

THE IMPACT OF PSYCHOLOGICAL, ECONOMIC, SOCIAL ASPECTS, AND INTEREST RATE VARIATIONS ON WORKING MILLENNIALS' SAVING PATTERNS THROUGH DIGITAL BANKING

Mr. Christopher M. Ataza

Graduate Student
Polytechnic University of the Philippines
Email: atazachristopher7@gmail.com
ORCID ID: <https://orcid.org/0009-0005-4219-272X>

Ms. Mary Ann B. Porcel

Graduate Student
Polytechnic University of the Philippines
Email - maryannporcel57@gmail.com
ORCID ID - <https://orcid.org/0009-0002-2081-1807>

Ms. Ladylyn F. Resabal

Graduate Student
Polytechnic University of the Philippines
Email - ladyyyresabal@gmail.com
ORCID ID - <https://orcid.org/0009-0006-5320-9168>

Mr. Andy Evans G. Sandoval

Graduate Student
Polytechnic University of the Philippines
Email - sandovalandyevans@gmail.com
ORCID ID - <https://orcid.org/0009-0000-2988-7328>

Assoc. Prof. Cresilda M. Bragas

Chief of Research and Extension, PUP CBA-Graduate Studies,
Polytechnic University of the Philippines
Email - cmbragas@pup.edu.ph
ORCID ID - <https://orcid.org/0000-0002-4095-1738>

Abstract

The objective of this research is to determine the significance of various factors including, psychological aspects, economic aspects, social aspects, and interest rate variations, that influence the saving patterns of working millennials through digital banking. The research was conducted using survey questionnaires from a stratified random sample of 51 working millennials who have bank accounts in Metro Manila, Philippines. Results showed that

Editorial Record

First submission received:
July 25, 2024

Accepted for publication:
August 14, 2024

psychological aspects ($Beta = 0.430$, $p\text{-value} = 0.006 < 0.05$) and interest rate variations ($Beta = 0.878$, $p\text{-value} = 0.000 < 0.05$) were statistically significant and had a positive effect on the saving patterns of working millennials through digital banking. However, social aspects ($Beta = -0.182$, $p\text{-value} = 0.016 < 0.05$) had a negative effect. To where the values of many factors that has been discover, this will be served as the foundation in creating the regression model to be represented as of the $y = (0.430)P + (-0.130)E + (-0.182)S + (0.878) + (-0.01)$, which will assist the bank managers in optimizing their personalized offers for the saving patterns of working millennials.

Keywords: Digital Banking; Economic; Financial Literacy; Interest Rates; Millennials; Psychological; Savings; Social

Cite this article

Ataza, C., Porcel, M., Resabal, L., Sandoval, A., & Bragas, C. (2024). The Impact of Psychological, Economic, Social Aspects, and Interest Rate Variations on Working Millennials' Saving Patterns Through Digital Banking. *Sachetas*, 3(3), 1-14. <https://sachetas.in/index.php/Sachetas/article/view/290>

INTRODUCTION

With the emergence of digital banking, there has been a revolutionary shift in how working millennials in the Philippines handle their finances in the ever-changing world of finance. For Filipinos, a new era has been brought about by the convenience of access to the financial services, facilitated by the widespread utilization of cell phones and seamless internet connectivity. The proliferation of mobile banking applications, enabling customers to interact with financial services whenever they choose, has particularly highlighted this shift. By providing higher interest rates on savings accounts, most digital banks have become significant rivals to traditional banking institutions in the Philippine financial sector. Since interest rates have a substantial influence on customers' financial decision-making, their significance cannot be overstated. They essentially represent the incentive that banks provide to their clients for depositing money in savings accounts. The study by Co & Centeno (2023) explores the complex interactions between psychological factors and social influences affecting the financial behavior of millennials, building on earlier research that examined the factors influencing the shift from traditional banking to online financial services (Jünger & Mietzner, 2019). Thus the complex relationship between the interest rate changes and the digital banking platform in saving habits of the Filipino working millennials is the main subject of this study.

This study intends to identify the psychological, economic, social, and interest rate fluctuations that influence the saving behaviors of working millennials using digital banking. It also investigates the role that personal psychological factors play in influencing saving practices when utilizing digital banking services. The study examines how changes in interest rates impact saving habits and asserts that these changes have a significant effect on respondents' evaluations of the frequency and amount of savings made using digital financial services. The study is crucial because advancements in understanding the changing financial environment for this group of people will offer insightful information to researchers, legislators, and financial institutions serving working millennials.

The decisions to improve banking services, advance financial inclusion, and raise financial literacy are informed by this study. By revealing a complex correlation between the fluctuations of interest rate and the saving habits, this research will support decisions designed to enhance financial inclusion, banking services, and financial literacy. The study functions as a research endeavor with implications that extend beyond the Philippines and is situated within the global discourse on the ways that the digitalization is upending consumer behavior and the financial institutions.

The study's scope includes a thorough evaluation of working millennials' saving habits using quantitative approaches, such as Cronbach's alpha, with a focus on the influence of the changes in interest rates. This research focuses on consumer perspectives and provides helpful insights into financial behavior within the digital financial landscape while acknowledging limitations such as potential sample bias and the dynamic nature of the digital banking ecosystem.

REVIEW OF RELATED LITERATURE

Factors Affecting Consumer Savings Patterns of Working Millennials

The financial lives of millennials are replete with challenges and opportunities related to saving practices that stem from a variety of factors, such as their ideals, financial habits, and personal circumstances. Co and Centeno (2023) highlighted the considerable differences in financial access that exist across Filipino households, especially for individuals of working age. Notably, the study discovered that social factors, particularly those involving close family members, significantly impact banking preferences. The study also emphasizes a crucial involvement of the psychological factors in shaping people's financial habits, including attitudes and perceived behavioral control. These psychological aspects are highlighted in addition to the customary emphasis on demographic elements, presuming that a more thorough apprehension of the intricate dynamics affecting the financial decision making of Filipino customers. The researchers make assumptions about how social and psychological factors affect workers' saving behaviors.

Psychological Factor

Income level is a main factor that affects savings; however, other factors must also be considered, such as individual thought processes and decision-making (Swasdpeera & Pandey, 2012). Saving is a constant commitment that requires self-discipline (Jumena et al., 2022). People manage their finances by setting different goals and dividing their income between essential needs and pleasures. One popular method is to allocate a portion of earnings for daily expenses and put the rest toward savings. However, when problems arise, people often prioritize short-term gains over long-term benefits, complicating human ability to accumulate savings. Rey – Ares et al. (2021) claim that the financial habits are influenced by self-control with those who may possess more self-control perhaps in saving more money. Human nature aims to maximize pleasure and minimize pain, making saving less pleasurable; postponing spending for gratification can cause discomfort for the individual (Swasdpeera & Pandey, 2012).

