

Banking Sector and Economic Growth in Congo-Brazzaville



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ABSTRACT: This article analyzes the effects of the banking sector on economic growth in Congo-Brazzaville over the period 1990-2020. The results obtained from the AutoRegressive Distributed Lag (ARDL) model show that in the short term, domestic credit provided to the private sector by banks, bank deposits, foreign direct investments, trade openness, the overall index of civil freedom, the degree of fight against corruption and inflation affect economic growth. On the other hand, in the long term, the degree of fight against corruption and inflation influences economic growth. These results have important economic policy implications in Congo-Brazzaville.

KEYWORDS: Banking sector, Economic growth, Inflation, ARDL.

JEL Classification : E59, C22, E31, Q56.

INTRODUCTION

Since the 1950s, the problem of the effects of the banking sector on growth has become a major issue for countries whose main objective is to promote the development of inclusive economic growth, likely to promote viable socio-economic development. Furthermore, numerous studies have focused on analyzing the impacts of the banking sector on economic growth (Beck and Levine, 2004; Abbassia, 2015; Agostinho, 2016). In this context, Beck and Levine (2004) discussed the impact of the banking sector on economic growth. They lead to the results according to which the banking sector has a positive and significant effect on economic growth. For Abbassia (2015), the banking sector has a negative and significant impact on economic growth. On the other hand, Agostinho (2016) notes that the banking sector has no impact on economic growth.

In Africa, the work of the African Development Bank (ADB, 2020) on the impact of the banking sector on economic growth has provided very significant lessons. For example, between 2018 and 2020, economic growth in Africa has been controversial. It was estimated at 3.4% between 2018 and 2019. This situation could be explained by the moderate expansion of Algeria, Egypt, Morocco, Nigeria and South Africa which together recorded a rate average growth of 3.1%. According to this work, in 2020, Africa's economic growth increased to 3.9%.

In the Republic of Congo, over the period from 2014 to 2020 for example, economic growth was mixed. Indeed, between 2014 and 2015, growth was 6.8% and 2.6% respectively. In 2016, it increased to 3.8%. On the other hand, in 2017, the growth rate fell sharply by 3.4% due to insufficient oil revenues and poor economic diversification. Between 2018 and 2019, economic growth was 2.2% and 2.4%, thanks to increased oil production. Finally, this Congolese growth was 8.1% in 2020.

In Congo, empirical work on this issue is numerous, but controversial. From this perspective, this article seeks to answer the following question: does the banking sector influence economic growth in Congo-Brazzaville?

The article aims to study the effects of the banking sector on economic growth in Congo based on the theoretical and empirical contributions available in the economic literature. The data used via the ARDL model covers the period 1990-2020. To do this, we will distinguish the impact of the banking sector as a target variable from that of the other variables which play the control role.

This work is structured in two sections. In the first, we will present the literature review relating to the impact of the banking sector on economic growth. In the second section, it will be a question of carrying out the empirical work, successively presenting the methodology adopted, the results of the tests and the model, as well as the discussion, interpretations and associated implications.

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1- LITERATURE REVIEW

1-1 Theoretical review

The banking sector's problem with economic growth is at the center of the debates between theorists of "*Supply Leading*" and those of "*Demand Following*".

For *Supply Leading theorists*, notably Bagehot (1873), the banking sector promotes economic growth through the mobilization of savings and the allocation of financial resources to finance various investment projects. In this line, Schumpeter (1911) suggests that the banking sector plays a significant role in real economic growth by channeling savings funds to borrowers efficiently in order to increase investment in physical capital and thus stimulate innovation.

Inspired by the work of Bagehot (1873) and Schumpeter (1911), authors such as Gurley and Shaw (1960) as well as McKinnon (1973) and Shaw (1973) have addressed this question. For Gurley and Shaw (1960), the emphasis is placed on the significant contribution of the banking sector to economic growth. For these authors, resources are directed by the banking sector towards productive investments. As for McKinnon (1973) and Shaw (1973), restrictions imposed by the government on the banking system hinder financial development and, therefore, reduce economic growth.

