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THE IMPACT OF PUBLIC DEBT ON MALI'S ECONOMIC GROWTH FROM 2010 TO 2019.

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ABSTRACT

Most African countries, including Mali, face limited domestic resources to meet their financing needs. To address this shortfall, Mali has resorted to public debt. The objective of this study is to determine the nature of the relationship between public debt and Mali's economic growth in two parts.

According to an analysis conducted using Eview 12 software, Mali's public debt has a positive impact on the Malian economy. In addition to public debt, other variables (investment, inflation rate, and trade balance) also contribute to economic growth in Mali, but not significantly.

Keywords: Public debt, economic development, Mali.

INTRODUCTION

Since its independence in 1960, Mali has implemented development strategies characterized by the construction of industrial enterprises and sustainable development programs. As independence followed colonization, the established objectives became difficult to achieve due to scarce financing resources. This prompted the country to seek alternatives, including public debt. Initially, this policy was on the right track; however, it presented an unfavorable situation as outstanding debt increased year after year.

Mali's recourse to public borrowing is linked to several factors. Primarily, these are socio-political issues. In recent years (2010-2023), Mali has incurred expenditures related to insecurity in the northern region and to changes in power (coups d'état). During this period of conflict, the country was compelled to procure military equipment, recruit personnel to reinforce the armed forces, and implement training programs. In addition, there were already planned development projects, which further increased the debt stock. These factors explain why fluctuations in Mali's public debt from one year to the next are well justified. Despite the year-on-year increase in public debt, Mali's debt level remains sustainable. This can be attributed to the adherence to the limits set by international organizations such as the WAEMU and the International Monetary Fund (IMF). Furthermore, compliance with these requirements allows Mali to maintain credibility with donors and to avoid any risk related to over-indebtedness. The objective of this study is to highlight the impact of public debt on the economic growth of Mali over a ten-year period from 2010 to 2019. Public debt is a significant aspect of the economy at the international level. Indeed, some countries generally adopt it as part of an economic policy aimed at developing their nations, whereas its inclusion in the budget is mandatory for other countries. The latter situation is justified by the scarcity of domestic resources to meet financing needs. This scenario is pertinent to Mali and is linked to several factors. As mentioned above, the scarcity of Mali's resources is attributed to the effects of colonization. Over time, the situation by the end of 2020 is also influenced by factors that have further exacerbated this scarcity. These are socio-political crises and rebellion. Both crises result from the State's engagement in extraordinary expenditures. Furthermore, with the population increase, the State is compelled to progressively raise its annual spending to meet the needs of the population in areas such as health, education, and security. To address this enormous financing requirement with limited internal resources, the alternative chosen by the Malian State is public debt. This policy aims to develop the country beyond its own resources.

Theoretical Review:

Public debt is considered a legitimate tool of economic policy. The relationship between public debt and economic growth is at the heart of debates among scholars. Due to the divergence of their

ideas, this debate has not been unanimous to this day. Thus, two schools of thought provide different definitions regarding the link between public debt and economic growth. These are the Keynesian perspective and the classical perspective.

According to Keynesian thought, public debt does not impose costs on the state in all circumstances (current and future costs). The core idea of this approach can be summarized as follows: debt is an anticipated revenue that the state should capture by creating a budget deficit to stimulate the country's economy. Keynesian thought favors this policy as the best option because it allows for the realization of investments and the creation of jobs.

According to Keynesian thought, other economic agents (businesses and households) must deposit their cash surpluses to allow the state to borrow in exchange for income. This enables the state to make expenditures beyond its capacity and avoid any increase in taxes and fees. However, funds from public debt must be allocated to productive investments, that is, to development objectives.

As for the classical school, debt constitutes an obstacle to a country's development. The classical thinkers believe that a country should develop through its own resources; public borrowing is a burden to be borne by the current and future generations (interest will be paid in addition to the repayment of the principal). This school considers public debt as a postponement of taxes to be paid by the population in the future. Moreover, the classical economists believe that public debt allows an increase in the interest rate. This will lead to a slowdown in the national economy because households and private businesses will be hesitant to invest due to the high interest rate. Consequently, the state risks substituting itself for other economic agents. This school advises against public debt policy because it only slows down the economy, contrary to the objectives pursued by the state (economic growth).