Social Factor

The social aspects greatly influence the financial decisions of working millennials, particularly regarding saving money. Peer influence affects how individuals save by discussing financial management matters (Hartono & Isbanah, 2022). This active connection between peers can shape the financial practices of millennials. According to Jamal et al. (2015), parents must discuss finances with their children to motivate and teach valuable skills in handling finances. According to the research by Angela et al. (2022), the biological parents will positively influence their kids in saving choices and how their behavior influences them. The intricate network of social relationships that influence the monetary choices of young workers today is evident in how much their friends and family affect these decisions.

Economic Factor

Higher rates of savings help a country achieve faster economic growth by using them as investments (Ribaj & Mexhuani, 2021). Millennials faced hard economic times, which changed their methods of managing money, including their saving, spending, and investing habits. People often save more money when the economy is good because they earn more and have secure jobs. According to Jumena et al. (2022), two factors influence savings: the amount of income received by an individual and the amount consumed. Higher income levels result in more savings, while lower income results in less savings.

As per (Swasdpeera & Pandey, 2012), in economic declines marked by reduced incomes and increased unemployment, make it very hard to save money. During such periods, individuals prioritize their urgent needs over saving due to financial uncertainty. The researchers hypothesize how economic factors influence working millennials' behavioral intentions.

Interest Rate

The amount that the bank or other financial institution pays the depositor for keeping their money in savings account is known as the interest rate on savings. Financial institutions generate their revenue from loans and investments, which are financed by depositors. They offer interest to encourage customers to keep their money in savings accounts. A contrary conventional in macroeconomics models in consumer judgments regarding the saving that are more influenced by nominal interest rates than the real interest rates, according to the study by Felici et al. (2022). The level of nominal interest rates determines how savings pattern react to changes in interest rates; savings respond positively at high levels and decline as nominal rates fall. The older and the less educated customers are blamed for the decline in policy efficacy in a low interest rate setting, to highlighting the need for the increase of financial literacy and the awareness of low and negative nominal interest rate policies. The researchers hypothesize that interest rates significantly affect the respondents' saving patterns.

Conventional logic suggests that lowering interest rates can discourage savings and encourage consumption or investment, as low interest rates may reduce the incentive for saving due to lower returns (Aizenman et al., 2017). Consequently, a mature financial market and an aging population may influence the correlation between interest rates and savings volatility. Among industrial and emerging economies, nominal rates lower than 2.5% show a substitution effect, whereas, in Asian market economies, rates below 2.5% affect income differently. Furthermore, when interest rates drop below 1.5%, there tends to be increased volatility, potentially affecting private savings in many developing countries.

It is a general practice of the Central Bank of the Philippines to increase interest rates to counter inflation. This trend shows that exchange rate stability is a more important measure than controlling inflation (Ugarte, 2020). In this study, the Central Bank of the Philippines significantly contributes to interest rate behaviors. It confirms that the interest rate response to the convertibility movement plays a significant role in these changes. The paper also emphasizes, how important the Philippine Central Bank in managing the exchange rate and currency value. It shows that inflation is an accurate measure related to interest rate-setting behavior in the Philippines. Consequently, the Central Bank of the Philippines maintains a heightened awareness of goods and prices to keep them stable as interest rates fluctuate, ensuring a stable exchange rate is effective. The Central Bank of the Philippines employs three

pecuniary policy tools such as setting reserve requirements, adjusting the discount rate, and influencing interest rates and the money supply.

Digitalization in the Banking Sector

The financial sector is becoming more digital that has made transactions more convenient and efficient, benefiting both the industry and customers. According to Kitsios et al. (2021), by utilizing digital technologies, banks can enhance the monitoring of risk management and control procedures, save time, lower operational costs, and provide higher-quality goods and services in the market. Clients can quickly complete their financial transactions online, saving money by using paperless transactions instead of physically visiting a branch. In addition to the advantages that clients receive from digitalization, banks can improve their relationships with customers by offering secure, convenient, and personalized transactions.

However, the upsurge of digital banking and the advent of new players have heightened competition in the digital banking industry, leading to a significant shift in the banking landscape and increased competition among banks. Moritz Junger and Mark Mietzner (2019) examine the significant impact of FinTech companies and technological advancements on the financial management services sector that seeking to comprehend the workings of this changing environment. The survey has been indicated that the customer routinely switch in banking institutions or may view FinTech as their main supplier of the services due to dissatisfaction with their current provider or a lack of trust. This implies that FinTech companies can capitalize on consumer discontent with traditional financial institutions by improving products and services to increase customer satisfaction levels. Customer interactions with banks and the operational methods of banks have changed due to digitalization. The researchers hypothesize how interest rate variations affect the saving habits of respondents through digital banking.

THEORETICAL FRAMEWORK

Classical Theory of Interest

The Classical Theory of Interest (Ricardo, J.S Mill, Marshall, and Pigou) lends the support to this study. As per the theory that the interest rate is determined by the equilibrium of savings supply and demand. Interest rate fluctuations may impact savings habits: lowering interest rates may encourage spending as the opportunity cost of saving declines, while higher interest rates may encourage saving more because savers can earn more from their investments. Interest is the compensation that lenders receive for saving money and allowing borrowers to invest it. The Classical Theory of Interest provides a framework for understanding how interest rate fluctuations might affect the saving habits of working millennials, especially when using digital banking. Higher interest rates might encourage working millennials to prioritize saving money through digital banking platforms, while lower interest rates may lead them to consider other options offering higher returns on their investments.

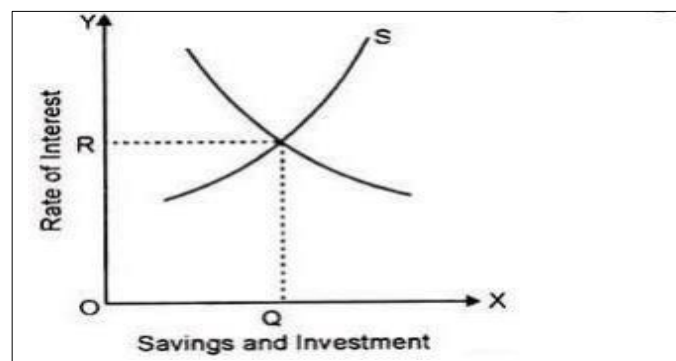


Figure 1. Rate determination in classical theory

Theory of Planned Behavior

Building on the Theory of the Reasoned Action by Alzen (1991), the Theory of the Planned Behavior (TPB) is a psychological theory that aims to the forecast and explain the human behavior. It posits those three fundamental elements which are the perceived norms, attitudes, and human can conduct the based on a sense of a perceived behavior control. The first element, attitude (A), summarizes human being positive or negative evaluation of a particular behavior. Within this domain, behavioral beliefs reflect personal expectations about the outcomes of a behavior, while outcome evaluation assesses the desirability of those consequences. Subjective norms (SN) are based on perceived social influence, encompassing significant others' approval or disapproval of performing or avoiding a specific behavior. Normative beliefs involve opinions about whether significant others accept or reject the behavior, while motivation to comply explores the desire to meet these expectations. The third factor, perceived behavioral control (PBC), examines

how easy or challenging individuals perceive it to carry out a behavior. Control beliefs involve factors that could assist or obstruct the behavior, with perceived power indicating their influence on the individual's capability to enact the behavior. Together, these three elements including perceived norms, attitude, and the perceived behavioral control form behavioral intention (BI), representing a person's inclination to immerse in or refrain from a behavior. Behavioral intention, in turn, precedes actual behavior (B). However, the process of translating intention into realized behavior can be influenced by external variables that may hinder this progression. In conclusion with a thorough framework for the comprehending behavior is provided by the Theory of Planned Behavior (TPB) about the complex interactions between psychological factors that influence behavior.

