THE NEED FOR INNOVATION IN FINANCIAL EDUCATION: A STUDY OF HOUSEHOLD INDEBTEDNESS IN PERU

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ABSTRACT

Purpose: The main objective of the text is to explore and determine the impact of financial education on the indebtedness of Peruvian households.

Theoretical framework: As for the theoretical framework, reference is made to several previous theories and studies, such as Kahneman and Tversky's prospect theory, Modigliani and Brumberg's life-cycle theory, and Friedman's permanent income hypothesis, among others, to support the importance of financial literacy and financial decision-making under conditions of uncertainty and expectations of future income.

Design/Methodology/Approach: To address this objective, a quantitative, applied, and non-experimental methodology was used, with a cross-sectional design and a descriptive-correlational approach, surveying 300 Peruvian households.

Results: The results revealed that 68% of the participants have a regular level of financial knowledge and 60% have a regular level of household indebtedness. In addition, a significant positive correlation of 0.891 was found between financial literacy and household indebtedness.

Practical and social implications: The practical and social implications of the study are notable, highlighting the need to improve financial education, given the prevalence of fair and low financial knowledge and skills among participants. The implementation of financial education programs...
from an early age and in communities especially vulnerable to financial instability is proposed. In addition, the creation of a certification program for financial educators and the continuous training of financial sector professionals is suggested.

Originality/value: In terms of originality and value, the proposals address various areas, such as academic, professional, social, political, economic, and strategic. The idea of seeding financial education from the early years of education and exploring the effectiveness of various financial education strategies is proposed. In addition, the creation of funds for financial innovation and the promotion of fintech companies is proposed, as well as the strategic implementation of partnerships with international organizations, NGOs, and the private sector. It is also suggested to use technology and digital platforms to expand the reach of financial education programs.

Keywords: financial literacy, indebtedness, education, policies, innovation, financial inclusion.

A NECESSIDADE DE INOVAÇÃO NA EDUCAÇÃO FINANCEIRA: UM ESTUDO SOBRE O ENDIVIDAMENTO DAS FAMÍLIAS NO PERU

RESUMO

Objetivo: o principal objetivo do texto é explorar e determinar o impacto da educação financeira sobre o endividamento das famílias peruanas.

Estrutura teórica: Quanto ao enquadramento teórico, é feita referência a várias teorias e estudos anteriores, como a teoria do prospeto de Kahneman e Tversky, a teoria do ciclo de vida de Modigliani e Brumberg e a hipótese do rendimento permanente de Friedman, entre outras, para sustentar a importância da literacia financeira e da tomada de decisões financeiras em condições de incerteza e de expectativas de rendimento futuro.

Estrutura/Metodologia/Abordagem: para abordar esse objetivo, foi usada uma metodologia quantitativa, aplicada e não experimental, com um projeto transversal e uma abordagem descritiva-correlacional, pesquisando 300 famílias peruanas.

Resultados: os resultados revelaram que 68% dos participantes têm um nível razoável de alfabetização financeira e 60% têm um nível razoável de endividamento familiar. Além disso, foi encontrada uma correlação positiva significativa de 0,891 entre a alfabetização financeira e o endividamento das famílias.

Implicações práticas e sociais: as implicações práticas e sociais do estudo são notáveis, destacando a necessidade de melhorar a educação financeira, dada a prevalência de conhecimento e habilidades financeiras razoáveis e baixas entre os participantes. Propõe-se que os programas de educação financeira sejam implementados desde a mais tenra idade e em comunidades particularmente vulneráveis à instabilidade financeira. Além disso, sugere-se a criação de um programa de certificação para educadores financeiros e o treinamento contínuo de profissionais do setor financeiro.

Originalidade/valor: em termos de originalidade e valor, as propostas abordam diversas áreas, incluindo acadêmica, profissional, social, política, econômica e estratégica. É apresentada a ideia de semear a educação financeira desde os primeiros anos de educação e explorar a eficácia de várias estratégias de educação financeira. Além disso, propõe-se a criação de fundos para inovação financeira e a promoção de empresas de fintech, bem como a implementação estratégica de parcerias com organizações internacionais, ONGs e o setor privado. Sugere-se também o uso de tecnologia e plataformas digitais para ampliar o alcance dos programas de educação financeira.
1 INTRODUCTION

Financial literacy empowers households to effectively manage their economic resources, which is reflected in their ability to access financial services at low interest rates. Whang et al. (2022) illustrates how deficiencies in the financial capital management of Chinese households have led to high levels of household indebtedness, which in some cases result in the inability to meet payments on time.

