Journal of Studies in Economics and Management
ISSN: 2602-6570
Volume 04 Number 01 - june 2021

Evaluating the Efficiency of Algerian Commercial Banks in Financing Economic Activity
Standard Analytical Study For the Period "1990-2019"

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Date of receipt: 04 /05/2021 Date of acceptation: 10/06/2021

Abstract:
This study aims at analyzing the impact of the development of the Algerian banks efficiency on the growth of economic activity in light of the Monetary and Loan Law 90/10 reforms. It is based on the time series data for the period (1990-2017) and the multiple linear regression method using the least squares method (OSL). This is to reveal the impact of financial policy developments of the Algerian banking system on the growth of economic activity expressed in the gross domestic product at current prices.

The study concluded that the effect of the financial policy channels of the Algerian banks on the growth of economic activity is limited, except for the effect of their expansion in lending to the national economy on the rate of inflation.

Keywords : financial system, financial policy, commercial banks, economic growth.
Jel Classification Codes : G30, G38, G21, E20.

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INTRODUCTION:

Banking services occupy great importance in the modern economy. However, their impact on economic growth has not been agreed upon among researchers in this field due to the diversity of schools of thought and methods of analysis. The determinants of economic growth and the efficiency of financing policies in stimulating capital accumulation have been subject to many applied studies which aim at statistically revealing the nature of the relationship between them and their trend. Almost studies asserted that an efficient financial system will produce highly efficient financing policies in stimulating economic growth, in a manner that responds to the requirements of the economic development needs.

After the collapse of the socialist system and the emergence of capitalism as a dominant economic system, the rapid and sudden transformations in the international economy in the early 1990s contributed in the emergence of many variables. Those variables exerted heavy pressure on the national economy that has imposed its logic of the necessity to respond to these developments. This is through adopting comprehensive economic reforms. The objectives of these reforms revolved around activating the role assigned to the commercial banks and financial institutions in developing the national economy. This development is achieved through the banks direct communication channels with various aspects of the economic activity which is mainly embodied by mobilizing savings. It is also achieved through providing the most productive branches of the economic activity with sufficient financial resources to facilitate transactions and accelerate economic growth.

In light of the above, the following main question can be summed up as a problematic of the topic: What is the efficiency of the Algerian banks financing policy in financing economic activity?

The importance of this study comes from the role of Algerian commercial banks in financing national development. This role has grown in the context of the transition to a market economy and the challenges it brings in the field of risk management, ability to compete and survival in light of performance standards based on market tests. In addition, the economic reform in Algeria is correlated by activating the role of the financing policy in financing the economic activity. The study also aims at evaluating the efficiency of Algerian banks financing policy through the use of the most important analytical indicators of the development of their business compared to developments in the economic activity.

1-Theories explaining the relationship between the financial system and the economic growth:

The role of financial banking in economic growth has occupied a great importance in the literature of contemporary developmental economic thought. Several theories have appeared in this field, the most important of which are:

1-1. The structural theory of finance: It appeared at the beginning of the sixties of the 20th century. Its analysis is based on linking economic development with the level of the financial system structural development. For example (Patrick Malawi, 1989) believes that the availability of banks with adequate financial resources motivates investors to borrow in order to establish new projects or expand their own ones. Thus, the economic situation moves from a state of supply leading to a state of demand following. That is, an increase in the supply of loans causes an increase in demand for them. This is consistent with Say's Law which says that supply creates demand. An example is the case of the Japanese economy. (Gurley & Show, 1960, p. 09)

According to this theory, the importance of financial institutions comes from the importance of money in the contemporary economy, which is important and influential like labor and capital in the production process. The increasing investor’s cash balance increases his productive capacity (Friedman, 1970 Johnson, 1977). It means that the growth of cash balances in the economy will be followed by growth in real output as well. (Alomar, 2009, p. 05)

1-2. Financial Restriction Theory: Its roots go back to the work of economists (1937. Mc Kinnon & E.shaw). It criticized the policies of financial restraint of financial and monetary systems in developing countries on the expansion of lending (زين الدين، 2016، صفحة 124), This theory has analysed the effect of the bank system on the total production depending on measuring the negative effects of financial restraint on national capital formation and economic growth. Those negative effects are represented in increasing the cost of loans available for investment From here, this theory linked the improvement of economic growth rates with the liberalization of the interest rate, in order to be determined automatically in the market. Thus, it allows reaching the equilibrium price level that would reduce the cycle of the decreasing savings the decrease in investments and then the decrease in incomes. (مصطفى الفرا، 2012، صفحة 51)

1-3. The theory of internal growth models: The new trends that took place in the economic arena during the 1990s, in the field of total analysis of growth within the internal models framework, without relying on external data or determinants. These models proved that the causes of economic growth can be traced back to purely internal factors. Thus, the changing preferences and technology, income distribution, and institutional changes can positively affect economic growth internally.

