

The Impact of Dollarization on Consumption and Savings Behavior in Dili Timor-Leste (Case Study: Permanent Civil Servants)

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ABSTRACT

Dollarization is adopting the U.S. dollar as the currency of choice in a foreign country. A small nominal value of the dollar pushed the price in the market becomes more expensive. Coupled with the community of Dili, Timor-Leste that the behavior of consumption is very high because it always gives more priority to their culture. Saving behavior of Timorese people affect by three factors: the low price (using U.S dollar), income and culture. Therefore, this research aims to identified the effect of dollarization on consumption behavior and saving behavior of permanent civil servants in Dili, Timor-Leste. We use 315 samples in our research and the data collection through questionnaires. SMART-PLS 3.0 was used to test hypothesis. The result showed that dollarization has the positive and significant effect on the consumption behavior of permanent civil servants in Dili, Timor-Leste. Therefore, dollarization has positive and significant effect on saving behavior of permanent civil servants in Dili, Timor-Leste.

Keywords: Dollarization, Consumption Behavior, Saving Behavior, Mental Accounting, Self-Control.

1. Introduction

The concept of "dollarization" originally referred to the demand for foreign currency, particularly the US dollar, among Latin American countries. However, by the 1990s, dollarization also started to describe the use of the US dollar as a legal currency in a country. Generally, dollarization refers to the trend of citizens in an economy choosing foreign currencies over the domestic currency, driven by their financial decisions. This can be seen as natural to a certain extent, but a sudden shift in the pattern may indicate economic or political distress (Misu, Güleç and Selim Duramaz, 2020) Timor-Leste is a new country that adopted the US dollar as its official currency in 2000 after obtaining a referendum from Indonesia in 1999. Dollarization in Timor-Leste was implemented by the UN Transitional Administration in 2000 but was not implemented until early 2001. Although the US dollar was designated as the official currency in January 2000, the Indonesian Rupiah and Australian Dollar are still widely used in Timor-Leste.

In Ecuador and Timor-Leste, national coin series have been fully converted to U.S. dollars, leading to a significant increase in the use of coins. However, this widespread adoption of the dollar brought new challenges. Initially, it was found that the U.S. coins were not widely accepted by the general public, causing difficulties in low-value transactions. To overcome this, a decision was made in 2003 to replace these coins with new national coins in five different denominations. The new coins featured clearly legible numerals and cultural or product-related motives that

reflected the heritage of Timor-Leste. The coins quickly became a success and greatly facilitated the eventual actual phasing out of the rupiah (Lönnberg and Jácome, 2010). Currently, Timor-Leste is still very dependent on the supply of goods from Indonesia from groceries to fuel. However, the policy of the government of Timor-Leste to adopt the US dollar as the currency of the State of Timor-Leste resulted in a decline in the purchasing power of the people, especially in Dili. As a result, Timor-Leste is currently ranked 181 out of 216 countries in the world with a Gross Domestic Product per capita in Timor-Leste is US\$1,458 in 2021 (World Bank, 2022). Recently with the economic development experienced by the Timor-Leste government with business activities through export and import of goods using the US dollar currency payment instrument, GDP until 2021 has increased by 1.96 billion (Macro-trends, 2022).

According to the standard life-cycle model, individuals and their households determine their consumption expenditures in a given period by maximizing expected discounted life-time utility under a life-time budget constraint. Many extensions have added empirically relevant features to the standard model, such as liquidity constraints, habit formation, a bequest motive, endogenous labor supply and retirement, etc. Still, there seems to be broad consensus in the literature that standard life-cycle models based upon expected utility maximization cannot explain several features of observed behavior in economic experiments as well as observational data on actual consumption choices (Shefrin and Thaler, 1988; Levin, 1998). This has led to the introduction of behavioral life-cycle models, in which a

traditional version of the life-cycle model is enriched with behavioral features that can explain deviations from optimal behavior in the choices that agents make. Most of these studies use behavioral arguments to predict how observed behavior differs from what the life-cycle model predicts and then present reduced form empirical evidence in line with the predictions. More structural models that incorporate the behavioral features into the empirical life-cycle model are scarce. The alteration in income caused by retirement is a major factor influencing an individual's saving and dissaving patterns throughout their life-cycle. Even in countries like the Netherlands where most employees automatically accumulate pension wealth through a mandatory occupational pension, many retirees have to use private savings to meet their financial retirement goals (Knoef *et al.*, 2014). The last few decades, research on the adequacy of retirement savings has focused on explaining the discrepancy between predictions of life-cycle models and observed individual or household saving behavior (Banks, Blundell and Tanner, 1998; Lusardi, 2003; Lusardi, 2003) and ways to increase individuals' voluntary pension contributions, exploiting insights from behavioral economics (Madrian and Shea, 2001; Yoong *et al.*, 2019).

Shibuya, Hashimoto and Yano (2002) explain that the greater a person's income, will lead to greater the consumption expenditure. The ratio of the amount of consumption expenditure to additional income is the marginal propensity to consume (MPC). While the amount of additional income is called the marginal desire to save (Marginal to Save, MPS). In household consumption expenditure there is a minimum consumption for the household, namely the amount of consumption expenditure that must be made, even though there is no income. This household consumption expenditure is called autonomous consumption expenditure.

The culture of the East Timorese society is very strong with customs such as *Fetosan-Humane*, *Lia-mate*, *lia-moris*, *belis* (dowry) and *koremotan* reflecting very extravagant consumption behavior. It has become a culture in this country that if a man wants to marry a woman, the groom's family must give a large amount of dowry (buffalo, horse, pig, cash, gold, etc.) Because it is believed that in this way, a strong friendship will occur between the two families from generation to generation. Moreover, if a family has died (*lia mate*, *lia moris*) then each relative must gather and donate funds in the form of money or other forms (animals). Of course, this reduces the savings rate of the people of Timor-Leste. As we know that income, consumption, and saving have a close relationship.

As far as we know, this is the first study to examine the impact of dollarization on the consumption and saving behaviors of permanent civil servants in the city of Dili, Timor-Leste using a unique, hand-collected and database as a contribution to the complexities of currency substitution and its effects on the broader economy. This study makes a

particular contribution to the literature on dollarization impact on consumption and saving behavior like Timor-Leste by showing that the dollarization has a significant and positive impact on consumption and saving behavior, and also contributes to deepening knowledge about dollarization in general.

2. Theoretical Frameworks

2.1. Definition Dollarization

According to Reilly, (2020) dollarization is the process through which residents of a country decide to use the dollar in addition to or instead of the home currency. He adds that the costs which the dollarizing country may encounter besides losing a symbol of its nationhood, the currency, are inevitable: first, the highest cost of dollarization would be being deprived from monetary discretion. In other words, if either country experiences a shock, the dollarizing country will be left with few alternatives for mitigating the consequences. Second after dollarization, when the central bank gets in financial trouble must either seek credit from the issuing country or pay the consequences of its damage. Reilly (2020) In his article, "The unique dollarization case of Lebanon", the authors highlight that the dollarization case of Lebanon is unique due to the banking system's high level of foreign currency liquidity and the central bank's high gross international reserves which contrast with its poor and often negative net international reserves (Reilly, 2020; Bitar, 2021).

