

The Role of Financial Literacy in Mediating the Relationship Between Inflation, Income Inequality and Saving Behavior in Dili-Timor-Leste (Case Study: Public and Private Sectors)

Teresa Freitas Belo¹, Aderito Lino Monteiro², Margaretta Evy M. D. da Silva³, Emilia Freitas Pereira⁴, Nelson Domingos Correia Boavida⁵, Eduardo Freitas Ximenes⁶

^{1,2,3,4}Lecturers of the Finance Management Department, Dili Institute of Technology, Dili Timor-Leste

^{5,6}Students of the Finance Management Department, Dili Institute of Technology, Dili Timor-Leste

Email: teresafreitas.belo@hotmail.com, aderitolinomonteiro1990@gmail.com, evy.mardianidewi@gmail.com, fremilzoe@gmail.com, nelsonboavida14624@gmail.com, eduardofximenes99@gmail.com

ABSTRACT

This study investigates the intricate relationship between inflation, income inequality, financial literacy, and saving behavior among public and private sector employees in Dili, Timor-Leste. Recognizing the significant income disparity between these sectors, the research aims to address the pressing social and economic issues associated with low saving behavior. Through a questionnaire-based survey involving 355 respondents, the study employs a mixed-method approach to data analysis. The findings reveal several key insights. Firstly, the study found that inflation does not significantly influence saving behavior, but has positive impact on financial literacy among public and private sector employees in Dili, Timor-Leste. Secondly, contrary to expectations, income inequality does not directly affect saving behavior but has a positive impact on financial literacy. Thirdly, financial literacy significantly enhances saving behavior, bridging the gap between income groups and promoting economic stability. Lastly, financial literacy serves as a mediating factor, positively influencing saving behavior and mitigating the negative effects of both inflation and income inequality. These results underscore the critical role of financial literacy in shaping saving behavior and mitigating the impact of economic factors. The study contributes to understanding the unique economic dynamics of Dili, Timor-Leste, and offers insights for policymakers and stakeholders to develop targeted interventions aimed at promoting financial education and enhancing saving behavior among public and private sector employees.

Keywords: *Inflation, financial literacy, saving behavior, public sector, private sector, mixed method approach*

1. Introduction

Timor Leste, despite being a relatively young nation since gaining independence in 2002, has faced significant economic challenges and opportunities. Situated in Southeast Asia, the country relies heavily on imports to meet its domestic consumption and investment needs. This reliance is evident in the substantial amount spent on importing goods, with the total monetary value reaching approximately 872.68 million U.S. dollars in 2021, marking a significant increase from previous years (Asian Development Bank, 2023).

The nation's domestic production capacity is constrained due to its tumultuous recent history marked by political conflicts and inter-group clashes, particularly involving martial arts factions. Political discord and conflicts have hindered the formulation of cohesive policies essential for economic growth. Additionally, confrontations between martial arts groups have further complicated Timor-Leste's challenges, impacting infrastructure required for manufacturing and production activities (United Nations Comtrade database, 2021).

Public and private sector employees in Dili, the capital of Timor-Leste, play crucial roles in the economy and society. However, significant income inequality between these sectors poses challenges, as evidenced by low saving behavior among the population. Research aims to investigate the reasons behind

this disparity and its implications for economic stability (Index Mundi, 2023).

Financial literacy plays a crucial role in shaping saving behaviors in Timor-Leste. Inflation, income inequality, and financial literacy are interconnected factors influencing individuals' saving decisions. Financially literate individuals are better equipped to navigate economic challenges, such as inflation, and are more likely to engage in prudent financial behaviors (Trading economics, 2023).

This study introduces a comprehensive framework to understand the interplay between inflation, income inequality, financial literacy, and saving behavior in Timor-Leste. By examining these factors collectively, the research offers insights into the complexities of the country's economic landscape and proposes strategies to promote financial well-being and economic stability among public and private sector employees (Van Rooij et al., 2011).

2. Theoretical Frameworks

The phenomenon of inflation, characterized by a general increase in the prices of goods and services over time, is a significant economic challenge globally. It impacts countries in various ways, influencing economic decision-making and

individual financial standing. Understanding inflation rates is crucial for assessing economic well-being and making informed choices across sectors. Factors such as productivity growth, changes in production costs, and the substantial increase in money supply during events like the pandemic contribute to inflationary pressures (Mankiw, 2006; Hess and Schweitzer, 2000; Gharehgozli and Lee, 2022). Studies like Khan and Gill's research in Pakistan highlight determinants such as money supply, government spending, and exchange rate depreciation as key contributors, underscoring the complex interplay of monetary, fiscal, and external factors in shaping inflation dynamics (Khan and Gill, 2010). For policymakers, inflation presents a critical concern in efforts to enhance population welfare. Factors influencing inflation, such as money supply and interest rates, have significant implications for economic stability and welfare costs (Utari et al., 2015). Empirical research, like Akinbobola's study, emphasizes the inverse effects of money supply and exchange rates on inflationary pressure in the long run, supporting the understanding of inflation as a monetary phenomenon (Akinbobola, 2012). Additionally, metrics like the Producer Price Index (PPI) and wage inflation serve as essential indicators for predicting and measuring inflation, highlighting the multifaceted nature of inflationary pressures (Galodikwe, 2014; Johnston & Hancké, 2009). Understanding these factors comprehensively is crucial for policymakers to mitigate the negative effects of inflation on the economy and population welfare effectively (Chowdury, 2014).