According to this theory, the financial and banking system affects economic growth through two main channels: the capital accumulation channel and the capital productivity channel. For the first channel, the effect is through increasing the level of saving in a way that raises the volume of financial resources available for investment that raises economic growth rates in a manner commensurate with the high investment rates. As for the capital productivity channel, the development of the financial sector enables the collection and analysis of information and the evaluation of the available investment projects. These projects contribute in removing the problems of information inconsistency and improving the quality and efficiency of investments by pooling financial resources in the best use. This use would lead to increase capital productivity, thus raising the economic growth rates (مصطفى الفرا، 2012، صفحة 52).

2.The trend of the generative relationship between the efficiency of the financial system and economic growth:

Economic thought which was interested in analyzing the relationship of financial development and economic growth has revealed a clear difference among economists. This economic thought can be divided into three main directions or perspectives as follows:

2-1. Financial development causes economic growth: The theoretical interest of the relationship between the financing policy of the banking system and economic growth is due to the writings of (Walter Baghot, 1873) and (Schumpeter, 1911). They have emphasized on the importance of the banks role in providing the necessary financing to stimulate economic growth especially after the exclusion of hoarding idea by the classical thought. The importance of the banking system emerged as one of the most important institutions working to mobilize savings and provide the necessary liquidity for the economy. Schumpeter believes that the services provided by the banking sector including the mobilization of savings, the evaluation of projects, the management of risks and their follow-up, are all necessary for any economic growth. Those services are also important for the exit of community members from the state of low productivity and motivate them to assume the personality of the organizer who is able to create developmental conditions for the society in which he lives. This reflects the impact that the banking institutions can have in improving the level of the individual. (kenza & Mohamed, 2012, p. 334)

The studies of (1937 R. McKinnon et E.shaw) are among the first pioneering studies that emphasized on the importance of the banking sector role in the economic growth. It has found that in developing countries, the quantitative restrictions imposed by the government on credit policies for institutions and the banking system limit the quantity and productivity of investments. Thus, it restricts economic growth and leads to inflation and price instability. (E.shaw) also believes that money is among the assets of wealth. He considers it a mean of payment and an intermediate productive input in all non-monetary sectors. However, (R. McKinnon) considered money as productive asset and a complete substitute for capital. (مصطفى الفرا, 2012, p. 54),The researchers 'work showed largely identical results. They emphasized that liberal policies related to the banking sector stimulate economic growth by improving the quality and quantity of investment through policies that would reduce restrictions on the upper level of the interest rate and high legal reserves. Also, those policies stimulate some credit programs that facilitate the process of economic development.

The studies carried out by (King & Levine, 1993) for a large number of countries during the period 1960-1989 are considered one of the most important applied studies to determine the direction of the causal relationship between financial development and economic growth. It included a number of measures of development in the banking sector, including the average liquid assets of the banking sector associated to Real the GDP, the average rate of credit devoted to the private sector associated to the total domestic credit and the average bank credit associated to the total loans. It also included a number of measures of economic growth, including average per capita income, average education, and indicators that reflect the exchange rate, trade, fiscal and monetary policy. The results of their findings accept and support the idea that development in the banking sector positively affects economic growth; whereas, the economic growth does not affect the development of the banking sector. The study of Murinde and Eng 1994 addressed the relationship between development in the banking sector and economic growth using time series and joint integration in Double Vector Autocorrelation-VAR growth. They used the monetary mass totals M1, M2.M3 and the ratio of currencies circulated outside the banking system to M1, M2.M3 and others as a measure of development in the banking sector. The real GDP was used as a measure of economic growth. The result they reached was in favour of the one-way causation “that development in the banking sector leads to economic growth”. (العتوم، 2003، صفحة 82)

