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Research Article

Determinants of Total Deposit Growth in Philippine Banking: A Statistical Study Across Banking Groups

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ABSTRACT

This paper analyzes the drivers of total deposit growth in the Philippine banking system for years 2014-2024. It considers the joint impact of macro-economic conditions and technology development across the major banking groups. The study utilized a descriptive-correlational design and secondary data were obtained from the Bangko Sentral ng Pilipinas and the Philippine Statistics Authority. The correlation analysis was performed to study the correlation between the macroeconomic and technological variables and the deposit growth. The results show that total deposits are still growing mainly driven by the Universal and Commercial Banks. GDP, GDP per capita, CPI and digital payment adoption are very strongly positively related to deposit growth while PPP is very strongly negatively related showing that nominal deposits grow when purchasing power falls. Of the variables that point to financial technology's growing importance, digital payments have the highest correlation across banking groups. "There are differences between bank types. Larger banks are more sensitive to macroeconomic and technological factors. The findings show that economic performance and digital transformation have a significant relationship with the growth of deposits in the Philippine banking industry. Macro-economic stability is the structural basis for deposit mobilization. But the biggest innovation related to the growth of deposits of financial inclusion and expansion of deposits is digital innovation. The results suggest that policymakers and financial institutions could consider integrated approaches to improve economic fundamentals, while encouraging digital financial infrastructure to facilitate the development of the banking sector.

Keywords: *Consumer Price Index (CPI), Deposit Growth, Digital Payments, Gross Domestic Product (GDP), Financial Technology, Philippine banking, Purchasing Power of Peso (PPP)*

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Background

Today's banking industry has shifted away from traditional credit intermediation to a closely knit web of diversified financial services. Banks are financial intermediaries (Georgiev, 2024; Konstantakopoulou, 2023) that connect savers with borrowers. The types of deposit accounts in which people, entities, and governments deposit their surplus funds in banks are checking, savings, and time deposits (Glass et al., 2020; Kristu, 2025; Team, 2024). The banking sector is an important component of the Philippines' economy. Universal and commercial banks constitute the bulk of all deposits in the country. Not only economic factors such as GDP, CPI, and PPP but also technological progress, especially in the digital payments sector, drive the deposit pool (BSP, 2023). Current studies suggest a promising investment and banking environment with the rise in economic activities, decline in inflation and stabilization of financial markets (Sinco et al., 2024).

These tendencies provide a macroeconomic basis to explain the rise of deposits in the Philippines banks. Deposits made up 74.6% of the banking system's total assets of ₱19.1 trillion as of March 2024. Deposits increased 9.5% year over year to ₱19.5 trillion (74.5%) as of June 2024 (BSP, 2024). Deposits increased by 7 percent to P19.58 trillion in September 2024 from a year ago. GDP is a leading indicator for the health of economy for income and savings During the expansion of the GDP, people deposit and invest more money in the bank (Bai & ICEMGD 2023 Organizing Committee, 2024; Kim & Lee, 2023; Mishkin, 2019). GDP growth rates were 6.1% and 5.7% in 2014 and 2024 (PSA, 2025). Inflation as measured in the CPI affects consumer spending. An increase in inflation reduces savings and discretionary income, and a decrease in CPI promotes deposits (Mishkin, 2019; Rodriguez, 2022; Singh, 2025). The inflation's effect was on the consumer behaviour, from 3.8% in 2013 to only 1.9% in 2014 and then growing to 2.9% in 2024 (RateInflation, 2025).

This is the long-term effect of inflation as the purchasing power of the peso decreased from ₱1.10 in 2014 to ₱0.78 by 2024. The Big Mac Index and PPP (The Economist, 2024) are useful in determining the values of currencies and their impact on deposits. The new technology especially digital infrastructure and mobile banking have caused changes in financial behaviour (Orencia, 2023). This was concomitant with the increase in digital payments from 10% in 2018 to 52.8% in 2023 (BSP, 2023), thereby increasing financial inclusion and creating deposit account holders. This study investigated the trends of deposit growth in the Philippine banking industry from 2014 to 2024 using quantitative methods such as trend analysis and data mining from BSP and bank financial reports. It includes the total deposits of Universal, Commercial, Thrift and Rural banks. But it excludes international banking, time deposits and individual behaviors.

Previous studies have looked at the growth of Philippine bank deposits separately from other factors in a macroeconomic context – i.e. either GDP or CPI, and/or digital finance such as mobile payments have been discussed in isolation. However, little has been done to analyze the joint effects at the bank types level on the total bank deposit growth over the decade. Similarly, Inhambre (2025) used cointegration techniques to relate the GDP and the deposit level but without considering technological variables. In a more recent study, Antonio and Magante (2023) established a link between mobile phones and digital finance and high bank account ownership, but their focus was on inclusion, not on deposit growth. The study fills the gap in the literature by including the macroeconomic indicators (GDP, CPI, and PPP), digital payment adoption and their differential impact on Universal & Commercial, Thrift and Rural & Cooperative banks in a decade. It provides a sophisticated analysis of the processes of deposit growth.

The Philippine banking industry needs to see more deposits to be able to sustain itself and grow. The economic indicators and technology adoption have been studied separately in the past but not much research has been done on the combination of these dimensions on the effect on deposit growth in different banking groups over time. The lack of a comprehensive cross-section analysis leaves policymakers and banks in a quandary while they consider strategies to attract deposit inflow

and promote financial inclusion. This study intends to address this gap by exploring the combined influences of macroeconomic variables like Gross Domestic Product (GDP), Consumer Price Index (CPI), and Purchasing Power of Peso (PPP) and technological factors like the adoption of digital payment on the deposit growth of Universal and Commercial Banks, Thrift Banks, and Rural and Cooperative Banks from 2014 to 2024.

Specifically, the research sought to answer the following questions. (1) Growth in total deposits of major banking groups in the Philippines from 2014 to 2024 (2) What is the relationship between deposit growth in Philippine banks and macroeconomic indicators (GDP, CPI and PPP)? (3) How does the adoption of digital payment affect the growth of deposits in Philippine banks? (4) How are macroeconomic and technological factors jointly associated with deposit growth? And (5) what are the most statistically significant factors associated with growth of deposits across various banking groups?

