

# Assessing the Effect of Monetary Policy on Private Sector Credit in Selected Sub-Saharan Countries

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## Abstract

*The primary objective of this research was to scrutinize the impact of monetary policy on private sector credit across Sub-Saharan African countries. Employing the positivism method, the study embraced an explanatory research design, targeting the entire spectrum of Sub-Saharan African nations as its population. A purposive selection technique, specifically the convenience sampling method, was applied to focus on a subset of 12 Sub-Saharan African countries, covering the period from 1995 to 2021, spanning 26 years. This resulted in a sample size of 312 observations. For a nuanced analysis of the data, Stata v.16 was employed as the preferred software for panel data analysis. The analytical framework centered on the Dynamic Model, specifically utilizing the System GMM (Generalized Method of Moments). The empirical findings unveiled that broad money supply and gross domestic savings exert a positive influence on facilitating financial support for private enterprises. Conversely, inflation and real interest rates demonstrated a negative impact on the provision of credit to non-public entities. Drawing from these insights, the study proposes that African governments should formulate monetary policy frameworks aligned with the overarching goal of fostering economic growth through heightened credit accessibility for the non-state sector. Furthermore, it recommends strategic considerations for mitigating interest rates, recognizing the inhibitory effects of elevated rates on the accessibility of private sector credit. These recommendations underscore the importance of tailoring monetary policies to support and propel the growth of private businesses in the African context.*

**Keywords:** Private Sector Credit, Monetary Policy Tools, Sub-Saharan Africa, Economic Impact, Financial Regulation, Corporate Governance, Sustainable Finance, Economic Growth, Public Policy, Central Banking, Interest Rates, Inflation Control, money Supply, Dynamic Model.

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## 1.0 INTRODUCTION

The fundamental objectives of monetary policy usually involve preserving price stability, managing inflation, fostering economic growth, and ensuring stability in employment (Onaga, et al 2023). The study set out to address this deficiency by inquiring into the ramifications of monetary strategies on private credit in sub-Saharan African (SSA) countries. The study will contribute to existing literature in the field of the association between monetary policy and private sector credit. Also the findings will have implications for financial supervisors, venture capitalists, investors and academics as it would illuminate the affinity between microeconomic indicators and private credit as well as increase our understanding of the responses of changes in private sector credit to changes in monetary policy. The study will also guide policy makers in developing strategies to evenly distribute credit between government and private sector to enhance economic advancement.

Beyond the realm of inflationary calculus, the adoption of monetary policy by central banks cast a discerning eye on the ripple effects of their policies on employment dynamics. A judicious approach to stimulating economic growth becomes an instrument of job creation, intertwining the dual imperatives of economic vitality and gainful employment.

Finally, the study will serve as a source of reference and literature in academia. It can also serve as a further inroad into the issues of private sector credit on sub-Saharan countries.

## 2.0 MATERIALS & METHODS

In the past few years, the connection between monetary policy and private sector credit has been a focal point in both policy circles and academic conversations, driven by the significance of money supply in maintaining price stability. The fundamental objectives of monetary policy usually involve preserving price stability, managing inflation, fostering economic growth, and ensuring stability in employment (Onaga, et al 2023)

Monetary authorities in Sub-Sahara Africa employ a sophisticated arsenal of monetary policy tools, with a focal point on interest rates, to meticulously manage inflation. By intricately adjusting interest rates, they deftly mold the cost of borrowing and spending, defusing inflationary pressures and orchestrating equilibrium in overall demand and price levels (Berg and Portillo 2018). The overarching goal is to maintain inflation within a predefined target range, a strategic imperative for upholding the purchasing power of a currency and nurturing a resilient foundation for economic stability. In wielding the lever of interest rates and other nuanced instruments, central banks deftly navigate the intricate dance of stimulating or tempering economic activity (Ndikumana 2016). The symphony of lowering interest rates orchestrates an environment that propels borrowing and spending, fostering a milieu conducive to robust economic growth. Conversely, the measured elevation of interest rates acts as a prophylactic shield, preemptively averting the specters of overheating and asset bubbles.