2-2.Economic growth causes financial development: This hypothesis embodied the thinking of the proponents of the second trend whose studies concluded that economic growth leads to an increase in the demand for financial services. Thus, it leads to the growth of financial assets that translates the development of the financial system. The most important pioneers of this trend are (Robinson, Curley and Shaw). The study of (Robinson1952) stated that the causal relationship is heading from economic growth to the financial system and not vice versa. Development creates the demand for financing arrangements that suit them. The financial system will automatically respond to that demand. As for (Curley and Shaw-1955,1956,1960) found that financial development is a positive function of real wealth. During the development process, growth in the average per capita income leads to a faster growth in financial assets which means that the direction of the causal relationship is from economic growth to the financial system. (عموص، 2015، صفحة 10)

2-2. The relationship of mutual influence in both directions: This hypothesis embodies the thinking of the proponents of the third trend who argue that there is a causal relationship of mutual influence in two directions between the development of the financial system and economic growth, At a first stage, the financial system develops as a result of economic development that turns at a later stage into a catalyst for investment and growth. One of the most important pioneers of this economic thought is (Patrick, 1966). He argued that both financial development and economic growth cause the other. The growth develops a profitable financial intermediation system and the establishment of an efficient financial system responds to faster economic growth. Financial intermediation improves efficiency distribution of resources and then the production capacity of the real sector will expand. Also, the technical efficiency will increase the size of the financial sector. Therefore, the real sector exerts a positive external impact on the financial sector through the volume of savings. (الخليل، 2004، صفحة 64).

3.**The impact of the financial development channels on the economic activity:** The economic literature that is concerned with analyzing the causal relationship between the development of the financial system and the growth of economic activity indicates that the importance of the financing policy of the banking system in influencing economic growth – if any – cannot be embodied in a direct way but through a set of intermediate channels whose activities link various aspects of the economic activity. The most important channels are: the money supply channel, the savings mobilization channel, and the channel for allocating financial resources to the most efficient productive sectors. (بوعتروس، 2010، صفحة 101)

3-1.The money supply channel: The importance of the effect of money supply on the variables of economic activity and growth has become evident in economic theory, in contrast to the views of the classical school that enshrined the principle of money neutrality in the economy. Thus, the function of issuing money and determining the amount of money supply - which is undertaken and implemented by the central bank - reflects the importance of the banking sector in influencing economic activity. Given that the commercial banks are financial institutions that create liquidity, they are considered one of the most important channels through which monetary policy is implemented. Through these banks, the necessary liquidity is pumped in order to achieve financial stability and ensure the flow of economic and commercial transactions without any bottlenecks. Granted credit is considered one of the main traditional channels for transmitting the impact of monetary policy on the volume of the economic activity and its effect on its growth(عودة، 2011، صفحة 25) .

3-2. Savings Mobilization Channel (capital accumulation): The process of mobilizing and collecting savings from various segments of society represents the first aspect of financial intermediation work. If the banks do not succeed in attracting deposits, they will not succeed in their role in-for financing the economy based mainly on granting credit and providing the necessary liquidity for financial deficit units. The economic importance of banks in the field of mobilizing deposits from savers lies in the fact that they achieve a balance between the supply of money in the economy and the demand for it. This is positively reflected on economic growth and the level of income. In the absence of banks, saving will turn into unproductive hoarding which is one of the worst phenomena that many poor countries suffer from due to the smallness of their financial intermediation institutions. (قويدري قوشيح بوجمعة، 2017، صفحة 283)

3-3. Channel allocating financial resources: If the mobilization of savings represents one of the most important functions of financial intermediaries, directing savings after mobilizing them for the most productive investments is considered the most important function of financial intermediation. Businessmen usually have more investment opportunities than surplus units In fact, both the business sector and the family sector have excess savings that are of low marginal productivity. The financial intermediaries contribute to push the economic growth by accumulating and investing these low marginal productivity savings and allocating them for deficit units of the business sector and families who are characterized by high marginal productivity of the capital units. Thus, it leads to reducing liquidity risks and raising capital productivity. In the context of optimal resource allocation, financial intermediaries can also align short-term savings with long-term productive financing which helps stimulate growth in the long term. (قويدري قوشيح بوجمعة, 2017, p. 286)

5. The quantitative indicators for evaluating the development of the banking system compared to economic activity

The economic literature in the field of measuring the development of the banking system offers the use of many quantitative indicators that reflect the different dimensions and aspects of financial development which are represented in (عموص, 2015, p. 15):