Moreover, the study also targeted the following null hypotheses: H 0 1 : GDP and deposit growth are not significantly related. H_{02}: CPI and deposit growth have no significant relationship.

H 0 3 : There is no significant relationship between PPP and deposit growth H_{04}: There is no significant association between digital payment adoption and deposit growth. And H_{50}: When combined, macroeconomic and technological factors are not significantly associated with deposit growth.

Figure 1 shows main variables included in the study and illustrates the relationships between main variables. It shows that selected economic indicators and a technological indicator can be used as independent variables in the computation of total deposits or deposit growth in Philippine banks. The independent variables are shown on the left side of the diagram and the dependent variable on the right. Arrows between the variables show the hypothesized direction of influence and the relationships empirically tested in the analysis.

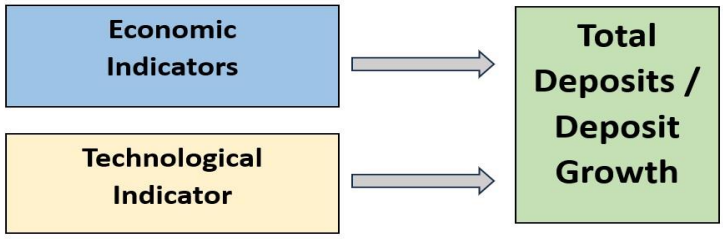

Figure 1. Conceptual Model Showing the Influence of Economic and Technological Indicators on Deposit Growth

The figure shows the association of five economic indicators that affect overall deposit growth: Gross Domestic Product, GDP per capita, annual GDP change, Consumer Price Index and Purchasing Power of the Peso, and a technology indicator that reflects adoption of digital payment tools. These economic drivers include the economic status of the country, income status, trends of inflation and currency value. There are many factors that dictate how individuals and institutions will save or decide where to allocate funds in banks. At the same time, the technology element also reflects the extent to which advances in digital platforms promote access to financial services and drive deposit activity. These variables, in aggregate, represent the effect of economic fundamentals and technology advancement on the changes or increases in total deposits of banking groups.

Methods

The present study used a descriptive correlational design, which is a method of research used to study and describe characteristics of a population or phenomenon and relationships between variables, but does not determine causality between variables. Variables are considered as variables and the strength and direction of the relationship between variables can be ascertained through correlational analysis

(Creswell & Creswell, 2018). This design enables us to determine whether deposit trends are related to national issues. Secondary data were collected from official data from the Bangko Sentral ng Pilipinas (BSP) and Philippine Statistics Authority (PSA) websites from 2014 to 2024. Number and value of deposit accounts were indicators of deposit growth. The PSA supplied the economic indicators such as GDP growth, CPI and PPP. Data on digital transactions such as mobile payments and electronic fund transfers were extracted from BSP's Digital Payments Transformation Reports, because this is a correlational study, the analysis is limited to statistical relationships among variables and does not establish causal or predictive effects.

The data collection involved searching the historical deposit records of the Bangko Sentral ng Pilipinas (BSP) systematically with special emphasis on the year-to-year changes so that the trends could be recorded. Data collected for the study were systematically organized and carefully checked for consistency and completeness. Data were cross-referenced with the statistics from the Philippine Statistics Authority (PSA) for the reduction of discrepancies and improvement of accuracy and reliability. All datasets used were publicly available and ethically sourced, and the final dataset format was designed to allow the required precision for detailed analysis. To standardize scales and enable consistent evaluation of trends and associations throughout the study period, all variables were transformed into indexed time series data.

The empirical analysis used statistical trend analysis in analyzing deposit distribution among Philippine banks. Correlation analysis was performed to analyze the relationship between economic and digital variables and deposit growth. This led to the study to find out the strength and direction of relationships between each independent variable and deposit growth. The significance level was set at 0.05 to determine if the relationships among the variables. Statistical significance was assessed in the context of correlation analysis only, and no regression or predictive modeling techniques were used in this study.

The study employs only secondary data that is publicly available from the Bangko Sentral ng Pilipinas (BSP). Ethics clearance was considered unnecessary as there was no contact with human participants. It, however, preserves the standards of transparency and academic integrity of the research, and fully recognizes BSP as the official and sole source of data. Further, all the results and analyses are presented independently and responsibly as to the integrity and trustworthiness of the conclusions of the research. Note that the data on digital payments were only available from 2018 onwards, which limits the time coverage of this variable relative to other indicators.

Results and Discussions

Secondary Data Obtained for Analyses

Figure 1. Total deposits of the four major banking groups in the Philippines (2014-2024) This classification covers the Philippine Banking System in its entirety, Universal and Commercial Banks, Thrift Banks and Rural and Cooperative Banks. Bangko Sentral ng Pilipinas (2024) data show trends and changes in the deposit buildup in these banking segments over the decade.

The graph shows that the whole banking system is in a steady upward trend with the total deposits increasing from ₱8,524.55 billion in 2014 to ₱20,373.90 billion in 2024 mostly due to the performance of Universal and Commercial Bank Groups that also had supremacy in the sector from ₱7,680.62 billion to ₱19,101.25 billion (BSP, 2024). On the other hand, Thrift Banks had the highest volatility, from ₱699.87 billion to ₱826.20 billion with slight dips after 2018 while Rural and Cooperative Banks had the least contribution at ₱144.05 billion compared to ₱350.18 billion during the same period. The results of the study showed that there is a positive correlation between economic and technological factors to Philippine Banking System (PBS) and Universal Banks, though little for Thrift Banks, on an economic and technological perspective. This is consistent with the findings of the study.