Beyond the realm of inflationary calculus, the central banks cast a discerning eye on the ripple effects of their policies on employment dynamics. A judicious approach to stimulating economic growth becomes an instrument of job creation, intertwining the dual imperatives of economic vitality and gainful employment (Jelilov & Onder 2016). Simultaneously, the calibrated measures designed to rein in inflation can reverberate in the realm of employment, sculpting the intricate contours of workforce dynamics. Thus, the orchestration of monetary policy emerges as a finely tuned symphony, harmonizing the intricacies of inflation control, economic vitality, and employment stability on the global economic stage (Pattillo, Portillo and Unsal 2015). Globally, with a particular emphasis on developing countries, individuals are actively devising strategies and policies to enhance and sustain economic development. Consequently, governments and various stakeholders in these economies, particularly in Sub-Saharan Africa, have devised and implemented a diverse array of initiatives with the aim of fostering development. Economic growth in a nation is propelled by either the private sector or the public sector, but not both concurrently (Mwankemwa and Mlamka 2022)

Dana (2007) contends that nurturing the advancement of the private sector is imperative for the economic advancement of Africa. The reliance on the public sector for growth in many African nations is attributed to the underdeveloped nature of the private sector (Austin, 2010). Consequently, the limited contribution of the private sector in economically challenged countries hinders their capacity to drive overall economic development. The accessibility of loan provisions for private companies assumes a pivotal involvement in fostering economic expansion, serving as a crucial financial conduit for businesses to engage in expansive endeavors, innovation, and advancements in productivity (Obeng-Amponsah, et al 2019). With access to credit, businesses can embark on capital-intensive initiatives, employ skilled personnel, and procure essential resources, thereby augmenting overall economic productivity. Furthermore, credit acts as a catalyst for entrepreneurship, affording individuals the financial capability to initiate and sustain businesses. In essence, a resilient and competitive economy is fortified through a flourishing private sector, sustained by adequate credit accessibility (Katusiime 2017)

The fundamental role of credit availability is deeply intertwined with its multifaceted impacts on businesses and entrepreneurial activities. First and foremost, access to credit

empowers businesses to undertake ambitious and capital-intensive projects, fostering innovation and improvements in productivity (Adeleke, et al 2015). This financial support enables businesses to invest in cutting-edge technologies, expand their operations, and enhance their overall efficiency. Moreover, credit availability is instrumental in facilitating the employment of skilled personnel, creating a positive feedback loop as increased business activities lead to job creation and a more dynamic labor market. ( Were, Nzomoi and Rutto 2012). The ability to hire and retain skilled workers contributes not only to the individual businesses' success but also to the broader economic landscape.

In the realm of entrepreneurship, credit serves as a catalyst, providing aspiring individuals with the financial means to initiate and sustain new ventures. This, in turn, cultivates a vibrant and diverse private sector, characterized by a multitude of innovative and competitive enterprises (Loloh and Amoah 2014). The fostering of entrepreneurship also contributes to economic resilience, as a diverse private sector can better weather economic challenges and adapt to changing circumstances. A flourishing private sector, underpinned by adequate credit accessibility, becomes a driving force for economic development. It stimulates economic activities, encourages competition, and contributes to overall economic resilience (Mamman and Hashim 2013). Therefore, policies and strategies aimed at ensuring a conducive environment for credit availability to the non-government industry are paramount for sustaining and enhancing economic progress in a given region (Ali, et al 2021).

Access to credit empowers businesses in African countries to undertake capital-intensive projects crucial for infrastructural development. Whether it's investing in transportation networks, energy infrastructure, or technological advancements, credit serves as the financial backbone for these initiatives, contributing to overall economic productivity (Adu-Asare, Agyei and Bainn 2020). The availability of credit supports businesses in African countries in expanding their operations, leading to increased employment opportunities. As businesses grow, they can hire and train skilled personnel, addressing issues related to unemployment and contributing to the development of a capable and competitive workforce. Credit accessibility is a key driver of entrepreneurship in African countries. It provides aspiring individuals, especially those from underprivileged backgrounds, with the financial means to initiate and sustain their own businesses (Nampewo, et al 2016).