The results of empirical studies on the link between public debt and economic growth are mixed. Some findings show that public debt can help accelerate the economy, while other authors discourage the state in this regard. These different results are described as follows.

According to Doctor Sira Samba Diallo, professor at the University Institute of Management of Bamako (IUG), in his article titled "External Debt and Economic Development in Mali," public debt has a dual impact on Mali's economic development, namely: the direct effect and the indirect effect. To analyze the direct effect of public debt on Mali's economy, Professor Diallo highlighted the contribution of each determinant of economic growth, namely GDP, total investment, and the public debt in question. This analysis shows that public debt negatively affects economic growth. As for the indirect effect, public debt promotes economic growth through its impact on GDP by enabling profitable investments.

MARIE-PASCALE KRA, in her master's study at the UNIVERSITY OF QUÉBEC AT TROIS-RIVIÈRES, worked on "the link between public debt and economic growth: a comparison between Quebec, Ontario, and Canada." This work is based on 35 chronological observations covering a wide range from 1983 to 2017. After setting thresholds for debt ratios at 41.9%, 10.7%, and 44.17% respectively for Quebec, Ontario, and Canada, Marie concludes that debt has a positive effect on economic growth when public spending (public debt) is directed towards productive investments.

According to the study by the author Aïda WADE in January 2014 titled "The Impact of Public Debt on Economic Growth in the UEMOA Zone," it encourages UEMOA member states to engage in public borrowing up to a threshold of 48% of GDP, beyond which debt slows down economic growth. Thus, the author used Hansen's method, which gives a threshold of 49.83% of GDP as the public debt ceiling. This method confirms that any increase in debt beyond this threshold by 1 percentage point leads to a 0.08 percentage point decrease in economic growth.

Leila Ben Ltaief, in her article titled: 'Public Debt and Economic Growth: An Empirical Investigation for the Euro Area, the European Union, and Advanced Countries,' highlighted the effect of public debt on economic growth based on a sample of 35 countries (Eurozone, European Union, and advanced countries) between 2006 and 2013. Her study is divided into two groups: countries with low public debt and highly indebted countries. The author refers to the Maastricht Treaty (public finance deficits must not exceed 3% of GDP for all public administrations, and public debt should be limited to 60% of GDP for advanced countries and 40% of GDP for highly indebted countries). The group that exceeds the indicated limits will experience a decrease in their growth, whereas the group that remains within the Maastricht range will see their public debt contribute to the growth of their economies.

According to Etienne Alphonse NIAFOUNA, in his master's thesis titled: "The impact of public debt on economic growth in Senegal," defended at the ASSANE SECK UNIVERSITY OF ZIGUINCHOR in Senegal, he conducted his study over a period of forty years (between 1970 and 2019). The author used data from the World Bank and made an estimation using an analysis tool called ARDL (Auto Regressive Distributed Lag model) and also tested these results. The outcome of this work showed that public debt negatively affects Senegal's economic growth in both the short and long term. However, the author noted the unavailability of certain data to improve the quality of his study.

According to Jean Claude Kouakou Brou, in his doctoral thesis entitled: 'Harmonization of Economic Policies and Public Debt in Sub-Saharan African Countries' over the period between 1975-2015, he found a nonlinear relationship between public debt and economic growth, and that

public debt negatively affects growth. In his thesis, he determined the level of indebtedness of each area included in his panel and emphasized the role of a union in limiting public debt. Furthermore, he advocates for public debt directed towards scientific research, infrastructure modernization, and the improvement of technical skills so that debt can serve to enhance the quality of the environment. So, the result of this thesis doesn't question the usefulness of public debt for economic growth, but it does suggest managing it well—from planning it in the budget to using the funds effectively.