Following this work, an abundant literature inspired by "*Demand Following*" theorists, notably Robinson (1952), Lucas (1988), Gupta (1984) and Demetriades and Hussein (1996) on the effects of the banking sector on economic growth took shape. According to Robinson (1952), economic growth leads to banking development. Regarding Lucas (1988), the banking sector does not explain growth. In contrast, Gupta (1984) and Demetriades and Hussein (1996) argue that banking development is caused by economic growth to the extent that when the economy grows, the supply of financial services increases to satisfy real sector demand.

1.2. Empirical review

A vast empirical literature explores the relationship between the banking sector and economic growth. It uses several types of models (VECM, OLS, ARDL), econometric techniques (Granger causality tests, correlation, Johansen cointegration) and produces various results. As part of our research, we group this work into two broad categories: those which show that the banking sector exerts a positive influence on economic growth and those which find contrary or mixed effects of the banking sector on economic growth.

-Work on the positive effects of the banking sector on economic growth

Placed in this first category is the work of Goldsmith (1969), who analyzed the effects of the banking sector on economic growth in 35 countries over the period 1860-1963. It highlights a positive correlation between the banking sector and economic activity. The work of King and Levine (1993) which is part of this research orientation deals with the effects of the banking sector on economic growth on a sample of 77 countries over the period 1960-1989. They found that improving banking intermediation services promotes economic growth and technological innovation.

Rioja and Valev (2004) tested the effects of the banking sector on the sources of growth using a sample of 74 countries, divided into three regions, over the period 1961-1995. They observe a strong positive influence of the banking sector on productivity growth in developed countries. Nyasha and Odhiamb (2015) go in the same direction by examining the impact of the banking sector on economic growth in South Africa, during the period 1980-2012.

By focusing their work on the effect of the banking sector on economic growth in Algeria during the period 1980-2014, Hemche and Benallal (2015) provided very informative results, namely that the level of the banking sector in the broad sense is an important factor for economic growth.

Puatwoe and Piabuo (2017), placed in the context of Cameroon, treated the impact of the development of the banking sector on economic growth. They used solidity indicators (M_2/GDP , financial sector deposit/GDP), efficiency indicators (credits allocated to the private sector), control variables (public spending, private investments) and autoregressive models with staggered delays or Autoregressive Distributed Lag (ARDL). They note a positive relationship between banking development variables and economic growth.

Sanogo and Moussa (2017) worked on the impacts of the development of the banking sector on economic growth in Côte d'Ivoire. They used the control variables (financial sector employability, gross fixed capital formation/GDP, public spending, degree of trade openness, real interest rate), the dummy variable, the financial development indicators (domestic credit issued by the banking sector/GDP, M_3/GDP , credit issued by the private sector) and the VAR model. Their results indicate that the banking sector significantly impacts economic growth.

Mehdi and *al.*, (2020) conduct an investigation into the impact of the banking sector on economic growth in Morocco over the period 1987-2017. They focused on the staggered-lag autoregressive model. Their results revealed that in the short term, bank asset deposits, bank credit granted to the private sector and trade openness have a positive impact on economic growth.

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-Work on the negative or mixed effects of the banking sector on economic growth

In the second category of work, the effects of the banking sector exert a negative or mixed influence on economic growth. Falling into this category, the work of De Gregorio and Guidotti (1995), Ram (1999), Hassan and *al.*, (2011) as well as those of Oludele and Kinfaek (2014).

In this dynamic, De Gregorio and Guidotti (1995) studied the effects of the banking sector on economic growth in 12 Latin American countries, they noted a negative correlation between the two variables.

Ram (1999) discusses the impacts of the banking sector on economic growth on a sample of 95 countries over the period from 1960 to 1989. He shows a negative and significant effect of the banking sector on economic growth for 56 countries.

Hassan and *al.*, (2011) explores the relationship between the banking sector and economic growth in 168 countries over the period 1980-2007. They group countries into several subsamples and find a negative and statistically significant relationship between the banking sector and economic growth for high-income countries, while this relationship is positive and statistically significant for East Asia and the Pacific. and for Latin America and the Caribbean.

