


THE IMPACT OF BANK CREDIT ON INVESTMENT AND PUBLIC SPENDING IN IRAQ FOR THE PERIOD (2005-2021)

Zahraa Qassem Hussein ^A, Khaled Hussein Al-Marzouk ^B, Ehab A. Mahmood ^C



| ARTICLE INFO | ABSTRACT |
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| Article history: | <p>Purpose: The purpose of the current research is to show the reality of bank credit and then analyze and measure investment and public spending in Iraq, as well as to show the impact of bank credit on investment and public spending in Iraq.</p> |
| <p>Received 04 October 2022</p> | <p>Theoretical framework: Most economic activities are financed by bank credit, which plays a significant and efficient role in doing so by coordinating and creating short-, medium-, and long-term financing mechanisms. Bank credit contributes to growing the national economy.</p> |
| <p>Accepted 20 December 2022</p> | <p>Design/methodology/approach: The analytical descriptive approach was adopted to study the research variables (bank credit, investment, and public spending). Modern standard tools in economic analysis were used to show how bank credit affected investment and public spending. This was done in order to reach the research methodology and achieve the research objectives.</p> |
| <p>Keywords:</p> | <p>Findings: It has been determined that the role performed by bank credit in the growth of economic, social, and commercial activities was successful, and there is a direct correlation between bank credit and total investment.</p> |
| <p>Bank Credit; Investment; Public Spending; Iraqi economy.</p> | <p>Research, scientific and social implications: Through the current research, the banking sector can be developed to meet the needs of productive projects in society, especially investment projects in order to advance the investment reality, in addition to state support for public and service projects through public spending to achieve the well-being of members of society. This in turn enhances the economic development of the country.</p> |
|  | <p>Originality/value: The value and significance of the research concerning the study of bank credit in Iraqi commercial banks becomes evident and seeks to explain the impact of bank credit on total investment and public spending through analyzing and measuring the relationship between bank credit and total investment and public spending.</p> |
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^A Master Student. Department Of Financial And Banking Sciences - College Of Administration And Economics- University Of Babylon-Iraq. E-mail : zkasemnana@gmail.com Orcid: <https://orcid.org/0000-0003-0205-0960>

^B Prof. Department Of Financial And Banking Sciences- College Of Administration And Economics- University Of Babylon-Iraq. E- mail: bus.khalid.hussein@uobabylon.edu.iq Orcid: <https://orcid.org/0000-0002-7920-2988>

^C Assist. Prof. Department Of Financial And Banking Sciences - College Of Administration And Economics- University Of Babylon-Iraq. E-mail: ehab.mahmood@uobabylon.edu.i Orcid: <https://orcid.org/0000-0001-9827-1447>

O IMPACTO DO CRÉDITO BANCÁRIO NO INVESTIMENTO E NOS GASTOS PÚBLICOS NO IRAQUE PARA O PERÍODO (2005-2021)

RESUMO

Objetivo: O objetivo da pesquisa atual é mostrar a realidade do crédito bancário e depois analisar e medir o investimento e os gastos públicos no Iraque, bem como mostrar o impacto do crédito bancário sobre o investimento e os gastos públicos no Iraque.

Estrutura teórica: A maioria das atividades econômicas é financiada pelo crédito bancário, que desempenha um papel significativo e eficiente ao fazê-lo, coordenando e criando mecanismos de financiamento de curto, médio e longo prazo. O crédito bancário contribui para o crescimento da economia nacional.

Design/método/abordagem: A abordagem analítica descritiva foi adotada para estudar as variáveis de pesquisa (crédito bancário, investimento e gastos públicos). Ferramentas padrão modernas na análise econômica foram utilizadas para mostrar como o crédito bancário afetou o investimento e os gastos públicos. Isto foi feito a fim de alcançar a metodologia de pesquisa e alcançar os objetivos da pesquisa.

Descobertas: Foi determinado que o papel desempenhado pelo crédito bancário no crescimento das atividades econômicas, sociais e comerciais foi bem sucedido, e há uma correlação direta entre o crédito bancário e o investimento total.

Pesquisa, implicações científicas e sociais: Através da pesquisa atual, o setor bancário pode ser desenvolvido para atender às necessidades de projetos produtivos na sociedade, especialmente projetos de investimento a fim de fazer avançar a realidade do investimento, além do apoio estatal a projetos públicos e de serviços através de gastos públicos para alcançar o bem-estar dos membros da sociedade. Isto, por sua vez, melhora o desenvolvimento econômico do país.

Originalidade/valor: O valor e significado da pesquisa relativa ao estudo do crédito bancário nos bancos comerciais iraquianos torna-se evidente e procura explicar o impacto do crédito bancário no investimento total e nos gastos públicos através da análise e medição da relação entre o crédito bancário e o investimento total e os gastos públicos.

Palavras-chave: Crédito Bancário, Investimento, Gastos Públicos, Economia Iraquiana.