2.2. Currency Substitution View

In the early 1970s, dollarization was purely a currency substitution process. In the past, many Latin American nations resorted to replacing their currencies with the United States dollar (USD) to prevent hyperinflation, as noted by (Zoryan, 2005) cited by Catão and Terrones (2016). The currency substitution theory, which considers foreign currency as a means of safeguarding against inflation, has faced significant criticism due to the fact that dollarization in Latin America was linked to high inflation levels. After dollarizing, the countries achieved low and stable inflation rates, but they still continued with dollarization in the 1990s, even after the decline and stabilization of inflation rates.

2.3. Asset Substitution View

The asset substitution view refers to foreign currency being used as a store of value (Yeyati and Sturzenegger, 2001). In the absence of official dollarization, entities and individuals can opt for foreign currency denominated assets rather than local domestic currency denominated assets to safe guard their value, known as asset substitution (Feige, 2003). Financial dollarization is a form of asset substitution. The risk associated with asset substitution is the mismatches

in the balance sheet. Asset substitution is also referred to as asset dollarization (Zoryan, 2005) Cited by (Catão & Terrones, 2016).

2.4. Quality of Life of People With Disabilities

The optimum currency theory is divided into two theories, namely the old OCA theory and the new OCA theory.

a) The Old OCA Theory

The old OCA theory uses various key performance indicators (KPIs) to assess the effectiveness of dollarization/euroization for various countries. The key performance indicators (KPIs) consist of factor mobility, integration through fiscal transfers, as well as real and financial integration. There is a positive correlation between dollarization and factor mobility, integration via fiscal transfer, and real and financial integration (Imam, Kpodar, & Kramarenko, 2010) Cite in (Fikri, Amir and Achmad, 2014). Islamic banking: how has it diffused? As noted by (Lebdaoui and Wild, 2016) Cited by Imam, Kpodar, and Kramarenko (2010), factor mobility pertains to the capacity to transfer factors of production - such as labor, capital, or land - from one production process to another or even between different countries.

b) The New OCA Theory

The theory underlines that dollarization is negatively related to inflation and interest rates. This means that dollarization lowers inflation and interest rates, as these will be aligned to the anchor economy (Winkler, 2004). The new OCA theory integrates the Maastricht Treaty of 1992, which stipulates that inflation rates and bond yields ought to be maintained at low levels and should be consistent across all member nations, according to (Chlond, 2018). The adverse variance on the budget should not exceed a 3% threshold while a benchmark of below 60% has been set on the debt to GDP ratio (Chlond, 2018). The new OCA is a performance measurement tool for all member states in a monetary union to control any fiscal imbalances that might arise (Chlond, 2018). There is a positive correlation between dollarization and fiscal discipline and or current account balances. This means that the future debt obligations of a government might not vary significantly from the future income streams, thereby creating surpluses in the balance of payments (BOP) (Winkler, 2004).

2.5. Disadvantages of Dollarization.

Yeyati and Sturzenegger, (2001) state that there are some substantial shortcomings to adopting a foreign currency. When a country gives up printing money on its own, it loses its ability to directly affect the economy, including the right to manage monetary policy and any form of money exchange rate regime. The central bank lost its

ability to collect 'seigniorage', the profit obtained from the issuance of a currency (in printing the cost of money is reduced by the true value of that coin). In contrast, the US Federal Reserve collects seigniorage, so that local governments and gross domestic product (GDP) as a whole lose income.

2.6. Advantages of Dollarization

Dollarization efforts are taken by a country to avoid the risk of exchange rates, differential interest rates, and excessive inflation rates. However, in the process of implementing full dollarization, the conditions that must be met first are the availability of sufficiently high foreign exchange reserves, a solvent banking system, sound government finances, and a flexible wage system. To monitor the circulation of the US dollar currency, the Banking Committee of the United States Senate drafted the International Monetary Stability Act (IMSA) of 2000. The bill addresses the calculation of the profit ratio of "seigniorage" received by America and the adopting country of dollarization. It also emphasized that the Federal Reserve does not have to assist countries experiencing a crisis to act as lenders of the last resort. In addition to reducing risks and protecting against inflation and devaluation, there are several compelling reasons for a country to decide to give up in many ways over economic control. As already mentioned above, full dollarization makes investors act positively, to reduce the attack of speculation on the local currency and exchange rate. The result is a more stable capital market, a sudden flow of final capital that can be issued, and a balance of payments that is less prone to crises Last but not least, full dollarization can boost the global economy by allowing for easier economic integration into world markets (Yeyati and Sturzenegger, 2001).

2.7. Consumption Behavior

In an economy, household consumption is very important component in aggregate spending. The consumption includes household expenses to buy necessities of life such as food and beverages, clothing, vehicles, house rental, entertainment, education and medicine. Consumption is an activity with a purpose reduces or depletes the use value of a goods or services in order to fulfill life necessities (Hanum, 2017). Research on the analysis of public consumption in Indonesia has previously been carried out of the several studies that have been carried out are about public consumption in Indonesia and these studies include (Fikri, Amir and Achmad, 2014), Research with the title Consumption Analysis in Indonesia in 1989-2002 (Review of the Keynes and Post Keynes Hypothesis). After data analysis using multiple linear regression, several conclusions were produced. The calculation results based on the PAM model, long-term elasticity is greater than short-term. This means that long-term elasticity is no longer affected by

previous consumption expenditures. Based on classical assumption tests there were no symptoms of multicollinearity, heteroskedasticity, and autocorrelation (Fikri, Amir and Achmad, 2014).

2.7.1. Factors Affecting Consumption Behavior

According to Hanum, (2017) Cited by Manurung and Rahardja (2004:34). There are several factors that influence the amount of consumption expenditure, namely: economic factors, demographic factors (population), non-economic factors. In addition, according to Putong and Adjaswati as cited in (Hanum, 2017) there are several factors that influence consumption, namely: level of income and wealth, interest rates and speculation, thrifty attitude, Culture, lifestyle (showing off, prestige and going with the flow) and demonstration effect, state of the economy. Using more recent data, (Madrian and Shea, 2001) Bernheim, Skinner, and Weinberg (1991) again document that consumption exhibits a sharp drop at the time of retirement and an even more pronounced decline post-retirement. Most importantly, they find a strong negative correlation between retirement savings and the magnitude of the consumption drop; consumption falls sharply for those with little wealth. Recent studies, including Lusardi, (2003) Cited by Hurd and Rohwedder (2003) and Ameriks, (Lusardi, 2003b) cited by Caplin, and Leahy (2002), contradict these conclusions by revealing that households anticipate a decline in their consumption during retirement. It remains uncertain whether this expectation stems from the expenses related to working, the escalation of household production of goods and services when workers retire (Lusardi, 2003a) cited by Aguiar and Hurst, (2003), or the insufficient amount of wealth that households have by the time they retire.