Madeira and Margaretic (2022) highlight that poor financial literacy has led Chilean adults to indebtedness and inadequate retirement planning, which has negatively affected their financial and emotional stability. Although Mitchell and Kusardi (2022) propose that Pennsylvania retirees should theoretically be at the zenith of their wealth accumulation and manage their savings shrewdly, reality shows a notable deviation from this model. Kurowski (2021) notes that, in Poland, the omission of personal financial planning has resulted in the inability of families to meet critical expenses in situations of income loss, as occurred during the pandemic.

Similarly, Cao et al. (2020) highlight the imperative of maintaining a strong financial literacy to mitigate debt and avoid economic chaos. Alvarez et al. (2022) report that the pandemic has exacerbated household indebtedness, forcing families to sell property to cover medical expenses and survive the loss of income. Financial education is established as a fundamental pillar for economic stability in various scenarios and stages of life. In parallel, Daher et al. (2021) reveal that the scarce foresight for new investments, together with the absence of support networks in their social environment and the fear of entrepreneurship, has oriented income towards the acquisition of non-essential goods for the family nucleus. Moreover, considering that Peru's Impugnatory Claims Law does not provide a mechanism to alleviate the situation of over-indebted consumers, but rather restricts their alternatives in such a way that they can only access it if at least half of their debt comes from their total income, the problem is exacerbated (Carbonell, 2019).

In this regard, family income earners often lack the necessary skills to effectively manage these resources, mainly due to their lack of knowledge of the fundamental functions of money. This lack of knowledge makes them unable to confidently approach financial decisions within the household, decisions that will inevitably have a negative impact on the
family's future indebtedness. It is therefore essential to implement financial education aimed at all those who generate financial resources.

In addition, the lack of adequate personal financial education has led to the inability to effectively plan the use of income sources. The absence of sound strategies for saving and accessing low-interest loans has resulted in inadequate financial decisions. Therefore, families find themselves in a situation where they are unable to meet all their financial obligations due to insufficient financial resources.

It is essential to recognize that financial education involves not only understanding how to manage income and expenses, but also how to plan, how to invest wisely and how to ensure that financial resources are used as efficiently as possible. Therefore, financial education should be considered a crucial tool that can empower individuals to make informed decisions, protect them from future financial problems and promote sustainable economic stability in the household.

The study was justified by its relevance and appropriateness, as its findings provided clarity on the factors that inhibit families' acquisition of adequate financial literacy, which impacts their ability to make informed decisions at the household level. The social justification for the research is that it provided information on the current state of families' financial literacy, enabling the identification of areas for improvement so that families can reach an optimal level of financial literacy and develop satisfactory competence in the effective management of their financial resources. This information, in turn, served as a reference in other sectors with similar characteristics.

Moreover, the study provided important theoretical contributions by citing articles, books, news, reports, theses, and other sources relevant to the issues investigated. There was also a practical justification, since the data obtained will enable households to make more informed decisions regarding savings, investment, and other financial issues. A methodological justification was also provided, since only validated instruments recognized by the scientific community were used, and the results may be beneficial for future research using similar or identical variables.

Furthermore, it is critical to underscore that financial education is an essential pillar for household economic stability. This study not only identifies gaps in this area, but also suggests areas of potential intervention for public policies and educational programs. The relevance of the findings may transcend the immediate context, offering insights that could be applied in diverse socioeconomic and cultural contexts, and thus have the potential to
influence discussions and strategies at a broader level around financial education and resource management.