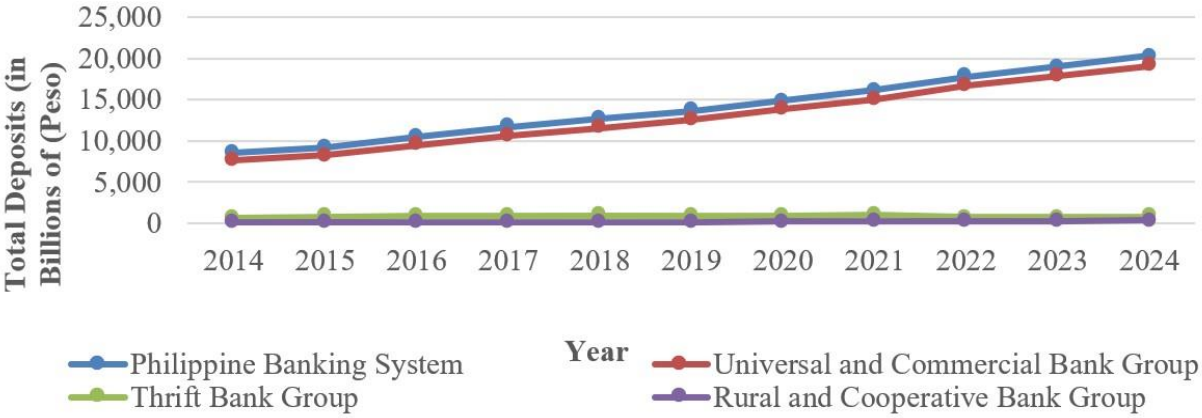

Figure 1. Deposit Trends by Banking Group in the Philippine Banking Sector (2014-2024)

Purchasing Power of Peso. Figure 2 shows the depreciation of the peso's purchasing power between 2014 and 2024. The PPP started from ₱1.10 in 2014 and then gradually fell through the years to ₱0.99 in 2018, the actual base year, to ₱0.90 in 2021 and reaching ₱0.78 in 2024. The impacts of inflation that tend to pull the real value of money down (Philippine Statistics Authority, 2024) in aggregate are well presented. Specifically, the analysis found a strong relationship between the Philippine Banking System, particularly within the Rural and Cooperative Bank Group, and peso's purchasing power, and peso was a significant influence on deposit behavior with changes in PPP.

But this relationship must be interpreted with caution. The rise in total deposits seen together with a fall in purchasing power is simply a nominal value effect, not a real increase in savings behavior. In inflationary conditions, nominal financial aggregates like deposits are automatically inflated while their real value shrinks due to the growth of the money supply and the price level (Rodriguez, 2022; Santos & Nguyen, 2021). We argue that the strong negative relation between PPP and deposit growth is best interpreted as a macro-economic scaling effect, rather than as a conscious saving behavior to maintain purchasing power. Lower purchasing power is associated with higher nominal deposit levels in aggregate.

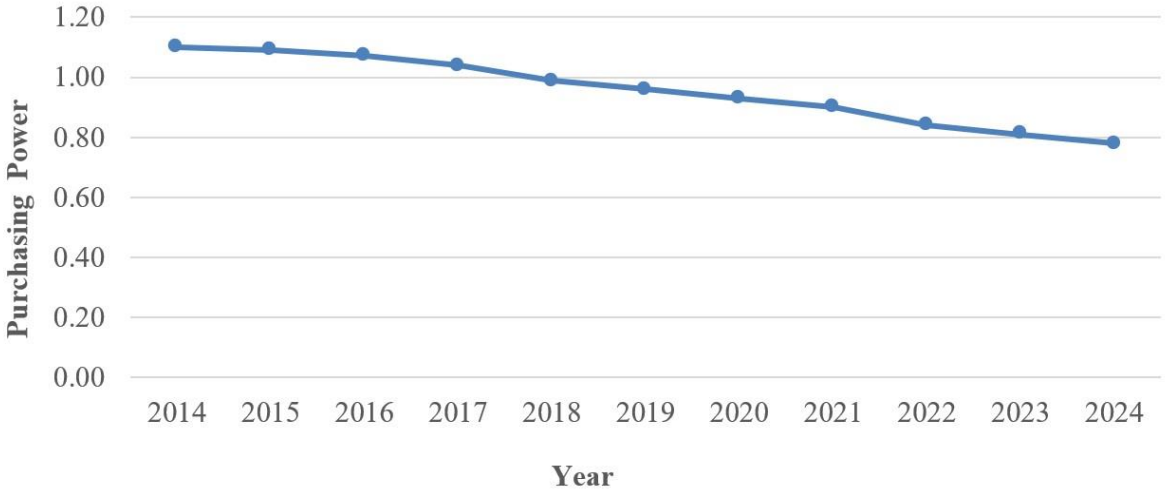

Figure 2. Purchasing Power of Peso (2014-2024)

Gross Domestic Product. This is the trend of the Philippine GDP in the last ten years in billions of US $. The GDP grew steadily in the following years, from an approximate $297 billion in 2014 to $455 billion by 2024 (Macrotrends, 2023). The year 2016 has shown substantial growth of 7.1 percent and the year 2022 has shown the highest growth of 7.6 percent. However, in 2020 GDP dropped to $361.75 billion (-9.5%, due to the pandemic), then recovered in the next years (Macrotrends, 2023).

Usually, the positive growth of GDP leads to the accumulation of deposits as usually economic conditions lead to increased household or business incomes thereby increasing the saving capacity through better incomes (Kim & Lee, 2023; Mishkin, 2019). As shown in Figure 3. However, the correlation results indicate that the degree of the relationship between GDP and deposit growth is different across the banking segments. The strongest and positive relationship between GDP and deposit growth was found among the Universal and Commercial Banks. This shows that the larger and more diversified institutions are better at converting macroeconomic growth into deposit mobilization.