Oludele and Kinfaek (2014) analyzed the effects of banking sector development on economic growth in Cameroon and South Africa. They used the variables (M_1/GDP , M_2/GDP , M_1/M_2 , bank deposits/GDP, domestic credit/GDP, real interest rate/term deposits, interest rate spread, stock market development) and descriptive analysis. They note that in Cameroon, financial sector development policies in response to the economic shock of 1980 did not improve the economic situation. On the other hand, in South Africa, despite financial repression and sanctions, the financial sector has been able to meet the needs of the economy and the liberalization of the sector has been beneficial for the country.

2- METHODOLOGY AND DATA OF THE STUDY

2-1 Specification of the empirical model

From the empirical literature on the effects of the banking sector on economic growth, several studies emerge, notably those of Mehdi and *al.*, (2020), Dembele and Machrafi (2021) and Ntsama and *al.*, (2022). This work used, among others, the Auto Regressive Distributed Lag (ARDL) model, the vector autoregressive (VAR) model and the Ordinary Least Squares (OLS) method.

In order to achieve the objective pursued in this research, we will use an econometric approach which is based on the empirical work of Mehdi and *al.*, (2020) who analyzed the effects of the banking sector on economic growth in Morocco. These authors used the Auto Regressive Distributed Lag (ARDL) model, the equation of which is as follows:

$$PIBH_t = f(CIFSPB_t, DB_t, OUV C_t) \quad (1)$$

With GDPH: gross domestic product per capita; CIFSPB: domestic credits provided to the private sector by banks; DB: bank deposits; OUV C: commercial opening.

The choice of this model in the context of the Republic of Congo is dictated by practical considerations (capturing the specific effects of the banking sector, influencing economic growth).

Unlike the Mehdi and *al.*, (2020), the econometric model is built by admitting that the banking sector can influence economic growth. Thus, we extended our model by integrating the following control variables: foreign direct investments, the overall index of civil liberty, the degree of fight against corruption and inflation. These data were selected because of their theoretical and empirical role on the effects of the banking sector on economic growth.

In this study, the model adopted is the autoregressive model with step lag (ARDL). The equation of this model can be represented as follows:

$$\Delta y_t = \alpha_0 + \sum_{i=1}^p \alpha_{1i} \Delta y_{t-i} + \sum_{i=0}^q \alpha_{2i} \Delta x_{t-i} + \beta_1 y_{t-1} + \beta_2 x_{t-1} + \varepsilon_t$$

With y_t , the variable to explain ; x_{t-1} the vector of explanatory variables ; α_{1i} and α_{2i} , short-term effects ; β_1 and β_2 , long-term effects; Δ , the first difference ; ε_t , the error term.

Thus model (1) can be rewritten in the following form:

$$PIBH_t = f(CIFSPB_t, DB_t, IDE_t, OUV C_t, IGLC_t, DLFC_t, TIN F_t) \quad (2)$$

By applying the general form of the ARDL model to the variables retained in this study, the specified model translates as follows:

$$\begin{aligned} \Delta PIBH_t = & \alpha_0 + \sum_{i=1}^p \alpha_{1i} \Delta PIBH_{t-i} + \sum_{i=0}^q \alpha_{2i} \Delta CIFSPB_{t-i} + \sum_{i=0}^q \alpha_{3i} \Delta DB_{t-i} + \sum_{i=0}^q \alpha_{4i} \Delta IDE_{t-i} + \sum_{i=0}^q \alpha_{5i} \Delta OUV C_{t-i} + \\ & \sum_{i=0}^q \alpha_{6i} \Delta IGLC_{t-i} + \sum_{i=0}^q \alpha_{7i} \Delta DLFC_{t-i} + \sum_{i=0}^q \alpha_{8i} \Delta TIN F_{t-i} + \beta_1 PIBH_{t-1} + \beta_2 CIFSPB_{t-1} + \beta_3 DB_{t-1} + \\ & \beta_4 IDE_{t-1} + \beta_5 OUV C_{t-1} + \beta_6 IGLC_{t-1} + \beta_7 DLFC_{t-1} + \beta_8 TIN F_{t-1} + \mu_t \end{aligned} \quad (3)$$