The study had a clearly defined general objective: to explore and determine the effect of financial education on household indebtedness in the Peruvian context. In a more specific breakdown, the objectives were diversified to address different facets of the main topic. The first specific objective (SO1) focused on identifying the level of financial literacy and the level of household indebtedness in the country prevalent in Peruvian households, seeking to understand the depth and breadth of their financial literacy. Subsequently, the second specific objective (SO2) sought the effect of different dimensions of financial literacy on household indebtedness in Peru, exploring how different aspects of financial literacy can influence households' economic decisions and their financial stability.

2 THEORETICAL FRAMEWORK

Phung's (2023) study found a positive correlation between parental responsibility in decision making and their children's financial literacy and budgeting habits. Students whose parents make most family financial decisions have better financial literacy and are more likely to create a family budget. Similarly, Zhang and Fan (2023) concluded that loan calculation and repayment success were positively correlated with higher levels of financial literacy and other measures of financial capability, as credit anxiety, loan defaults, and other unfavorable outcomes have been related to inadequate family financial literacy. At the same time, Todorov et al. (2022) found that financial literacy correlates with both the gross household savings rate and the household net financial asset ratio, highlighting the importance of both in ensuring one's own well-being and the growth of the economy.

Meanwhile, Karakara et al. (2022) found that financially literate individuals are 2.4% less likely to face financial hardship. Socioeconomic factors significantly affect the likelihood of an individual facing financial hardship, as financial literacy should be a policy priority to help people make better decisions. Similarly, Alvira et al. (2020) concluded that the number of credit sources, debt-to-income ratio and net worth are positively correlated with the number of arithmetic skills of individuals, also finding significant debt and wealth accumulation behaviors linked to economic stratification at the city level and the gender of the household head. Ticnona et al. (2023) concluded that the direct involvement of children in the family business has a significant impact on their financial literacy. The results show the importance of the family as the main educational agent and generator of habits, while
emphasizing the need for an educational system adapted to the social and economic reality of the city.

Similarly, Ramos (2023) concludes that, due to the complexity of financial products, it is important to conduct a thorough evaluation of financial education programs to address the challenges of developing the skills needed to make well-informed financial decisions through training. On the other hand, behavioral economics highlights that people avoid making financial decisions because they generally resort to heuristics to save time or seek expert advice when making difficult decisions. Likewise, Alvarez et al. (2022) found that 48% of the clientele has a low level of financial literacy, 39% is moderate and 13% is high, showing that there is a significant connection between the variables. In addition, Perez et al. (2021) conclude that there is a statistically significant correlation between financial literacy and financial management ($r = .779; p < .001$), showing that users with higher levels of financial literacy also have better financial management skills.

The prospect theory, introduced by Kahneman and Tversky (1979), serves as a theoretical foundation for family financial education, postulating that human behavior is inclined towards irrationality and incoherence when faced with uncertainty in economic contexts. This theory, supported by empirical evidence, focuses on the more pragmatic elements of the average individual when making decisions under uncertainty. This position is justified by the idea that human beings, in general, reside in a world that alters and evolves at a dizzying pace, in which their environment is so fluctuating that it contrasts with the notion of homo economicus.

Similarly, the Behavioral Finance theory is considered, in which Fernandez et al. (2017) argue that the economic agent is perceived as irrational and inconsistent when facing financial decisions and risky situations. This twist in financial thinking can be employed as a diagnostic tool to explore the reasons behind market inefficiency and understand the implications of the decision-making process when dealing with monetary issues.

The conceptualization of financial education, according to Cardozo et al. (2023), is described as the process through which crucial knowledge and skills are acquired to make informed decisions about the use of money, budget management and the family's financial future. In a similar vein, Kumar et al. (2023) defines it as essential for families to understand the mechanics of money and how to use it optimally to achieve their financial goals. At the same time, Trombetta (2023) conceptualizes it as the ability of people of all ages to
understand fundamental economic notions such as budgeting, saving, prudent borrowing and investing.