Central banks employ interest rates as a primary instrument within their monetary policy toolkit. Through adjustments to policy rates, such as the benchmark interest rate, central banks wield influence over the overall cost of borrowing (Ellingsen and Söderström 2001). A reduction in interest rates enhances affordability, incentivizing businesses to secure loans for expansion, investment, and innovation, thereby fostering economic growth through increased private sector activity ( Mohsen, Hoang and Tariq 2022). Central banks shape the amount of money available for lending. Optimal liquidity ensures that financial institutions possess the necessary resources to extend credit to the private sector, thereby facilitating business development and contributing to economic expansion. An accommodative monetary policy, characterized by lower interest rates and sufficient liquidity, serves as a catalyst for private sector investment. In such an environment, businesses are more inclined to undertake projects, initiate new ventures, and engage in capital-intensive activities, leveraging readily available and affordable credit. This stimulation of investment becomes a significant driver of economic upswing (Brima and Brima 2017)

While not forming a direct linkage, the involvement of monetary strategies in handling inflation indirectly supports the availability of credit. Central banks, in pursuit of price stability, contribute to creating a predictable economic environment for businesses. Moderate inflation levels, as targeted by central banks, establish a conducive backdrop for businesses' decision-making regarding borrowing and investment (Pattillo, Portillo and Unsal 2015. Financial stability ensures the smooth functioning of banks and financial institutions, fostering confidence among lenders and borrowers, and ultimately enhancing credit availability to support the growth initiatives of the private sector.(Namewo, et al 2016).

### 3.0 METHODOLOGY

This chapter presents the detail discussion on methodology of the study. It explains in details the study design and approach adopted, the examined population, sampling and sampling strategy, sources of data and technique that will be employed to analyze data.

#### 3.1 Research Design

To fulfill the research objective, the study incorporates an explanatory research design conjoined with a quantitative analytical procedure. The choice of the explanatory research design is motivated by the intention to inquire into the interrelation between two variables, while the quantitative research approach allows the researcher to analyze the phenomenon using statistical data sourced from reliable outlets. This research design is selected to comprehensively elucidate various aspects of the study, aiming to provide a detailed understanding of the problem. The quantitative research approach relies on factual, numerical data, enabling researchers to generate generalizable statistics and examine relationships between variables to ascertain cause-and-effect dynamics.

#### 3.2. Research Philosophy

A researcher's philosophy in conducting research serves as the cognitive framework that enables the formulation of novel empirical insights into the subject under investigation. This encompasses aspects ranging from selecting a research approach and defining the research problem to collecting, cleaning, and analyzing data. Many scholarly works delve into distinctions within and among the four principal research philosophies: positivism, interpretivism, pragmatism, and realism. The pragmatic research approach is grounded in practical considerations, asserting that the chosen methodology should align with the specific characteristics of the research subject at hand. This study adopts the positivism approach. Positivism relies on measurable observations that culminate in statistical analyses. Given the quantitative nature of this research and its reliance on theory to formulate hypotheses, positivism was deemed suitable.

#### 3.3 Research approach

The study will use the quantitative research approach. Quantitative research is a systematic empirical investigation employing statistical, mathematical, or computational techniques to collect, analyze, and interpret numerical data (Alharahsheh & Pius, 2020). It aims to quantify relationships, patterns, and phenomena to generate objective and generalizable findings. This approach often involves the use of surveys, experiments, structured observations, and statistical analyses to uncover patterns and test hypotheses.

Quantitative research emphasizes objectivity, minimizing the influence of researcher biases (Queirós, Faria, & Almeida, 2017). The structured nature of data collection and statistical analysis enhances the replicability of studies, allowing other researchers to validate findings. Quantitative research provides statistical precision. The use of statistical tests allows researchers to measure the degree of confidence in their findings, providing a level of certainty about the observed relationships.

The quantitative research approach is justified for this reason; Firstly, the study aims to measure and quantify relationships between key variables such as monetary policy and private sector credit. By utilizing quantitative methods, numerical data will be systematically collected and analyzed, allowing for statistical techniques to measure the strength and direction of associations between these constructs.

Large-scale data collection will be a priority, involving the examination of monetary policy practices across a representative sample of companies in the sub-Saharan countries. Quantitative methods are particularly well-suited for handling extensive datasets, contributing to the comprehensiveness and robustness of the research.

#### 3.4 Ethical Consideration

This research was compiled with principles which aimed at protecting the privacy of every individual who, in the course of the research work was requested to provide personal or commercially valuable information about themselves (hereinafter referred to as a subject of the research). Before an individual becomes a subject, the person was notified of, the



aims, methods, anticipated benefits and potential hazards of the research. No person becomes a subject unless the person is fully abreast or cognizant of the notice referred to in the preceding paragraph.