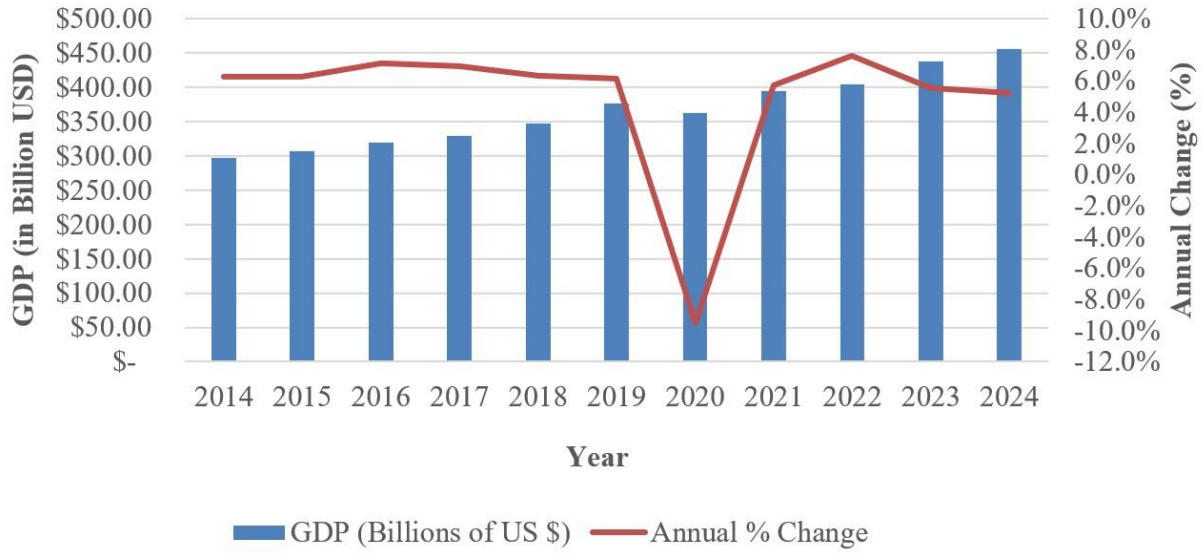

Figure 3. Gross Domestic Product (2014-2024)

Per Capita in U.S. Dollars. Figure 4 GDP per capita (USD) trends, 2014-24. From the graph we can see that there is an upward trend in the ten years showing an increase in the average income levels (World Bank, 2024). GDP per capital increased steadily but gradually from around $2900 in 2014 to around $3200 in 2018. The trend is still that in 2019, the GDP per capita was about $3,400, which indicates more economic activity and ability of people to earn (Lee & Santos, 2022; Kim & Lee, 2023). But the decline was visible already in 2020 and the GDP per capita dropped to about 3,200. The fall disrupts the old pattern of growth. This can be caused by the external economic shock such as the global economic recession at the time.

But that flip-flop was reversed in 2021 and the price rebounded to nearly $3,400, and continued to rise in 2022 and 2023. A vigorous recovery and faster growth in the second half of the period saw GDP per capita reach a peak of some $4,100 in 2024. What this graph is really telling us is that even though there is a small dip in GDP per person around 2020, there is a general upward trend. Slow economy, rising average income. That could be a sign that consumers are saving more in aggregate — and could help add to deposits in the banking sector.

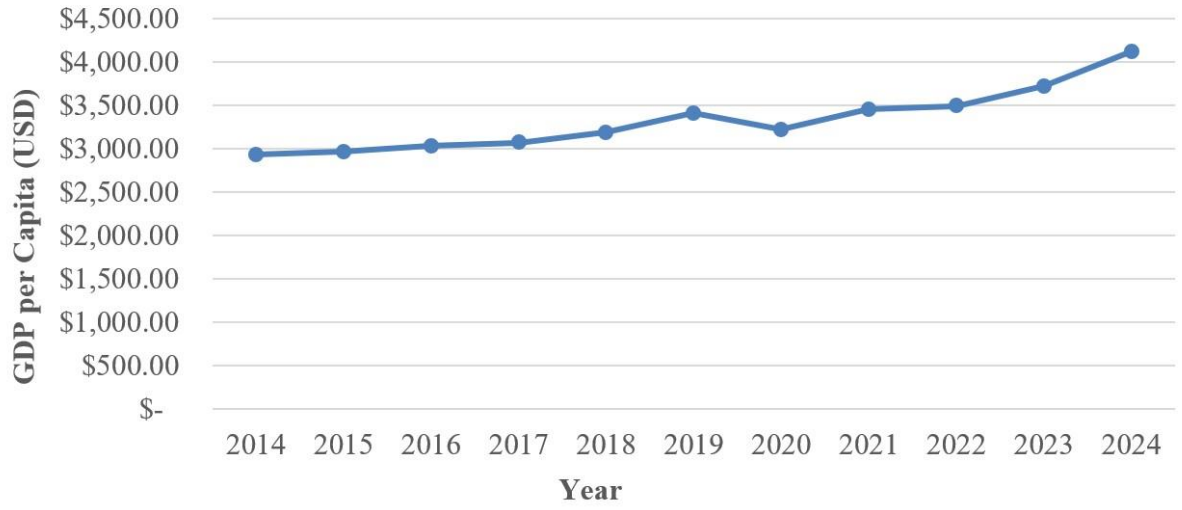

Figure 4. Per Capita in US Dollars (2014-2024)

Consumer Price Index. The trend of Consumer Price Index (CPI) as a percentage for the period 2014-2024 is shown in figure 5. The CPI has been increasing over time from 1.9% in 2014 to about 2.9% in 2024 (an increase of 1% in the last 10 years). The steepest increase occurred after 2018. Times inflation rose. CPI indicators, growth in cost of goods and services. The CPI was statistically significant for Universal and Commercial Banks but was not statistically significant for Thrift Banks and Rural and Cooperative Banks. Thus, inflation affects saving behaviour more in larger banks, where richer clients base their deposits on the cost of living (Philippine Statistics Authority, 2024).

The graph of the Consumer Price Index (CPI) 2014-2024 shows the development and variations of inflation in the decade. The economic growth, government policies and external events such as disruptions in the global market have influenced the inflation in CPI to varying degrees of price stability. A rising CPI over time signals inflation; slower growth and/or short dips indicate relative price stability or successful inflation management (Philippine Statistics Authority, 2024). One reason is that consumers' costs are so intrinsic to this exercise. The purchasing power of consumers and the cost of living are key indicators of the overall economic condition and therefore monitoring the CPI is of central importance. CPI data also helps shed light on the impact of inflation on household spending, saving and borrowing trends.