2.1. Financial Literacy

Financial literacy emerges as a crucial tool for individuals in managing economic uncertainties, impacting various aspects of personal finance, including daily expense management, savings, and investments. Defined by the Policy Research Initiative (PRI, 2004) as the ability to understand financial options, discuss personal finance comfortably, and make decisions to safeguard against future uncertainties, financial literacy encompasses both knowledge and confidence in financial decision-making. Research suggests that individuals with higher financial literacy scores are more likely to exhibit positive financial behaviors, such as saving and investing, irrespective of their income levels (Bhushan and Medury, 2013; Morgan & Long, 2020). However, sociodemographic factors significantly influence financial literacy levels, with studies highlighting lower literacy among certain demographic groups. This underscores the importance of targeted financial education interventions to promote financial well-being across diverse populations (Hung, Parker, and Yoong, 2009; Fernandes, Lynch, & Netemeyer, 2014).

In measuring financial literacy, various dimensions are considered, including financial awareness, knowledge, attitude, culture, and behavior. Financial awareness encompasses understanding one's financial situation, confidence in selecting financial products, and familiarity with market trends (Klapper et al., 2013). Financial knowledge involves understanding basic financial concepts, budgeting, risk assessment, and knowledge about various financial institutions (Hogarth et al., 2002;

Gaurav & Singh, 2012). Financial attitude reflects individuals' financial goals, risk tolerance, and prioritization of long-term financial planning (Lusardi & Mitchell, 2011). "Financial culture" emphasizes the importance of managing money responsibly, building saving habits, and investing wisely (Morgan & Long, 2020). Financial behavior relates to practical aspects such as budgeting, debt management, regular saving, investment diversification, and financial plan review (Bhushan & Medury, 2013). Understanding and addressing these dimensions comprehensively are crucial for promoting financial literacy and enhancing financial well-being among individuals from various backgrounds.

2.2. Income Inequality

Income inequality, reflecting the uneven distribution of income within society, is a critical economic phenomenon influenced by factors such as inflation, social status, education, and others. It denotes a substantial disparity in income distribution between individuals, groups, populations, social classes, or countries (Britannica, 2023). OECD (2023) defines income inequality as a measure highlighting the gap in disposable income among individuals or households within a specific year and country. Wallace et al.'s study (2011) explores the relationship between globalization, labor market transformation, and metropolitan earnings inequality, suggesting a positive association between globalization and increased earnings inequality within urban areas. Factors such as minimum wage regulations, employment protection legislation, union density, and labor market policies also play crucial roles (Chong & Calderón, 2009; Burniaux et al., 2006). Numerous studies have explored the connection between human capital, income inequality, and the labor market. Research by Gallup in 2002 sheds light on wage disparities in Vietnam during the 1990s. The relationship between human capital investments and income disparities is emphasized, along with the moderating role of information and communication technology (ICT) in this relationship (Castelló-Climent & Doménech, 2021; Tchamyou et al., 2019). In this study, we used poverty rate, labor market, Gini coefficient, and the Lorenz Curve to measure income inequality. The poverty rate was measured by using good understanding of challenges faced by individuals living in poverty, concerned about high poverty rates, reducing poverty, individual and communities actively engage in efforts to alleviate poverty (World Bank, 2022; Arham & Hatu, 2020). Labor market was measured by using ample employment opportunities available, secure in current job and observed positive wage growth in industry (Wallace et al.'s study, 2011; Arham & Hatu, 2020).

The Gini Coefficient was measured by using awareness of income disparity within society and concern about the level of income inequality (Clarke et al., 2006 and Beck et al., 2007). The Lorenz Curve was measured by using a good understanding of how income distributed, belief that there is a substantial gap between rich and poor, perception that the current income distribution is unfair (Jin, Li, and Wu (2011).

2.3. Saving Behavior

Keynesian economics defines savings as the residual income after deducting consumer expenditure, crucial for a country's investment, capital formation, and overall development (Lunt & Livingstone, 1991). The Life Cycle

Hypothesis (LCH), proposed by Modigliani (1966), concerns the study of public and private savings behavior. Individuals save for motives such as retirement, precautionary measures, bequests, tangible asset acquisition, and life cycle reasons (Browning and Crowsley, 2001; Sturm, 1983). The Behavioral Life cycle Hypothesis (BLCH) posits that self-control problems may lead individuals to deviate from rational saving behavior (Manfrè, 2017). Studies across various regions, including India, Nigeria, Morocco, and Kenya, highlight the intricate relationship between savings and demographic factors. Income, population, human capital, investment, assets, and age influence savings positively, while household size, unemployment, and certain gender aspects may have a negative impact (Choudhury, 2005; Fazoranti, 2007; Gonzalez & Ozcan, 2008; Khalek et al., 2009; Kibet et al., 2009; Steiner, S. et al., 2009; Eijdenberg & Ehmann, 2019). In Tanzania, age and education emerge as significant predictors of positive saving behavior, with high-income earners, the elderly, and those with higher education levels exhibiting higher savings (Mori, 2019).

In this study, we used retirement, precautionary, and bequest savings, current consumption, self-control and investment in a variety of assets to measure saving behavior. The retirement was measured by using set aside money to save, consistently contribute to retirement saving and setting specific target for retirement saving. The precautionary was measured by using emergency saving, emergency saving fund, have clear goals for emergency saving, financial sacrifices and ability to handle unexpected financial setbacks. Bequest was measured by using preserving wealth and assets, allocation a portion of income or asset for future bequest, set amount and recipients of bequest, financial sacrifices and seek professional advice. The current consumption was measured by using saving for future needs, allocate a portion of income for savings and investments, clear financial goal and prioritizing saving and investing for future. Self - Control was measured by using the ability to resist impulsive spending and financial decision, sacrificing short term wants, able to resist temptation and avoid impulsive purchases, aligning spending habits with financial objectives, seek support from tools, resources or individual to maintain self-control. The invest variety asset was measured by using diversifying investments across various assets, such as stocks, bonds, real state and commodities, understand different asset classes carry varying levels of risk, research and analysis before making decision investment and monitoring market conditions. (Chaffin, 2013; Sherfin and Thaler, 2004; Belo et al, 2022).