IMPACTO DEL CRÉDITO BANCARIO EN LA INVERSIÓN Y EL GASTO PÚBLICO EN IRAQ DURANTE EL PERIODO (2005-2021)

RESUMEN

Objetivo: El objetivo de la presente investigación es mostrar la realidad del crédito bancario y, a continuación, analizar y medir la inversión y el gasto público en Iraq, así como mostrar el impacto del crédito bancario en la inversión y el gasto público en Iraq.

Marco teórico: La mayor parte de las actividades económicas se financian mediante el crédito bancario, que desempeña un papel importante y eficaz en este sentido al coordinar y crear mecanismos de financiación a corto, medio y largo plazo. El crédito bancario contribuye al crecimiento de la economía nacional.

Diseño/metodología/enfoque: Se adoptó el enfoque descriptivo analítico para estudiar las variables de la investigación (crédito bancario, inversión y gasto público). Se utilizaron herramientas estándar modernas de análisis económico para mostrar cómo el crédito bancario afectaba a la inversión y al gasto público. Esto se hizo con el fin de alcanzar la metodología de investigación y lograr los objetivos de la investigación.

Resultados: Se ha determinado que el papel desempeñado por el crédito bancario en el crecimiento de las actividades económicas, sociales y comerciales fue exitoso, y existe una correlación directa entre el crédito bancario y la inversión total.

Implicaciones científicas, sociales y de investigación: A través de la presente investigación, se puede desarrollar el sector bancario para satisfacer las necesidades de los proyectos productivos de la sociedad, especialmente los proyectos de inversión para avanzar en la realidad de la inversión, además del apoyo estatal a los proyectos públicos y de servicios a través del gasto público para lograr el bienestar de los miembros de la sociedad. Esto a su vez potencia el desarrollo económico del país.

Originalidad/valor: El valor y significado de la investigación referente al estudio del crédito bancario en los bancos comerciales iraquíes se hace evidente y busca explicar el impacto del crédito bancario en la inversión total y el gasto público a través del análisis y medición de la relación entre el crédito bancario y la inversión total y el gasto público.

Palabras clave: Crédito Bancario, Inversión, Gasto Público, Economía Iraquí.

INTRODUCTION

Banks have a significant role in the economy since they have a significant impact on increasing the total amount of money in circulation. Deposits are not only created but also accepted by them. The banking system is a group of institutions dealing with bank credit, including the central bank, specialized banks, and commercial banks. Credit activities and related interests account for the majority of banks revenues and profits (Flayyih and Khiari 2022). It must be the duty of the bank to pay attention to the credit function, given that the financial position of any bank is particularly affected by the credit portfolio (loans). The safety of this portfolio depends on achieving high profits for the bank at the lowest possible levels of risks associated with the decision to grant credit (Abass et al., 2022).

Bank credit is considered one of the key issues on which the countries of the world depend, whether they are developing or developed countries, due to its role in financing economic activities in general and investment in particular through financing investment projects that support the national economy (Campiglio, 2016). The role of public spending is one of the tools of fiscal policy, which directly reflects its role in achieving economic development. The process of analyzing bank credit in Iraq finds its necessity as a result of the nature of the economic reality, which requires the effective contribution of the banking sector in financing the economic sectors, especially after the great openness witnessed by the Iraqi economy during the research period.

Background

Bank credit has a significant impact on the national economy since changes in bank credit tools have an effect on actual economic activity and the two variables (investment and public spending). However, the effects of bank credit on investment and public spending in Iraq are unclear. This is due to reasons that may be related to the nature and reality of the Iraqi economy and the financial system (Jassim et al., 2021).

A study by (Al-Taie & Salman, 2021) highlighting its role in the investment process in Iraq, and addressing the reality of investment in Iraq and know its obstacles. The study reached a set of results. There is a role for public debt and bank credit on investment in Iraq, but the strength of this role varies according to the security and economic conditions and the fiscal and monetary policy in Iraq. There is a correlation and effect of significant significance between total public debt and total bank credit as two independent variables in total fixed capital as a dependent variable that represents investment (Al-Refiay et al., 2022).

The study of (Hamad et al., 2022) found that the volume of public spending increased as a result of the increase in oil revenues after the lifting of economic sanctions on Iraq, as public expenditures increased from the year (2004-2019). This increase in public spending has often been apparent rather than real. By reviewing previous studies, it becomes clear that the number and type of variables used in measuring bank credit differed from one study to another. There are a number of indicators used in studies to measure bank credit on investment and public spending. It is clear from the audit review that the number of studies and research that dealt with bank credit, investment and public spending is few on the one hand. On the other hand, the impact of bank credit on investment and public spending for the period (2005-2021) has not been studied. Therefore, this study, in this period, uses the analytical and analogical method to bridge this research gap (Flayyih et al., 2022).

Objective of the work or research problem

The research aims at studying the reality of bank credit in Iraq, estimating and analyzing the total investment and public spending. It also aims at showing the impact of bank credit on the total investment and public spending in Iraq during the study period. The research problem is summarized by raising the following questions:

- 1- Does bank credit, investment and public spending in Iraq have a level consistent with economic theories?
- 2- What is the impact of bank credit on total investment and public spending in Iraq during the research period (2005-2021)? Which of the two variables was more affected by bank credit?