According to Tin, (2000) cited by Attanasio, Banks, Meghir, and Weber (1999) and Gourinchas and Parker (1999), incorporating family size into the analysis can help eliminate the "excessive" correlation between consumption and income over the working life, but it is also necessary to incorporate a precautionary motive. In contrast, (Browning and Crossley, 2001) cited by Browning and Ejrnaes (2000) discovered that if the numbers and ages of children are taken into account, assuming that older children result in higher expenditures than younger ones, then prudence is not required, and all of the inverted U-shape in consumption can be attributed to the presence of children.

2.8. Savings Behaviors

According to Keynes (1936) as cited in (Tin, 2000) and (de Carvalho, 2016), there are 8 different motives for saving, namely: (1) Precaution (preventive measures), which implicate increasing reserves to face unforeseen circumstances; (2) Foresight (future review), to anticipate the difference between income and future expenditure expenditures (the life-cycle motive); (3) Calculation, want to

obtain benefits (interest on money); (4) Improvement, raising the standard of living for a long time; (5) Independence, shows the need for freedom and power to do things; (6) Enterprise, the presence of freedom to invest money when it allows (supports); (7) Pride, more focused on putting money for heirs (the bequest motive); and (8) Avarice (greed of property) or real stinginess. Pension *et al.*, (2003) Cited by Meanwhile, Browning and Lusardi (2001) added a down-payment motive, namely the desire (desire) to accumulate the entire money to be used as a means of payment for expensive and durable goods such as houses or cars.

One of the important ones according to the economic theory of savings is the life cycle hypothesis put forward by Browning and Crossley, (2001) cited by (Modigliani and Brumberg, 1992), in which individuals save for a handle at the end of their lives when they no longer earn income. In this context, the main motivation that drives the individual to save is the desire to accumulate money to use when he retires. While the development of this hypothesis is the permanent income (Friedman, 1957), where the motivation for saving is for inheritance (*Bequest motive*).

Several studies that have been carried out have found that there are differences in motivation to save. Camerer, Loewenstein and Rabin, (2004) Cited by Katona (1975) found that in the 1960s in the USA people saved because to deal with emergency things (sick, unemployed), reserve needs, old age or retirement, children's needs, buying a house or durable goods and for vacations. Few say that saving to earn income in the future or leaving money for inheritance. Recent findings by Yuji and Watanabe, (1997) cited by Kotlikoff (1989) state that about 30% of family savings in the USA can be explained through motive precautionary nature, for example in the form of anxiety about their old age. It is also found in the Netherlands and Sweden. Meanwhile, (Johnson, 1999) found that there was a motive for anticipating emergencies and the education of his children in Asians. Yuji and Watanabe, (1997) Cited by Horioka and Watanabe's (1997) research in Japan discovered that Japanese individuals save money for two primary reasons: to prepare for pensions and to be cautious. Families in Australia say the motive for saving is for retirement, vacation and prevention reasons as well as home investment, paying bills, children's education and purchasing durable goods. While the motive for bequeathing property is less important among them (Harris, Loundes and Webster, 2002). According to (Webley and Nyhus, 2006), the British prioritize saving for the future, while Israelis and Italians prioritize saving for their children's education and health. Despite this, evidence suggests that even the poor have a significant latent demand for savings. Household surveys show that the poor have some surplus, which they allocate to non-essential expenses (Banerjee and Duflo, 2007). However, only 22 percent of adults globally reported saving with a formal financial institution in the past 12 months, and 77 percent of adults

earning less than \$2 per day do not have an account with a formal financial institution (Demirgüç-Kunt and Klapper, 2012).

Shefrin and Thaler, (1988) proposed the Behavioral Life Cycle Hypothesis (BLCH), which suggests that individuals adjust their behaviors as they move through different stages of their life cycle. They take into account various factors, such as demographic characteristics, economic conditions, and uncertainty about the future, to estimate their expected sources of income over their lifetime. Based on this, they determine their permanent income and maximize their overall satisfaction over time by balancing their present and future consumption through savings and resource allocation.

According to Shefrin and Thaler, (1988), BLCH is a continuation of the theory of "Joint Life Cycle Permanent Income" first expressed by (Friedman, 1957) in his article entitled The Theory of Consumption Function and Ando and Modigliani and Brumberg, (1992) in his article The Life Cycle Hypothesis of Saving Aggregate Implications and Tests in the American Economic Review. Camerer and Loewenstein, George Rabin, (2004) Cited by Sherfin and Thaler (2004) states that it was (Friedman, 1957) who first defined permanent income as the annuity value of the lifelong income that the individual expects (Individual's expected lifetime income).

(Alnaa and Matey, 2022) Cited by Richert-Kaźmierska (2019), Life cycle theories of savings and consumption are economic theories that explain how saving and consumption behavior changes during different phases of the human life cycle. These theories can be broadly categorized into two approaches. The first approach, called the life cycle hypothesis (LCH), focuses on the relationship between savings and consumption and the average level of income over a long period of human life. The second approach, known as the behavioral life cycle hypothesis (BLCH), emphasizes the role of psychological factors, such as self-control, willpower, mental accounting, and framing effect, in shaping individual saving and consumption behavior over time.

The Theory of the Life Cycle of Behavior which is based on actual behavior (Based on Actual Behavior) has the following points simulated:

a) Mental Accounting

BLC has the basic assumption that households mentally separate income and wealth in a rule called the Great Simplification of Actual Mental Accounting Rules or a large simplification of a mental accounting rule, where there is a mental accounts system characterized by a different Marginal Propensity to Consume (MPC), namely:

- Current income, is a mental accounting that can be spent immediately for examples such as dividend payments or small windfall.

- Assets Income, for example, the child's education until he reaches college age.
- Future Income

However, the real reality is not that simple, because in reality various sub-accounts are labeled which are sometimes ambiguous, for example, dividend payment sub-accounts whether they are included as asset income or current income as well as extraordinary income sub-accounts (Windfall) for small windfall tend to be categorized into current income while the larger windfall is categorized into asset income. Retirement by others is categorized as current income because it can be consumed immediately, but some others categorize it as future income. The whole mental accounting apparatus being presented here can be thought of as part of an individual's solution to these problems. For example, the rule of thumb to restrict monthly expenditures to no more than monthly income is clearly non-optimal (Grinblatt and Han, 2005; Faff, Mulino and Chai, 2008 cited by Thaler; Rajagopal and Rha, 2009).

As noted in the literature review, the study incorporates three concepts from the behavioral life cycle hypothesis (BLCH) - current income, current assets, and future income - and another concept, mental budgeting, is used to evaluate the impact of mental accounting among Indian households (Sweeney *et al.*, 2013) cited by Mahapatra *et al.*, (2010). The conceptual framework proposes that mental accounting is a second-order factor that is influenced by current income, current assets, future income, and mental budgeting (see Figure 1).