3. Hypothesis Development

3.1. The effect of Inflation on Saving Behavior

In a series of studies examining the relationship between inflation and savings in India, contradictory results emerge. Santosh and Lakshmi (2018) reveal adverse effects of inflation on both domestic and private savings, implying a negative influence on the overall savings within the country and the savings of individual households as inflation rates increase. Heer and Suessmuth (2006) contribute to this narrative, proposing a negative association between inflation and savings based on prevailing models. Their argument centers on unanticipated inflation leading to a decline in real income, subsequently reducing the savings rate. This perspective suggests that unexpected inflation may diminish individuals' purchasing power, thereby impacting their ability to save.

Miller and Benjamin (2008) introduce a distinct dimension to the discourse, suggesting that elevated inflation could heighten the opportunity cost of holding money. They contend that individuals, motivated by the desire to counteract the diminishing value of money due to inflation, may actively search for deals. This intensified focus on deal-searching, they argue, has the potential to divert real resources away from savings, contributing to an overall reduction in savings. Emara and Kasa's (2020) study align with the findings of Santosh and Lakshmi (2018), supporting the notion that inflation detrimentally affects savings in India. Their research underscores the negative consequences of inflation on individuals' savings behavior in the Indian context, reinforcing the idea that inflation has adverse effects on both domestic and private savings within the country. Collectively, these studies contribute nuanced perspectives to the intricate relationship between inflation and savings in the Indian economic landscape.

H1: There is no relationship between inflation and saving behavior of employees in the Public and Private Sectors in Dili, Timor-Leste.

3.2. The Effect of Income Inequality on Saving Behavior

Savings may depend on the level of income of the individual. A recent study by Ellmeier et al., (2023) on saving behavior during the pandemic showed that people with higher levels of income and education have a higher saving ability. Similarly, Maaboudi et al., (2023) found that income inequality has a hump-shaped effect on national savings. At low levels of inequality the quantity of savings increases due to the transfer of income from the poor to the rich that have higher marginal propensity to save.

Gottesman and Morey (2023) also emphasize that as inequality increases, poor individuals increase their willingness to take risk, presumably in an effort to keep up with others. This disparity of income in society have been rise in many years, Kaldor (1957) asserts that income disparity positively influences savings because wealthier individuals exhibit a larger marginal propensity to save than their less affluent counterparts. Stiglitz (1969) observes that in the presence of a convex saving function, wherein the marginal inclination to save increases with income, heightened income inequality leads to greater capital intensity through increased aggregate saving. Keynes' theory posits that consumption propensities decrease with income, resulting in elevated savings rates among affluent households. Kotlikoff and Summers (1981) suggest that opulent bequests contribute to increased savings rates, while Becker (1975) contends that lower-income individuals invest more in human capital, resulting in lower savings rates.

Dynan, Skinner, and Zeldes (2004) identify a positive relationship between personal savings rates and lifetime income. Tran et al.'s 2020 research reveals that income inequality positively impacts household savings in Vietnam, indicating that rural households may exhibit greater patience in restraining consumption to accumulate wealth and enhance their social status. The findings of Koo and Song (2016) suggest that the influence of income distribution on saving is particularly strong and statistically significant in financially developed, affluent, and OECD countries. Previous studies conducted in developed and developing nations, with a focus on Turkey, have reported similar results, demonstrating the robustness and consistency of these findings (Abdelkhalik et al., 2010; Agrawal, 2001; Çelik, 2009; Çolak & Öztürkler, 2012; Horioka & Terada-Hagiwara, 2012; Hüfner & Koske, 2010).

H2: There is no effect between income inequality and saving behavior of employees in public and private sectors in Dili, Timor-leste.

3.3. The Impact of Inflation on Financial Literacy

When the prices of goods and services rise, it affects personal consumption, income, and savings. Inflation has an impact on individual financial literacy, which pertains to an individual's knowledge for making informed decisions about their financial situations. This can be illustrated by the fact that individuals with a robust understanding of financial literacy promptly adapt their spending habits. Conversely, those with lower financial literacy may encounter challenges in efficiently managing their income, expenses, and savings in response to changing economic conditions. The study of Klapper et al., 2012 finds that higher financial literacy greatly increases the likelihood that an individual will report having more available unspent income and more spending capacity, during the financial crisis, there was a stronger correlation between financial literacy and the availability of unspent income, which suggests that having financial literacy may help people cope with macroeconomic shocks. Moreover, Bruin et al., 2010 study on "Expectations of Inflation: The Role of Demographic Variables, Expectation Formation, and Financial Literacy" the study suggests that differences in expectation formation and financial literacy may account for some of demographic inequalities in inflation forecasts, more specifically, those with lesser financial literacy and those who were more concerned with how they would pay for their future bills and prices they pay than with the US inflation rate expressed higher inflation forecasts.

Many studies have done on effect of inflation on variable such as; Expectations of Inflation, Demographic variables, financial literacy, household saving, Inflation Literacy (Lusardi, 2011; Bruin et al., 2010). However, there is limited specific studies on variable of Impact of inflation on financial literacy. This study emphasis on financial literacy as important roles in mediating the inflation and saving behavior. Based on the literature financial literacy as the public comprehension of information pertaining to financial services, the administration of financial investments, and essential perspectives crucial for the awareness of household investors. This definition aims to mitigate asymmetrical information problems associated with various financial terms such as interest rate risks and inflation (Clark et al., 2017).

H3: There is significant relationship between inflation and financial literacy of employees in Public and Private Sectors in Dili, Timor-Leste.