### *3.5 Research Methods*

Researchers around the world have employed two main research approaches, namely the quantitative and the qualitative research methods (Adams et al., 2017). The qualitative method presents a descriptive and non-numerical approach to collect the information in order to present understanding of the phenomenon (Berg 2020). Adams et al., (2020) argue that qualitative method employs methods of data collection and analysis that are non-quantitative, aims towards the exploration of social relations, and describes reality as experienced by the respondents. Babbie (2020) points out that qualitative method is an active and flexible method that can study subtle nuances in the attitudes and behaviors for investigating the social processes over time. On the other hand, Adams et al., (2017); and Bryman (2022) point that the quantitative approach uses different types of statistical analysis and provides stronger forms of measurement, reliability and ability to generalize. Quantitative approaches refer to the research that is based on the methodology principles of positivism and neo-positivism and adheres to the standards of a strict research design developed prior to the actual research (Adam et al., 2017).

Moreover, Berg (2020) argues that the quantitative method can deal with longer time periods with larger number of samples increasing the generalization capacity. Quantitative research design is used in this study. The quantitative method of data collection was adopted because of the availability of data, convenience as well as the nature of the research design which required past and documented facts as basis for performance evaluation. The justification for adopting a quantitative method in this study stems from three plausible reasons (i) the fact that existing theories make it easier to formulate hypotheses that can be tested using statistical tools; (ii) provides a framework for addressing the relationship among variables in the study; and (iii) useful for dealing a cause and effect relationship. Furthermore, this study applied deductive positivism approach whereby the pre-existing theoretical basis is identified and relied upon in developing the hypotheses, the empirical findings demonstrate whether the tested hypotheses are accepted or rejected. To achieve this objective, this study used multiple regression as the main tool of analysis in which the researcher pursued the positivist understanding of the conduct of methodological processes that are “unaffected by the individual perceptual differences (Ardalan, 2022). Hair, (2019) stated that “the appropriate method of analysis when the research problem involves a single metric variable presumed to be related to two or more independent variables”. Therefore, multiple regression analysis is chosen as the main tool of analysis in this study. Multiple regression models is one of the most common methods of analysis that have been used by previous researchers (Cheng, E. W. (2021).

#### *3.5.1 The Study's Population*

Participation in the study involved nations across Sub-Saharan Africa. Geographically, Sub-Saharan Africa encompasses the entirety of the continent located south of the Sahara Desert, totaling 46 countries.

#### *3.5.2 Sample Size and Selection Technique*

I focus on 12 Sub-Saharan African countries, selected intentionally through the convenience sampling technique. This approach enables the researcher to include countries with readily available data. Given that these 12 countries had accessible data on the variables essential for this study, they were considered suitable samples, and the chosen sampling technique was deemed appropriate for their selection.

### *3.6. Data and its origin*

Data utilized for the analysis was secondary data, characterized by an annual frequency and encompassing parameters such as domestic credit to private sector, broad money, Inflation, real interest and gross domestic savings. The dataset spanned the years 1995 to 2021, totaling 26 years. With a sample size of 12 selected SSA countries, this resulted in a total of 312 observations. The substantial size of this estimation is considered significant as it ensures a higher degree of freedom, contributing to the accuracy of the estimated model. Table 3.1 displays

the variables incorporated in this study, along with their respective definitions, measurements, and sources of data.