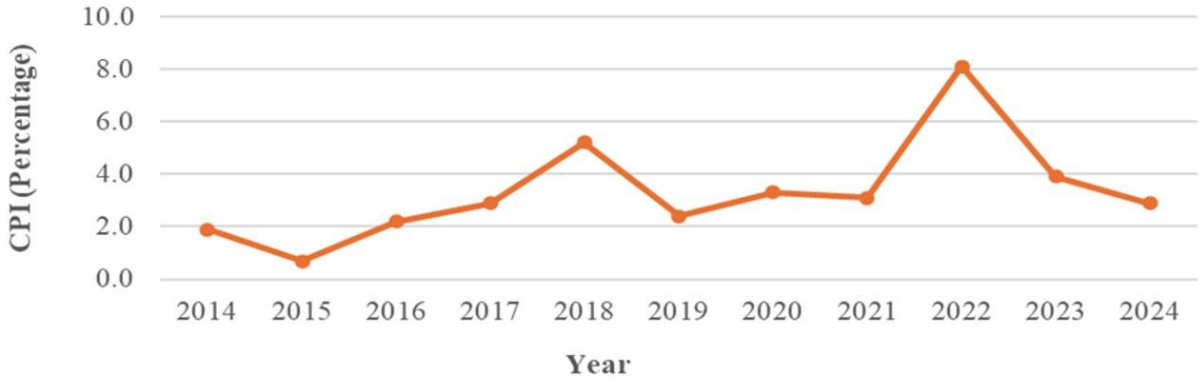

Figure 5. Consumer Price Index (2014-2024)

Digital Payments. Figure 6 illustrates the growing transition to electronic fund transfers, mobile banking and e-wallet in the Philippines. The share of digital payments to total transactions increased from 10% to 52.8% or an impressive growth of 42.8 percentage points in five years between 2018 and 2023 (Bangko Sentral ng Pilipinas, 2023). "This is a sign of how fast the banking sector of the country is digitizing." The digitization has been very positive for the growth of deposits of the banking groups surveyed, in particular Universal and Commercial Banks and Rural and Cooperative Banks. The results indicate that higher adoption of digital financial services leads to higher banking penetration and deposit mobilization. The results are consistent with prior studies that found digitization facilitates financial inclusion and contributes to deposit growth acceleration (Kim & Park, 2023; Shahen & Sharaf, 2025).

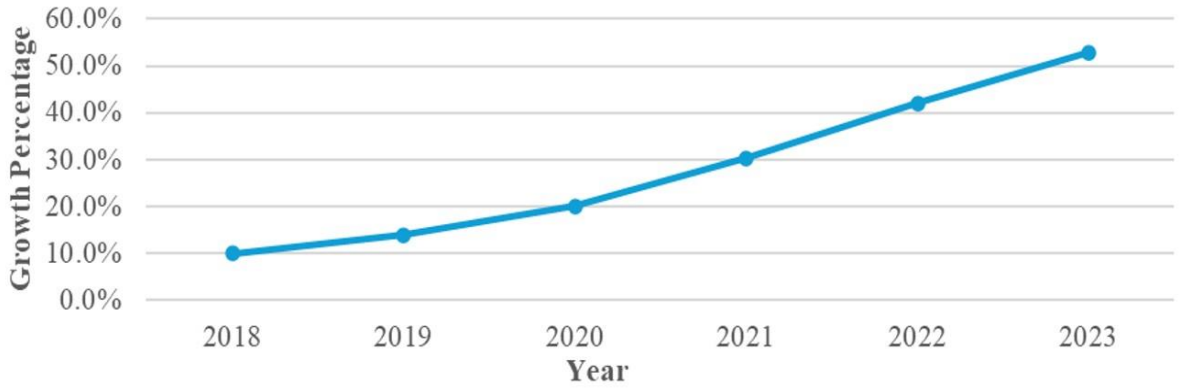

Figure 6. Digital Payments (2018-2023

Pearson Correlation Between Philippine Banking System Trend and Determinants of Economic Growth

The results of the Pearson correlation analysis testing the relationship between the key economic determinants and the trend of the Philippine banking system are shown in Table 1. The chosen variables are the Purchasing Power of the Peso Index, Gross Domestic Product (GDP) Index, GDP per Capita Index, Consumer Price Index and Digital Payments. The table presents the corresponding Pearson r coefficients which indicate the strength and the direction of the association between each determinant and the observed banking systemtrend. This enables a systematic comparison of the statistical association of each economic indicator with the changes in the banking sector over the period under review.

Table 1. Pearson Correlation Between Philippine Banking System Trends and Determinants of Economic Growth

Determinants	Pearson *r*	Interpretation
Purchasing Power of Peso Index	-0.9873	Very Strong Negative Relationship
Gross Domestic Product Index	0.9566	Very Strong Positive Relationship
GDP Per Capita Index	0.9606	Very Strong Positive Relationship
Consumer Price Index	0.9402	Very Strong Positive Relationship
Digital Payments	0.9894	Very Strong Positive Relationship

Note. Interpretation of correlation strength is based on Evans (1996). r values are interpreted as follows: very weak (0.00–0.19), weak (0.20–0.39), moderate (0.40–0.59), strong (0.60–0.79), and very strong (0.80–1.00).

The high absolute value of Pearson *r* coefficients implies that the selected determinants have high correlation with the trend of the Philippine banking system as presented in Table 1.

The first four variables, Purchasing Power of Peso Index, Gross Domestic Product Index, GDP per Capita Index and Consumer Price Index are economic factors and all are strongly related with the banking system. Interestingly, there are very strong positive relations for three economic indicators. That is, the progress of the banking sector is very strictly linked to the changes in the general economic conditions, the levels of income and price movements. On the other hand, the Purchasing Power of the Peso Index has a very strong negative relationship which means that a decrease in the purchasing power is a close relation with the changes in the trends of the banking system.