3.4. The Impact of Income Inequality on Financial Literacy

The literature on financial literacy reflects a consensus that proficiency in financial matters is a crucial component of effective financial management. Researchers such as Hogarth, Hilgert, and Schuchardt (2002) assert that financial literacy encompasses knowledge about saving and borrowing, indicating the importance of well-rounded financial skills and habits. Fernandes, Lynch, and Netemeyer's (2014) research further establish a positive association between financial literacy, financial education, and downstream financial behaviors. This suggests that enhancing financial literacy through education can lead to more informed financial decision-making. Agarwal et al. (2015) shed light on prevalent financial mistakes among both young and elderly individuals, highlighting that these groups often exhibit the lowest

levels of financial knowledge. Calvet, Campbell, and Sodini (2021) contribute to this understanding by linking low financial literacy to poorer, less educated, and immigrant households, which are more prone to financial errors. Lusardi (2012) add that individuals with lower financial literacy are more likely to engage in high-cost transactions and borrowing methods, emphasizing the potential economic consequences of inadequate financial knowledge.

Economic literacy, as explored by Prete (2016), is linked to income inequality, with higher literacy contributing to less growth in inequality. The implication is that improving financial literacy can have broader societal impacts by mitigating economic disparities. Monsura's (2020) research reinforces this idea, suggesting that successful financial literacy programs can result in increased income mobility, underscoring the role of education in fostering sound financial practices. Socio-economic demographics emerge as strong influencers of financial literacy, with Heenkenda (2014) noting that most respondents demonstrate modest financial knowledge. Furthermore, Lusardi, (2012) stated that More than ever, having lifelong skills in numeracy and financial literacy is essential to succeeding in the complex economic climate of today. This aligns with behavioral finance literature, as highlighted by French and McKillop (2016), which underscores the significance of attention and planning in consumer finance. Omar and Inaba (2020) research takes a global perspective, robustly supporting the notion that financial inclusion significantly reduces poverty rates and income inequality in developing countries. This finding advocates for the promotion of access to formal financial services for marginalized populations, highlighting the potential to enhance overall societal welfare through increased financial inclusion.

H4: There is significant relationship between Income Inequality and Saving Behavior of employees in Public and Private Sectors in Dili, Timor-Leste.

3.5. The Impact of Financial Literacy on Saving Behavior

Sanjeeva and Hongbing (2019) and Falahati et al. (2012) emphasize the empowering nature of financial literacy, enabling individuals to manage funds effectively and cultivate awareness of the importance of meeting future financial demands. This developmental process, as suggested by Ajzen et al. (2018), shapes attitudes that ultimately evolve into intentions. A notable outcome of this process is the positive correlation observed between a person's financial knowledge and their inclination to save, as evidenced by the impact of Financial Literacy on Saving Intention among high school students (Lestari et al., 2017). Furthermore, the ability to control financial statements is identified as a significant factor contributing to the positive relationship between financial literacy and saving behavior (Widjaja et al., 2020).

The demographic landscape plays a crucial role in understanding financial literacy. Klapper, Lusardi, and Lusardi (2012) find that older, more educated, and higher-income individuals are more likely to possess a bank account and report greater availability of unspent income and higher spending capacity, thereby reinforcing the importance of financial literacy. However, financial illiteracy is pronounced among women, the less educated, those with low income, ethnic minorities, and older respondents, as indicated Lusardi and Mitchell (2014), and Lusardi and Tufano (2009). Importantly, high levels of financial literacy are associated with better retirement planning, wealth accumulation, and overall financial

well-being (Mitchell & Lusardi, 2022).

Efforts to improve financial literacy are recognized as pivotal in increasing saving rates and lending to vulnerable consumers, thereby contributing to financial inclusion (Cole, Sampson, and Zia, 2011). Persistent gender differences in financial literacy are noted in international studies, with women generally having lower financial knowledge than men (Lusardi and Mitchell, 2022). Low literacy individuals are found to be more likely to carry high-cost debt and face challenges with debt management (Lusardi and Tufano, 2009). Multiple studies consistently affirm the positive impact of financial literacy on saving and retirement planning behaviors (Agnew et al., 2012; Allgood and Walstad, 2016; Brown and Graf, 2013; Bucher-Koenen and Lusardi, 2011; Hauff et al., 2020; Lusardi and Mitchell, 2011). Despite the positive associations, the literature also acknowledges potential negative mechanisms related to financial literacy. Some studies suggest a positive relationship between subjective financial literacy and enhanced retirement saving intentions and behaviors, while others highlight a gap in understanding potential negative mechanisms that may decrease individuals' desire to save for retirement, especially if they perceive themselves as highly financially literate (Croy et al., 2010; Topa and Herrador-Alcaide, 2016). Lee and Hanna's (2020) recent study on early retirement account withdrawals underscores that individuals who consider themselves financially literate are more likely to face financial hardships, emphasizing the need for a comprehensive understanding of both positive and negative implications of financial literacy on retirement savings.

H5: There is significant relationship between financial literacy and saving behavior of employees in Public and Private Sectors in Dili, Timor-Leste.

3.6. The Impact of Inflation Through Financial Literacy on Saving Behavior

Lusardi, Mitchell, and Curto (2009) highlight a significant disparity in financial understanding based on sociodemographic factors and family background. Their research reveals that a college-educated male with parents possessing stocks and retirement savings is approximately 50 percentage points more likely to comprehend risk diversification compared to a female with less than a high school education and parents lacking wealth. This stark contrast emphasizes the influential role of education and family background in shaping an individual's financial knowledge and decision-making. Widjaja, Arifin, and Setini (2020) contribute to this understanding by emphasizing the positive impact of financial literacy and subjective norms on saving behavior. Their research suggests that individuals who are financially literate and perceive certain financial behaviors as socially normative are more inclined to engage in saving activities. This underscores the social and normative aspects that complement financial literacy in shaping saving behaviors. Ariffin, Sulong, and Abdullah (2017) further support these insights in their research, which demonstrates the positive influence of financial literacy on students' saving behavior. This finding suggests that fostering financial literacy among students can contribute to developing positive saving habits. The study conducted by Jamal, Ramlan, Karim, and Osman (2015) adds depth to this perspective by emphasizing the significance of both individual financial knowledge and external social influences in shaping students' saving behavior.