Table 1: Variable Definition, Measurement and Origin

| Variable                                 | Definition   | Measurement and Origin  |
|--|--|---|
| <b>Money supply</b>                      | Money supply represents the total volume of liquid assets, including physical currency and easily accessible bank deposits, circulating within an economy. It serves as a crucial indicator for assessing the availability of money for transactions and economic activities. Governments and central banks closely monitor money supply to formulate and implement monetary policies that influence economic stability. Various classifications or aggregates, such as M1, M2, and M3, categorize different forms of money based on their liquidity and usage | This is measured using, M2 broad money (% of GDP). The data is sourced from the World Bank Database.                                  |
| <b>Domestic credit to private sector</b> | This refers to the total amount of funds that financial institutions within a country provide to private businesses and individuals. It encompasses loans, credit lines.   | This is measured using the domestic credit to private sector (% of GDP). The data is sourced from the World Bank Database.            |
| <b>Inflation</b>                         | Inflation refers to the insistent rise in the overall price level of goods and services within an economy over an extended timeframe.<br>Financial development refers to the growth and sophistication of financial systems and markets within a country, which can facilitate economic growth and development.  | This is measured using the inflation rate (%). The data is sourced from the World Bank Database.                                      |
| <b>Interest rate</b>                     | This outlines the cost of borrowing money or the return earned on an investment, expressed as a percentage of the principal amount. It represents the compensation paid by borrowers to lenders for the use of funds or the reward received by investors for providing capital   | This is measured using the domestic credit to the private sector by banks (% of GDP). Data is retrieved from the World Bank Database. |
| <b>Gross domestic savings</b>            | Gross domestic savings is the total amount of savings generated within a country's economy over a specific period, typically a year. It includes the savings of households, businesses, and the government sector, excluding depreciation.   | Interest rate is measured using the real interest (% annual). The data is sourced from the World Bank Database.                       |
|  |  | This is measured using the gross domestic savings (% of GDP). The data is sourced from the World Bank Database.                       |

### 3.7 Data Analysis Technique

The study employs Stata v.17 software for the analysis of the data, chosen for its suitability in handling panel data. The analysis is conducted using the Dynamic Model, specifically the System GMM (Generalized Method of Moments). GMM represents a statistical approach deployed to estimate model parameters by minimizing the differences between observed data and the predictions of the model, relying on a set of moment conditions. Recognized for its flexibility and effectiveness, GMM proves valuable in various fields, including econometrics and

finance, particularly when dealing with complex models and diverse data structures. Given the information provided, the model utilized for the analysis is outlined as follows:

$$Y(dcps)_{it} = \beta_0 + \beta_1(dcps)_{it-1} + \beta_2(bm)_{it} + \beta_3(Inf)_{it} + \beta_4(ri)_{it} + B55(gds)_{it} + \varepsilon_{it}$$

Where, *dcps* epitomizes domestic credit to the private sector, *bm* represents broad money (M2), *inf* represents inflation, *ri* represents real interest rate, and *gds* represents gross domestic savings.

### 3.8 Diagnostic Tests

Prior to the estimation process, the research conducts diagnostic tests on the data to validate its suitability, ensuring that the regression model remains unbiased. The Pairwise correlation was administered to track the presence of multicollinearity in the data.

### 3.8 Summary

The chapter discussed the research design and research methods adopted for the present study. The research methods discussed included the population, sample and sampling techniques as well as the tools used for analyzing the data sources, secondary (BOG database) the diagnostic tests for assumptions of multiple linear regression including the Correlation and Multicollinearity test were presented. The validity and reliability of the data was also presented and discussed. The next chapter presented the data analysis and research results.

## 4.0 DATA ANALYSIS AND RESEARCH RESULTS

### 4.1 Data and Information Description

This segment of the research delves into the examination of the data and subsequent discourse. Commencing with descriptive statistics concerning the variables, it also showcases the initial tests performed before employing the data for analysis. Following this, the section proceeds to elucidate the data analysis stemming from the GMM analysis, culminating in a final segment that centers on the discussion of the findings in alignment with the study's targets.

### 4.2 Context of Research Sites

The data was collected from Bank of Ghana database as well the Ghana Stock Exchange. The fast-paced operations in the selected data could have compromised the responses as respondents could have rushed through with responses and lastly, the presence of the researcher and the research assistants could have influenced the responses to the data to please the researchers.

#### 4.2.1 Descriptive statistics

Table 2:4. 1: Descriptive Statistics

| Variables                  | obs | Mean     | Std. Dev. | Min       | Max      |
|----------------------------|-----|----------|-----------|-----------|----------|
| Domestic credit to private | 80  | 13.7377  | 8.693808  | .4976014  | 39.72843 |
| Broad money                | 98  | 25.28623 | 11.24707  | 5.210061  | 65.45944 |
| Inflation                  | 97  | 38.14318 | 286.9856  | -9.616154 | 4145.106 |
| Real Interest              | 23  | 3.89703  | 16.83086  | -93.51346 | 61.8826  |
| Gross domestic savings     | 31  | 16.81533 | 17.81976  | -38.83457 | 57.31777 |

From the table, it can be witnessed from the descriptive statistics that domestic credit to private sector expressed in proportion to the GDP, had a minimum 0.497 percent and a maximum of 39.728 percent. The mean domestic credit to private sector recorded was 13.737

percent implying that on average, the domestic credit to private sector was 13.737 percent of GDP.