The technological determinant – Digital Payments – also shows a very high positive correlation coefficient among all the variables vis-à-vis the economic factors. This implies that the correlation of development of technology in the field of financial transactions with the development of the banking system is at least as strong as with traditional economic indicators, if not stronger. Economic factors give a broad structural account of bank performance. However, the technological factor has a particularly strong statistical association which indicates the growing importance of digital transformation in shaping the modern banking scene.

As shown in Table 1, the economic variables and trends in the banking system are highly correlated implying that the Philippine banking system is highly responsive to the macroeconomic conditions. The sector is still very sensitive to the overall economy. This is demonstrated by the strong correlation between the indicators of banking activity and indicators of economic performance such as GDP, GDP per capita, purchasing power and inflation. The results of this research are in line with the previous studies that macroeconomic factors have a significant impact on the bank performance, the trends of lending and the general financial stability (Ghosh & Mondal, 2024). In many economies, economic growth usually results in growth in consumer spending, company activity and income levels. Such changes often lead to greater use of financial services including borrowing, savings and other forms of credit intermediation. The larger the economy, the more opportunity for banks to give financial services to people and business. This supports the hypothesis that the growth and development of the banking industry is still dependent on good economic fundamentals (Murrar et al., 2024; Nguyen, 2022).

The same positive association of digital payments also at the same time points to the growing importance of technological factors in the banking sector. The somewhat higher correlation of digital payments to traditional economic indicators shows that fintech is playing an increasing role as a key driver of the transformation of the banking system. Empirical studies revealed that the usage of fintech boosts up bank performance, efficiency and financial inclusion particularly in the emerging economies (Shahen & Sharaf, 2025; Yoon et al., 2023). Furthermore, the digital payments have been linked to real benefits such as higher financial services access and higher growth in GDP per capita, highlighting their role in economic and financial development (Aguilar et al., 2024). Overall, the results indicate that technical innovation is becoming more important for the industry, but that economic factors are still of relevance. In a nutshell, the banks' long-term viability is increasingly dependent on the combination of macro-economic stability and technological progress.

Pearson Correlation Between Universal and Commercial Bank Trends and Determinants of Economic Growth

Table 2 shows the results of Pearson correlation analysis between the trends of the universal and commercial banks in the Philippines and selected determinants of economic growth. The variables used in the analysis are the Purchasing Power of the Peso Index, Gross Domestic Product (GDP) Index, GDP per Capita Index, Consumer Price Index and Digital Payments. The table provides the corresponding Pearson r correlation coefficients, which indicate the direction and strength of the relationship between each determinant and the observed trends of banking. It provides a systematic perspective of the statistical correlation of economic and technological factors with the performance and development of universal and commercial banks during the period of study.

Table 2. Pearson Correlation Between Universal and Commercial Bank Trends and Determinants of Economic Growth

Determinants	Pearson *r*	Interpretation
Purchasing Power of Peso Index	-0.9880	Very Strong Negative Relationship
Gross Domestic Product Index	0.9588	Very Strong Positive Relationship
GDP Per Capita Index	0.9618	Very Strong Positive Relationship
Consumer Price Index	0.9347	Very Strong Positive Relationship
Digital Payments	0.9920	Very Strong Positive Relationship

Note. Interpretation of correlation strength is based on Evans (1996). r values are interpreted as follows: very weak (0.00–0.19), weak (0.20–0.39), moderate (0.40–0.59), strong (0.60–0.79), and very strong (0.80–1.00).

Table 2 shows that all the determinants identified are strong relationships with the trends of the universal and commercial banks in the Philippines. The first four variables are economic factors and all have very strong relationships with banking trends. They are Purchasing Power of the Peso Index, Gross Domestic Product Index, GDP per Capita Index and Consumer Price Index. Among them are three indicators with very strong positive relationships which shows that the growth of banking sector is closely associated with economic performance, income levels and price dynamics. The Purchasing Power of the Peso Index, on the other hand, is highly negatively correlated. That is, changes in banking activity are very highly correlated with the fall in purchasing power.

The technological determinant – Digital Payments – is also strongly and positively correlated to these economic factors and has the highest correlation coefficient across all the variables. Technological changes in the area of financial transactions are as important, if not a little bit more, to banking trends as conventional macro-economic indicators. The economic factors in general point to the structural dependence of the performance of the banking on the economic situation in general. The technological factor highlights the increasing importance of digital transformation. The comparison shows that although economic fundamentals continue to be an important driver, digital payments are emerging as a particularly strong related factor for the trajectory of universal and commercial banks.

The universal and commercial banks in the Philippines are being driven by strong macroeconomic conditions and rapid technological advancement as shown in Table 2. The strong correlation between economic variables such as GDP, GDP per capita, purchasing power and inflation with banking trends, shows that the sector is still closely related to the general economic activity. These suggest that macroeconomic variables are important drivers of bank performance, credit expansion and financial stability (Al-Homaidi et al., 2018; Ghosh & Mondal, 2024). Specifically, the continuous economic growth and rising income levels are recognized to enhance demand for banking services, improve intermediation, and foster the development of the financial sector (Murrar et al., 2024; Nguyen, 2022).

The stronger association for digital payments also highlights the growing importance of technology as a key driver of banking transformation. The different empirical studies have shown that fintech innovations especially digital payments improve efficiency, increase access to financial services and significantly improve banks' performance, especially in developing economies (Shahen & Sharaf, 2025; Yoon et al., 2023). In addition, empirical evidence suggests a positive correlation between the adoption of digital payment systems and higher GDP per capita growth and financial inclusion, underscoring the importance of these systems for the progress of banking and economic development (Aguilar et al., 2024). Overall, the findings suggest that the structural backbone of the banking sector is still emerging from economic fundamentals but also that technology factors are emerging to be equally if not more important. This means future growth of univer-

sal and commercial banks will depend on successful integration of macroeconomic strength and digital innovation.