Romero et al. (2022) define financial literacy as an individual's ability to acquire, process and evaluate the relevant information needed to make decisions with full awareness of their potential financial consequences. Often, individuals do not weigh the long-term implications of their financial decisions, which can lead them to become adults who struggle to manage their growing debts due to insufficient income (Ferrada & Diaz, 2020). On the other hand, financial competence, according to Zamudio et al. (2022), refers to the ability to effectively use acquired financial knowledge. Avendaño et al. (2021) observe financial competence in action during the time spent solving a problem, analyzing a situation, or performing an economic activity. Furthermore, Camisón et al. (2019) emphasize that the cognitive processes that involve searching, comparing, contrasting, evaluating, and applying financial knowledge to real situations are an integral part of this competence. Regarding financial attitude, García et al. (2021) describe it as what prevails in people when deciding on a course of action, examining people's expectations and concerns regarding their financial resources. Ho and Lee (2022) note that understanding people's perspectives on money facilitates the assessment of their preferences and priorities in managing their resources. Similarly, Zhang et al. (2021) indicate that it is used to describe a household's inclination to adopt financially sound behaviors, such as saving, investing, and managing debt. Finally, Talwar et al. (2021) explain that it is the set of beliefs and ideals that a household shares about how money should be used.

The underlying theory of household indebtedness is based on Modigliani and Brumberg's (1954) life-cycle approach and Friedman's (1957) permanent income hypothesis, which suggest that household borrowing decisions are based on the expectation of higher future income, which makes it possible to anticipate spending. This is because wages, generally low at the outset, are expected to rise over time. Individuals acquire assets to raise consumption above the level that current income allows, anticipating higher income in the future of their career (Ottaviani and Vandone, 2011; Cox and Jappelli, 1993; Del Rio and Young, 2006; Del Rio and Young, 2008; Duca and Rosenthal, 1993; Gropp et al., 1997; Leece, 2000; Magri, 2007). Bagliano and Berrola (2004) add that people increase their savings as they approach retirement, aware that their spending in retirement will exceed their income. In these models, people act "rationally", maximizing their expected utility and making decisions based on long-term preferences and stable levels of debt and savings.
The credit dependence theory, proposed by Hyman Minsky (1919-1996), which suggests that credit policy and ease of access to credit affect household indebtedness, was considered. Ease of access to credit and tempting offers may induce households to accumulate debt without due consideration of their financial situation, highlighting the need to effectively regulate and monitor the credit market to avoid irresponsible and excessive indebtedness (Mansoor et al., 2020). Liu et al. (2020) explain that, according to this theory, household borrowing decisions are influenced by the ease of access to credit and credit policy, with variables such as interest rates, borrowing requirements, credit limits and the availability of financial products playing a crucial role. These factors can affect how households access credit and the amount of debt they can incur. In addition, theory holds that over-indebtedness puts households' financial stability at risk (Li et al., 2021). Easy access to credit can motivate households to take on debt beyond their repayment capacity, resulting in repayment difficulties, higher interest burdens, and financial stress, which negatively impacts household financial and mental health (Owalo et al., 2021).

The conceptual basis of household indebtedness is based on contributions such as those of Villada et al. (2017), who point out that it focuses on the adequate management of income to meet needs, involving financial decisions that promote well-being. Comino et al. (2021) define it as the situation in which a family acquires debts to cover expenses or investments, committing to future repayments, commonly with interest, to entities such as financial institutions. Webb (2021) conceptualizes it as the strategic and conscious assumption of debt, always with the family's ability to pay in perspective, and stresses that income, expenses, and financial commitments should be meticulously evaluated before taking on additional debt. In short, family indebtedness addresses financial management and obligations, focusing on the management and commitment to repay resources with strategic and conscious planning.

In that sense, Valenzuela et al. (2022) define savings as the portion of family income that is set aside for future needs and not for present desires, which implies the accumulation of financial resources by reducing expenses or increasing income. Vélez et al. (2019) add that a family savings account, which can take various forms such as savings or investment accounts, serves to deposit money and accumulate interest, with the objective of protecting and increasing family wealth. Savings goals, according to Berger & Houle (2019), are established financial objectives, such as buying a house or financing education, toward which a family works. Dueñas (2019) establishes indicators for this dimension: 1) Saving
capacity, which is the money left over after covering expenses and bills; 2) Investment capacity, referring to the ability to allocate financial resources to assets or instruments that expect future earnings; 3) Economic reserves, or liquid assets accumulated for emergencies; 4) Saving habits, practices linked to financial self-discipline and efficient management of resources to achieve long-term financial goals; and 5) Additional savings accounts, which are secondary accounts used to deposit money for specific purposes or to support the main savings account.

