3	0.20	-0.65**	—			
Masculinity	4	0.22	0.16	-0.11	—		
Uncertainty Avoidance	5	-0.28	0.35	-0.26	0.24	—	
Long-Term Orientation	6	0.20	-0.37	0.48*	-0.34	-0.11	—
Indulgence	7	0.04	-0.15	-0.05	0.06	-0.05	-0.54**

Note: Correlations are calculated using Pearson's correlation coefficient. Financial literacy scores are averaged at the country level.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix E: Correlations between country-level financial literacy scores, cultural dimensions and control variables

Variable		1	2	3	4	5	6	7	8	9
Financial literacy	1	—								
Mastery–Harmony	2	0.40	—							
Inglehart Secular	3	0.49*	0.08	—						
Power distance	4	-0.48*	-0.10	-0.56**	—					
GDP per capita	5	0.55**	0.37	0.43*	-0.68***	—				
GINI	6	-0.21	0.00	-0.29	0.47*	-0.43*	—			
Math score	7	0.69***	0.23	0.79***	-0.62**	0.72***	-0.46*	—		
Life expectancy	8	0.65***	0.50*	0.51*	-0.57**	0.78***	-0.29	0.62**	—	
Internet use (%)	9	0.50*	0.12	0.42*	-0.71***	0.85***	-0.17	0.58**	0.60**	—
Religiosity	10	-0.56**	-0.08	-0.84***	0.72***	-0.57**	0.38	-0.84***	-0.54**	-0.55**

Note: Correlations are calculated using Pearson's correlation coefficient. Financial literacy scores are averaged at the country level.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Resümee

Rahvuskultuur, religioossus ja täiskasvanute finantskirjaoskus: riikideülene tõendus OECD/INFE andmetel

Gregor Artur Vahtra

Finantskirjaoskus on tänapäeval oluline pädevus, kuid selle tase erineb riikide vahel märkimisväärselt ning nende erinevuste põhjused ei ole veel täielikult teada. Enamik seniseid uuringuid seletab riikidevahelisi erinevusi majandusliku arengu ning institutsioonide ja haridussüsteemide kvaliteedi kaudu. Viimastel aastatel on aga üha enam tõendeid, et ka rahvuskultuur mängib olulist rolli. Siiski tugineb valdav osa eelnevaid kultuuriteemalisi uuringuid ainuüksi Hofstede kultuuridimensioonide raamistikule, jättes lahtiseks küsimuse, kas leitud seosed kehtivad ka teiste kultuuriraamistike puhul.

Käesolev töö uurib rahvuskultuuri ja religioossuse seoseid täiskasvanute finantskirjaoskusega, kasutades OECD/INFE 2023. aasta finantskirjaoskuse uuringu individuaaltasandi andmeid 24 riigist. Analüüsi kaasatakse neli laialt kasutatavat lähenemist rahvuskultuuri mõõtmiseks: Hofstede, Schwartz, Inglehart–Welzel ning Minkov–Kaasa. Lisaks kultuuriraamistikele on religioossus kaasatud eraldiseisva kultuuritegurina, et testida, kas religioossusel on finantskirjaoskusega iseseisev seos, mis ei ole täielikult seletatav laiema Inglehart–Wetzeli sekularismi-ratsionaalsuse dimensiooniga. Analüüsis kasutatakse mitmetasandilist regressioonimudelit, mis sobib hierarhilise struktuuriga andmete analüüsimiseks.

Analüüsi tulemused näitavad, et kultuurilised tegurid on finantskirjaoskusega statistiliselt oluliselt seotud. Kõrgem finantskirjaoskuse tase on omane sekulaarsematele ning ratsionaalsust, isiklikku autonoomiat ning võrdsust rõhutava rahvuskultuuriga riikidele, samas kui hierarhiat ja traditsioonilisust väärtustava rahvuskultuuriga riikide ning usklike riikide finantskirjaoskuse tase on keskmiselt madalam. Religioossus osutub kõige robustsemaks ja suurema efektiga teguriks, olles negatiivselt seotud finantskirjaoskusega. Võimaliku ühendava teoreetilise mehhanismina pakutakse välja fatalismi ja vaba tahte vastandumist: kultuurides, kus inimesed usuvad, et nad saavad oma elukäiku teadliku pingutuse kaudu kujundada, on motivatsioon finantsteadmiste omandamiseks suurem, samas kui fatalistlikes ja traditsioonikesksetes kultuurides võib sellise pingutuse tajutav tasuvus olla madalam.

Töö peamine panus seisneb kolmes aspektis. Esiteks laiendab see olemasolevat kirjandust, kasutades mitut kultuuriraamistikku, mis vähendab sõltuvust ühest konkreetsest rahvuskultuuri mõõtmisviisist. Teiseks, erinevalt enamikust varasematest teadustöödest, mis on tuginenud OECD/INFE 2015. aasta uuringule ja oluliselt väiksemale riikide valimile, kasutab käesolev uuring kõige värskemat 2023. aasta lainet ja laiemat 24 riigi valimit. Kolmandaks eristab see religioossuse mõju teistest kultuurilistest dimensioonidest, mis pakub uusi tõendeid selle rolli kohta finantskirjaoskuse kujunemisel.

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