Pearson Correlation Between Thrift Bank Trends and Determinants of Economic Growth

Table 3 displays the Pearson correlation results between the thrift bank trends in the Philippines and selected determinants of economic growth. The variables used in the analysis are: Purchasing Power of the Peso Index, Gross Domestic Product (GDP) Index, GDP per Capita Index, Consumer Price Index and Digital Payments. Table presents the respective Pearson r coefficients. The Pearson r coefficient is a measure of the strength and direction of the association between each determinant and the observed trends in thrift banks. It gives a clear and ordered picture of the statistical relationship of both economic and technological factors with the performance and development of thrift banks during the period of study.

Table 3. Pearson Correlation Between Thrift Bank Trends and Determinants of Economic Growth

Determinants	Pearson *r*	Interpretation
Purchasing Power of Peso Index	-0.9343	Very Strong Negative Relationship
Gross Domestic Product Index	0.9590	Very Strong Positive Relationship
GDP Per Capita Index	0.8657	Very Strong Positive Relationship
Consumer Price Index	0.7873	Strong Positive Relationship
Digital Payments	0.9328	Very Strong Positive Relationship

Note. Interpretation of correlation strength is based on Evans (1996). r values are interpreted as follows: very weak (0.00–0.19), weak (0.20–0.39), moderate (0.40–0.59), strong (0.60–0.79), and very strong (0.80–1.00).

Table 3 presents the association of all the factors considered with the trajectories of thrift banks in the Philippines. First four are Consumer Price Index, GDP per capita Index, Gross Domestic Product Index and Peso Purchasing Power Index. There are economic reasons. It was found to be correlated with the performance of thrift banks most of the time. Three of the economic indicators are strongly positively correlated. The relationships suggest that thrift bank expansion is closely related to economic growth, income levels and general price conditions. But it is very negatively correlated to the Peso Index's purchasing power. The decline in our purchasing power has led to a huge increase in the traffic to thrift stores. It is interesting to note that the CPI's weak positive association suggests that thrift banks may be more vulnerable to the inflationary pressures than other banking groupings. This is consistent with the findings of Jarallah et al. (2024) that macroeconomic conditions have a stronger impact on smaller banks because they are more susceptible to changes in inflation, interest rates and economic growth. Smaller banks have a narrower range of activities and a smaller financial cushion, and so are more vulnerable to external economic shocks than larger banks.

Moreover, technological determinant of digital payment has very significant positive association with coefficient more for majority economic variables as compared with these economic variables. It can be seen that the development of digital finance has a great influence on thrift banks mobility. However, some economic variables are still the same drivers, which makes disentangling economic and technological drivers more difficult than in previous banking categories. This means that the performance of the thrift banks can still be explained by economic principles but the role of technical progress especially in the field of digital payments is growing. Overall, the comparison suggests that thrift banks are affected by technology and economic conditions, and that their interdependence is somewhat more balanced than that of larger banking sectors.

As shown in Table 3, the performance and trends of thrift banks in the Philippines are different from larger banking institutions in terms of the impact of macro-economic conditions

and technological developments. The huge interdependence of economic indicators (GDP, GDP per capita, purchasing power and inflation) on savings banks' developments proves the fact that savings banks are still strongly depending on the overall economic activity. This result is consistent with the results of previous studies that confirmed the significance of macroeconomic factors in determining the performance of the banking sector, credit behavior and financial sector stability (Jarallah et al., 2024; Ruxho & Beha, 2024). This shows the positive effects of economic and income growth on financial intermediation and the demand for banking services (Minoiu et al., 2023) and shows the criticality of economic fundamentals for the sustainability of the operations of thrift banks.

However, the robust positive link with digital payments points to a greater role of technological innovation in the development of thrift banking practices. Digital payment systems can increase financial inclusion, access to banking services and efficiency of institutions, particularly smaller, community-based ones (Azmeh & Al-Raeei, 2024; Zhu et al., 2024). However, it seems that universal and commercial banks are able to compensate the impact of technological factors compared to purely economic ones. Or thrift banks are also increasingly dependent on both the old economy and the new digital shift. The thrift banking sector can only be sustainable, more inclusive and competitive within a stable macroeconomic setting and conscious application of digital financial technologies.

Pearson Correlation Between Rural and Cooperative Bank Group Trends and Determinants of Economic Growth

Table 4 presents the Pearson correlation analysis of the relationship between trends of rural and cooperative banks in the Philippines and selected determinants of economic growth. The variables used in the analysis are; Purchasing Power of the Peso Index, Gross Domestic Product (GDP) Index, GDP Per Capita Index, Consumer Price Index and Digital Payments. The table displays the corresponding Pearson r coefficients which describe the strength and direction of the association between each determinant and the observed banking trends. This is a systematic review of the statistical relationship of important economic and technological factors with the performance and development of rural and cooperative banks in the study period.

Table 4. Pearson Correlation Between Rural and Cooperative Bank Group Trends and Determinants of Economic Growth

Determinants	Pearson *r*	Interpretation
Purchasing Power of Peso Index	-0.9716	Very Strong Negative Relationship
Gross Domestic Product Index	0.9356	Very Strong Positive Relationship
GDP Per Capita Index	0.9316	Very Strong Positive Relationship
Consumer Price Index	0.8727	Very Strong Positive Relationship
Digital Payments	0.9946	Very Strong Positive Relationship

Note. Interpretation of correlation strength is based on Evans (1996). r values are interpreted as follows: very weak (0.00–0.19), weak (0.20–0.39), moderate (0.40–0.59), strong (0.60–0.79), and very strong (0.80–1.00)

From Table 4, the identified determinants are very strongly related to the trends of the rural and cooperative banks in Philippines. The first four variables are economic factors, such as Purchasing Power of Peso Index, Gross Domestic Product Index, GDP per Capita Index, and Consumer Price Index. All of them have very strong consistent relationships to trends in banks. Three of these indicators are very strongly positively correlated; This indicates that the expansion of rural and cooperative banks is highly correlated to the expansion of economic activities, incomes and general price movements. Furthermore, the Purchasing Power of the Peso Index has a very strong negative correlation which implies that the decline of the purchasing power of the Peso Index is highly related to the performance of these banks.