Valenzuela et al. (2022) describe the budget as a plan that details a household's expected income and expenses, providing an accurate picture of the management and distribution of financial resources among the various categories of expenses and financial goals. Gelos et al. (2019) consider it vital for controlling finances, properly managing money, setting priorities, restricting unnecessary expenses, and achieving short- and long-term financial goals. Díaz et al. (2020) define four indicators for this dimension: 1) Household budget, which contemplates the estimation and distribution of income, as well as the payment of debts and contingency planning; 2) Income and expenses, with income being money obtained from various sources during a specific period and expenses being disbursements to acquire goods, services or settle financial obligations; 3) Debt capacity, which refers to a household's ability to incur and repay debts responsibly and sustainably without compromising its long-term financial security and standard of living; and 4) Credit control, which involves the detailed management and monitoring of all debts and credit obligations, ensuring prudent use of credit and avoiding over-indebtedness.

Also, Valenzuela et al. (2022) define credit status as the financial condition of a household and its capacity to incur debt, considering its credit history and current financial obligations. It is essential for assessing financial well-being and the ability to manage and repay debts. Good creditworthiness facilitates access to credit and favorable borrowing conditions, while poor creditworthiness can limit financial options and lead to hardship (Chotewattanakul et al., 2019). Pñaloza et al. (2019) establish three indicators for this dimension: 1) The account statement, a summary of activities in a financial account issued regularly by the financial institution; 2) INFOCORP, which collects and provides credit history data to financial institutions to assess credit risks; and 3) Financial well-being, which implies financial satisfaction and security, which allows meeting basic needs, achieving financial goals, reducing money-related stress, and living to the fullest.
3 METHODOLOGY

The present study, of an applied nature and framed within a quantitative approach, employs a non-experimental, cross-sectional, descriptive, and correlational design, with the purpose of addressing specific problems of practical reality through the detailed analysis of numerical data. The research focuses on 300 families located in various departments of Peru, applying a survey composed of twenty-one items, which was rigorously validated by experts and subjected to a pilot test, with the aim of exploring in depth financial education and family indebtedness.

The initial phase of the study consisted of an exhaustive literature review and the development of the theoretical and methodological framework, thus establishing a solid conceptual and procedural basis for the research. Subsequently, the survey was applied, and its results analyzed using the SPSS version 27 statistical package. This process not only made it possible to identify the levels of the variables and dimensions studied, but also to apply inferential statistical methods to test hypotheses and evaluate the relationships between the variables in question.

The research was conducted under the rigorous guidance of ethical principles, such as autonomy, beneficence, human integrity, and justice, thus ensuring a respectful and equitable approach towards the participants. This approach not only provided valuable insights, but also generated empirical data that could be of vital importance for future research and policy formulation around family financial and fiscal management.

The methodology applied and the results obtained not only allowed the formulation of solid conclusions, but also facilitated the generation of recommendations, which are based on statistical analysis and discussion of the data. Furthermore, this study could serve as a reference point for future research in this field, providing a framework on how to address and analyze issues related to financial literacy and indebtedness in specific domestic contexts. Ultimately, the findings and lessons derived from this study have the potential to inform and guide both academia and policy makers in creating more effective and contextualized strategies to address the challenges associated with household financial management and indebtedness.
4 RESULTS AND DISCUSSION

Table 1 Comparison of financial education, household indebtedness and dimensions by department in Peru