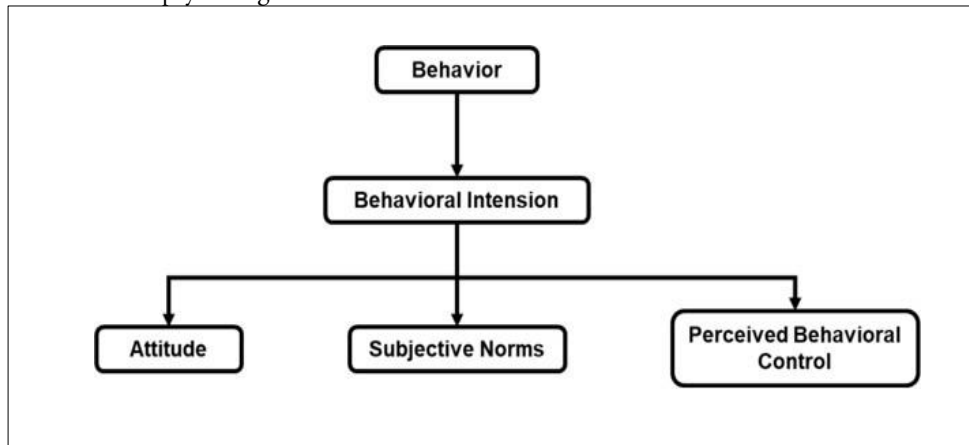


Figure 2. Visual representation of the theory of planned behavior (Ajzen, 1991).

CONCEPTUAL FRAMEWORK

The integrated framework advances the planned behavior theories and classical interest, aims to investigate the complex interplay between psychological, economic, and social factors that influence human behavior. These subjective norms, attitudes, and perceived behavioral control, particularly about financial decisions made by working millennials utilizing digital banking platforms.

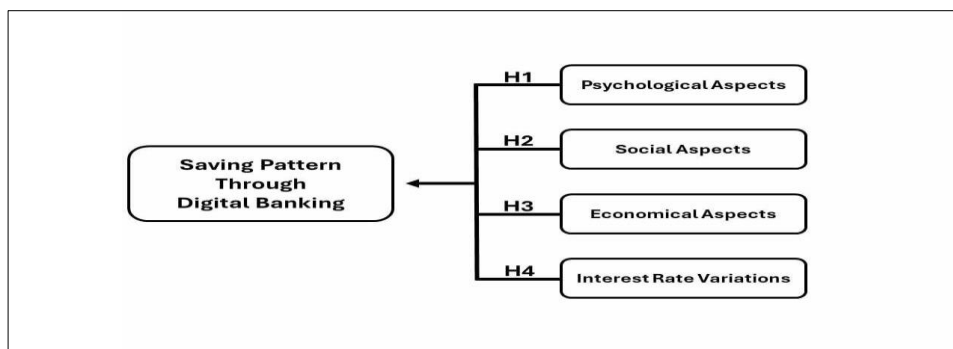


Figure 3. Visual representation of the conceptual framework

- (H1): Psychological aspects has a significant impact on the respondents' saving habits through digital banking.
- (H2): The respondents' saving habits are significantly impacted by the social factors through digital banking.
- (H3): Economic aspects has an important influence on saving pattern of the respondents through digital banking.
- (H4): The respondents' saving habits are impacted by the changes in the interest rates through digital banking.

METHODOLOGY

The business research design and the methods that were used to administer the study are covered in this chapter. It gives a description of the study respondent, including the sample size and sample strategy in the instrumentation used by the researcher for this study, and the techniques employed to ensure its validity and reliability. The procedure includes questionnaire administration, data gathering, processing, and analysis.

The researchers used a purposive sampling technique to select the appropriate 30 respondents needed for the survey. For this study, the researchers chose 50 respondents who were using digital banks and were knowledgeable or aware of any saving pattern through digital banking. These respondents supported the variables, which include the psychological aspect, economic aspect, social aspect, and

interest rate variations. The respondents who completed the survey questionnaire were identified as millennials aged 25-42 years old, who are working and have savings in digital banks.

The instrument of the study was adapted from the Classical Theory of Interest (Ricardo, J. S. Mill, Marshall, and Pigou). According to this theory, the interest rate determines the supply and demand of savings. Interest rate fluctuations may impact saving habits. While lower interest rates may encourage spending as the opportunity cost of saving declines, higher interest rates may encourage people to save more because they can earn more from their savings. Interest is the compensation that the lender receives for saving money and allowing the borrower to invest it.

The questions were easy to comprehend and sufficiently covered the scope of the whole investigation fulfilling the researcher goal. With a 5-point likert scale, 1 representing “strongly disagree” and 5 representing “strongly agree,” the researcher created a survey questionnaire to measure the impact of psychological, economic, and social aspects, as well as interest rate variations on working millennials’ saving patterns through digital banking. The correctness of the components was evaluated by a testing pilot of this study that employed the Cronbach’s Alpha technique. This Cronbach’s alpha scores above the 0.7 are normally regarded as allowable, and those above 0.8 indicate good internal consistency. The minimum sample size required is influenced by the level of internal consistency desired in the alternative hypothesis by M.A Bujang and colleagues (2018).

Table 1. Measurement scales used in the reliability analysis

Cronbach’s Alpha		No. of Items
Reliability of Statistics of Psychological Aspects	0.804	5
Reliability of Statistics of Social Aspects	0.878	5
Reliability of Statistics of Economic Aspects	0.926	5
Reliability of Statistics of Interest Rate Variations	0.865	5

Online survey forms were distributed using Google Forms, a social networking tool. Every possible response from working millennials in Metro Manila, Philippines, aged 26 to 42, was scrutinized. The questionnaire was distributed with the respondents’ informed consent, and the design of study was based on the findings. In conformity with the “Data Privacy Act,” RA 10173, the information submitted by respondents will be kept private and confidential.

RESULT AND DISCUSSION

Demographic Characteristics of Respondents

In this study, 51 respondents participated in the survey. The age, gender, civil status, employment status, monthly gross income, and mode of banking were obtained as characteristics of each respondent.