Lukunda NTEMO Nalph, in his undergraduate study entitled 'External Public Debt, Real Exchange Rate, and Economic Growth in African LDCs,' did not find a significant relationship between public debt and economic growth. Thus, the results of his study showed that public debt has a positive but weak impact on economic growth for certain periods (1990 to 2000) and does not explain economic growth for the remaining period (2000 to 2008). As for the relationship between public debt and the real exchange rate, there is no relationship between these two variables.

The literature review highlighted the different opinions from various authors. Most of these opinions do not question public debt as a development factor, but they suggest proper management of it in order to achieve the set objectives.

This study does not contradict previous works, but rather aims to bring added value to improve existing contributions. In the case of Mali, this study will focus on the system related to public debt management in Mali to better understand the objective of the study. This allows an understanding of its mechanism, and subsequently, the effects of it on the Malian economy will be highlighted.

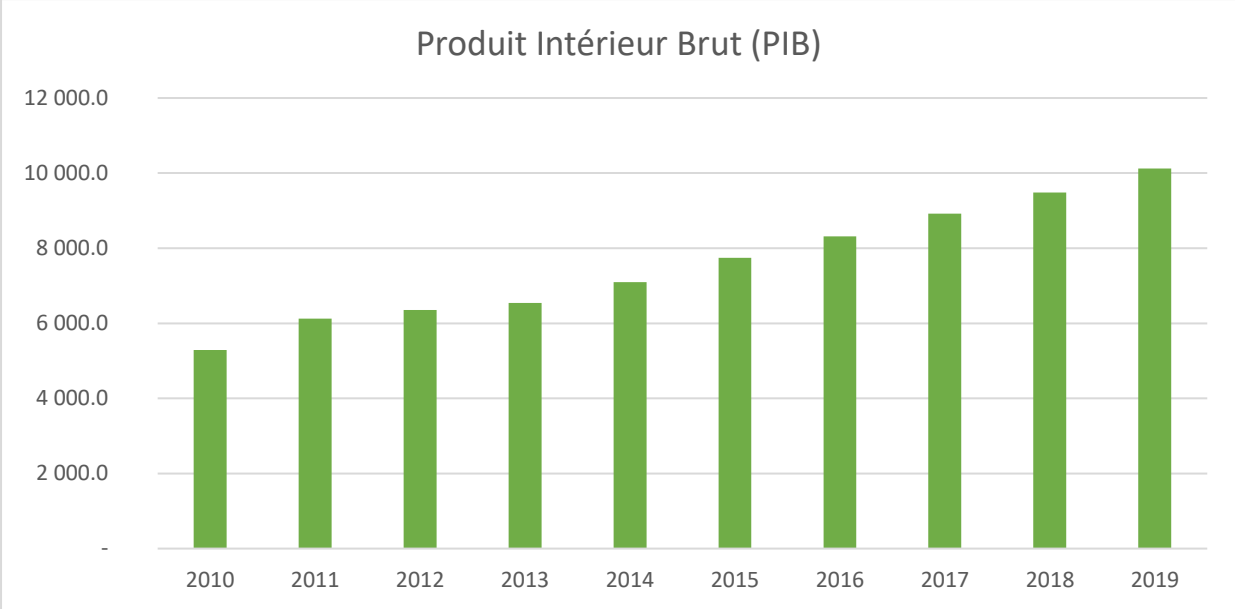
IV. Effect of Public Debt on the Economic Development of Mali

1. Data Analysis

1.1. Overall analysis of GDP

From 2010 to 2019, Mali's Gross Domestic Product evolved as follows:

Figure 1: GDP EVOLUTION from 2010 to 2019 (in billion CFA francs)



SOURCE: DGDP, AUTHOR

This chart highlights how Mali's GDP has evolved over the past ten years (2010-2019). Despite the occurrence of sociopolitical crises and insecurity, GDP growth did not experience a decline during these years. This includes the March 22, 2012 coup d'état, the Ivorian and Libyan crises, and the rebellion in the northern part of the country. These events were marked by sanctions such as embargoes. This growth demonstrates the importance of the volume of economic activities in the formation of GDP.