<table>
<thead>
<tr>
<th>Variables</th>
<th>Levels</th>
<th>Departments</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Lambyeque</td>
<td>Cajamarca</td>
<td>Amazon</td>
<td>La Libertad</td>
</tr>
<tr>
<td>Financial education</td>
<td>Low</td>
<td>27</td>
<td>39</td>
<td>53</td>
<td>4</td>
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<tr>
<td></td>
<td>Medium</td>
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<td>51</td>
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<td>46</td>
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<tr>
<td></td>
<td>High</td>
<td>6</td>
<td>10</td>
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<tr>
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<td>Low</td>
<td>31</td>
<td>40</td>
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<tr>
<td>Financial literacy</td>
<td>Low</td>
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<td>53</td>
<td>51</td>
<td>51</td>
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<td>Medium</td>
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<td>7</td>
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<td>47</td>
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<tr>
<td></td>
<td>High</td>
<td>21</td>
<td>38</td>
<td>40</td>
<td>2</td>
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<tr>
<td>Financial ability</td>
<td>Low</td>
<td>45</td>
<td>47</td>
<td>55</td>
<td>39</td>
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<tr>
<td></td>
<td>Medium</td>
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<td>15</td>
<td>5</td>
<td>59</td>
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<tr>
<td></td>
<td>High</td>
<td>30</td>
<td>43</td>
<td>55</td>
<td>3</td>
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<tr>
<td>Financial attitude</td>
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<td>47</td>
<td>35</td>
<td>60</td>
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<tr>
<td></td>
<td>Medium</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>55</td>
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<tr>
<td>Family indebtedness</td>
<td>Low</td>
<td>50</td>
<td>50</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>60</td>
<td>42</td>
<td>57</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>40</td>
<td>60</td>
<td>74</td>
<td>10</td>
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<td>Savings</td>
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<td>25</td>
<td>20</td>
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<tr>
<td></td>
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<td></td>
<td>High</td>
<td>20</td>
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<td>32</td>
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<tr>
<td>Credit situation</td>
<td>Medium</td>
<td>34</td>
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<td></td>
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<td>21</td>
<td>8</td>
<td>40</td>
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</tbody>
</table>

Note: Information obtained from SPSS V.27 (2023).

**Description:** In Lambayeque, the mix of levels of financial variables paints a picture of diversity. Education and financial literacy tend to be average, but notably high household indebtedness overshadows their financial stability. Financial capacity, however, shows a positive side, as it is relatively high, although low creditworthiness suggests that this capacity does not necessarily translate into sound credit management.

Cajamarca presents its own challenges, leaning toward low to medium levels on most variables. Education and financial literacy, while average, are accompanied by significantly low savings, which could indicate a lack of resources or strategies to accumulate savings. Credit status also leans toward the low side, which could be an area of interest for future interventions.

Amazon faces its own challenges, with low levels of financial literacy, financial attitudes, and savings, suggesting that households may not have the resources, knowledge or attitudes to manage their finances effectively. However, the high level of credit is an interesting anomaly, which could indicate that, despite challenges in other areas, households...
may be managing their credit effectively or that they have access to more favorable credit. Finally, La Libertad excels in several areas, showing strengths in education, skills, and financial savings, suggesting a solid foundation in these areas. However, the low credit score is a reminder that strength in one area does not guarantee stability in others and raises questions about how these families are navigating their credit realities despite their financial skills and knowledge.

Each department, with its own challenges and strengths, offers a unique window into the financial realities of Peruvian families. Interventions and strategies to improve the financial health of families in each department may need to be carefully tailored to address the specific challenges and build on the strengths that exist in each context.

In the academic context, Karakara et al. (2022) establish a connection between financial literacy and the probability of facing financial adversity. The definitions of financial skills by Zamudio et al. (2022) and Avendaño et al. (2021), and financial attitude, according to García et al. (2021) and Ho and Lee (2022), are vital for effective financial management. Alvira et al. (2020) and Ticnona et al. (2023) stress the importance of financial education from an early age, especially in the family and business environment. From a theoretical point of view, the life-cycle approach of Modigliani and Brumberg (1954) and the permanent income hypothesis of Friedman (1957) offer a perspective for interpreting the results of the study, especially regarding the anticipation of spending as a function of future income expectations.