For broad money, a least value of 5.21 percent and a highest value of 65.459 percent were recorded. The mean broad money is observed to be 25.296 percent. This illustrates that on average, money supply (M2) was 25.296 percent of GDP

The minimum inflation was recorded to be -9.616- percent and the maximum was 4145.106 percent. This implies that the best inflation recorded in Sub-Saharan Africa within the period was -9.61 percent while the worse was 4145.106 percent. The mean inflation rate was recorded to be

38.143 percent indicating that on the average, the inflation in Sub-Saharan Africa within the period of study was 38.143 percent.

Furthermore, minimum real interest was of -93.513 percent and a maximum of 61.8826 percent. The mean rate of real interest recorded was 3.897 percent. This implies that on average, real interest rate was 3.89 percent during the study period.

Finally minimum gross domestic savings expressed as its percentage of GDP, was reported as of 38.834 percent and maximum of 57.317 percent. The mean gross domestic savings recorded was 16.815 percent, highlighting that on average the gross domestic savings was 16.815 percent during the period.

#### 4.3.2 Correlation Analysis

The correlation analysis depicts how independent variables in the study exhibit a strong correlation, which may lead to issues related to multicollinearity. The correlation analysis findings are displayed in below.

**Table 3:4.2: Correlation Analysis**

| Variables   | DCPS    | DBM     | INF     | RI      | GDS    |
|-------------|---------|---------|---------|---------|--------|
| <b>DCPS</b> | 1.0000  |         |         |         |        |
| <b>DBM</b>  | 0.0369  | 1.0000  |         |         |        |
| <b>INF</b>  | -0.1985 | -0.1261 | 1.0000  |         |        |
| <b>RI</b>   | 0.0615  | 0.3833  | -0.5870 | 1.0000  |        |
| <b>GDS</b>  | 0.0160  | 0.0004  | 0.3005  | -0.1304 | 1.0000 |

A correlation matrix exceeding 0.70 indicates the potential incidence of multicollinearity among the explanatory variables. "Multicollinearity stems from a strong correlation between two or more independent variables within a regression model.

Examining Table 4.2, it is evident that the highest correlation, was 0.5870, between inflation and real interest. This value falls below the 0.70 threshold. Consequently, the study can infer that the occurrence of multicollinearity is unlikely within this model.

#### 4.4 Analysis of Data

The examination of data in this research employs the dynamic model, specifically focusing on the system GMM analysis. The outcomes of this analysis are detailed in this segment of the study.



Table 4. 3: Summary of GMM Analysis

| DCPS                  | Coef.         | Std. Err.    | t         | P value |
|-----------------------|---------------|--------------|-----------|---------|
| <b>DDCPS</b>          | 1.265653      | .8833<br>114 | 1.<br>43  | 0.152   |
| <b>BM</b>             | .709637       | .0840<br>263 | 8.<br>45  | 0.000   |
| <b>DINF</b>           | -<br>.4656407 | .1106<br>69  | -<br>4.21 | 0.000   |
| <b>DRI</b>            | -<br>.1557647 | .0680<br>473 | -<br>2.29 | 0.022   |
| <b>GDS</b>            | .050754       | .0800<br>905 | 0.<br>63  | 0.526   |
| <b>_CONS</b>          | -<br>4.919627 | 3.001<br>09  | -<br>1.64 | 0.101   |
| <b>NUMBER OF OBS.</b> | 131           |              |           |         |
| <b>AR2</b>            | 0.100         |              |           |         |
| <b>SARGAN</b>         | 0.302         |              |           |         |
| <b>HANSEN</b>         | 0.093         |              |           |         |