5-1. **Indicators of financial size and depth:** The evaluation on this dimension reflects the size of the banking system compared to the size of the national economy as a whole using the following indicators:

- **The money supply index in its broad sense as a percentage of the gross domestic product:** In a way that reflects the importance and size of the banking sector in the growth of economic activity expressed in terms of **(M2 / GDP)**: where M_2 represents the value of the total available means of payment, M_1 plus the value of DT deposits. This indicator was criticized when it is used in developing countries because most of the monetary mass is outside the banking sector. Thus, it does not give a good representation of the size of financial intermediation.(الجزائر، 1994-2017)
- **Index of loans directed to the private sector (CVP) as a percentage of the total GDP:** It reflects the financial intermediation size of the commercial banks and their contribution to financing the private sector. The increasing loans directed to the private sector as a percentage of the GDP indicates a higher dependence on the banking sector for financing, and thus an increase in financial depth.
- **Index of total assets of banks (AT) to gross domestic product GDP:** This indicator measures the financial depth degree of the commercial banks financing policy. It is more comprehensive than the index of loans which is directed to the private sector as a percentage of the **GDP** because it also contains loans which are directed to the government and other sectors.

5-2.Indicators of the efficiency and effectiveness of banking transactions: This dimension contains a set of indicators that measure the extent to which the banking system contributes to facilitate financial transactions by reducing the cost of obtaining information, and raising the efficiency and effectiveness of financial services provided by commercial banks. The most important of these indicators are:

- **Ratio of total deposits (DT) to gross domestic product GDP:** The increase in this ratio reflects the high volume of banking transactions of the bank and its success in attracting deposits. Those deposits form the basis of its work by providing financial and financing services that contribute to the development of investment and economic growth.

- **Index of private credit (CVP) to total credit (CR):** This indicator illustrates the mechanism of distribution of loans between the public sector and the private sector in the economy. According to (King and Lvine), the financial system that grants larger loans to the private sector is likely to be the most efficient in selecting successful investment projects, mobilizing savings and managing risks from financial systems that grant larger loans to the public sector.

5-3. **Banking sector profitability index:** This indicator is measured by the amount of the interest margin between the interest rates that the bank charges for lending operations and the interest rates it pays for the deposits it collects. The smaller the margin is, the greater the effectiveness of financial intermediation. Thus, it provides financial services at a low cost and vice versa.

5-4.Financial activity indicators: This dimension reflects the extent of the breadth of the financial system's activity compared to the level of the economic activity as a whole. The indicators of this dimension measure the extent of banking awareness among individuals and the degree of spreading financial services to the units of the national economy. The banking proliferation index has been the focus of attention of many applied studies, perhaps the most important of which is embodied in the Cameron-1967 model. This modal has related the efficiency of the banking system to the bank branches for every 10,000 individuals where they are measured by the following equation:

Banking spread index = (number of bank branches / population) * 10,000

5-5. Financial system stability indicators: The ratio of loans (CR) to total deposits (TD) is the most important indicators used in this regard. It expresses the extent to which the savings mobilized in the form of deposits from banks are used in lending operations. Also, the extent of stability reflects the financing of the banking system to the economy on the one hand and the size of the liquidity risk that its institutions are exposed to as a result of the potential demand of withdrawing deposits.

6. Evolution of indicators of the Algerian banks financing efficiency compared to the growth of economic activity (1990-2019)

6.1. Index of money supply compared to the Algerien GDP: The main objectives of the economic reforms in Algeria in the early 20^{th} century are to reduce the rate inflation and establish the parameters of the macroeconomic equilibrium. However, the reality of the situation in the Algerian economy reflects different results, especially those embodied after the end of these reform programs, as shown by the following figure:

Fig 1: Evolution of money supply indicators compared to the Algerien GDP

Source: Prepared by the researcher based on the statistical publications of the Bank of Algeria

The development of the data in the above figure reflects a set of observations, the most important of which can be summarized in the following points:

- The period (1990-1994): It is characterized by the growth money supply in comparison to the economic activity which has declined during this period due to the effects of the 1986 oil crisis and the decline in the income of the national economy. This generated an increase in the liquidity in the national economy which is reflected by the higher rates of M2 associated to the GDP at current prices, with an average of 52.05%. In addition, it records negative monetary stability transactions far from the correct one which expresses the impact of high monetary inflation due to an abundance of money supply and a contraction in economic activity.