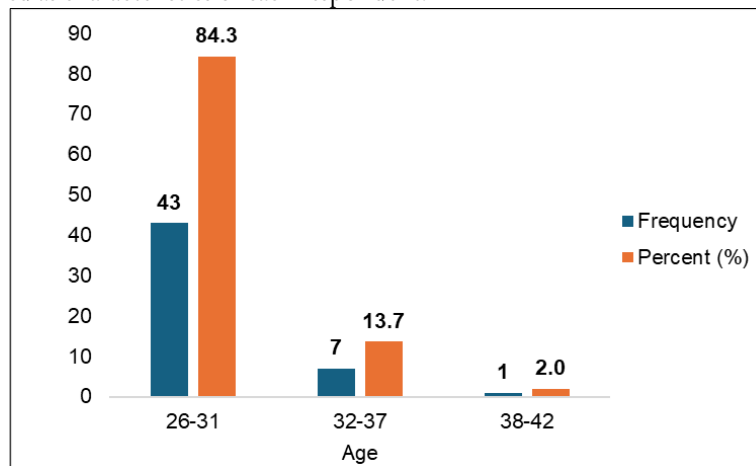


Figure 4. Characteristics of respondents based on age

As shown in Figure 4, the largest age group among the respondents is 26-31 years old, comprising 84.3% (43 respondents) in overall. After this comes by the 32-37 age range, which makes up 13.7% (7 respondents). The smallest age group is 38-42 years old, representing 2.0% (1 respondent). This distribution exhibits that the majority of the study’s participants are in the younger age bracket of 26-31 years. This result is in agreement with the Philippines employment status as reported by the Philippine Statistics Authority (PSA). According to the PSA (2020), the 25–34-year-old age congregation made up the largest share of the employed population at 27.3 percent in 2020. This age group is likely to be the most directly involved in saving through digital banking.

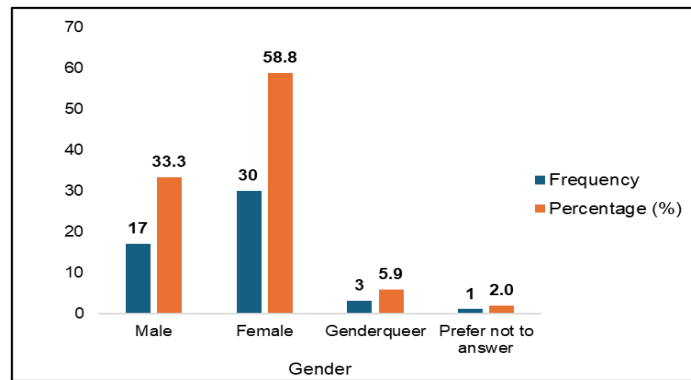


Figure 5. Features of the participants according to gender

The respondent apportionment of gender is summarized in Figure 5. Out of the 51 respondents, the majority were female, comprising 58.8% (30 respondents) of the total. Males accounted for 33.3% (17 respondents). A smaller percentage of respondents identified as genderqueer, representing 5.9% (3 respondents). Additionally, 2.0% (1 respondent) preferred not to divulge their gender. This result implies that females save more than males. According to Sequino et al. (2003), there are notable variations in savings and investment choices based on gender, with females tending to save more than males. Further, Hinz and colleagues (1996) and Hungerford (1999) discovered that in the US the women typically make more cautious in pension investment and contribute significantly higher amounts to their savings plans compared to men.

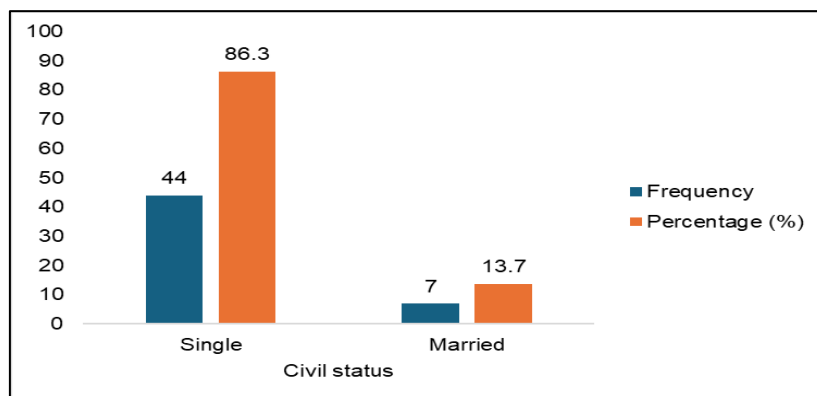


Figure 6. Characteristics of respondents based on civil status

Figure 6 illustrates the apportionment of respondents' marital status. Most of the respondents were single, making up 86.3% (44 respondents) of the total. The remaining 13.7% (7 respondents) were married. This distribution indicates that the predominant civil status among the study's participants is single.

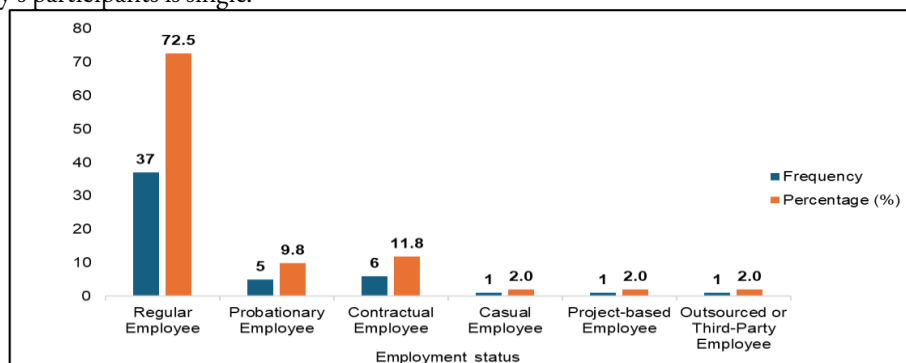


Figure 7. Characteristics of respondents based on employment status

Most of the respondents were regular employees, comprising 72.5% (37 respondents) of the total. Probationary employees accounted for 9.8% (5 respondents), while contractual employees made up 11.8% (6 respondents). Casual employees, project-based employees, and outsourced or third-party employees represented 2.0% (1 respondent) of the total (Figure 7).