The model indicates a noteworthy constant of -4.919, and this value is statistically insignificant ( $p=0.101$ ). This suggests that, keeping all other variables unchanged, domestic credit to the private sector would be anticipated to decline by 4.919 units. For the lagged dependent variable a co-efficient 1.265 was recorded and shown to be insignificant with a p value of 0.152. "This further suggests a positive impact of past domestic credit to the private sector on current domestic credit to the private sector with a one-unit upward movement in its lag corresponding to a 1.265-unit upsurge in the domestic credit to the private sector. With respect to independent variables, broad money (M2) recorded a co-efficient of 0.709 and was ascertained to be significant with a p-value of 0.000. This indicates that broad money has a positive and significant impact on the domestic credit to private sectors. A unit increase in broad money (M2) results in 0.709 spike in the domestic credit to the private industry.

The lagged inflation also recorded a co-efficient of -.4656407 and was determined to be significant with a p value of 0.000. This implies the lag of inflation has a negative and significant impact on the domestic credit provided to the private sector. A unit surge in lagged inflation evokes a 0.465-unit decrease in the domestic credit provided to the private sector.

The lag of real interest noted a co-efficient of -0.156 and was revealed to be significant with a p value of 0.022. This signifies that the lag of real interest rate has an inverse and significant bearing on the domestic credit provided to the private industry. A unit surge in interest rate in an economy provokes a 0.156 decrease in the domestic credit provided to the private sector.

Gross domestic savings however revealed a positive insignificant relationship with the domestic credit provided to the private industry. Gross domestic savings documented a co-efficient 0 .0507 with p value 0.63. This infers, a unit hike in the gross domestic savings instigates a 0 .0507-unit surge in the domestic credit to the private sector.

Arellano-Bond AR (2), Sargan, and Hansen tests are commonly employed to assess the soundness of the over-identifying restrictions in GMM dynamic panel data models. In the event that these tests yield insignificant results, it signifies that the over-identifying restrictions are not breached, affirming the consistency and efficiency of the GMM estimator. This implies the validity of the instrumental variables used in the model, thereby eliminating concerns of endogeneity or omitted variable bias. In the current model, p-values of AR (2) = 0.100, Sargan = 0.302 and Hansen = 0.093 indicating the model's consistency and efficiency.

#### 4.5 Discussion of Findings

The effect of Money supply on private sector credit in sub-Saharan African Countries.

The chief study objective was to ascertain the influence of money supply on private sector credit in Sub-Saharan African countries. The positive and substantial effect of money supply on private sector credit portrays that the supply of money in the economy plays an integral role in the credit provision for the private sector. An upsurge in the money supply has the potential to result in an expansion of credit. With a greater volume of money in circulation within the economy, banks and financial institutions might exhibit a heightened willingness to lend, thereby enhancing private business credit access. The role of the money in influencing the overall liquidity stock is indispensable of the financial system. A heightened money supply equips banks with increased liquidity, empowering them to offer more credit to businesses and individuals within the private sector. Our discovery aligns with the outcomes of earlier studies by

(Dang, Pham and Tran 2020) and (Okyerere and Mensah 2020).

It has been revealed in our study that money supply exerts a significant and positive effect on private sector credit. This enables the private sector to engage in useful investments to expand and grow their respective businesses. The availability of private sector loan accessibility is fundamental for economic success in Sub-Saharan Africa. However, spike in the money aggregates without a corresponding rise in economic activity has the potential to create financial instability. This could result in speculative behavior, the formation of asset bubbles, and other risks that may influence the overall accessibility of credit. Money supply needs to be optimal to prevent the potential unavailability of credit to the private industry due to excessive hikes in the money supply. Our findings are that money supply has a major effect on private sector credit are consistent with studies by (Brima, 2017).

The secondary purpose of the study was to evaluate the effects of interest rates of Sub-Saharan African economies on private sector credit. Our analysis unveiled that interest rate exerts a negative significant effect on private sector credit in Sub-Saharan African countries. Interest rate serves as the expense associated with borrowing for individuals and businesses. Elevated interest rates result in higher costs for obtaining credit, potentially causing a decline in the demand for and supply of loans within the private sector. In contrast, reduced interest rates enhance the affordability of borrowing and may stimulate an increase in demand for and supply of credit. Overall economic activity is shaped by the influence of interest rates. Elevated rates have the potential to impede economic growth, whereas reduced rates can encourage and stimulate economic expansion. The extent of economic activity, in reciprocal fashion credit opportunities for private-sector entities.