This highlights the complex interplay between individual financial literacy and broader social factors in determining

saving habits, particularly among the student population.

H6: Inflation has positive Impact on saving behavior of employees in Public and Private Sectors through financial literacy in Dili Timor-Leste

3.7. The Impact of Income Inequality through Financial Literacy on Saving Behavior

Baidoo et al. (2018) research delves into the positive relationship between financial literacy and saving behavior, particularly among small-scale miners. The findings suggest that individuals with higher levels of financial literacy demonstrate better saving behaviors, encompassing the ability to set financial goals, budget effectively, and make informed decisions about their financial resources. This emphasizes the practical implications of financial literacy in fostering responsible financial management. Gruber (2012) contributes to the understanding of saving behavior by exploring the impact of income shocks. The research indicates that negative income shocks tend to reduce saving rates, while positive shocks may lead to increased saving or consumption. This underscores the sensitivity of saving behaviors to changes in income and highlights the importance of financial preparedness in navigating financial challenges. Tran, Ong & Nguyen (2020) and Koo & Song (2016) provide further depth to the discussion by identifying financial literacy as a mediator that partially explains the impact of income inequality on saving behavior. These studies suggest that financial literacy plays a crucial role in influencing individuals' saving behaviors and that income inequality can have an impact on both financial literacy levels and saving behaviors. Individuals with higher financial literacy tend to exhibit better saving behaviors, including setting financial goals, budgeting, and making informed investment decisions. Conversely, income inequality may hinder financial literacy development, particularly among individuals from lower-income backgrounds, and create financial constraints that affect saving behavior.

H7: Income inequality has positive impact on saving behavior of employees in Public and Private Sectors through financial literacy in Dili Timor-Leste.

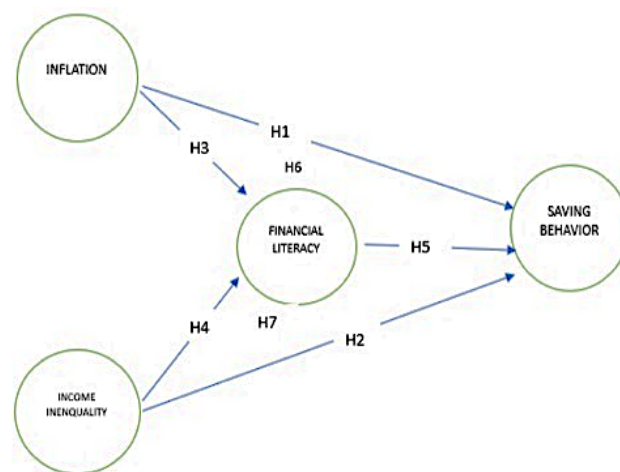


Figure 1. The Research Model

4. Research Method

This study tries to determine the impact of inflation and income inequality on saving behavior of the Public and private sectors in Dili Timor-Leste through financial literacy. In this study we use mixed methods. According to Creswell (2021) mixed research methods are an approach to investigate behavioral, social, and health-related problems by collecting and analyzing quantitative and qualitative data strictly as answers to research questions, and integrating or "mixing" the two forms data in a particular research design to yield new and more complete insights or understandings than what might be obtained from quantitative or qualitative data alone. The selection of public and private sectors in the city of Dili as the object of research is first, departing from the observation of the income inequality of public and private sectors who tend to be high and the saving behavior that tends to be low. Second, in terms of fixed income in Dili Timor-Leste, public and private sectors are the highest. Third, Dili is the capital of Timor-Leste at this time, making it easier to access data acquisition. Supramono and Utami (2004) introduced a classification of three research types: exploration, descriptive, and explanatory. The study employs a mixed-methods approach, combining quantitative and qualitative data to provide a comprehensive understanding of the issues. This methodology allows for a more nuanced exploration of how inflation and income inequality affect saving behavior among public and private sector employees in Dili, Timor-Leste, through the lens of financial literacy. Quantitative data was collected through questionnaire distribution to a representative sample of employees from both public and private sectors. The questionnaire distribution ensured a balanced representation across various departments and income levels, providing a comprehensive dataset for analysis. These questionnaires included carefully designed questions to measure the key variables of interest: inflation, income inequality, financial literacy, and saving behavior.

Inflation was measured through respondents' perceptions of price increases and their impact on purchasing power, ensuring that the data reflects personal experiences and attitudes towards inflation. Income inequality was assessed based on income distribution among respondents and their perceptions of income disparities, capturing both actual income differences and subjective experiences of inequality. Financial literacy was evaluated using questions that tested respondents' knowledge and skills in managing finances, including budgeting, saving, and investing, providing a comprehensive measure of their financial capabilities. Saving behavior was examined through questions about respondents' saving habits, goals, and practices, offering insights into how individuals plan and manage their finances. By combining these quantitative measures with qualitative insights from in-depth interviews, the study provides a well-rounded analysis of the factors influencing saving behavior in Dili, Timor-Leste.

Qualitative data was gathered through in-depth interviews with key informants, such as Mrs. Fatima Soares, Mrs. Anita, and Professor Doctor Afonso Aleixo, who provided insights into personal experiences and perceptions related to the study variables. The qualitative data was analyzed by coding and identifying themes that complemented the quantitative findings.

SMART-PLS 4.0 was used to test reliability, validity, and hypotheses. This software package is commonly utilized for analyzing small sample sizes, formative/reflective indicators, multivariable analysis, data normality requirements, and collinearity testing (Hair et al., 2014; Saldanha et al., 2018,

2019). Reliability was assessed using Cronbach's Alpha (CA) and composite reliability (CR) (Hair et al., 2014; Saldanha et al., 2018), while convergent validity was assessed using indicator loading or outer loading (OL) and average variance extracted (AVE) (Hair et al., 2017). Discriminant validity testing used the Fornell-Larcker criterion (Hair et al., 2014) and heterotrait-monotrait (HTMT) (Henseler et al., 2015). Hypothesis testing was conducted by examining direct and indirect effects using path coefficients and P values, and bootstrapping calculations (Hair et al., 2014; Hair et al., 2017; Saldanha et al., 2018).