With Δ : the first difference operator; α_0 : the constant; $\alpha_1 \dots \alpha_8$: short-term effects; $\beta_1 \dots \beta_8$, the long-term dynamics of the model; $\varepsilon \sim (0, \sigma^2)$: the error term (white noise); (p, q), the optimum shifts; i the country of origin index; t , the time index; α and β are the unknown parameters to estimate.

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The GDPH variable represents gross domestic product per capita. CIFSPB, means domestic credits provided to the private sector by banks. DB, constitutes bank deposits. The variable "FDI" indicates foreign direct investment. OUVVC is the commercial opening. The "IGLC" variable is the overall civil liberty index. As for DLFC and TINF, they respectively indicate the degree of fight against corruption and inflation.

-The endogenous variable is the GDPH: it is an indicator which makes it possible to measure the economic performance of a country in relation to its population.

-The exogenous variables are:

- **CIFSPB** which means "domestic credits provided to the private sector by banks". They designate the financial resources provided to households and businesses by financial institutions in the form of loans, purchases of securities other than capital, commercial credits and other debts. The positive sign is expected between domestic credits provided to the private sector by banks and GDPH (Ntsama, *al.*, 2022).
- **DB** which represent bank deposits or claims on the part of households in relation to banks. There is a positive relationship between bank size and economic growth (Puatwoe and Piabuo, 2017) and a negative relationship (Mehdi and *al.*, 2020).
- **FDI:** this variable indicates foreign direct investment net inflows. They refer to the export of capital to another country in order to acquire, create a business or even take an interest in it. The positive sign is expected between FDI and economic growth (Barro, 1991; Easterly and Rebelo 1993; Azeroual 2016).
- **OUVC:** this variable designates commercial openness. It measures the importance of trade and, more indirectly, trade restrictions. We expect a positive or negative sign between economic openness and economic growth (Halit, 2003).
- **IGLC:** this index indicates the overall civil liberty index. It varies between 1 and 7. The number 1 indicates civil freedom and the number 7 corresponds to repression. The lowest scores (1 and 2) in the civil liberties scale established by Freedom House are awarded to countries respecting freedom of expression as well as the rights of assembly, association, education and religion . The highest scores (6 and 7) correspond to states offering few freedoms to their citizens. The expected sign is positive.
- **DLFC:** this variable represents the degree of fight against corruption. DLFC involves state intervention to increase transparency, ensure effective public access to information and promote public participation in decision-making processes. The negative sign is expected between the degree of fight against corruption and GDPH (Agostino, Dunne and Pieroni, 2016).
- **TINF** is the inflation rate. It is characterized by a general and constant increase in the prices of goods and services over a given period. The sign of this variable is negative (De Gregorio, 1993) or positive (Mallik and Chowdhury, 2001).

2-2 Model data

For our empirical analysis, we selected annual data from the Republic of Congo. Thus, the data used in this study come from two (02) sources. Those relating to gross domestic product per capita (GDP), domestic credits provided to the private sector by banks (CIFSPB), bank deposits (DB), foreign direct investments (FDI), trade openness (OUVC) and inflation (TINF) are taken from the World Bank database. The variable measuring the overall index of civil liberty (IGLC) and the degree of fight against corruption (DLFC) come from the World Perspectives database.

2-3 Model estimation, presentation and discussion of results

2-3-1. Model estimation procedure

The estimation of the model involves the study of different tests: stationarity, terminal cointegration and diagnosis.

-Stationarity tests

We use two types of unit root tests: the Augmented Dickey Fuller (ADF) test and the Phillips Perron (PP) test. The results of these tests are recorded in Table 1.