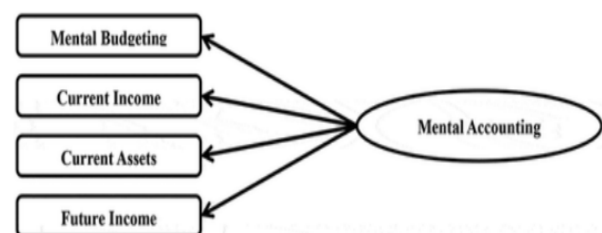


Figure 1. Conceptual Frame Work

b) Framing over Permanent Income

The decomposition of wealth into the account as described above is called framing. Adjustment of savings rates depending on how changes in wealth are framed or described (*Lump sum* vs. *Annuity*) (Frank, Levine and Dijk, 2014).

c) Self-Control

The temptation to spend (consume) is assumed to be the largest for current income and the weakest for future income. Individuals who are more advanced in their life cycle have increased self-control to delay consumption in the coming period. In BLC there is willpower related to the so-called problem of "overeating" or "over pending" or problems related to "overeating" or "overspending" so that appear the

so-called constellation pains vs pleasure or "pain" and "pleasure" (Camerer and Loewenstein, George Rabin, 2004) cited by (Sherfin and Thaler, 2004).

d) Character "Doer" and "Planner"

Each person is assumed to simultaneously exhibit a decision that behaves consistently with two pairs of characters coexistent with each other, but inconsistent preferences. One preference is represented by the character "Doer", and the other is indicated by the character "Planner" (Thaler, 2008).

One of the important elements relates to the decomposition of BLCH into household wealth into a series of mental accounts (Shefrin and Thaler, 1988) cited by Kahneman (1984). One simple and stylized version of a mental accounting system divides wealth into three components: current spendable income, current assets, and future income. The decomposition of mental wealth is an example of framing.

Without regard to the primary use of "account balance" in mental accounts, BLCH indirectly proposes that any tax changes should be framed in the context of expected gains and losses obtained from the present and future with current income, current assets, and mental accounts of future income. Something that is felt to have a relative effect on determining permanent income.

Thaler, (2008) propose a more comprehensive BLCH model, which suggests that current income can be subdivided into multiple sub-accounts, each serving a specific purpose. For example, households may create a separate sub-account for their children's education until the child reaches college age. However, there is ambiguity regarding how households manage changes in their wealth. While asset income is usually considered as a current asset, dividend payments may be treated as current income instead.

2.8.1. Prediction Model in BLCH

This model is based on the basic assumption that BLCH individuals seek to maximize lifetime satisfaction as they advance in the life cycle.

Behavioral life cycle theory according to Shefrin and Thaler, (1988) assumes that people classify assets into three mental accounts: current income, current assets, and future income by (1) exerting self-control, which has increased in deferring consumption to later periods; (2) mentally segregating income into different accounts (called mental accounts) that make a difference in the marginal propensity to consume (MPC); and (3) adjusting their saving rate based on the profits and losses perceived in the three accounts, namely: current income, current assets, and future income. Everything that is felt to permanently affect the relative price between these accounts will affect the return on savings (Thaler, 2008a).

3. Hypothesis Development

3.1. The effect of Dollarization on Consumption Behavior.

Currently Timor-Leste is very dependent on the supply of goods from Indonesia, Singapore, Australia, Portugal, Vietnam, China, Korea and Myanmar so that the market prices from time to time continue to increase which is very difficult for the Timor-Leste government to control. Even though Timor-Leste currently has the "Lei Tributaria" Law which regulates the price of goods on the market, business people still increase the price of an item according to their own wishes. The use of the US dollar also triggers the price of goods to become expensive, but the people of Timor-Leste, who generally have high consumption behavior, continue to make purchases of goods and services on the market (Housen, Hopkins and Earnest, 2014).

The culture of the East Timorese society is very strong with customs such as *Fetosan-Humane*, *Lia-mate*, *lia-moris*, *belis* (dowry) and *koremetan* reflecting very extravagant consumption behavior. It has become a culture in this country that if a man wants to marry a woman, the groom's family must give a large amount of dowry (buffalo, horse, pig, cash, gold etc.) Because it is believed that in this way, a strong friendship will occur between the two families from generation to generation. Moreover, if a family has died (*lia mate*, *lia moris*) then each relative has the obligation to gather and donate funds in the form of money or in other forms (animals). Of course this reduces the savings rate of the people of Timor-Leste. As we know that income, consumption and saving have a close relationship (World Bank, 2001). In some cases, the satisfaction derived from present consumption outweighs the benefits of saving for the future. However, various studies conducted in developed countries suggest that people make appropriate decisions regarding savings and consumption over the course of their life (Knoef *et al.*, 2014) cited by (Scholz., *et al.*, 2006). Nevertheless, there is still ongoing debate about the accuracy of these findings (Juster *et al.*, 2004) cited by (Poterba *et al.*, 2013).

H1 : Dollarization makes Civil Servants in Dili Timor-Leste More Consumptive.

3.2. The Effect of Dollarization on Saving Behavior

The saving behavior of the people of Timor-Leste is influenced by three factors, namely: low prices (using the dollar as the official currency), income and culture. The first factor is that the people of Timor-Leste see that the nominal value of the dollar is relatively small, so they think that the price of goods is cheap so that their consumption behavior increases. So a lot of money is spent to buy consumer goods and this reduces the allotted money to be saved in the bank. For the people of Timor-Leste it is easier to spend 10 USD

today than to spend 100,000 IDR during the Indonesian occupation (Sweeney *et al.*, 2013).

The second factor is the people of Timor-Leste who have a fixed income every month, the money spent on consumption remains the same or even increases. It can be said that if income is fixed but consumption needs increase then all income is used to meet current consumption needs so there is no more money to save. So people decide not to save in the bank because if they don't make a deposit every month, the money in their savings will be cut off, if it continues like that, over time the money will run out by itself.