<table>
<thead>
<tr>
<th>Table 2 Cross table between variables and dimensions</th>
<th>Family Indebtedness</th>
<th></th>
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<tbody>
<tr>
<td>Financial education</td>
<td>Low</td>
<td>Count</td>
<td>68</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>80,0%</td>
<td>15,3%</td>
<td>4,7%</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Count</td>
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</tr>
<tr>
<td></td>
<td>%</td>
<td>32,5%</td>
<td>62,1%</td>
<td>5,4%</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Count</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>33,3%</td>
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<td>39,2%</td>
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<tr>
<td>Financial literacy</td>
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</tr>
<tr>
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<tr>
<td>Financial ability</td>
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In the area of Financial Education, it is observed that an overwhelming 80% of families with low financial education experience a high level of family indebtedness. Meanwhile, those with medium financial education tend to be at a medium level of indebtedness, with 62.1% in this category. Surprisingly, families with high financial education show an even distribution across all levels of indebtedness, with no clear inclination towards any specific category.

In terms of financial knowledge, families with a low level of financial knowledge tend to lean towards high indebtedness, with 55.5% of them in this situation. Those with medium financial literacy are inclined towards medium family indebtedness, with 53.3%. Families with high financial literacy present a more balanced distribution, although with a slight preference (52.6%) towards medium indebtedness.

Exploring Financial Capacity, it stands out that a significant 74.2% of families with low financial capacity have high indebtedness. Families with medium financial capacity are inclined towards medium indebtedness, with 57.4%. On the other hand, families with high financial capacity show a homogeneous distribution between levels of indebtedness, although with a slight inclination (43.3%) towards medium indebtedness.

In terms of Financial Attitude, a remarkable 80.8% of households with a low financial attitude are in a situation of high indebtedness. Households with a medium financial attitude lean predominantly (64.8%) towards medium indebtedness. It is worth noting that households with a high financial attitude are the only ones that show a clear tendency towards low indebtedness, with 62.5% in this category.

In general terms, people with low education, financial knowledge, skills, and attitudes tend to experience higher levels of household indebtedness. People with medium
levels of these financial characteristics tend to be at medium levels of indebtedness. It is noteworthy that people with high financial attitudes are the only ones who show a clear trend toward low household indebtedness. In addition, it is curious that the totals appear to be consistent across categories, which could be an error or a coincidence, and may require additional verification of the data.

From a theoretical perspective, behavioral finance theory Fernandez et al. (2017) provides a valuable framework for interpreting these results, highlighting how perceptions and attitudes toward finances can influence indebtedness decisions. The definition of household indebtedness by Comino et al. (2021) and the perspective on household creditworthiness by Chotewattanakul et al. (2019) are also relevant for understanding the contexts and implications of these levels of indebtedness.

In addition, the connections between financial literacy, indebtedness, and financial management skills, as discussed in Alvarez et al. (2022) and Perez et al. (2021), provide additional context for understanding the findings and could be further explored in future studies to unravel the complexities of these relationships. The definitions and correlations proposed by Kumar et al. (2023), Trombetta (2023), and Webb (2021) also provide a solid foundation for future research that seeks to further explore the relationships between household financial attitudes, knowledge, and indebtedness.
Description: The correlation coefficient between "Financial literacy" and "Household indebtedness" is set at 0.696, proving to be statistically significant at the 0.001 level and indicating a moderate to strong positive relationship between these variables. In applied terms, an increase in financial literacy tends to correlate with a decrease in household indebtedness. The bilateral significance value of 0.001, below the standard threshold of 0.05, authenticates the statistical significance of this correlation.

The analysis shows that the correlation coefficient between financial capacity and household indebtedness is 0.714, indicating a moderate to strong positive correlation between these variables. In practice, this suggests that an increase in financial capability in the sample analyzed tends to correlate with a reduction in household indebtedness. Furthermore, the bilateral significance value of 0.000 indicates that the correlation is statistically highly significant, which adds an additional layer of reliability to the identified relationship and suggests that the results are not likely to be derived by chance.
The analysis shows that the Spearman correlation coefficient between "Financial Attitude" and "Household Indebtedness" is 0.491, reflecting a moderate level of positive correlation between these variables. This result suggests that a more proactive or positive financial attitude in an individual tends to be associated with a lower level of household indebtedness. Furthermore, the bilateral significance value of 0.002 confirms that the correlation is statistically significant, which adds an additional degree of confidence to the study's conclusions.