Elevated interest rates could result in diminished credit availability, with financial institutions imposing stricter lending standards that pose challenges for the private sector in securing loans. Conversely, lower interest rates may prompt banks to ease lending criteria, thereby enhancing the accessibility of credit. The impact of interest rates on business investment is substantial, as higher rates may dissuade businesses from undertaking new projects or expanding due to increased financing costs. Conversely, lower interest rates can serve as an incentive for investment, fostering economic activity. The negative relationship between interest rate and private sector credit is supported by (Ali, et al 2020) and (Akowuah 2011).

The next goal of the study was to delve into the influence of gross domestic savings on private credit in Sub-Saharan African countries. Based on the analysis, gross domestic savings depicted a direct, however insignificant association with private sector credit. Overall domestic savings play a role in augmenting the collective funds in the economy. Elevated savings levels typically translate to increased resources at the disposal of financial institutions for lending to the private sector. This augmented availability of funds can have a positive effect on the ease

with which individuals and businesses can access credit. Additionally, the magnitude of gross domestic savings has the potential to impact interest rates. A surplus in savings provides financial institutions with greater capital, enabling them to lend at reduced interest rates, thereby enhancing the affordability of credit for the private sector. Conversely, diminished savings may lead to higher interest rates, influencing the overall cost of borrowing.

The expansion of gross domestic savings is frequently indicative of a favorable investment climate. A strong savings environment fosters trust among financial institutions, motivating them to offer credit to the private sector for diverse investment and business ventures. This, in turn, fosters economic growth. Gross domestic savings play a crucial role in accumulating capital, a fundamental aspect of lending activities. Financial institutions leverage accumulated capital to furnish loans to individuals and businesses in the private sector, thereby facilitating economic development and expansion. Higher levels of gross domestic savings are commonly linked to economic stability, creating a supportive environment for credit provision. Lenders are more inclined to extend credit in a stable economic setting, reflecting confidence in the overall economic well-being. Our verdict of a positive effect of gross domestic savings on private sector credit is corroborated by (Brima and Brima 2017).

The study's final goal was to investigate the ramification of inflation on private sector credit in SSA. It was evident from the analysis that inflation possessed a negative and significant impact on private sector credit. Central banks frequently make adjustments to interest rates in response to inflationary pressures. Elevated inflation rates may result in increased interest rates as a measure to control inflation, rendering borrowing more costly for both businesses and individuals. In response to inflation, businesses and individuals may alter their borrowing patterns. The diminishing purchasing power of money over time due to high inflation may lead businesses to reevaluate the feasibility of acquiring debt for investment purposes. Similarly, individuals might reconsider borrowing for significant purchases. In an inflationary environment, financial institutions may modify their lending standards. The heightened uncertainty associated with higher inflation can prompt lenders to tighten standards to mitigate risks, potentially impacting private sector financing options.

A moderate level of inflation is often seen as promoting economic stability (Katusiime 2018). When inflation is moderate, it may be linked to an expanding economy. In response to potential deflationary risks, central banks might implement expansionary monetary policies, which may include maintaining relatively low interest rates. This approach is designed to encourage economic activity and could result in a greater credit availability for non-governmental entities.

Our insights on the negative effect of inflation on private sector credit is reinforced by (Dobrinisky, 2005) and (Brima and Brima 2017).

## 5.0 CONCLUSION

The overarching goal was to investigate the monetary policy on private sector credit of Sub-Saharan African nations. To accomplish this objective, the study employed an explanatory research design and adopted a quantitative research approach. The sample comprised 12 Sub-Saharan African countries, chosen on the grounds of the availability of data. The sample selection was guided by purposive sampling due to data availability. The study covers a 26-year period from 1995 to 2021, encompassing a total of 312 observations for the 12 selected African countries.

Data was retrieved via World Development Indicators Database. The research employed panel data analysis for model estimation and analysis, relying on the Dynamic Model (System GMM) to analyze the data. Stata V.15 was utilized for the analysis, as it is deemed a suitable software for panel data analysis. The study's findings disclose that money supply (Broad money) and gross domestic savings positively shape financial support for private businesses. Inflation and real interest rate negatively shape credit facilities for non-public entities.

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