3.2. The research Model

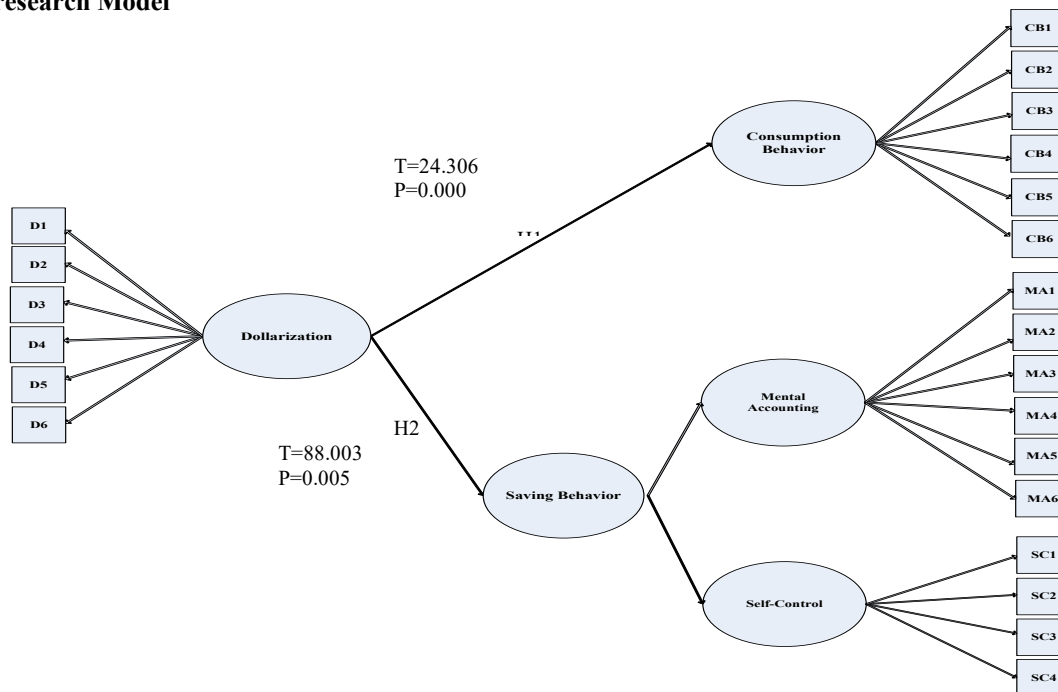


Figure 2. The Research Model

4. Research Methods

This research was carried out in Dili from October to November 2022. The total of population is 12,258 permanent civil servants, the formulas that can be used according to (Hair *et al.*, 2014). The sample selected was 373 people from permanent civil servants who were worked in the 12 ministries and 6 Public institutions (Ministry of Finance, Ministry of Health, Ministry of Justice, PNTL, F-FDTL, Ministry of Infrastructures, Ministry of Agriculture, Ministry of Education, INDMO, Ministry of Internal, SEFOPE, Ministry of Transportation and Telecommunication, Ministry of Foreign affairs, Ministry of Higher Education, Ministry of Solidarity and Inclusions, Ministry of Estate, Prime Ministry Cabinet and CNEFP) at Dili. The sample size of 373 above the minimum required by the SMART-

The third factor is Timor-Leste's culture, which is very strong in its customs and traditions, encouraging people to keep their own money at home because when needed, it can be used immediately. For example, a man who wants to marry a woman must be able to give a dowry (*belis*) in the form of cash, a number of animals, and gold to the bride's family. This culture has been passed down from generation to generation and all the necessities for the wedding party must be prepared by the groom's family.

H2 : Dollarization has a Negative effect on the Saving Behavior for Civil Servants in Dili Timor-Leste.

PLS 3.0 rule of thumb of ten times the largest number of inner model paths directed at a particular construct in the inner model (Hair *et al.*, 2014; Andrei *et al.*, 2017). The Five Scale Likert of survey questionnaire was used to collect the data. The survey instrument was developed from previous studies using a scale from 1 (Strongly disagree) to 5 (Strongly agree) for respondents. All items of dollarization adopted from Yeyati and Sturzenegger (2001), consumption behavior from Hanum (2017), (Fikri, Amir and Achmad, 2014), Lusardi, (2003) cited by Aguiar and Hurst (2003) and Browning and Crossley (2001). Mental accounting (MA) and self-control (SC) were used to measure the saving behavior, which were originally proposed by (de Carvalho, 2016) cited by Keynes (1937) and further discussed in literature by Tin (2000), (de Carvalho, 2016), (Madrian and

Shea, 2001) cited by Browning and Lusardi (2001), Modigliani and Brumberg (1954), Sherfin (2004), (Grinblatt and Han, 2005), Thaler, (2008), (Rajagopal and Rha, 2009), and (Camerer and Loewenstein, George Rabin, 2004) cited by Shefrin and Thaler (2004).

We used accidental sampling to distribute our questionnaires to permanent civil servants who were willing to be respondents. Each respondent was asked to answer the questionnaire about the effect of dollarization on their consumption behavior and saving behavior after the US dollar was officially used in 2000 until now. We distributed 373 questionnaires to the permanent civil servants all around Dili specially whom worked at the ministries but at the end we only obtained 315 (84.45%) questionnaires from our respondents and 58 (15.55%) questionnaires are not returned.

SMART-PLS 3.0 was used to test reliability, validity and hypotheses. This statistical computer package is widely used for small sample sizes (of up to 30 participants), formative/reflective indicators, multi-variable analysis, data normality required, and collinearity testing (Hair *et al.*, 2014; Saldanha *et al.*, 2018, 2019). Cronbach's Alpha (CA) and composite reliability (CR) were used to test reliability (Hair *et al.*, 2014; Saldanha *et al.*, 2018). The convergent validity was tested using indicator loading or outer loading (OL) and average variance extracted (AVE) (Hair *et al.*, 2017). Discriminant validity testing used Fornell-Larcker criterion (Hair *et al.*, 2014) and heterotrait-monotrait (HTMT) (Henseler *et al.*, 2015). Hypothesis test was carried out by using path coefficient (T and P values) observing direct and indirect effects from bootstrapping calculation (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

From the result shows that out of 315 respondents who were permanent public servants in Dili, 157 (49.8%) were men, while 158 (50.2%) were women. This indicates that women dominate the permanent civil servant positions in several ministries including Ministry of Finance, Ministry of Health, Ministry of Justice, PNTL, F-FDTL, Ministry of Infrastructures, Ministry of Agriculture, Ministry of

Education, INDMO, Ministry of Internal, SEFOPE, Ministry of Transportation and Telecommunication, Ministry of Foreign affairs, Ministry of Higher Education, Ministry of Solidarity and Inclusions, Ministry of Estate, Prime Ministry Cabinet, and CNEFP, in Dili, compared to men in this study.

5.1.2. Age

From the result the age distribution of permanent civil servants in Dili, with the majority falling between the ages of 21 to 40. Specifically, 19 respondents (6.0%) were less than 20 years old, 124 (39.4%) were between 41-60 years old, and only 8 respondents (2.5%) were over 60 years old. The prevalence of civil servants in the 21-40 age group indicates that this age range is the most productive in terms of work output for the various government ministries and agencies included in this study. These ministries and agencies comprise the Ministry of Finance, Ministry of Health, Ministry of Justice, PNTL, F-FDTL, Ministry of Infrastructures, Ministry of Agriculture, Ministry of Education, INDMO, Ministry of Internal, SEFOPE, Ministry of Transportation and Telecommunication, Ministry of Foreign affairs, Ministry of Higher Education, Ministry of Solidarity and Inclusions, Ministry of Estate, Prime Ministry Cabinet and CNEFP.

5.1.3. Working Duration

The duration of work is the time offered by a civil servant in performing his or her functions and responsibilities in the government institutions in Dili. Long-term work transforms staff into reliable in the execution of work. The characteristics of the respondent based on the duration of the work on the result shows the distribution of respondents according to the duration of their work as permanent civil servants in Dili. It can be observed that the majority of the respondents have been working for more than 10 years, with the highest percentage (34.9%) falling in the category of 11-15 years of working duration. On the other hand, those who have been working for less than 5 years and those who have been working for over 16 years have the lowest and second-lowest percentage, respectively. This result indicates that the respondents, who are civil servants in various ministries, have significant work experience in their respective fields.

5.1.4. Total of Family

The family is composed of two or more people associated by marriage and living together in one place. Family is very important in consumption and savings behavior. In addition, the family is an unity of use and purchases lots of products for consumption. The number of family-dependent family members in family life can affect the level of consumption that the family must spend because of their increasing needs. The characteristics of the respondents based on the total family can be shows that the

majority of respondents, with a percentage of 50.6%, had a total family size of 1-5 people, totaling 159 people. Meanwhile, 156 respondents, comprising 49.5%, belonged to families with 6-10 members. This suggests that, like in many other Asian countries, permanent civil servants in Dili, Timor-Leste tend to have larger family sizes. This is significant in terms of consumption behavior, as the number of family members can impact the level of expenditure required to meet their needs.