Table N°1: Results of stationarity tests

Variables	Degree of testing	Types of testing	Without constant and without trend	With constant and without trend	With constant and trend	Critical value at the 5% threshold	Test Stats	Décision
CIFSPB	In level	ADF	No	No	No	-1.952473	-0.841937	I(0)
		PP	No	No	No	-1.952473	-0.885860	
	In difference	ADF	Yes	Yes	Yes	-1.952910	-4.230172	
		PP	Yes	Yes	Yes	-1.952910	-4.230791	
DB	In level	ADF	Yes	No	No	-1.952473	-2.205039	I(0)

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	In difference	PP	Yes	Yes	Yes	-1.952473	-3.605839	
		ADF	Yes	No	No	-1.952910	-5.385042	
		PP	Yes	Yes	Yes	-1.952910	-5.388306	
DLFC	In level	ADF	No	No	No	-1.952473	0.526646	I(0)
		PP	No	No	No	-1.952473	1.155572	
	In difference	ADF	Yes	Yes	Yes	-1.952910	-5.890844	
		PP	Yes	Yes	Yes	-1.952910	-5.910767	
IDE	In level	ADF	No	No	Yes	-1.952910	-0.464233	I(0)
		PP	No	No	Yes	-1.952473	-1.694388	
	In difference	ADF	Yes	Yes	Yes	-1.952910	-10.09796	
		PP	Yes	Yes	Yes	-1.952910	-10.09796	
IGLC	In level	ADF	No	Yes	No	-1.952473	-0.711289	I(1)
		PP	No	Yes	Yes	-1.952473	-0.707812	
	En différence	ADF	Yes	Yes	Yes	-1.952910	-5.784757	
		PP	Yes	Yes	Yes	-1.952910	-6.411646	
OUV	In level	ADF	No	Yes	No	-1.952473	0.303677	I(1)
		PP	No	Yes	No	-1.952473	0.319517	
	In difference	ADF	Yes	Yes	Yes	-1.952910	-5.706673	
		PP	Yes	Yes	Yes	-1.952910	-5.731129	
PIBH	In level	ADF	Yes	Yes	Yes	-1.952473	-3.797020	I(1)
		PP	Yes	Yes	Yes	-1.952473	-3.806690	
	In difference	ADF	Yes	Yes	Yes	-1.952910	-8.681378	
		PP	Yes	Yes	Yes	-1.952910	-17.45032	
TINF	In level	ADF	Yes	Yes	No	-1.953858	-3.353076	I(0)
		PP	Yes	Yes	Yes	-1.953858	-3.339502	
	In difference	ADF	No	No	Yes	-1.968430	-1.508585	
		PP	Yes	Yes	Yes	-1.955020	-12.85326	

Source: Author from Eviews 9.

The results of Table N° 1 reveal that certain series are stationary in level $I(0)$ with trend or without trend at the statistical threshold of 5% for the ADF and PP tests, while the others are stationary in first difference $I(1)$. This allows us to conclude that all the series retained are not integrated of the same order, thus confirming the existence of a long-term relationship and therefore the use of an ARDL model.

-Cointegration test at the terminals

For this test, it is important that the calculated test statistic (Fisher's F-statistic) is compared to the critical values which form bounds, making it possible to detect a cointegration relationship as stated by the following hypotheses:

If Fisher > upper bound: cointegration exists;

If Fisher < lower bound: cointegration does not exist;

If lower limit < Fisher < upper limit: no conclusion.

The results of this test are shown in Table 2.

Table N° 2: Results of the terminal cointegration test

Test Statistic	Value	K
F-statistic	4.155544	7
Critical value at the terminals		
Significance	Terminal <	Terminal >
10%	1,92	2,89
5%	2,17	3,21

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2,5%	2,43	3,51
1%	2,73	3,9

Source: Author, from Eviews 9 software.

The results of this test confirm the existence of a cointegration relationship between the model variables, because the value of the Fisher statistic (F-Stat =4.155544) is greater than that of the upper limit and less than the threshold of 1 %, 2.5%, 5% and 10%.

- Diagnostic test

The diagnostic test is a test that allows you to verify the basic assumptions of the simple linear model. The results of this test are shown in the table below.