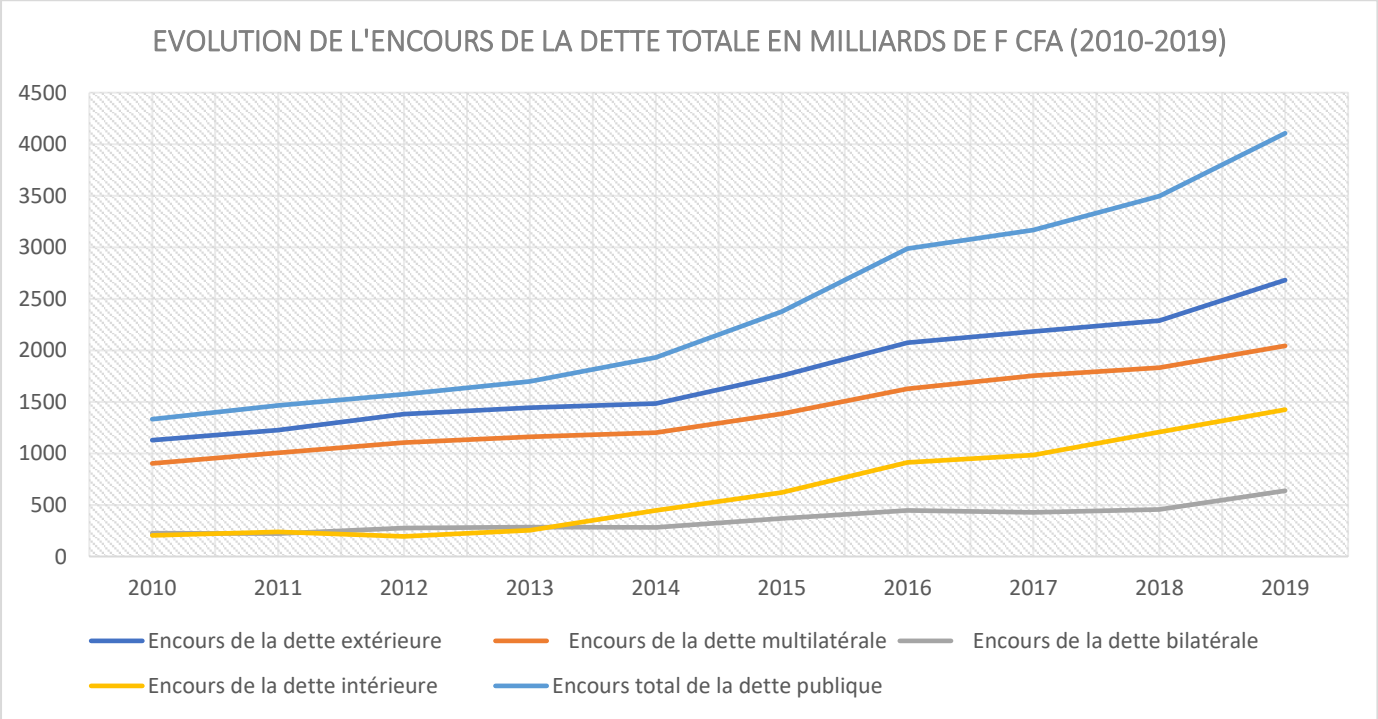
In 2010, Mali's GDP was estimated at 5,288.9 billion CFA francs, and in 2012 it rose to 6,123.9 billion CFA francs, representing an increase of 15.78%. From 2011 to 2015, Mali's economic growth continued to increase despite sociopolitical crises and insecurity. Thus, during this period, the country recorded an average economic growth rate of 8%. This average comes from the following GDPs: 6,123.9 billion CFA francs; 6,352.4 billion CFA francs; 6,540.6 billion CFA francs; 7,092.8 billion CFA francs; and 7,747.7 billion CFA francs for 2011, 2012, 2013, 2014, and 2015, respectively. Their respective growth rates were 15.78%; 3.73%; 2.96%; 8.44%; and 9.23%. It is noticeable that the growth rate was very high in 2011 compared to other years. However, growth slowed between 2012 and 2013. This slowdown was due to two consecutive national events that the country experienced during this period.