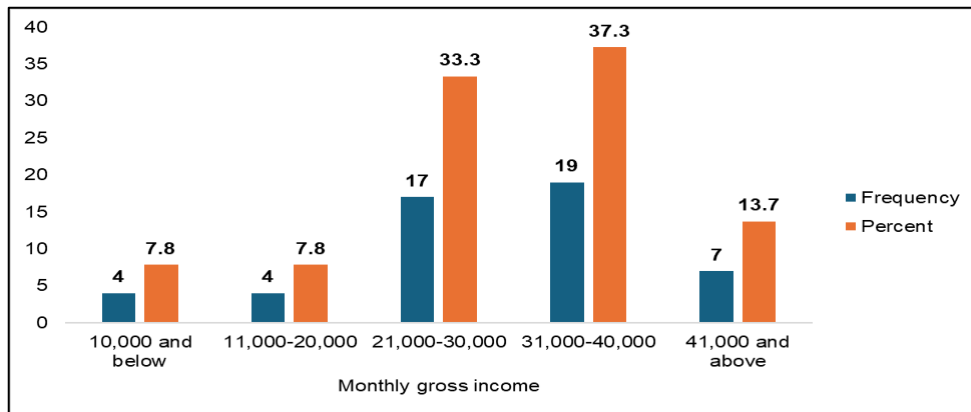


Figure 8. Characteristics of respondents based on monthly gross income

Shown in Figure 8 is the distribution of monthly gross income among the respondents. The largest income group was those earning between 31,000 and 40,000, comprising 37.3% (19 respondents). This was followed by respondents earning between 21,000 and 30,000, making up 33.3% (17 respondents). Those earning 41,000 and above accounted for 13.7% (7 respondents). Respondents earning between 10,000 and 10,000 each month below and those earning between 11,000 and 20,000 represented 7.8% (4 respondents) of the total. This distribution indicates a wide range of income levels among the study's participants, with a significant portion earning between 21,000 and 40,000.

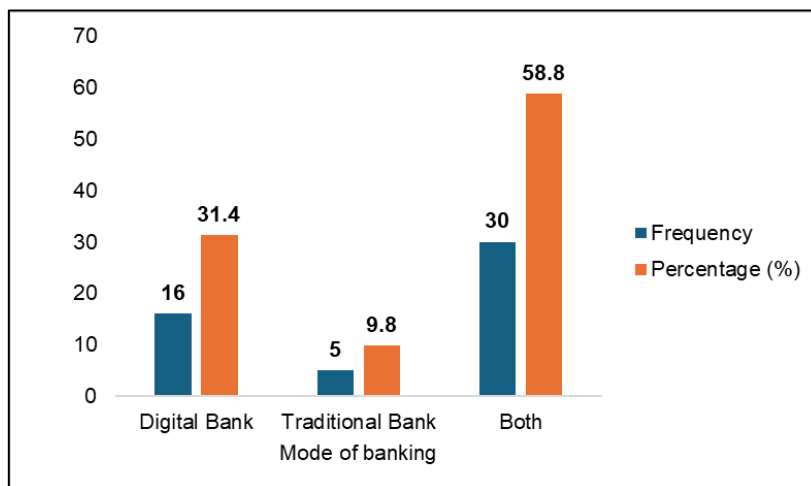


Figure 9. Characteristics of respondents based on mode of banking

The mode of banking used by the respondents is detailed in Figure 9. Most of the respondents, 58.8% (30 respondents), used both digital and traditional banks. Respondents who exclusively used digital banks comprised 31.4% (16 respondents). Meanwhile, those relying solely on traditional banks accounted for 9.8% (5 respondents).

Descriptive Statistics

The descriptive statistics values of the study variables among 51 respondents are presented in Table 2. The indicators include psychological aspects, economic aspects, social aspects, interest rate variations, and overall aspects.

Table 2. Descriptive statistics of research variables

Indicators	Sample size	Min	Max	Mean	Std. Deviation
Psychological aspects	51	1.00	5.00	4.11	0.54
Economic aspects	51	2.00	5.00	4.22	0.58
Social aspects	51	1.00	5.00	3.73	0.86
Interest rate variations	51	1.00	5.00	4.04	0.58
All	51	1.00	5.00	4.09	0.62

The economic aspects received the highest mean rating, which was 4.22, reflecting a strong and relatively consistent economic perspective. The economic perspective on saving behavior aims to explore how both macroeconomic (nationwide) and microeconomic (individual) factors impact household saving habits (Walden, 2012). According to Copur and Gutter (2019), these economic aspects may include age, civil status, household size, income, education level, homeownership, and financial management behavior.

The social aspects, on the other hand, had the lowest average rating and the greatest variability, having the standard deviation of 0.86 and a mean average of 3.73 indicating a significant degree of the societal impact on saving patterns with more variability compared to other aspects. These social aspects of saving involve conversations with parents, using various sources of information, and parental modelling. In a study by Gutter et al. (2010), it was observed that higher frequencies of discussions and behavioral modeling with parents increased the likelihood of college students saving money.

In the same context, the psychological aspects and interest rate variations had mean scores of 4.11 and 4.04, respectively, suggesting a high awareness and impact of psychological aspects and interest rate changes on the saving patterns of the respondents. A conventional economic theories that have acknowledged the psychological components of saving behavior including the pessimism and worries about the state of the economy (Lunt & Livingstone, 1991). In one incentive for an instance, it is clear the idea of precautionary saves where the households concern for their financial future lead them to save money as a buffer against potential downturns in their economic circumstances (Walden, 2012).

Considering all aspects, the sample size remains 51, with values ranging from 1.00 to 5.00. The average score is 4.09, has a 0.62 standard deviation indicating a high degree of consistency across all areas. The data suggest that respondents place significant importance on psychological aspects, economic aspects, social aspects, and interest rate variations when saving through digital banking.

Data Analysis

Table 3 shows the model statistics for different aspects influencing saving behaviors, specifically focusing regarding the coefficient of the determined (R^2) and the correlation coefficient (R) for psychological, economic, and social aspects, interest rate variations, and overall aspects.

Table 3. R Square of model summary

Model Summary	R	R^2
Psychological	0.557	0.3102
Economic	0.514	0.2642
Social	0.291	0.0847
Interest Rate Variations	0.837	0.7006
All	0.868	0.7534

The correlation coefficient (R) for psychological elements as displayed in the Table 3, is 0.557 suggesting a somewhat positive associated between psychological factors and the saving behavior. A coefficient of the determination (R^2) is 0.3102, means that approximately 31.02% of the variance in saving behaviors through digital banking can be explained by psychological factors. This suggests that factors like financial anxiety, risk tolerance, and future financial goals are influential in how millennials handle their savings. The impact of psychological aspects is linked to millennials' attitudes toward financial security and their confidence in handling finances via digital platforms. Financial literacy and the capability to set and achieve financial goals may also contribute. Digital banking can address psychological needs by providing specific tools for budgeting, goal setting, and tracking financial progress, thereby enhancing user confidence and satisfaction.

The study by Copur and Gutter (2019) found similar psychological factors influencing saving behavior. They found that assertiveness, financial risk tolerance, impulsiveness, distrust, anxiety, and planning horizon are psychological factors that bumped the saving behavior. Moreover, the bidirectional in connection between the savings and self-efficacy individuals with saving behavior is more likely in those with a strong self-efficacy, and the effective savers frequency have higher level of self-efficacy (Lown et al., 2015). Magendans et al. (2017) concurred that individuals who possess strong financial self-efficacy demonstrate considerable intention to save and engage in more saving activities.