5.1.5. Wage Rates

Wages are compensation for services using the production factors that the domestic sector and the company own through wages, rent, and profit. The family or domestic income of a permanent civil servant in Dili will determine the consumption, savings, and levels of domestic well-being expenses. According to the results, there were 20 respondents in Grade A with a wage rate of USD 571-742, representing 6.3% of the total respondents. The majority of respondents were in Grade D, with 121 individuals and a wage rate of USD 272-324, making up 38.4% of the total. The lowest level of wage was in Grade G, with only 0.9% and 1.5% of respondents receiving a wage rate of USD 115-175. Overall, the data shows that there is a range of wage levels among civil servants in various ministries such as Finance, Health, Justice, Agriculture, and Education in Timor-Leste.

The results demonstrates that most permanent public servants in Dili, across various ministries such as Finance, Health, Justice, and others, strongly agree with the use of the US dollar as a means of transaction, with a percentage of 77.8%. This indicates that the majority of public servants in Dili use the dollar in their daily transactions, as the US dollar is the main currency in Timor-Leste. However, the indicator with the lowest response rate was the perception that the value of the US dollar remains constant ($1 \$ = 1 \$$), with a response rate of 55.5%.

5.2. Consumption Behavior

In this research, consumption behavior is a process and activity when people are related to subsistence, choose, buy, use, as well as the assessment of products and services complying with needs and desires. Consumption behavior in the indicator (CB1) I am satisfied with the value of the currency (currency) of US dollars to purchase goods with high price, (CB2) I am satisfied with the amount of salary (US dollars) so that can increase my self-confidence to spend on my consumption, (CB3) I am always satisfied with making transactions using the US dollars to maintain my lifestyle. (CB4), I always have the satisfaction of making credit when I don't have money to buy a good that I want (CB5), I always receive information from others about transaction requests using the U.S. dollar based on the higher

price and (CB6) I always buy goods (often) after receiving income (bonus in money, per diem, fees etc.).

The instrument used for the statement was 1 = Strongly disagreed (SD); 2 = disagreed (D); 3 = neutral (N); 4 = agreed (A); 5 = Strongly agreed (SA).

The technical knowledge of the respondents indicated that the positive factor was their perception towards credit, with 63% of permanent public servants agreeing that they were satisfied with making credit when they had no money to buy something they wanted (CB4), which was higher compared to other indicators. In terms of consumption behavior, 53% of permanent public servants said that they always receive information from others about transaction requests using the U.S. dollar based on the higher price (CB5).

5.3. Saving Behavior

In this research, savings behavior is the conscience of each individual for his own money. savings are related to the daily need for permanent public servants who want to purchase the goods they have experienced.

The results of the mental accounting savings behavior survey are as follows: (MA1) I allocate my routine wages directly to important needs. (MA2) I differentiate the use of my monthly wages from losses, fees, and other expenses. (MA3) I consider my routine wages more valuable than income from bonuses, losses, and other sources. (MA4) I always think carefully about how to use my monthly income. (MA5) I carefully plan my monthly budget for investment. (MA6) I always keep some money for emergency activities (*lia moris/lia mate*).

The descriptive analysis shows that permanent public servants strongly agree with statement (MA5), with 66.1% of respondents saying that they carefully plan their monthly budget for investment. Additionally, 47% of respondents agreed with statement (MA6), indicating that they always keep some money for emergency activities.

The analysis of the descriptive data above indicates that the "Saving" indicator that received the highest agreement from permanent public servants in Dili is "I always consider the main needs first" with a percentage of 65.4%, compared to other indicators. This suggests that before saving their income, these public servants prioritize their important needs based on the allocation of their monthly salaries for one month's consumption needs.

5.4. Reliability and Validity

Outer models are measured using the following parameters: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Abd Razak, Ab Rahman and Borhan, 2016). To test the reliability of the measurement model, composite reliability (CR) and *Cronbach's Alpha* (CA) values are used to ensure the reliability of the measurement model using Algorithm

SMART-PLS 3.0. Table 5.4.1 shows that the CR and CA values of all items exceed the threshold point of 0.7 (Hair *et al.*, 2017; Cepeda-Carrion *et al.*, 2019), therefore, all items are reliable to be used in this model.

Table 1. Reliability Test Using SMART-PLS 3.0

Item	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
CB	0.837	0.863	0.880	0.553
Dlr	0.849	0.860	0.890	0.576
MA	0.828	0.833	0.875	0.541
SB		1.000		
SC	0.736	0.756	0.835	0.562

In general, there are two validity tests, namely convergent validity and discriminant validity. Convergent validity is measured by outer loading (OL) or indicator loading, and average variance extracted (AVE). AVE and OL values of all items should be above the threshold values of 0.5 and 0.7 respectively to demonstrate an acceptable degree of convergent validity (Hair *et al.*, 2017). Figure 3 shows the OL values of all items exceed the threshold values

of 0.7, and AVE values as shown in Table 1. Exceed the threshold values of 0.5. Therefore, all items are valid to use in this model based on convergent validity test.

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). Table 2 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.

Table 2. Discriminant validity Test based on Fornell-Larcker Criterion

	CB	Dlr	MA	SB	SC
CB	0.744				
Dlr	0.758	0.759			
MA	0.635	0.671	0.735		
SB	0.666	0.700	0.935		
SC	0.594	0.612	0.712	0.913	0.750