This concerns the sociopolitical crisis and the 2013 presidential election. Apart from these cases of force majeure, Mali remained a country affected by war well before 2010 and beyond 2019. During the years 2014 and 2015, the growth rate made significant strides. This strong growth primarily stems from the advantage of the country's stabilization, highlighting the importance of the end of the sociopolitical crisis. From 2016 to 2019, GDP was as follows: 8,311.9 billion CFA francs; 8,922.2 billion CFA francs; 9,482.0 billion CFA francs; and 10,124.7 billion CFA francs. Up to the last four years, the country's economy progressed steadily with growth rates of: 7.28%; 7.34%; 6.27%; and 6.77%. Compared to 2015, 2016 experienced a decrease in the growth rate. This rate increased the following year, reaching 7.34%. In 2018, the country's economy continued to grow, but it declined in terms and in comparison, to the previous year. In 2019, despite the COVID-19 pandemic which caused disasters worldwide, its growth rate was higher than the previous year. From 2010 to 2019, Mali's economic growth was on an upward trend. As described above, these growths are reasoned. To complement the aforementioned reasoning, other factors will be highlighted as follows.

1.2. Overall analysis of public debt

In order for this document to provide a detailed analysis of the financial situation of Mali's public debt, it is necessary to conduct a study on certain data related to this debt. This involves data concerning the evolution of total public debt, including its components.

Figure 2: Evolution of the total debt outstanding in billions of CFA francs (2010-2019)



In view of the figure above, Mali's public debt situation has been continuously increasing from

2010 to 2019. During the first four years (2010-2013), the total debt stock gradually increased with rates of 10.04%, 7.47%, and 7.81% for 2011, 2012, and 2013 respectively, representing an average growth rate of 8.44%. The years 2012 and 2013 did not experience an excessive increase compared to the first two years, although they were marked by extraordinary events (the March 22, 2012 coup and the 2013 presidential election). Despite this socio-political crisis in the country, the debt increase was moderate. Looking at the total debt situation, external debts increased from 2011 to 2012 but dropped in 2013 by 4.68%. As for domestic debts, their evolution resembled a broken line with rates of 17.05%, -18.05%, and 29.95%.

From 2014 to 2019, the rate of increase in total debt, in terms of the gap, became greater compared to that of previous years. Its growth was considerable from 2014 to 2016, with respective rates of 13.62%, 23.10%, and 25.69%. However, total debt declined in 2017, registering a growth rate of 6.07%. During the last two years, the level of debt increased by 10.38% and 17.42%, respectively. External debts continued to increase from 2014 to 2016 with rates of 2.74%, 18.17%, and 18.21%. Similarly, domestic debts grew during this period as follows: 75.70%, 39.55%, and 46.82%. Consequently, total debt, which consists of both external and domestic debts, increases when these rise and decreases inversely. This is illustrated by the trends below. After decreasing compared to 2016, the total debt growth rate for 2017 was 6.07%, composed of 5.22% and 8% for external and domestic debts, respectively. During the last years (2018 and 2019), total debt evolved in an increasing manner with rates of 10.38% and 17.42%. Regarding their components, they were respectively 4.85% and 17.19% for external debts, and domestic debts were 22.64% and 17.84%. By observing the table above, GDP and total debt evolve together. This implies upstream that public debt is a growth factor in the country's economic policy. Moreover, in accordance with the criterion defined by the UEMOA regulation establishing the reference framework for public debt policy and public debt management in the UEMOA member states, Mali's public debt remains sustainable. This regulation sets a threshold of 70% of GDP, beyond which the financial situation of public debt would be considered unsustainable. This threshold is called the 'over-indebtedness threshold.' From 2010 to 2019, Mali's debt thresholds were respectively 25.2%; 23.9%; 24.8%; 26.0%; 27.2%; 30.7%; 35.9%; 35.5%; 36.9%; 40.6%. These thresholds are still below the level indicated by UEMOA (70% of GDP).