Table N°3: Results of the diagnostic test

Test hypothesis	Test	Statistics	Probabilities
Autocorrelation	Breush-Godfrey	1.077617	0.3851 > 5%
Heterocedasticity	Breusch-Pagan Godfrey	0.805455	0.6693 > 5%
	ARCH	0.011770	0.9144 > 5%
Normality	Jarque-Bera	2,084716	0,3526 > 5%
Specification	Ramsey	1.006320	0.3405 > 5%

Source: Author from Eviews 9.

From the results in Table 3, it appears that the probabilities associated with the different tests which help to diagnose the estimated ARDL model are greater than the statistical threshold of 5%. Therefore, the null hypothesis of absence of autocorrelation and heteroscedasticity of errors is accepted for all these tests. Errors are therefore normal. The model used in this research is statistically validated.

2-3-2. Presentation and discussion of results

-Presentation of the results

We present the results of the short-term (Table 4) and long-term (Table 5) model estimations.

Table N° 4: Short-term results

Variable	Coefficient	T-Statistic
D(PIBH(-1))	-0.754242***	-9.661639
D(CIFSPB)	1.356636***	5.992525
D(CIFSPB(-1))	-1.605606***	-7.228465
D(DB)	-7.288478***	-5.242804
D(DB(-1))	-16.454996***	-8.913532
D(IDE)	0.175911***	4.946241
D(OUVC)	-60.052017***	-12.181546
D(OUVC(-1))	-56.491869***	-9.761754
D(IGLC)	-2.880099**	-2.549809
D(DLFC)	-0.702794***	-4.405959
D(TINF)	0.211526***	3.385527
D(TINF(-1))	0.937869***	7.755255
CointEq(-1)	-0.865889***	-10.704177

** Significant at the 5% threshold

*** : Significant at the 1% threshold.

Source: Author from Eviews 9.

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Table N° 5: Long-term results

Variable	Coefficient	T-Statistic
CIFSPB	0.723737	1.015072
DB	2.100560	1.218512
IDE	0.188439	1.305696
OUVC	14.185971	0.781274
IGLC	3.025751	0.973012
DLFC	-0.729763**	-2.280153
TINF	-1.012967*	-1.911727
C	-26.375817	-1.058303

* Significant at the 10% threshold

** : Significant at the 5% threshold.

-Interpretation (discussion) of the results

Two types of interpretations of the results are analyzed, namely, short-term results and long-term results.

*Short term results

In the **short term**, the econometric results indicate that the adjustment coefficient or the restoring force (-0.865889) is statistically significant and negative and between 0 and 1. This result guarantees an error correction mechanism as well as the existence of a cointegration relationship between the variables of the model and therefore the use of the ARDL model.

Thus in the short term, all the variables of the study affect economic growth, in particular, domestic credit provided to the private sector by banks, bank deposits, foreign direct investment, trade openness, the overall index of civil freedom, the degree of fight against corruption and inflation.

Indeed, domestic credit provided to the private sector by banks has a positive impact on economic growth. A 1% increase in this credit increases economic growth by 1.36%. This result is consistent with those of Ntsama and *al.*, (2022) which show that the CIFSPB has a positive and significant effect on economic growth. It means that in Congo, credit is an important tool in achieving the economic objectives of private companies, because it allows them to finance their production and therefore increase their productive investment. The expected sign of this variable is consistent with theoretical predictions.

As for bank deposits (DB), the results show that its increase of 1% reduces economic growth by 7.29%. This result is in line with Mehdi and *al.*, (2020). But he opposes those of Puatwoe and Piabuo (2017) who emphasize that bank deposits have a positive impact on GDP. The decline in bank deposits in Congo can be explained by the decline in monetary availability caused by the multiple crises that Congo is going through.