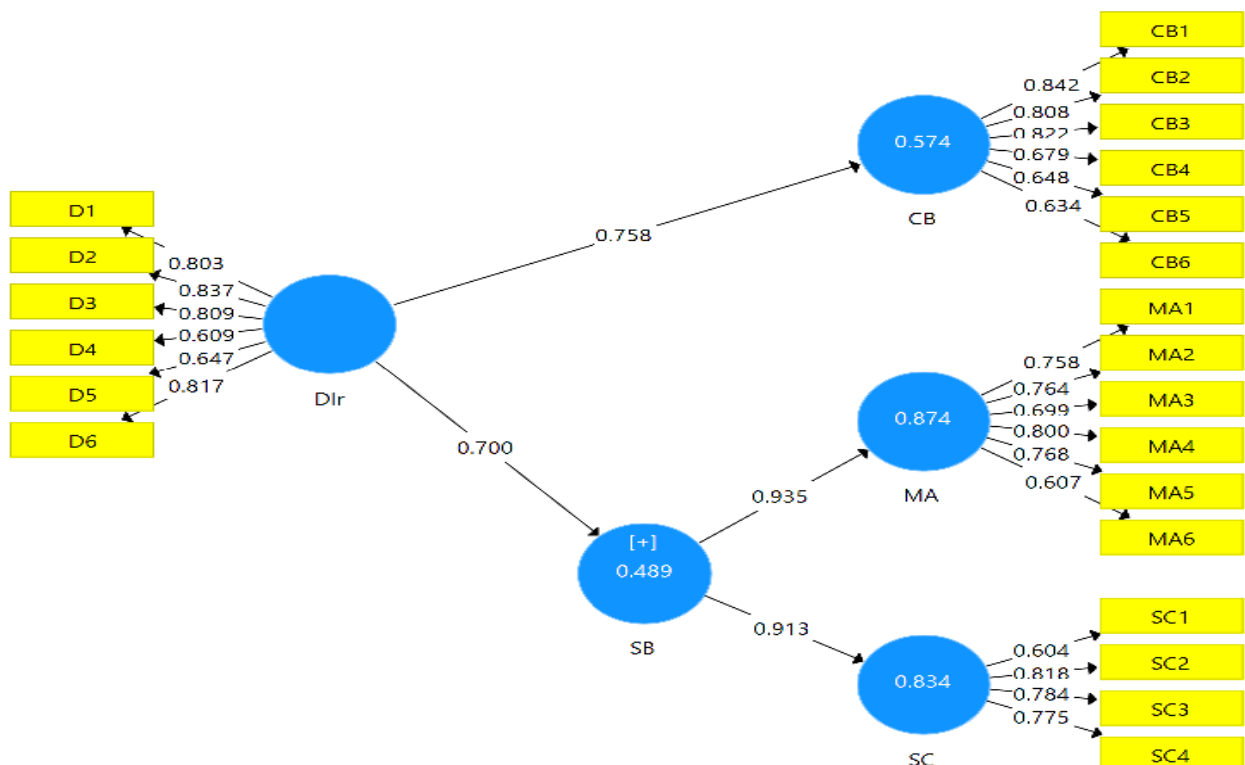


Figure 3. Outer loading for Convergent Validity Derived from Algorithm SMART-PLS 3.0

Discriminant validity was also measured by using *heterotrait-monotrait* (HTMT) with the threshold values of all items below the threshold point of 0.85 (Henseler *et al.*, 2015). Table III shows that HTMT values of all items are below the maximum point of 0.85, therefore, this model is valid based on discriminant validity (HTMT.₈₅).

Table 3. Values of heterotrait-monotrait (HTMT)

	CB	Dlr	MA	SC
CB				
Dlr	0.876			
MA	0.780	0.802		
SC	0.764	0.769	0.903	

From the table 3. showed that each variable with the variance value for each indicator are greater compare with others variables. Therefore the average variance extracted (AVE) values for each variable (construct) in highest square correlation with the other variable (construct) (Hair Jr. *et al.*, 2017). Based on the result using PLS 3.0 showed that the value of AVE for each variable with the highest construct using Fornell Larscker test as showed at the table above.

Table 4. Presents the Results of Path Coefficient Test for The Overall Sample to Examine Hypotheses H1 and H2 Using SMART-PLS 3.0.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/ST DEV)	P Values	Note
Dlr -> CB	0.758	0.760	0.031	24.306	0.000	Supported
Dlr -> SB	0.700	0.706	0.037	18.994	0.000	Supported
SB -> MA	0.935	0.935	0.011	88.003	0.000	Not Supported
SB -> SC	0.913	0.912	0.016	58.648	0.000	Not Supported

Accordingly, the relationship between Dollarization (Dlr) and Consumption behavior (CB), the T value (24.306) and P value (0.000), in which the T value is beyond the minimum threshold value of 1.96, and the P value is below than the maximum allowable value of 0.05 (Table 5.5) as recommended by Hair *et al.* (2014) and Hair *et al.* (2017). Therefore, hypothesis one (H1) is supported. The relationship between Dollarization (Dlr) and saving behavior (SB), using the T value (18.994) and P value (0.000) is shown above (Table 5.5). This shows that the T value beyond the minimum threshold value of 1.96 and the P value below the maximum threshold value of 0.05 means that dollarization (Dlr) has a positive and significant effect on saving behavior (SB). Therefore, hypothesis two (H2) is not supported. The dollarization has a significant effect on the saving behavior through mental accounting (MA) using the T value of (88.003) and P value (0.000) and self-control using the T value of (58.648) and P value (0.000).

The description as below:

- The AVE value for consumption behavior with the threshold value (0.744) is greater than the CB for variable or another indicator at the column.
- The AVE value for Dollarization with the threshold value (0.758) is lower than the variable or other indicator at the column.
- The AVE value for Mental Accounting with the threshold value (0.635) is lower than the variable or other indicator at the column.
- The AVE value for saving Behavior (0.666) is greater than the variable or other indicator at the column.
- The AVE value for Self Control (0.594) is greater than the variable or other indicator at the column.

Based on the indicators value that described in the table above showed that all data that used in this research are valid to measure all variables. It is mean that indicator for each variable can be used to test the relationship between the inner model test.

5.5. Hypothesis Test

6. Discussion

The objective of this research is to test the impact of dollarization on the consumption behavior of permanent civil servants in Dili, Timor-Leste. The results showed that dollarization had a positive and significant impact on the consumption behavior of permanent civil servants in Dili, Timor-Leste. To measure the consumption behavior we used six indicators that showed that dollarization affected the permanent civil servants in Timor-Leste capital city, which became more consumptive to purchase goods and service to maintain their life styles. Economists who developed Life-Cycle Saving and Investing theory state that, individuals should have an understanding about how are they going to make spending and saving decisions to develop a better retirement life (Chaffin, 2013). First, they seem to be happy with the value of the US dollars if compare to Indonesian rupiah. Second, they are satisfied with their salaries that they received in US dollars. Third, they are pleased with the

transaction using US dollars. Fourth, the permanent civil servants are satisfied to have credit when they do not have money to purchase goods or services that they wanted. Fifth, they always received the information from others about the request to make transaction using US dollars and lastly, they always purchased continually when they have more money (bonuses, per-diem, fees etc). The use of the US dollar also triggers the price of goods to become expensive, but the people of Timor-Leste, who generally have high consumption behavior that prioritize their culture such as *fetosan-humane*, *lia mate-lia moris*, continue to make purchases of goods and services on the market. This result is supported by the (Cleveland and Laroche, 2007); Soren Askegaard, Eric J. Arnould (2005); (McCracken, 1986) that culture is recognized as the most profound influence on consumer behavior. Also Shibuya, Hashimoto and Yano, (2002) showed that our attitudes and behaviors are pervasively, yet subtly, shaped by our cultural makeup even though we are not usually consciously aware of how culture impacts on our lives.(Ogden, Ogden and Jensen Schau, 2004); (Walters, Phythian and Anisef, 2007) defined in order to express cultural categories and principles, to cultivate ideas, to create and sustain lifestyles, and so on. As a consequence of varying values, beliefs and lifestyles, behavioral differences are evidenced across cultures like Timorese culture such as *fetosan-humane* and *lia mate-lia moris*.

The consumption behavior of permanent civil servants is influenced by several demographic variables, including gender, age, working duration, and family size. Women make up the majority of permanent civil servants, and research has shown that they tend to invest their financial resources more conservatively and are more risk averse than men. Additionally, the majority of respondents are between the ages of 21-40 and have been working as civil servants for 6-15 years, indicating that they are in their prime working years and may want to enjoy their lives. Despite having low salaries at the D and E levels, permanent civil servants have high consumption behavior due to the larger family responsibilities that women typically bear. Overall, these findings are supported by previous studies conducted by (Bajtelsmit and Bernasek, 1997); (Embrey and Fox, 1997); (Faff, Mulino and Chai, 2008); cited by Grable (2000); Hallahan, Faff, & McKenzie (2004); (Hinz, McCarthy and Turner, 1996); (Neelakantan, 2010); and (Yuh and Hanna, 1997).