5. Results

5.1. Characteristic of Respondents

This descriptive analysis based on the research data base were collected from the questionnaire that gathering from 315 permanent public servants in Dili. The data presented in the numeric table so can be easy to understand and interpreted. We used descriptive analysis to provide information about the demography characteristics of respondents. The result of descriptive analysis is show as below:

5.1.1. Gender

The study of 353 participants in Dili, Timor-Leste, demonstrates a gender disparity, with males comprising 55% of respondents and females 45%. This distribution mirrors broader gender dynamics in Dili, where men hold more dominant roles in both public and private sectors. Cultural norms in Timor-Leste traditionally assign men as primary providers, leading to their higher representation in the workforce and perception as more likely to engage in saving practices. These cultural expectations influence gender roles within households, where men are typically entrusted with greater financial responsibilities. This analysis offers insights into how cultural norms shape gender participation and saving behaviors in Dili, Timor-Leste.

5.1.2. Age

The age analysis reveals a predominant presence of public and private sector employees aged between 24 and 28, reflecting the tendency of institutions to favor younger, more productive individuals. Conversely, there's a lower representation of respondents aged 60 to 64, as they are nearing retirement age and deemed less productive. Typically, younger individuals with long-term outlooks allocate income towards retirement savings, while parents may save for their children's well-being. Consequently, those with stable incomes often manage to set aside savings, emphasizing the importance of financial planning across different life stages.

5.1.3. Education Level

In Dili, there is a diverse educational background among civil servants and private employees, as evidenced by the analysis of 353 questionnaires. The breakdown reveals that the majority hold undergraduate degrees (57.51%), followed by senior high school education (28.05%), while only a small percentage have primary school education (0.85%). Additionally, most respondents are employed in the public

sector, accounting for 71.67% of the total participants, while the private sector constitutes 28.33%. These findings underscore the varied educational attainment and occupational distribution among individuals surveyed, providing valuable insights into the workforce composition in Dili.

5.1.4. Sectors Types

Organizations are not disclosed in the results. This distribution of employment sectors indicates a predominant presence of participants working in public sector roles, reflecting the unique employment landscape in the study's context. The deliberate omission of organizational details underscores the research's commitment to maintaining confidentiality while providing valuable insights into the broader employment dynamics among the surveyed individuals.

5.1.5. Income Level

Among the 353 respondents, income distribution varies significantly, with the most common bracket being between \$251 and \$386, encompassing 41.08% of employees. This range mainly comprises ordinary staff, indicating a prevalence of lower-ranking positions. Interestingly, while higher income levels generally correlate with higher savings, this isn't necessarily the case for public and private employees in Dili. Instead, their income often caters to immediate needs, leaving minimal room for substantial savings. In some cases, higher incomes may even spur increased spending, reflecting a desire for consumption rather than saving.

5.1.6. Number of Dependents

The survey categorized respondents based on the number of dependents they have, revealing that the largest group consists of individuals with 4-6 dependents, comprising 46.5% of respondents. Following closely, 30.6% had 7-9 dependents, while 15.3% had 10 or more dependents, with only 7.6% falling into this category. This data suggests that having a significant number of dependents, particularly between 4-6 individuals, can notably impact inflation rates, potentially leading to financial strain due to increased expenses on daily necessities. Consequently, this financial burden may influence the saving behavior of public and private employees in Dili, highlighting the interconnectedness between dependents, inflation, and saving habits.

5.2. Inflation

The analysis of respondents' technical knowledge reveals a positive outlook on changes in the money supply, with 65.10% of public and private employees agreeing that alterations in money supply influence their spending and saving decisions (MS5), while 55.30% believed the central bank has maintained an optimal level of money supply (MS1). Regarding inflation, 62.60% believed that interest rates play a crucial role in managing inflation (IR3), with 40.50% believing the current interest rates are favorable for economic growth (IR1). The data suggests a general agreement among respondents regarding inflation, with the highest average value assigned to the MS5 indicator. This indicates that both government and private employees in Timor Leste associate inflation with the circulation of money, leading to price and service increases. Conversely, the lowest average value is recorded for the IR1 indicator, suggesting that public and

private employees in Dili believe that low deposit interest rates influence saving behavior, contributing to increased money circulation and subsequent price rises.

5.3. Income Inequality

The technical knowledge of respondents revealed significant concerns about income inequality, with 60% of public and private employees expressing worry about the level of income inequality in their society (GC2), which stood out as higher compared to other indicators. Additionally, 55% perceived the current income distribution as unfair (LC3), while 56.90% believed that individuals and communities should actively engage in efforts to alleviate poverty (PR4). Furthermore, 54.4% observed positive wage growth in their industries or occupations (LMI3), and 54.1% believed there is a substantial gap between the rich and the poor in terms of income. The responses highlight a consensus among government and private sector employees in Dili that diminishing poverty levels can lead to a more inclusive society and improve quality of life. This underscores the reciprocal relationship between poverty prevalence and income inequality, with poverty significantly impacting the existence of income disparities within the population.

The descriptive analysis of retirement planning among public and private employees reveals significant agreement in certain areas. Specifically, 70.6% believe in setting specific targets for retirement savings to achieve their desired lifestyle in retirement (RT3), supported by Dorn and Hanson (2013). Conversely, 62.6% value the importance of setting aside money specifically for retirement (RT1), showing lower agreement. For precautionary savings, 68% recognize the significance of setting aside money for unexpected expenses (PC1), while 56.6% emphasize constantly contributing to emergency savings (PC2).