Grable and Joo (2004) defined financial risk magnanimity as an individual's readiness to participate in activities with uncertain results. DeVaney et al. (2007) discovered that households with a higher propensity to save were also more open to taking risks. Consequently a burlier intention to save was connected with the law tolerance for the financial risks whereas a high tolerance for financial risks was linked to a weaker intention to save (Magendans et al., 2017).

People's levels of trust and anxiety can significantly influence their choices in financial investments and savings, as well as their willingness to take risks. Individuals characterized by those with a higher levels of mistrust and the lower levels of anxiety are more

likely to follow advised money management guidelines (Hayhoe et al., 2012; Gutter et al., 2012) Moreover, studies have emphasized the influence of planning horizons on saving behavior. Chamon et al. (2010) observed that households with longer timeframes to adjust their retirement savings tend to have lower savings rates. Similar findings were made by DeVaney et al. (2007) and Lee et al. (2000) who found the correlation between saving behavior and a long-term planning viewpoint.

The correlation coefficient (R) for economic aspects is 0.514, indicating a moderate positive relationship between economic factors and saving behaviors through digital banking. There is a 0.2642 coefficient of determination (R^2), meaning indicates the economic considerations account for about 26.42% of the variation in saving practices. (Table 3). These economic factors include income stability, employment status, and overall economic conditions. Economic stability fosters confidence in allocating funds for savings, whereas economic downturns or job insecurity may lead to deprioritizing savings. Digital banking can offer solutions by providing flexible saving options, financial advice, and tools to adapt to changing economic conditions.

However, Walden (2012) suggests that the economic approach to saving behavior should consider both macroeconomic factors (economy-wide influences) and microeconomic factors (individual circumstances). The microeconomic behavior of households, encompassing factors such as economic models about the consumption and the saving are explained by using data on income, age, education, marital status, employment status, household size, and the homeownership (Browning and Lusardi, 1996; Gutter et al., 2007; Haron et al., 2013; Whitaker et al., 2013). Aktas et al. (2012) reported that savings tend to rise with household income, the age of the household head, and education levels. Furthermore, individuals with well-paid were found to be more inclined to embrace prudent money management practices, like saving money (Perry and Morris, 2006). Therefore, saving rates varied among households across different income levels.

Table 3 shows that the correlation coefficient (R) for social aspects is 0.291, indicating a weak positive relationship between social factors and saving behaviors through digital banking. There is a 0.0847 coefficient of the determination (R^2), meaning that social factor explain 8.47% of the variation in saving practices, making it the least impactful among the factors discussed. Social factors include peer influence, family expectations, and societal norms. The low percentage suggests that millennials may prioritize personal financial goals over social pressures when it comes to saving. This generation tends to value financial independence and may be less influenced by external social factors. However, social media platforms like Facebook, LinkedIn, Twitter, and peer sharing of financial successes and strategies can still have a subtle impact, though not as pronounced as other factors.

In recent decades, many researchers has to investigate the connection between financial socialization, and the processes through which individuals learn about money and financial behaviors. Parents are the most important and the influential figures in their children financial socialization, according to the research of Kim and Chatterjee (2013) and Kim et al. (2011). Opportunities for financial socialization were evaluated through conversations with parents, utilization of diverse information sources, and parental role modeling. Kim et al. (2011) also noted that the children saving habits for the future educational costs were be positively correlated with the higher parental warmth levels. Moreover, the discussions between parents and children about money were correlated with children's financial behaviors.

Interest rate variation has a high correlation coefficient (R) of 0.837 and a 0.7006 is coefficient of determination (R^2), indicating that approximately 70% of the variance in saving behaviors can be explained by changes in interest rates. This suggests that the returns on savings significantly influence millennials' saving decisions. Higher interest rates make saving through digital banking more attractive by offering better returns, while lower rates might discourage saving. Digital banks can leverage this by offering competitive rates and personalized financial products tailored to the interest sensitivity of millennials.

According to Xaba (2019), the interest rate is the predominant factor that determines the savings rate. Studies conducted by Shaw (1973) and Orji et al. (2015) revealed that the interest rates had a favorable impact on savings and the economic growth. Warman (1994) similarly observed a positive correlation between real interest rates and savings. On the other hand, after analyzing the estimates of saving interest flexibility, Balassa (1989) came to the conclusion that the interest rates are negatively associated with consumption and positively associated with savings. Balassa's findings align with Dirchmind and Glatzer (2004), who propose the substitution effect. This effect suggests that households forgo present consumption to increase future consumption, leading to increased savings when interest rates rise.

Taking all factors into account, with a coefficient of determination (R^2) of the 0.7534 the correlation coefficient (R) is 0.868. Approximately around 75% of the variance observed in the dependent variable may be explained by this for when all factors are considered together, highlighting the robust explanatory capability of the model as a whole. This substantial percentage suggests that millennials' saving behaviors are complex, and shaped by a mix of psychological, social, economic, and interest rate factors. Therefore, digital banking platforms that offer comprehensive financial solutions addressing all these aspects are likely to be more successful. Features such as personalized financial planning, social sharing options, economic updates, and competitive interest rates can collectively enhance the user experience and encourage better saving habits.

Table 4 is a results of the multiple linear regression analysis are shown in assessing the effects of different predictors on the dependent

variable.

Table 4. Analysis of the multiple linear regression

Model	Standardized Coefficients Beta	t	Sig.
Constant	-0.01	-0.004	0.997
Psychological	0.430	2.889	0.006
Economic	-0.130	-1.065	0.293
Social	-0.182	-2.495	0.016
Interest Rate Variations	0.878	8.710	0.000

Note: Significant at the level 5%

Based on the findings in Table 4, it can be inferred that the saving behaviors via digital banking among the respondents are positively and significantly predicted by psychological factors (Beta = 0.430, $p < 0.05$). Additionally, interest rate variations exhibit a very strong positive effect (Beta = 0.878, $p < 0.05$), making it the most significant predictor in the model. However, economic aspects (Beta = -0.130, $p > 0.05$) and social aspects (Beta = -0.182, $p < 0.05$) have a negative effect on saving patterns through digital banking, with economic aspects not significantly contributing to the model. Overall, psychological factors and interest rate variations are significant predictors, while economic factors are not, and social factors have a significant but negative influence on saving patterns through digital banking. The significance of the analyzed factors can also be visually depicted in a graphical format (Figure 10) to offer a clearer understanding of each factor's impact within the regression model.