- The period (1995-2000): It was characterized by the restoration of the national economy to its recovery by recording positive real growth rates averaging for the period at 3.25%. It is characterized by a relative decline in the growth rate of the monetary mass, which was estimated at an average of 22.59%. This is due to the austerity policy that accompanied this period leading to restoring the monetary stability, which was estimated at an average of 5.62%.

- The period (2001-2014): During this period, an additional cash amounted to 7 billion dollars (520 billion AD) was pumped into the national economy within the framework of the economic recovery program. This was reflected in the growth of the money supply at an average rate of 14.77% and an increase in the average liquidity of the national economy to 15.31%. It indicated a decline in the rate of money supply growth in 2009 to 3.12% due to the decision of stopping consumer loans. These developments came in the same direction as the growth of economic activity which recorded a real average rate of 3.68%. This growth benefits from the increase in oil revenues due to the recovery in global demand for hydrocarbons.

- The period (2015-2019): This period witnessed a significant decline in the performance of the national economy which is embodied by the decline in the economic growth rate. It reached 0.8% by the end of 2019 due to the depreciation of the Algerian dinar and the decline in fuel export revenues due to the sudden oil price and stagnant global demand. This has necessitated austerity measures and stricter control of the money supply in order to avoid further deterioration in the value of the local currency. The growth rate in M2 fell to 0.13%, 0.82% in the years of 2015 and 2016, respectively and it stabilized at -0.76% in 2019. It is the data that contributed to achieving a cash stability coefficient below the correct one. It reflects a state of contraction in the national economy.

6.2. Development of the volume of banking transactions compared to economic activity: Commercial banks operating in Algeria (1990-2019) have witnessed positive growth rates in relation to their total assets (AT), with an average of 13.83%. This enabled an increase in the total assets of the combined balance sheets of commercial banks from 472.15 billion DZD in 1990 to 16586.9billion DZD in 2019, as shown by the following table:

Table 1: Evolution of commercial bank assets compared to GDP (1991-2019) Unit (%)

YEARS	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
AT/GDP	-	85.3	70.2	72.3	70.7	60.9	54.3	53.6	71.6	74.2
YEARS	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
AT/GDP	59.2	66.1	73.5	67.3	63.3	55.7	61.5	69.6	66.0	73.5
YEARS	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
AT/GDP	66.6	61.7	59.6	62.0	69.5	74.9	74.0	74.7	76.84	81.19

Source: Prepared by the researcher based on the annual reports of the Bank of Algeria and statistical bulletins

The above table shows the importance of the total assets of commercial banks as a percentage of the GDP which has maintained a relatively stable growth around an average rate estimated by 75.24%. This reflects the importance of banking investments in financing national economic activity through loans directed to the economy and loans to finance the public treasury. However, this percentage reflects a lesser contribution to the investments of Algerian commercial banks in shaping the GDP compared to the combined economies of the Arab countries. According to the Unified Arab Economic Report 2015, they achieved an average rate of 130% due to the decrease in their deposits from the hydrocarbon sector starting from mid-2014 in addition to the significant deterioration in the value of the Algerian dinar.

6.3. Evolution of loans to the private sector (CPV) compared to the economic activity GDP: Despite of the repeated assurances from the Algerian government to activate the role of the private sector in the economic activity and create value, the latter's share of loans directed to the economy remained the lowest of the total credit portfolio granted by the Public and the private banks alike. This has reduced the percentage of funds directed to this sector compared to the GDP which did not exceed at the best 25.55% in 2019, as shown it is shown in the following table.

Table 2: Evolution of private sector loans as a percentage of GDP (1992-2019). Unit (%)

YEARS	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
CPV/GDP	-	-	7.1	6.5	6.5	5.2	5.4	3.9	6.1	6.8
YEARS	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
CPV/GDP	7.1	7.9	12.2	11.2	10.9	11.8	12.4	13.0	12.8	16.1
YEARS	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
CPV/GDP	15.1	13.6	13.9	16.3	18.1	21.5	22.7	23.8	24.49	25.55

Source: Prepared by the researcher based on the annual reports and statistical publications of the Algerian Bank.

The above table reflects the low ratio of loans directed to the private sector to GDP at current prices. The ratio of loans to the private sector to GDP did not exceed 7.08% during ten years of financial liberalization of the banking sector (1990-2000). It is improved starting from 2002 at rates that exceeded the 12%, to reach 25.55% by the end of the period in 2019.