The analysis reveals that the Spearman correlation coefficient between "Financial literacy" and "Household indebtedness" is 0.891, denoting an extremely strong positive correlation between these two variables. In practical terms, this implies that a higher level of financial literacy in an individual is strongly linked to a lower degree of household indebtedness. Furthermore, the bilateral significance value of 0.000 confirms that the correlation is statistically highly significant, providing a high degree of confidence in the results of the study and suggesting that the observed correlation is unlikely to be the result of random factors.

Phung's (2023) research emphasizes the influence of family financial education on children's budgeting behavior, highlighting the positive correlation between parental financial responsibility and children's financial habits. Zhang and Fan (2023) also highlight the positive correlation between financial education and successful debt management, such as student loans. Kahneman and Tversky's (1979) prospect theory provides a framework for understanding the importance of financial literacy in financial decision making under uncertainty.

Household indebtedness, savings, budgeting, and credit status provided by Villada et al. (2017) and Valenzuela et al. (2022) provide a framework for assessing the financial health of homeowners in this study. Minsky's credit dependence theory and the observations of Liu et al. (2020) provide a theoretical framework for understanding the study results in the context of household indebtedness. Similarly, Ramos (2023) highlights the importance of financial education and the need for a comprehensive evaluation of financial education programs.

5 CONCLUSIONS AND VALUE PROPOSITIONS

It was evident that there is a strong positive correlation between financial literacy and household indebtedness, underscoring the preeminence of sound financial literacy in
the prudent management of household debt. This finding underscores the critical importance of financial literacy as a vital tool for mitigating household indebtedness, providing a solid foundation for future policies and programs aimed at strengthening household financial health. Furthermore, the prevalence of fair and low levels of financial knowledge and skills among participants highlights the tangible need for improved financial literacy. The evidence of a significant deficit in the understanding and management of personal finances is palpable and highlights the urgency of addressing these gaps through educational and policy interventions.

Even though a significant proportion of households enjoy average financial health, there are pending concerns in vital areas such as savings and credit status. This scenario indicates potential financial vulnerability, especially in emergency and retirement contexts, and underscores the need for strategies that strengthen skills and attitudes towards savings and credit management. The remarkable correlation between household financial literacy and indebtedness illustrates the significant influence of financial education on debt management. This finding highlights the importance of promoting financial education to improve household financial health, providing an empirical basis for the development of policies and programs aimed at improving financial literacy. Similarly, the significant correlation between financial skills and household indebtedness underscores the tangible influence of financial skills on household debt management. This not only validates the relationship between the two variables, but also underscores the importance of improving financial skills as a means of mitigating household indebtedness, providing a rationale for strategies and policies that seek to strengthen financial skills in households.

The value propositions proposed are aimed at the academic, professional, social, political, economic, and strategic aspects. Thus, in the academic world, the seeds of financial education must be planted from the earliest years of education. Let us imagine a curriculum that, from basic education, equips future generations with essential financial knowledge, and research centers that explore the effectiveness of various financial education strategies, illuminating paths for political and social decision-making. At the professional level, the creation of a certification program for financial educators becomes a pillar, ensuring that those who teach finance are themselves well versed in the subject. In addition, continuing education for professionals in the financial sectors becomes imperative to maintain the quality and timeliness of financial advice and services.
In the social sphere, let us imagine financial education programs rooted in communities, especially those most exposed to financial instability, providing relevant tools applicable to their daily realities. Financial inclusion must be a flag that flies at all levels, allowing access to basic financial services for all citizens.

At the policy level, the implementation of policies that encourage financial education, such as tax benefits for those who participate in or sponsor financial programs, becomes a vital tool. Transparent and accessible regulation of financial services is also a pillar to ensure that citizens can navigate the financial world with confidence and security.

In the Economic Sphere, the promotion of fintech companies and the creation of funds for financial innovation can be catalysts for significant change, providing new tools and services that facilitate healthy and accessible financial management for all.

Strategically implemented, strategic alliances with international organizations, NGOs and the private sector can leverage the resources and reach of financial education programs. Technology must be our ally, using digital platforms and social media to reach a broad and diverse audience, while strong monitoring and evaluation mechanisms will ensure that every step taken is data-driven and has a real and positive impact on society.
REFERENCES