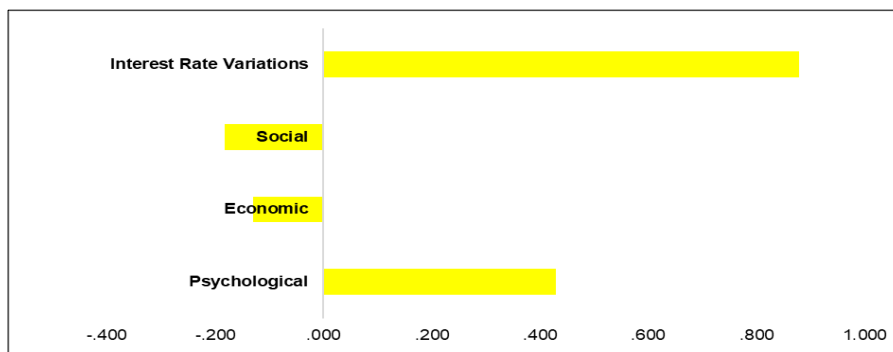


Figure 10. Degree of relationship of indicators in saving pattern

$$Y = b_1P + b_2E + b_3S + b_4I + c$$

Y = Saving patterns through digital banking

b₁ = Regression coefficient of psychological aspects b₂ = Regression coefficient of economic aspects

b₃ = Regression coefficient of social aspects

b₄ = Regression coefficient of interest rate variations c = constant

(Eq. 1)

Many regression analyses were been out to look at the combined impact of various factors on saving behaviors through digital banking among the respondents. The regression equation hypothesized in this study is represented by Eq. (1). The multiple linear regression test outcome yielded the following mathematical expression for the regression equation:

$$Y = (0.430)P + (-0.130)E + (-0.182)S + (0.878)I + (-0.01) \text{ (Eq. 2)}$$

In Equation 2, Y represents the dependent variable (saving patterns through digital banking), while the independent variables include psychological aspects, economic aspects, social aspects, and interest rate variations. This equation indicates that the saving patterns of working millennials through digital banking can be predicted using the four elements that were part of the survey. Thus, to improve the saving habits of working millennials, banks should focus on optimizing, developing, and promoting these key aspects that are significant to consumers.

CONCLUSION AND RECOMMENDATIONS

This study clearly indicates that the saving patterns of working millennials in Metro Manila, Philippines are significantly influenced by a variety of factors when utilizing digital banking platforms, with psychological aspects and interest rate variations being the most significant.

The psychological factor suggests that personal financial management tools and resources provided by digital banks can play a crucial role in augmenting user confidence and satisfaction. Economic conditions directly impact millennials' ability to save, highlighting the need for digital banks to offer adaptable financial solutions during economic fluctuations. The social aspects indicate that personal financial goals are prioritized over social pressures when sharing financial strategies. Interest rate variations are particularly important in encouraging millennials to save more through digital banking platforms. These findings emphasize the need for digital banking platforms to offer comprehensive financial solutions that address the diverse factors influencing millennials' saving behaviors.

To improve the effectiveness of online banking platforms in encouraging better savings habits among working millennials, digital banks should prioritize offering competitive interest rates to attract and retain millennial savers; higher interest rates can serve as strong incentives for increased savings. Advanced financial management tools, such as budgeting tools, goal-setting options, and financial progress tracking, can cater to the psychological needs of millennials, boosting user confidence and satisfaction. Developing flexible financial products that can adapt to changing economic conditions, and offering financial advice during economic downturns, can help maintain user engagement and trust. Implementing educational programs and resources to improve financial literacy among millennials can enhance their saving behaviors and effective financial management. Leveraging social media platforms to promote financial success stories and strategies can help create a supportive saving culture. Digital banking platforms should offer integrated solutions that address all the identified factors, providing a holistic user experience. By implementing these recommendations, digital banking platforms can effectively meet the needs of working millennials, encouraging better saving habits and enhancing overall financial stability.

REFERENCES

- Aizenman, J. (2017). *The interest rate effect on private saving: Alternative perspectives*. Asian Development Bank. <https://www.adb.org/publications/interest-rate-effect-private-saving-alternative-perspectives>
- Aktaş, A., Güner, D., Gürsel, S., & Uysal, G. (2012). *Structural determinants of household savings in Turkey: 2003-2008* (Doctoral dissertation).
- Angela, G., & Pamungkas, A. S. (2022, May). The influence of financial literacy, parental socialization, peer influence and self-control on saving behavior. In *Tenth International Conference on Entrepreneurship and Business Management 2021 (ICEBM 2021)* (pp. 560- 566). Atlantis Press.
- Browning, M., & Lusardi, A. (1996). Household saving: Micro theories and micro facts. *Journal of Economic literature*, 34(4), 1797-1855.
- Bujang, M. A., Omar, E. D., & Baharum, N. A. (2018). A review on sample size determination for Cronbach's alpha test: a simple guide for researchers. *The Malaysian journal of medical sciences: MJMS*, 25(6), 85. <https://doi.org/10.21315/mjms2018.25.6.9>
- Centeno, D. (2023). Effects of Filipino Consumers' Financial Attitudes, Subjective Norms, and Perceived Behavioral Control on Intentions to Formal Banking: Towards Financial Inclusion. *Philippine Management Review*, 30(1), 15-38.
- Chamon, M., Liu, K., & Prasad, E. (2013). Income uncertainty and household savings in China. *Journal of Development Economics*, 105, 164–177. <https://doi.org/10.1016/j.jdeveco.2013.07.014>
- Copur, Z., & Gutter, M. S. (2019). Economic, sociological, and psychological factors of the saving behavior: Turkey case. *Journal of Family and Economic Issues*, 40(2), 305–322. <https://doi.org/10.1007/s10834-018-09606-y>
- Devaney, S. A., Anong, S. T., & Whirl, S. E. (2007). Household savings motives. *Journal of Consumer Affairs*, 41(1), 174–186. <https://doi.org/10.1111/j.1745-6606.2006.00073.x>
- Dirschmid, W., & Glatzer, E. (2004). Determinants of the household saving rate in Austria. *Monetary Policy & the Economy Q*, 4, 25-38.
- Evans, D. A., Gorham, E., Lown, J. M., Mauldin, T., Solheim, C., Worthy, S. L., & Dorman, R. (2012). Exploring the relationship of economic, sociological, and psychological factors to the savings behavior of low- to moderate-income households. *Family and Consumer Sciences Research Journal*, 41(1), 86–101. <https://doi.org/10.1111/j.1552-3934.2012.02130.x>
- Felici, M., Kenny, G., & Friz, R. (2023). Consumer savings behaviour at low and negative interest rates. *European Economic Review*, 157, 104503. <https://doi.org/10.1016/j.eurocorev.2023.104503>
- Gutter, M. S., Garrison, S., & Copur, Z. (2010). Social Learning Opportunities and the financial behaviors of college students. *Family and Consumer Sciences Research Journal*, 38(4), 387– 404. <https://doi.org/10.1111/j.1552-3934.2010.00034.x>
- Gutter, M. S., Hayhoe, C. R., DeVaney, S. A., Kim, J., Bowen, C. F., Cheang, M., Cho, S. H., Gutter, M. S., Hayhoe, C., & Wang, L. (2007). Examining participation behavior in defined contribution plans using the transtheoretical model of behavior change. *Journal of Financial Counseling and Planning*, 18(1).
- Haron, S. A., Sharpe, D. L., Abdel-Ghany, M., & Masud, J. (2012). Moving up the savings hierarchy: Examining savings motives of