Empirical analysis of the relationship between public debt and growth

2.1 Methodology

After the analysis conducted above, we will perform an analysis using the Eview 12 software. In this analysis, the Gross Domestic Product will be the dependent variable explained by the following four (4) variables: public debt, trade balance, inflation rate, and investment. This study

will be conducted using data collected from the World Bank and national structures such as the DGDP.

2.2 Model Presentation:

In order to determine the impact of our explanatory variables on Mali's Gross Domestic Product, we established the econometric time series model over a 10-year period from 2010 to 2019:

$$LPIBt = \beta 0 + \beta 1 LINVit + \beta 2 LDPit + \beta 3 BCit + \beta 4 TIit + \varepsilon t$$

i = 1,…, K: the number of independent variables.

t = 1, …… , T: The estimation period.

β0 = the model constant.

β1, ..., β4 = the coefficients of the regression of the independent variables.

εt = the error term.

2.3 Descriptions of the variables

Thus, the relationship between public debt and economic growth in Mali is expressed as follows:

LPIB: F(LDPT, BC, TI, LINV).

LDP: Logarithm of public debt

LPIB: Logarithm of the Gross Domestic Product

BC: Trade Balance

CPI: inflation rate

LINV: Logarithm of investments

Table 1: the list of variables

Variables	Variable Names
LDP	Logarithm of Public Debt
LPIB	Logarithm of Gross Domestic Product
BC	Trade Balance
TI	Inflation Rate
LINV	Logarithm of Investments

Variable NamesLDP Logarithm of Public DebtLPIB Logarithm of Gross Domestic ProductBC Trade BalanceTI Inflation RateLINV Logarithm of Investments

2.3.1 Total Public Debt As described above, total public debt refers to all domestic and external debts of a country. Here, total debt is considered at its gross value, which is different from its net value. This value allows for the determination of debt-related indicators such as the debt threshold.

2.3.2 Gross Domestic Product (GDP)

Gross domestic product is an indicator that allows the measurement of the wealth created by a country's residents over a given period (annual). It illustrates the importance of a country's economic activity.

2.3.3 The trade balance

The trade balance reflects the balance resulting from the difference between a country's exports and imports. It highlights the gap between annual exports and imports. In other words, in commercial terms, this balance determines the level of dependence of a third-world country.

2.3.4 Investment

Investment represents the durable value acquired by production units to be used for at least one year in their production process. It is the formation of gross fixed capital. It is an important element in determining the gross domestic product. It allows measuring the share of created wealth dedicated to investment.

2.3.5 The inflation rate

Inflation is defined as a sustained increase in the average level of prices of all goods and services traded in the country over a given period. Thus, inflation is a factor that slows down the country's economy, unlike deflation.

3. Technique d'estimation

Table 2: ARCH Heteroscedasticity Test

F-statistic	0.700829	Prob. F (3,3)	0.6114
Obs*R-squared	2.884360	Prob. Chi-Square (3)	0.4098

Source : Eview 12 Autor

The heteroscedasticity test allows us to verify the consistency of error variances over time.

• H0: Homoscedastic errors

• H1: Heteroscedastic Errors

The probability associated with the ARCH statistic is greater than 5% here, so the variance of the errors is constant over time. The estimates obtained by least squares (OLS) are optimal.

Table 3: RAMSAY SPECIFICITY TEST

Eléments	**Value**	**df**	**Probability**
F-statistic	10.30124	(2, 3)	0.0453
Likelihood ratio	20.62739	2	0.0000

Source : Eview 12 Autor

• H0: the model is well specified

• H1: The model is incorrectly specified

The probability associated with the Ramsay statistic must be less than the 5% threshold; this test

shows a probability less than the model's threshold (5%), so this implies that the model is well specified.