The second objective of this research is to test the dollarization impact on the saving behavior of permanent civil servants in Dili, Timor-Leste measured by mental accounting and self-control. Our findings indicate that dollarization has a positive and significant effect on the saving behavior of permanent civil servants, leading to a greater desire to save. We used six indicators of mental accounting to measure saving behavior, and found that dollarization made permanent civil servants in Dili, Timor-

Leste more responsible with their income. Despite having low incomes, the majority of permanent civil servants were able to save due to their strong mental accounting practices, as evidenced by a T-value of 88.003, which exceeded the minimum threshold of 1.96. Specifically, our study revealed that routine wages were allocated directly to important needs, while monthly wages were used differently from bonuses, per-diem, fees, and other sources of income. Permanent civil servants viewed routine wages as more valuable than income from other sources and carefully planned their monthly budget as an investment. They also always had contingency money set aside for emergency activities, such as *lia moris* and *lia mate*.

Others variables demography that affect the saving behavior are the gender because the majority of the permanent civil servants are women (50.20%) and men (49.80%) it means that woman become more accountable and saving more and also the majority of the respondents are 21-40 years old it is mean most of them are productive so they want to save some of their income so they can enjoy their life in the future. This result is supported by (Agnew and Szykman, 2011) described that whether women are more or less likely than men to spend less than their income or to save regularly is unknown. Another factor that affects the saving behavior of permanent civil servants is the majorities of the respondents are working for 6-15 years as civil servants and still have changes to save more in the future. (Brinig, 1995) and (Gneezy and Croson, 2009) have found that the gender difference in risk-taking is highest at the age of 30, which is in line with evolutionary theories suggesting that men tend to take more risks during their reproductive years, while women tend to be more risk-averse during their childbearing years. Moreover the permanent civil servants have low salary at the level D and E with salary around US\$ 272 and US\$ 204 even their consumption behavior is high because most of them have 1-5 family members (50.50%) and 5-10 family members (49.50%) but some of them still prioritize their saving for better life. (Pension *et al.*, 2003) conclude that every employee is responsible for his own savings decisions in order to have sufficient retirement fund at their retirement age. Although the minimum wages of permanent civil servants in Dili Timor-Leste is low but they have motivation to save some of their income every month. This result is supported by the (Shariff and Isah, 2019) in their study found that income level seems to be an important determinant of saving behavior. It is supposed that a household with a higher income level tends to save more compared to those who earn less money. Individuals who seem to be more patient have indeed been found to save more (Lusardi, 2003a). (Bisin and Verdier, 2000), (Bisin, Topa and Verdier, 2004), and (Fernandez *et al.*, 2004) found that the parent-child social transmission of ethnic, religious and labor supply preferences. There is some evidence that the social transmission of behavior from parents to their children may extend to risk and time preference parameters, although

there is not much detailed evidence to support this idea (Bisin and Verdier, 2000); (Bisin *et al.*, 2008). (Juster *et al.*, 2004) found that much of the variation in saving behavior remains unexplained, even after controlling for demographic and socioeconomic characteristics of the household. These findings are consistent with other research on planning and savings, such as Ameriks, (Lusardi, 2003b) cited by Caplin, and Leahy (2003) and Hurst (2003), as well as studies that suggest that savings and consumption choices can be influenced by negative shocks experienced by family members, as demonstrated by (Madrian and Shea, 2001) and (Lusardi, 2003b) cited by Cox, Ng, and Waldkirch (2003).

7. Conclusions And Implications

The results of this study concluded that the dollarization has significant and positive impact on the consumption behavior of permanent civil servants in Dili, Timor-Leste. Timor-Leste has adopted a national coin series, which is fully convertible to U.S. dollars in their respective countries. However, early on, it was discovered that the general public was not readily accepting U.S. coins, making low-denomination payment transactions challenging. To resolve this issue, newly minted national coins were introduced in 2003, with clear numerals and motives connected to Timorese culture or well-known products. These coins quickly gained popularity and facilitated the eventual phasing out of the rupiah. Although permanent civil servants in Dili, Timor-Leste use U.S. dollars for their daily transactions, particularly for consumption and savings, the level of dollarization in savings is a natural occurrence in a successful market. However, with the increasing prices of goods, the value of money may decrease, which could directly impact the consumption and saving behavior of permanent civil servants in Dili, Timor-Leste.

The permanent civil servants after of using US dollar for their consumption behavior is very moderate because they using their lower income to purchase the goods that they need and save aside some of their income as well. Other factors that affect their saving behavior are mental accounting and self-control. Individuals should have an understanding about how are they going to make spending and saving decisions to develop a better retirement life. Although the minimum wages of permanent civil servants in Dili Timor-Leste is low but they have motivation to save some of their income every month. The majority of the permanent civil servants are good on manage their decision to spend or save their current income wisely so in the future they can face their retirement with a good financial condition. The advantage of using US dollar also helps the Timor-Leste government against the attack of speculation on the local currency and exchange rate in the future.

The study of the impact of dollarization on consumption and savings behavior is unique both theoretically and

practically as it addresses a highly relevant and under-researched topic in the field of economics. Theoretically, this study contributes to the existing literature on the economics of money by examining the effects of dollarization on two key macroeconomic variables - consumption and savings. This helps to expand our understanding of how currency substitution can impact the overall economy, particularly in developing countries where dollarization is often a common phenomenon.

Practically, the results of this study have significant policy implications for countries undergoing or considering dollarization as a solution to address inflation and exchange rate instability. The findings can inform policymakers about the potential impacts of dollarization on consumer behavior and provide insights into the potential benefits and drawbacks of currency substitution. Additionally, this study also provides a theoretical framework for future research on the topic, which can be used to guide further investigation into the micro-level effects of dollarization and its impact on various segments of the population. In summary, the uniqueness of this study lies in its contribution to both the theoretical and practical aspects of the economics of money, and its potential to inform policy decisions related to dollarization.

8. Limitation and Future Research

This research has numerous limitations. First, this study used an accidental sampling method and used questionnaires for data collection which rely entirely on the response of permanent public servants, who may misrepresent data in order to protect their consumption behavior and saving behavior. Therefore, for future research, we recommend to also unseen-depth interviews and focus group discussions to validate responses from permanent public servants or permanent employee in Private Sector to minimize the data bias. Second, this research was only carried out in the Dili which may be difficult to generalize to other districts. Therefore, future research needs to be undertaken in 12 districts and Oecusse in Timor-Leste to allow better generalization about the dollarization across the region. Third, this study only used primary data. For future research, we recommend to use a secondary data. The study can further be extended to analyze the influence of the mental accounting system in various financial decisions i.e. managing cash flow, investment decisions, insurance planning, retirement planning, etc. Further understanding of research-based choices and investors' preferences can also be explained.

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