6.4. Efficiency Indicators for Savings Mobilization: Our assessment of the efficiency of commercial banks operating in Algeria by mobilizing savings and their contribution in facilitating financial transactions in the national economy is based on the Average Tendency to Deposit Index (TD / BIB). It expresses the ratio of bank deposits associated to the GDP which reflects the effectiveness of commercial banks in mobilizing deposits according to their importance in the economic activity. The developments of this indicator for Algerian commercial banks during the period (1990-2019) were as follows.

Table 3: The evolution of the average tendency to deposit in Algerian banks (1991-2019)

Unit (%)

YEARS	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
TD/GDP	-	27.7	26.7	31.1	29.9	24.5	21.9	23.2	39.4	38.7
YEARS	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
TD/GDP	34.9	42.3	47.1	46.5	44.0	39.1	41.4	48.3	46.7	51.6
YEARS	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
TD/GDP	48.5	46.2	44.7	46.8	52.9	55.1	52.2	52.4	58.00	54.15

Source: prepared by the researcher based on the annual reports of the Bank of Algeria.

The results of the above table reflect the development of the average tendency for bank deposits at a low rate with different trends around an average rate for the period of 50.93%. This is due to the low growth rate of deposits throughout the study period which did not exceed an average of 6.61%. This indicates the low efficiency of the Algerian banking system in mobilizing savings which is attributable to many reasons, the most important of which are the limited savings channels offered to those with financial surpluses, the low banking awareness among the public, and the absence of the role of interest rates in stimulating the demand for bank deposits.

6.5. Banking density index: Despite of the expansionary trend in the banking market in terms of the number of banks operating in Algeria starting from the year 1990, by opening the way to private banking institutions in a manner that increased the number of banking agencies by the end of 2016 to 1577, the average banking density in the Algerian economy is remaining weak and it is not in line with the demographic growth rate, as shown in the following table.

Table 4: the evolution of the banking density index in Algeria for the period (2004-2016).

Years	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Banking Density Rate	0.3603	0.3686	0.3784	0.3752	0.3732	0.3733	0.3779
Years	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	

Banking Density Rate	0.3686	0.3784	0.3752	0.3732	0.3733	0.3779

Source: prepared by the researcher based on the annual reports of the Bank of Algeria.

The above table shows that the rate of banking density in the Algerian economy has developed at a weak rate. It records an average rate of 38.04% which explains-indicates the coverage of the banking network for population distribution at a rate of one bank agency per 26,242 inhabitants, which reflects the low effectiveness of the banking system by delivering its services to a large segment of society.

7. Analyzing the development impact of financing efficiency indicators of Algerian banks on economic activity.

This part of the study deals with estimating the volume of economic activity expressed in the level of gross domestic product (PIB), using a standard model. The researcher is guided by the relevant theoretical literature and applied studies, in addition to examining the results based on what is stated in economic theory and statistical standards. The most important of which are: The multiple determination coefficient (R^2), the modified coefficient of determination (R2 Adjusted). Whenever the value of the parameter is greater, the independent variables explain more the developments that occur to the dependent variable. Another statistical criterion is also the (F) test that determines the quality of the model and its suitability to the data. The greater value of this test expresses the higher quality of the statistical model in estimation, in addition to the (T) test which shows the significance of the transactions in the model.

7.1. The general model of the study :The estimation of the impact of the financing policy efficiency development of the banking system on the growth of economic activity in this study depends on a standard model consists of a dependent variable that defines the development of the economic activity volume expressed in the GDP of the Algerian economy (PIB). In addition to other independent variables that define the development of the banking system. To build the model, the researcher relied on annual data covering the period from (1992-2017), according to the following equation:

GDP: gross domestic product at current prices, (CR): the amount of loans granted to the economy, **IN1**: index of money supply in the broad sense (M2) to GDP, IN_2: index of ratio of private sector financing loans (CPV) to GDP, IN_3: Ratio of total bank deposits (DT) to total output, ei: random error :

7.2. Model estimation: This part of the study shows the results of estimating the model using the time series data for the period (1992-2017) and the multiple regression method using the OLS method with the help of Eviews9 program. The statistical data for equation (1) were estimated and gives the formula described by the equation (2):

The multiple linear regression equation above, in addition to the possibility of explaining the economic activity developments defined by the value of the gross domestic product through the financial development indicators of the banking system, reflects the wave value of the constant β_0 . This value explains the independent development in the value of the GDP from the developments of the indicators: the financial depth of banking transactions (M2 /**GDP**, CPV /**GDP**), the volume of loans (CR) destined for the national economy, and the index of the efficiency of commercial banks in mobilizing savings (DT / **GDP**).