Table 4 : Descriptive statistics

Eléments	LPIB	LDP	LINV	BC	TI
Mean	8.915930	7.716522	2577.278	-822.4033	0.971000
Median	8.910992	7.669224	2498.616	-766.9790	0.995000
Maximum	9.222732	8.320207	3463.403	-272.6510	5.320000
Minimum	8.573373	7.*194437*	1843.753	-1288.754	-1.800000
Observations	10	10	10	10	10

Source : Eview 12 Autor

Analyzing the relationship between Gross Domestic Product (GDP) and these variables over the past ten years, we observe that the highest average is for GDP, with an average of 8.91%, representing a value of 7,598.703 billion CFA francs, while the lowest average is for the trade balance, with a negative value of over 822 million CFA francs. GDP again holds the top spot in terms of the maximum value, with a rate of 9.22%. The value of this value amounts to 10,124.69 billion CFA francs, and the lowest maximum value is for the trade balance, with a deficit of 272.6510 billion CFA francs. Speaking of minimums, the highest remains GDP, with a minimum growth rate of 8.57%, amounting to 5,288.939 billion CFA francs. This can be explained by the gradual increase in the GDP growth rate since 2010, as 2010 is the reference year and this minimum GDP figure represents that year. The lowest minimum is the trade balance, with a negative value of 1,288.764 billion CFA francs.

Based on this analysis, which considers both the highest and lowest values and the average, GDP remains the highest variable, while the lowest is still the trade balance. This analysis suggests that the other variables contribute to the formation of the gross domestic product, hence its superiority over the other variables. As for the trade balance, its lower value indicates the deficit in Mali's trade balance.

Table 5 : Correlation of variables

Eléments	LPIB	LDP	LINV	BC	TI
LPIB	1.000000	0.988398	0.852848	-0.439138	-0.500549
LDP	0.988398	1.000000	0.866521	-0.544733	-0.567578
LINV	0.852848	0.866521	1.000000	-0.654229	-0.623948
BC	-0.439138	-0.544733	-0.654229	1.000000	0.512612
TI	-0.500549	-0.567578	-0.623948	0.512612	1.000000

Source : Eview 12 Autor

Upon reading this table, there is a higher correlation between GDP and the DP (0.988398). Conversely, the weakest correlation is observed at the same time between GDP and the trade balance (0.439138).

Table 6: Linear Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.798779	0.178601	26.86868	0.0000
LDP	0.522586	0.029383	17.78505	0.0000
LINV	6.02E-05	2.80E-05	2.152199	0.0840
BC	9.39E-05	2.24E-05	4.187647	0.0086
TI	0.006758	0.003560	1.898409	0.1161

Source : Eview 12 Autor

According to linear regression, there is a strong correlation between public debt and economic growth in Mali. The model shows a coefficient of 0.522586. This means that a one percent (1%) increase in public debt leads to a 0.523% increase in economic growth. In addition to GDP, there is a correlation between public debt and investment. This correlation coefficient is positive, but very weak compared to that of GDP; the coefficient is 6.02E-05. This coefficient shows that when investment increases by 1%, economic growth will also increase by 6.02E-05%. The trade balance has almost the same coefficient as investment. The relationship between the inflation rate and economic growth is not as significant. The model indicates that when the inflation rate increases by 1%, economic growth will also increase by 0.006%. This coefficient can be explained by other variables that inflation will influence.

According to linear regression, the relationship between gross domestic product (GDP) and the variables allows for increased economic growth. The trade balance and investment variables, however, contribute to a slow increase in economic growth. Among these four variables, only public debt (PD) has a positive and significant correlation coefficient; in other words, an increase in public debt leads to a considerable increase in gross domestic product (GDP).

4. Interpretation of results and recommendation

4.1 Interpretation of results

This study aims to determine the nature of the relationship that exists between public debt and economic growth in Mali.