Technological determinant Digital Payments also shows a very strong positive relationship than these economic determinants. It is most related to all the variables. So trends in rural and cooperative banks are very closely related to technological development, particularly in digital financial activities. Digital payments seem to have a slightly bigger impact than the economy, which shows that digital transformation is getting more and more important even for community banks that have been around for a while. To conclude, the comparison shows that the economic environment still affects the operation of rural and cooperative banks but the technological innovation, especially the digital payments, is becoming a very important aspect of banking development (Azmeh & Al-Raeei, 2024; Shahen & Sharaf, 2025).

Table 4 shows that economic conditions and technological development have a significant impact on the trends of rural and cooperative banks in the Philippines. The high correlation of economic indicators (GDP, GDP per capita, purchasing power, inflation) and banking trends indicates that these banks are still highly dependent on the overall performance of the country's economy. As the economy grows and incomes increase, communities are able to generate more savings, loans and other banking activity. At the same time the inflation and the change in the purchase power can affect the borrowing behaviour and the financial stability of these banks. Above all, in serving the vulnerable sectors and rural communities (Asian Development Bank, 2022).

The digital payment adoption gap in banking is the reverse of the role of technology at rural, cooperative banks. The use of financial technologies and payment systems can improve a bank's financial inclusion, accessibility and operational efficiency in developing countries (Shahen and Sharaf, 2025). Digital payments also promote economic development through financial inclusion and access to credit (Aguilar, et al., 2024). The results show that technological innovation is becoming more and more important for growth and competitiveness especially in the context of digital payments. The balance sheets of the rural and cooperative banks are not very strong. Therefore, it is necessary to develop industry in a sustainable way for a long-term period for economic success and for the effective use of digital financial technologies.

Summary of Findings

Data show that total deposits in the Philippine banking system increased dramatically and steadily, from ₱8.52 trillion in 2014 to ₱20.37 trillion in 2024. The sector's deposit growth is attributable to the large Universal and Commercial Banks. The thrift banks show the least progress and the greatest irregularity. The least important donors are the cooperative and rural banks. But there are more and more of them, all the time.

The growth of deposits is closely linked to the macroeconomy. The growth rates of deposits are positively and strongly correlated with GDP and GDP per capita. The more output and incomes there are, the easier it is for people and institutions to save. The Consumer Price Index (CPI) is also found highly correlated to savings behavior, especially for larger institutions. This suggests that inflation does affect savings behavior of high income depositors.

On the other hand the Purchasing Power of the Peso (PPP) has a very strong inverse relation with the growth of deposits. Generally, the loss of purchasing power of the peso by inflation is related to an increase in deposits, which suggests that the population increases its nominal savings or changes its financial behavior due to inflationary pressures. In all banking groups, this is negatively related and it is more pronounced for the Rural and Cooperative Banks.

The variable most closely correlated with deposit growth is technological progress, especially in the area of digital payments. Digital payments usage has increased from 10% in 2018 to 52.8% in 2023. Of all variables this variable is the most positively correlated with deposit growth. It again highlights the importance of financial technology in promoting financial inclusion, increasing accessibility and raising deposits in every single banking segment.

Among all bank categories Universal Banks and Commercial Banks are most sensitive to macroeconomic and technological factors. This is because of their size and their ability to take

advantage of economic growth and digital innovation. Thrift banks are more equally responsive to economic and technological factors. Rural and Cooperative Banks, which have always been affected by macroeconomic factors, are more affected by the uptake of digital payments and advise to move towards digital transformation even in smaller institutions.

The results point to a mix of robust macroeconomic fundamentals and swift technological progress underpinning the growth of deposits of the Philippine banking system. Economic factors like GDP and income provide a structural basis of the deposit growth. However, digital payments are emerging as a dominant and disruptive force and the future of banking growth will be at the intersection of economic stability and digital innovation.

Implications of the Study

The study results are useful to policy makers, financial institutions and the Philippine economy. First, the importance of macroeconomic variables especially GDP and income levels shows that economic stability and inclusive growth is important in increasing bank deposits. Policies that boost economic growth, jobs and higher incomes can help people save more and make bank deposits grow. In addition, effect of inflation index such as consumer price index (CPI) and purchasing power shows that it is important to maintain price stability as inflation can affect saving and financial decisions.

Second, digital payments were considered a key driver for deposit growth; This included developing digital banking systems, fintech services and secure online payment platforms to help increase financial access and encourage more people to use formal banking services. “Digital technology is highly relevant to financial inclusion because it facilitates banking and it brings the banking closer to the different groups of people.

Third, the differences between the banking groups mean banks need to be adopting different strategies. Deposit growth is still possible in Universal Banks and Commercial Banks due to economic growth and advanced digital systems. Thrift Banks and Rural and Cooperative Banks may also need further support to boost their digital capabilities and develop financial products that cater to the needs of their customers. Now smaller banks are going digital with payments and it seems technology is a must for long term success.

Finally, the study shows the importance of economic and technological factors for the future development of the banking sector. Digital transformation is the driver of economic development. Therefore, policy makers and financial institutions should collaborate to harmonize the economic policies, financial regulations and technological innovation in order to achieve sustainable deposit growth, enhance financial inclusion and support the overall economic development.

Conclusion

The study identifies the determinants of deposits growth in the Philippine banking system for the period of 2014-2024 and finds that the sustained growth of deposits is significantly associated with the general trend of macroeconomic factors and technological progress. The results show the existence of strong positive associations between economic indicators such as GDP, income levels, deposit growth and inflation related factors. In particular, the loss of purchasing power has complex effects on saving behavior. The rapid adoption of digital payments is also a large disruptive driver with the closest correlation to deposit growth across banking groups.

The findings suggest that macroeconomic stability remains the bedrock of deposit mobilisation and that digital innovation is emerging as a major catalyst in changing access, participation and financial inclusion even for smaller institutions. However the study is limited with the use of secondary data, correlational design and aggregated banking groups that limit causal interpretation and hide micro level variations.

Future work could also benefit from primary data, a broader set of determinants and more powerful analytical methods that are better able to capture causal dynamics and institutional differences. Additional research on emerging financial technologies could also be useful to further understand how digital transformation continues to change banking behaviors and development.

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