Table 5: The results of the statistical evaluation of the model

Results of estimation of model parameters				Results of model estimation	
Parameter code	**Estimated Parameters**	**t-statistic**	**P- value**		
Constant β0	663.54	0.23	0.81	FC	59.26
B1	2.26	4.4	0.00	R2	0.9150
B2	152.80-	1.40-	0.17	Durbin Watson	0.55
B3	42.84	1.06-	0.88	SGR	1858.018
B4	254.62	3.82	0.03		

Source: prepared by the researcher based on Eviews9 program output.

7.3. Analyzing the results: The results of the study were analyzed in light of the determination factor (R^2) test, Fisher test, Student test for each one of the model parameters, the residual self-correlation test and the error heterogeneity test as follows:

- **Multiple Determination Coefficient (R^2) test:** In light of the results of Table No. (05), we note that the high value of R_2, estimated by 91.50%, indicates a large explanatory dimension of the study model. This is through the possibility of interpreting 91.50% of the developments in the volume of economic activity in Algeria. It is defined as a dependent variable (GDP) by the development of the independent variables, while the ratio of 9% is explained by random errors.

- **Fisher test:** In light of the results shown in Table (05), it is clear that the value of 59.26FC = is greater than the tabular value of F at the level of significance of 5%, which calls for rejecting the null hypothesis H0 = 0 (lack of features). This means that the independent variables have a good explanation for developments in the value of the dependent variable, which is confirmed by the P-value of zero which is completely smaller than 0.05.

- **Student test:**

Table 6: Test Student Summary

Model components	Parameter	$\mid st(t_c) \mid$	St(tt)	P-Value	Note	Test results
Constant β0	663.54	0.23	2.05	0.81	tc< tt	**Non Significant**
CR	2.26	4.40	2.05	0.00	tc >tt	**Significant**
IN1 = M2/GDP	-152.80	1.40	2.05	0.17	tc< tt	**Non Significant**
IN2= CVP/GDP	42.84	0.88	2.05	0.88	tc< tt	**Non Significant**
IN3 = DT/GDP	254.62	1.97	2.05	60.0	tc >tt	**Significant**

Source: Prepared by the researcher based on Eviews9 program output.

The (t) test for the relationship of the independent variable defined by the size of loans provided to the national economy (CR) with the GDP showed a positive significant relationship. The value of parameter B1 was estimated by 2.26 in the equation (2). This indicates that the expansion of commercial banks in granting loans to the national economy by one will lead to an increase in the volume of economic activity which is expressed by the gross domestic product of the current prices of the local currency, by 2.26, assuming the constant factors. This can be explained by the directions of the credit policy of commercial banks operating in Algeria by expanding the granting of medium and long-term productive loans in a manner that contributes to the growth of the economic activity. This result is consistent with what the economic theory and the results of previous standard studies indicate.

The (t) test for the relationship of the independent variable defined by the degree of financial depth of commercial banking transactions (M2 / GDP) with the GDP showed a statistically insignificant negative relationship. The value of the parameter β_0 in the equation (2) was estimated to be (-152.8) which indicates that an increase in this ratio by one amount will lead to a decline in the gross domestic product at current prices by an amount of 152.8. This explains the contractionary effect that the high liquidity of the economy exerts on the volume of the economic activity or the gross domestic product. However, this result does not agree with previous studies in other economies where they reached a statistically positive significant relationship. The (t) test for the relationship of the independent variable defined by the degree of financial depth of commercial banking transactions (CPV / GDP) with the GDP has showed a positive non-significant relationship statistically. The value of the parameter β_3 in the equation (2) was estimated by (42.84). This indicates that increasing this ratio by one amount will lead to an increase in the gross domestic product at the current prices by an amount of 42.84, with the assumption that the other factors remain constant. However, the effect of the credit granted to the private sector on the GDP in the Algerian economy was not statistically significant. This explains the low share of loans that finance this sector from the total credit portfolio of the commercial banks operating in Algeria in a manner that limits the productivity and the importance of the role of this sector of the economic activity in Algeria which is characterized by an almost absolute dominance of the public sector. The (t) test for the relationship of the independent variable defined for the efficiency of commercial banks to mobilize savings (DT / GDP) with the GDP showed a positive non-significant relationship. The value of the parameter B_4 was estimated by 254.6 in the equation (2). It indicates that the expansion of the deposit capacity of commercial banks by mobilizing additional savings of 1 will lead to an increase in the volume of the economic activity, expressed by the GDP in current prices of the local currency, by 254.62, assuming constant of the other factors. However, the effect of the volume of savings mobilized by commercial banks on the GDP in the Algerian economy was not statistically significant for the limited strategies of these banks to develop financial resources due to the absence of the interest rate role in stimulating the demand for savings from individuals and families as well as the absolute dependency of banks on deposits collected from the hydrocarbon sector. In turn the hydrocarbon sector remains hostage to the development of the oil market forces. This can be explained by the role that the loan multiplier plays by raising the financing capabilities of commercial banks operating in Algeria in a way that enables them to expand by granting more feasible and productive financing grants that allows the development of the economic activity. This result is consistent with what it refers to by the economic theory and results the previous standard studies.