- older Malay Muslim. *Journal of Family and Economic Issues*, 34(3), 314–328. <https://doi.org/10.1007/s10834-012-9333-0>
- Hartono, U., & Isbanah, Y. (2022). Students' saving behaviour: what are the motives that influence them to save? *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, 11(3), 363. <https://doi.org/10.26418/jebik.v11i3.56561>
- Hayhoe, C. R., Cho, S. H., DeVaney, S. A., Worthy, S. L., Kim, J., & Gorham, E. (2012). How do distrust and anxiety affect saving behavior? *Family and Consumer Sciences Research Journal*, 41(1), 69–85. <https://doi.org/10.1111/j.1552-3934.2012.02129.x>
- Hinz, R. P., McCarthy, D. D., & Turner, J. A. (1997). Are women conservative investors? Gender differences in participant-directed pension investments. *Positioning pensions for the twenty-first century*, 91, 103.
- Hungerford, T. (1999). Saving For a Rainy Day: Does Pre-Retirement Access to Retirement Savings Increase Retirement Saving?. *Unpublished Paper, Social Security Administration*.
- Jamal, A. A. A., Ramlan, W. K., Karim, M. A., & Osman, Z. (2015). The effects of social influence and financial literacy on savings behavior: A study on students of higher learning institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science*, 6(11), 110- 119.
- Jumena, B. B., Siaia, S., & Widokarti, J. R. (2022). Saving Behaviour: Factors That Affect Saving Decisions (Systematic Literature Review Approach). *Jurnal Economic Resource*.
- Jünger, M., & Mietzner, M. (2020). Banking goes digital: The adoption of FinTech services by German households. *Finance Research Letters*, 34, 101260. <https://doi.org/10.1016/j.frl.2019.08.008>
- Kim, J., & Chatterjee, S. (2013). Childhood financial socialization and young adults' financial management. *Journal of Financial Counseling and Planning*, 24(1), 61.
- Kitsios, F., Giatsidis, I., & Kamariotou, M. (2021). Digital Transformation and strategy in the banking sector: Evaluating the acceptance rate of E-Services. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 204. <https://doi.org/10.3390/joitmc7030204>
- Loibl, C., Grinstein-Weiss, M., Zhan, M., & Red Bird, B. (2010). More than a penny saved: Long-term changes in behavior among savings program participants. *Journal of Consumer Affairs*, 44(1), 98–126. <https://doi.org/10.1111/j.1745-6606.2010.01159.x>
- Lown, J. M., Kim, J., Gutter, M. S., & Hunt, A.-T. (2014). Self-efficacy and savings among middle and low income households. *Journal of Family and Economic Issues*, 36(4), 491–502. <https://doi.org/10.1007/s10834-014-9419-y>
- Lunt, P. K., & Livingstone, S. M. (1991). Psychological, social and economic determinants of saving: Comparing recurrent and total savings. *Journal of Economic Psychology*, 12(4), 621–641. [https://doi.org/10.1016/0167-4870\(91\)90003-c](https://doi.org/10.1016/0167-4870(91)90003-c)
- Magendans, J., Gutteling, J. M., & Zebel, S. (2016). Psychological determinants of financial buffer saving: The influence of financial risk tolerance and regulatory focus. *Journal of Risk Research*, 20(8), 1076–1093. <https://doi.org/10.1080/13669877.2016.1147491>
- Montalto Catherine, P. (2000). The effect of family life cycle and financial management practices on household saving patterns. *International Journal of Human Ecology*, 1(1), 79-93.
- Montalto Catherine, P. (2000). The effect of family life cycle and financial management practices on household saving patterns. *International Journal of Human Ecology*, 1(1), 79-93.
- Orji, A., Ogbuabor, J. E., & Anthony-Orji, O. I. (2015). Financial liberalization and economic growth in Nigeria: An empirical evidence. *International Journal of Economics and Financial Issues*, 5(3), 663-672.
- Peery, V. G., & Morris, M. D. (2005). Who is in control? the role of self-perception, knowledge, and income in explaining consumer financial behavior. *Journal of Consumer Affairs*, 39(2), 299–313. <https://doi.org/10.1111/j.1745-6606.2005.00016.x>
- Philippine Statistics Authority [PSA]. (2020). | Philippine Statistics Authority | Republic of the Philippines. <https://psa.gov.ph/statistics/labor-force-survey/special-release/node/162867>
- Rey-Ares, L., Fernández-López, S., Castro-González, S., & Rodeiro-Pazos, D. (2021). Does self-control constitute a driver of millennials' financial behaviors and attitudes? *Journal of Behavioral and Experimental Economics*, 93, 101702. <https://doi.org/10.1016/j.socec.2021.101702>
- Ribaj, A., & Mexhuani, F. (2021). The impact of savings on economic growth in a developing country (the case of Kosovo). *Journal of Innovation and Entrepreneurship*, 10(1). <https://doi.org/10.1186/s13731-020-00140-6>
- Ricardo, J. S. Mill, Marshall, and Pigou. Classical Theory Of Interest.
- Seguino, S., & Floro, M. S. (2003). Does gender have any effect on aggregate saving? an empirical analysis. *International Review of Applied Economics*, 17(2), 147–166. <https://doi.org/10.1080/0269217032000064026>
- Shaw, E. S. (1973). Financial deepening in economic development.
- Swasdpeera, P., & Pandey, I. M. (2012). Determinants of personal saving: A study of salaried individuals in Thailand. *Afro-Asian J.*

- of Finance and Accounting*, 3(1), 34. <https://doi.org/10.1504/aajfa.2012.046347>
- Walden, M. L. (2011). Will households change their saving behaviour after the “Great Recession”? the role of Human Capital. *Journal of Consumer Policy*, 35(2), 237–254. <https://doi.org/10.1007/s10603-011-9180-7>
- Warman, F., & Thirlwall, A. P. (1994). Interest rates, saving, investment and growth in Mexico 1960–90: Tests of the financial liberalisation hypothesis. *Journal of Development Studies*, 30(3), 629–649. <https://doi.org/10.1080/00220389408422330>
- Whitaker, E. A., Bokemeiner, J. L., & Loveridge, S. (2012). Interactional associations of gender on savings behavior: Showing gender’s continued influence on Economic Action. *Journal of Family and Economic Issues*, 34(1), 105–119. <https://doi.org/10.1007/s10834-012-9307-2>
- Xaba, N. (2019). *The impact of interest rates on savings investments in South Africa* (Doctoral dissertation)