Likewise, foreign direct investments have a positive and significant influence on gross domestic product per capita at the threshold of 1%. A 1% increase in this investment increases GDP by around 0.18%. This result corroborates those found by Barro (1991), Easterly and Rebelo (1993) as well as Azeroual (2016) which confirm the positive role of productive public investments as a driver of economic growth. Regarding Congo, this result suggests that these investments were oriented towards productive sectors, such as the construction of ports, road infrastructure and telecommunications (Barro, 1991; Moussavou, 2017). The sign obtained is consistent with the expected results.

The « commercial openness» variable exerts a negative and significant influence on GDPH in the Republic of Congo. A 1% increase in this variable reduces gross domestic product per capita by 60.05%. This result was demonstrated by Halit (2003) who asserts that trade openness has no direct relationship with economic growth. In the context of Congo, this result is explained by the non-compliance with customs measures implemented in the Economic and Monetary Community of Central Africa.

On the other hand, the variable “overall civil liberty index” negatively and significantly influences GDPH at the 5% threshold. A 1% increase in the IGLC causes a drop in gross domestic product of 2.88%. In the case of Congo, the authorities must strengthen civil freedom.

Regarding the degree of fight against corruption, this variable has a negative and significant impact on GDPH at the 1% threshold. An increase of 1% in this variable implies a drop in gross domestic product of 0.70%. This result corroborates that of Agostino, Dunne and Pieroni (2016). Regarding Congo, this result can be explained by the ineffectiveness of the state in the face of measures aimed at combating corruption. The sign is contrary to the theoretical prediction.

Inflation positively and significantly influences economic growth at the 1% threshold. An increase in inflation of 1% leads to an increase in growth of 0.21%. This result corroborates those of Mallik and Chowdhury (2001) who attest that inflation has a positive impact on GDP growth.

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***Long-term results**

The results show that in the long term, the degree of fight against corruption and inflation negatively affects economic growth in Congo. Indeed, the degree of fight against corruption negatively influences economic growth at the threshold of 5%. An increase of 1% in this rate translates into a drop in growth of 0.73%. This result confirms the work of Agostino, Dunne and Pieroni (2016) who find negative effects of corruption on economic growth. Regarding Congo, measures aimed at combating corruption must be strengthened.

Regarding inflation, this variable negatively and significantly influences gross domestic product at the 10% threshold. An increase of 1% in this rate implies a drop in economic growth of around 1.01%. This result was highlighted by De Gregorio (1993) who asserts that inflation reduces economic growth.

In the **short and long term**, only two variables significantly affect economic growth: the degree of fight against corruption and inflation.

CONCLUSION AND IMPLICATIONS

This study set out to analyze the effects of the banking sector on economic growth in Congo Brazzaville, using the auto regressive model with staggered delay (ARDL) applied to data from the period 1990-2020, to test the effects of a certain number of variables supposed to act on economic growth.

Our results show that in the short term, all the variables in the study explain economic growth. Domestic credit provided to the private sector by banks, foreign direct investment and inflation positively affect economic growth. While bank deposits, trade openness, the degree of fight against corruption and the overall index of civil liberty negatively impact economic growth. While in the long term, the degree of fight against corruption and inflation has a negative and significant influence on economic growth in Congo-Brazzaville. From these results, the following implications can be proposed:

The first concerns the positive impact of domestic credit provided to the private sector by banks on economic growth. In the case of Congo, public authorities must strengthen and monitor the development of the banking sector in order to promote the massive banking of the population for more credit granting to businesses and individuals. This would lead to improved growth and therefore a better distribution of national wealth.

The second concerns the negative impact of trade opening on economic growth. In this dynamic, the Congolese authorities must improve accessibility to investments and human capital which can be considered as a source of high-tech trade, technological know-how and innovation capacities of competitive national companies in order to improve the performance of international trade and, consequently, economic growth.

The third implication relates to the negative impact of corruption on economic growth. To do this, public authorities must strengthen measures aimed at combating corruption in all its forms by establishing an effective monitoring system, to promote economic growth.

The last implication is based on the positive impact of inflation on economic growth. In order to improve economic growth, Congo must follow a restrictive monetary policy to lower inflation in order to therefore promote investment, economic growth and a fiscal policy to keep inflation low.

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