- **Self-correlation test:** It aims to test the hypothesis of the lack of self-correlation errors. The imbalance of this hypothesis leads to an inaccuracy in measuring the relationship between economic variables using the least squares method. This test depends on the estimation and the (DW) Durbin Watson test or Breusch -Godfrey test in order to reveal the extent of correlation between random errors in the model. The first test indicates a calculated WD = 0.55 (greater than 0.05) while the second indicates prob.chi-square (2) = 0.5 is completely greater than 0.05. This establishes the acceptance of the null hypothesis that there is no self-correlation between errors in a way that there is no self-correlation problem between the model variables.

Conclusion:

The Monetary and Loan Law and the following legal amendments which are among the most prominent reform stations known to the Algerian banking system has devoted a set of new work principles within the framework of the commercial banks financing policy. The aim is to bring them to the level of control over banking financing techniques that take into account the criteria of profitability and risk at the micro level by adopting rules. The precautionary management and the adoption of systems for selecting and classifying loans and their degree of risk, which opened a wide space of freedom for commercial banks to provide bank loans, in a way that doubled the volume of their financing for the economic activity in its public and private sectors, and gave the process of evaluating the efficiency of the financing policy of commercial banks by financing economic activity in In light of these trends the following results:

Results: The founding conditions for financial institutions and banks established in the framework of the Monetary and Loan Law contributed to the expansion of the banking market. This is achieved through opening the way for private banking institutions in a way that increased the number of banking agencies by the end of 2016 to 1577. Banking in the Algerian economy remains weak and they are not in line with the growth rate.

The banks operating in Algeria have achieved positive growth rates with respect to their total assets with an average of 6.61% for the period (1990-2019). This has enabled an increase in the total assets of the combined balance sheets of banks from 472.15 billion DA in 1990 to 16586.9billion DA in 2019. The rules for banking work established in the framework of the Monetary and Loan Law (profitability and risk) has established a new direction in the financing policy of the Algerian banks.

This has opened the way for them to expand by granting medium and long-term productive loans in a way that contributed to the growth of the economic activity which is expressed in the gross domestic product by current prices. These results are consistent with what the economic theory and the previous benchmark results indicate. The large expansion in granting loans to the national economy under the influence of the loan multiplier, which showed a statistically significant relationship to GDP by the current prices. In a greater extent, it explains the inflationary pressures that this channel inflicts on the economy due to the limited role of the rest of the financing policy channels on the growth of the economic activity. It also explains what is confirmed by the results of previous studies that the development of monetary stability indicators in Algeria under the influence of the credit policy of the banking system. Despite the significant expansion of the investment portfolio of the Algerian banks in the loan portfolio, it is still witnessing a decline in the share of loans directed to the private sector.

The private sector is considered the most efficient and productive in the national economy, according to the economic literature. This explains the limited contribution of this channel to the growth of GDP. It does not explain its developments at a statistically significant level. Despite the expansion of the great deposit capacity of the Algerian banks, their contribution to stimulate the growth of economic activity was not statistically significant. This explains the absence of the interest rate role in stimulating the demand for savings from individuals and families, and the absolute dependence of banks on deposits collected from the hydrocarbon sector that remains hostage to the development of the forces of the oil market.

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