Following the above analysis, the results from Eview 12 software will be examined in detail. Using the ARCH heteroscedasticity test, the obtained estimates are optimal, and the model is specified by the Ramsay test. All these tests led to a descriptive analysis that allowed us to draw conclusions. According to Eview 12, public debt has a positive and significant impact on Mali's economic growth. The results of this analysis confirm our hypothesis (that public debt positively impacts Mali's economic growth). The correlation coefficient between public debt and economic growth is 0.522586. This can be interpreted in several ways. First, the significance of the positive correlation between public debt and Malian economic growth allows us to assess the debt threshold set by the WAEMU (70% of GDP), as the ratio of public debt to GDP in Mali is always below this threshold. Second, public debt must be allocated to development projects to improve economic growth. Logically, development projects financed by public debt must be profitable. The unprofitability of these projects can reduce the positive effect of public debt on the Malian economy. The selected development projects must first comply with the CREDD framework to ensure a high probability of success.

The relationship between gross domestic product (GDP) and the three other variables in the model is not as positive. If GDP does not interact satisfactorily with these variables, then they will not be able to accelerate economic growth. Thus, estimates show that an increase in the inflation rate does not significantly boost economic growth. The coefficient between the inflation rate and economic growth is not high. Although the inflation rate has a low coefficient, this coefficient is higher than those of the other two variables (investment and the trade balance).

Based on the analyses above concerning the relationship between public debt and Mali's economic growth, observation shows that public debt has a positive and significant impact on Mali's economic growth. As mentioned above, this effect is substantial. This suggests encouraging public debt within the Malian economy. According to the analyses above, the other variables (INV, BC, and TI) have positive effects on the gross domestic product. Each of these variables contributes to the country's development. In order for them to become even more effective drivers of Mali's economic growth, they should be improved as described below.

CONCLUSION

This study examines the relationship between public debt and economic growth in Mali. It draws on several previous works. The results obtained by these works differ; while some authors believe that public debt accelerates a country's economy, others view it as a hindrance. This divergence can be explained by the time frame (study periods) and geographical location (countries studied). However, regardless of these factors, certain schools of thought contradict each other, namely Keynesian and neoclassical economics (as discussed in the literature review).

In light of the above observations, this study did not produce an impartial result compared to previous findings. Specifically, the financial situation of Mali's public debt showed a progressive increase in outstanding debt from 2010 to 2019. This increase stems from the fact that amounts allocated to servicing existing debts are included in the amounts of new debt to be incurred. This system only results in a continued increase in the stock of public debt, as was the case, for example, between 2010 and 2019. Furthermore, this increase may be a consequence of the decreasing concessional nature of external debt; however, this decrease has not been significant to date. As a key indicator of public debt management, the decrease in the volume of domestic debt within Mali's public debt portfolio over the years can be considered. This decrease is crucial because observations show that domestic debt is more expensive than external debt. The results of this data analysis are complemented by the results obtained from Eview 12.

Regarding the results obtained using the Eview 12 software, public debt has a positive and significant impact on Mali's economic growth. According to the software's findings, public debt helps accelerate the Malian economy. With a correlation coefficient of 0.522586, this demonstrates a strong and significant positive correlation between public debt and Mali's economic growth. The inflation rate, the trade balance, and investment contribute to economic growth, but not significantly. Therefore, these results not only confirm our hypothesis that "public debt positively impacts Mali's economic growth," but also support findings from other authors.

The objective of this study is to determine the relationship between public debt and economic growth in Mali over a ten-year period (2010-2019). Establishing this result required a specific methodology. In addition to the results obtained, this methodology led to several observations that have been formulated as recommendations (see Recommendations section). The added value of this study lies in these recommendations. Given that public debt has a positive and significant impact on Mali's economic growth, it is recommended that the Malian authorities consider these

recommendations to improve the effectiveness of public debt management within the Malian economy. However, implementing one of these recommendations is imperative to avoid future over-indebtedness: "alternating the methods of servicing public debt to avoid further indebtedness in Mali."

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