In terms of bequest, 64% value preserving wealth for future generations (BQ1), but only 49.8% seek professional advice for effective planning (BQ5). Regarding current consumption, 72.8% prioritize savings for clear financial goals (CC3), and 63.4% invest for the future over unnecessary expenditure (CC4). For self-control, 69.1% are able to resist temptation and avoid unnecessary purchases (SC3), but only 55.8% value resisting impulsive spending and making thoughtful financial decisions (SC1). Finally, in investing in a variety of assets, 66.3% believe in monitoring market conditions and making necessary changes (IVA5), while 54.4% actively invest in a variety of assets. The highest average value was observed in question number 1 of the Current Consumption Indicator (CC1), where participants prioritize saving money for future needs over immediate consumption, reflecting a desire for financial autonomy and freedom from debt (Autor, Dorn, & Hanson, 2013; Besustringue et al., 2023; Dorn & Hanson, 2013).

5.5. Financial Literacy

The descriptive analysis indicates a positive financial orientation among public and private sector employees, with notable percentages expressing familiarity with financial market trends (FAW4), confidence in making informed investment decisions (FK2), and prioritizing saving and budget adherence (FTA). Furthermore, a significant portion believes in managing money responsibly and avoiding excessive debt (FC2), while also demonstrating responsible debt management and savings practices (FB2, FB5). The highest average score was observed in question number 1 of the Financial Awareness Indicator (FAW1), emphasizing the importance of understanding one's personal financial situation. These findings underscore the significance of financial literacy in achieving various life

objectives, including education, retirement savings, debt management, and investment strategies (Dorn, & Hanson, 2013; Besustringue et al., 2023).

5.6. Reliability and Validity

Reliability tests are performed to demonstrate the instrument's level of accuracy, consistency, and accuracy in measuring the construct. When using the Smart-PLS 4.0 instrument to test a construct's reliability, the indicators Composite Reliability and Cronbach Alpha are recommended. The Cronbach Alpha and Composite Reliability values of a variable are greater than 0.6 (Hair et al., 2014 and Hair et al., 2017). According to the reliability test results, all of the indicators employed in this study are stated to be reliable because they met the standards, specifically the Cronbach's Alpha and Composite Reliability values are greater than 20.60 (Hair et al., 2014 and Hair et al., 2017).

Cronbach Alpha and Composite Reliability results are reliable. To assess the discriminant validity between constructs,

we used Fornell-Larcker criterion. This method states that the construct shares more variance with its indicators than with any other construct. To test this requirement, the AVE of each construct should be higher than the highest squared correlation with any other construct (Hair et al., 2014). Our results shows that the values of AVE of each construct represented by bold numbers is higher than the highest squared correlation with any other construct as recommended by Hair et al. (2014), therefore, all constructs are valid measured based on the Fornell- Larcker criterion.

5.7. Hypothesis Test

Four hypotheses in this study employ SMART-PLS 4.0 to evaluate the direct association between variables. Path coefficients (T and P values) are the parameters used to evaluate them. According to Hair et al. (2014) and Hair et al. (2017), the significant influence of two variables can be recognized if the T value is greater than 1.96 and the P value is less than 0.05.

Table I. T and P Values for Hypothesis Test (Direct Effect)

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics	P Values	Note
Inflation -> Saving Behavior (Sb)	0.017	0.017	0.060	0.285	0.775	Not Significant
Income Inequality (II) -> Saving Behavior (Sb)	0.103	0.096	0.066	1.560	0.119	Not Significant
Inflation (Inf) -> Financial Literacy (Fl)	0.242	0.244	0.063	3.851	0.000	Significant
Income Inequality (II) -> Financial Literacy (Fl)	0.585	0.593	0.055	10.629	0.000	Significant
Financial Literacy (Fl) -> Saving Behavior (Sb)	0.705	0.720	0.054	13.021	0.000	Significant

Table II. Mediation Effects (Specific Indirect Effects)

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T Statistics	P Values	Note
Inflation -> Financial Literacy (Fl) -> Saving Behavior (Sb)	0.170	0.176	0.048	3.536	0.000	Significant
Income Inequality (Ii) -> Financial Literacy (Fl) -> Saving Behavior (Sb)	0.412	0.426	0.050	8.264	0.000	Significant

The indirect effect test results reveal that the T-statistic of 3.536 indicates a statistically significant relationship between inflation, financial literacy, and saving behavior. The low P-value of 0.000 the P-Value is less than the level of significance of 0.05 suggests strong evidence that the relationship between inflation and saving behavior is statistically significant through the mediation of financial literacy. Based on the result, we have evidence to support H6. It appears that inflation has a statistically significant positive impact on saving behavior among employees in the Public and Private Sectors in Dili, Timor-Leste, and this effect operates through the mediation of financial literacy.

The T-statistic of 8.264 indicates a highly statistically significant relationship between income inequality, financial literacy, and saving behavior. The low P-value of 0.000 confirms that the relationship between income inequality and

saving behavior is statistically significant through the mediation of financial literacy. Based on the result, we have strong evidence to support H7. It appears that income inequality has a highly statistically significant positive impact on saving behavior among employees in the Public and Private Sectors in Dili, Timor-Leste, and this effect operates through the mediation of financial literacy.

The results of the hypothesis tests strongly support both H6 and H7. The data suggests that both inflation and income inequality have positive impacts on saving behavior among Public and Private employees in Dili, Timor-Leste, and these impacts are mediated by financial literacy. This implies that employees with higher financial literacy are more likely to save money, and both inflation and income inequality can contribute positively to this behavior when financial literacy is considered as a mediator.

6. Discussion

Timor-Leste, despite being a relatively young nation since gaining independence in 2002, has faced significant economic challenges and opportunities. Situated in Southeast Asia, the country relies heavily on imports to meet its domestic consumption and investment needs. This reliance is evident in the substantial amount spent on importing goods, with the total monetary value reaching approximately 872.68 million U.S. dollars in 2021, marking a significant increase from previous years (Asian Development Bank, 2023).

The nation's domestic production capacity is constrained due to its tumultuous recent history marked by political conflicts and inter-group clashes, particularly involving martial arts factions. Political discord and conflicts have hindered the formulation of cohesive policies essential for economic growth. Additionally, confrontations between martial arts groups have further complicated Timor-Leste's challenges, impacting infrastructure required for manufacturing and production activities (United Nations Comtrade database, 2021).

Public and private sector employees in Dili, the capital of Timor-Leste, play crucial roles in the economy and society. However, significant income inequality between these sectors poses challenges, as evidenced by low saving behavior among the population. Research aims to investigate the reasons behind this disparity and its implications for economic stability (Index Mundi, 2023).

Financial literacy plays a crucial role in shaping saving behaviors in Timor-Leste. Inflation, income inequality, and financial literacy are interconnected factors influencing individuals' saving decisions. Financially literate individuals are better equipped to navigate economic challenges, such as inflation, and are more likely to engage in prudent financial behaviors (Trading economics, 2023).

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This study introduces a comprehensive framework to understand the interplay between inflation, income inequality, financial literacy, and saving behavior in Timor-Leste. By examining these factors collectively, the research offers insights into the complexities of the country's economic landscape and proposes strategies to promote financial well-being and economic stability among public and private sector employees (Van Rooij et al., 2011).

While the study revealed that there was no significant effect between inflation and saving behavior, it underscored the significant relationships between inflation and financial literacy, income inequality and financial literacy, and financial literacy and saving behavior. Notably, the study also highlighted the positive impact of both inflation and income inequality on saving behavior through financial literacy. These insights contribute to the existing body of knowledge, offering

policy-makers and organizations in Dili, Timor-Leste, valuable guidance in developing strategies to promote financial literacy and cultivate a culture of saving among employees in both the public and private sectors, thus fostering greater economic resilience and prosperity.

7. Conclusions and Implications

Despite the inflationary environment in Dili, Timor-Leste, inflation does not significantly affect the saving behavior of public and private sector employees. Instead, other factors such as family responsibilities and modest incomes play a more influential role. Many respondents use their entire income for essential purchases, leaving little for savings. The cultural tendency towards conspicuous consumption among higher-income groups also reduces the inclination to save among lower-income individuals, highlighting the need to understand spending dynamics and cultural attitudes towards consumption.

Financial literacy emerges as a critical factor in managing finances effectively amid inflation and income inequality. Those with strong financial management skills show resilience to inflation and develop better saving habits through goal setting, budgeting, and informed decision-making. Financial literacy mediates the relationship between inflation, income inequality, and saving behavior, empowering individuals to save despite economic challenges. This underscores the importance of financial education in enhancing financial stability and promoting effective financial planning and decision-making among employees in Dili, Timor-Leste.

The study emphasizes the crucial role of financial literacy in mitigating the adverse effects of inflation and income inequality on saving behavior. Tailored financial education programs can empower individuals, particularly lower-income groups, to manage their finances better and enhance their saving habits. Policy-makers should address income inequality by increasing access to financial education, thereby boosting financial resilience. Support mechanisms for low-income families, such as subsidies or financial aid, can alleviate financial pressures and encourage saving, while financial education programs should aim to shift cultural attitudes towards more sustainable consumption and spending behaviors.

To protect savings from the eroding effects of high inflation, strategies like promoting investment in inflation-protected securities or assets are beneficial. Encouraging proactive financial planning and informed decision-making through practical financial management skills is also crucial. Employers can support this by offering financial literacy workshops and resources to their employees. Addressing economic disparities involves creating more opportunities for skill development and higher-paying jobs, which can help local workers improve their earning potential and save more effectively. Continuous research and monitoring of financial behaviors and literacy levels can inform targeted interventions, while collaboration between academic institutions, government agencies, and financial organizations can develop comprehensive strategies to enhance financial literacy and promote sustainable saving behaviors in Dili, Timor-Leste.

8. Limitation and Future Research

This research faces limitations that warrant careful consideration. Firstly, the use of an accidental sampling method and reliance on questionnaires for data collection may introduce response bias, potentially leading to misrepresentation of income inequality and saving behavior data. Secondly, the research's geographic confinement to Dili limits the generalizability of findings to other districts within Timor-Leste, as Dili's unique characteristics may not fully represent the country's economic dynamics. To address these limitations, future studies should employ more robust sampling techniques and diverse data collection methods to enhance reliability and generalizability. Additionally, expanding the research's geographical scope to include a broader sample of districts could offer a more comprehensive understanding of income inequality and saving behavior across Timor-Leste.

9. Recommendations

Based on the total mean of each indicator, several recommendations emerge. Firstly, future research endeavors should delve into additional factors that play a significant role in shaping saving behavior, considering that the variables employed in this study only account for approximately 63.40% of the overall variance. Investigating a broader range of factors could provide a more nuanced understanding of saving behavior dynamics and inform more effective strategies for promoting savings and financial well-being. Secondly, it is recommended that the government of Timor-Leste consider raising salaries and minimum wages in response to inflation to ensure that the income of the workforce keeps pace with the rising cost of living, thus contributing to economic stability and improved living standards. Additionally, policy measures such as price controls on imported goods and strengthening domestic production in sectors like agriculture, industries, tourism, and local enterprises could mitigate the impact of inflation and income inequality. AFAESA should strengthen operations to control the quality and price of goods in the market, while policymakers and organizations in Dili, Timor-Leste, should develop strategies to promote financial literacy and saving culture among employees in both sectors. Furthermore, future research should incorporate focus group discussions to validate responses and minimize data bias, with a broader geographical scope covering all 13 districts in Timor-Leste to facilitate better generalization of findings. Lastly, concerted efforts from the government, religious institutions, and community leaders are recommended to reduce the costs associated with cultural practices, aiming to allocate greater resources towards children's education and overall well-being, thereby elevating the standard of living for Timorese families.

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