LITERATURE REVIEW

Bank credit has a direct impact on the investment process as it is an injection tool for the economy in general and for investment in particular. It has an effective role in providing the funds needed for investment projects and providing the resources needed for production by saving the funds and directing them towards investment (e.g. Omankhanlen, 2011; Campiglio, 2016; Taghizadeh-Hesary & Yoshino, 2020; Al-Taie et al., 2022). The extent of the state's intervention in the country economic conditions and economic activity has an impact on granting credit, whether for consumption or investment purposes.

Study of (Al-Douri, 2006) found the country that aims to achieve rapid growth allocates the bulk of its income to investment loans and reduces its current expenditures except for the

necessary ones. Study of (Takka & Al-Azzawi, 2007) indicate to need the finance public expenditures has increased, as it has resorted to public borrowing because increasing existing taxes or imposing new taxes may cause problems for the national economy as a result of the burden of these taxes on members of society and the negative consequences they create on the economy. In addition, the tax revenue and public revenues have become insufficient to finance the increasing state expenditures, especially spending on government investment projects.

The key reason for governments resorting to borrowing is the deficit in the public budget (public revenues are less than public expenditures), or to counter the high costs caused by wars, or the need to finance economic development, i.e., the establishment of investment projects or the country infrastructure such as water, electricity, health projects, education, the construction of roads, bridges, irrigation canals, and dams, or due to a recession in which economic activity, production and use decrease.. The reason may be external influences on the local economy. The process of borrowing works to achieve a balance between aggregate demand and aggregate supply. That is, borrowing works to put an end to the problem of inflation and absorb it to the increase in aggregate demand and to get rid of the negative effects that lead to inflation, especially in developed countries. The state's obtaining of loans will help it increase production and diversify it, and then increase supply (Khalaf, 2008). These governments are obliged to recover the amounts they borrowed and pay the interest and debt installments on their due dates. It is called the service in the agreed period according to the terms of the borrowing that are agreed upon (Abdul-Hameed, 2005).

MATERIAL AND METHODOLOGY

Research Sample

The importance of the research on the study of bank credit in Iraqi commercial banks is evident which seeks to explain the impact of bank credit on total investment and public spending by analyzing the relationship between bank credit and total investment and public spending. The research included data on the Iraqi economy, especially bank credit, total investment and public spending. They are represented in the time period covered by the research, which are 17 years from (2005) to (2021).

Research Hypothesis

The research stems from the hypothesis that: (bank credit in Iraq had a positive or negative impact on total investment and public spending in Iraq during the research period. There is a short or long-term equilibrium relationship (joint integration), which results in a causal relationship between bank credit and total investment and public spending) .

In order to accept or reject the research hypotheses and to achieve its objectives, the research was divided into three sections. The first topic dealt with the conceptual framework of bank credit, investment and public spending through two demands: the first dealt with bank credit, investment and public spending. The second requirement included the impact of bank credit on total investment and public spending. As for the second topic, it dealt with analyzing the reality of bank credit, investment and public spending in Iraq for the period (2005-2021). It included two requirements, the first dealt with the development of bank credit, investment and public spending in Iraq for the period (2005-2021). The second dealt with the impact of bank credit on investment and public spending in Iraq for the period (2005-2021). As for the third topic, it was dealt with to measure and analyze the relationship between bank credit, investment and public spending in Iraq for the period (2005-2021). It included two requirements: the first dealing with the time-series stability test, and the second dealt with the co-integration test. The research concluded with a number of conclusions and recommendations.

RESULTS AND DISCUSSION

The development of bank credit in Iraq for the period (2005-2021)

It is noted from the data of Table (1) that bank credit during the period (2005-2008) witnessed a continuous increase due to the increase in the volume of direct cash credit provided by commercial banks in Iraq, which was (1717450) million dinars in (2005), while in (2008), it was (4587454) million dinars. The year (2009) also witnessed a significant increase in the total bank credit, which was (51761906) million dinars, due to the increase in the volume of pledge credit, which was (46071845) million dinars. Bank credit also decreased to (51512436) million dinars in (2010) due to the decline in pledge credit.

Then the bank credit increased during the period (2011-2014), as the lending activity of banks in (2011) witnessed a slight increase in the volume of bank credit up to (59376537) million dinars compared to the year (2014), which witnessed a remarkable expansion in the volume of credit. The total credit granted by commercial banks to various sectors was (85030693) million dinars at the end of the year (2014). This increase is an indication of the

increase in demand and supply of credit, which leads to increasing the employment of deposits in various sectors. This enhances the capacity of these sectors and ensures the necessary liquidity for them. The rise in total credit provided to all sectors, especially the central government, is due to the deteriorating security conditions and the increase in military spending in the war against ISIS terrorist gangs, which is the highest amount of total bank credit during the study period. It is noted that bank credit decreased significantly again for the period (2015-2018) due to the decrease in the volume of pledged credit provided in that period. It is noted that the amount of bank credit for the year (2015) became (77285834) million dinars, while the amount of bank credit was (63823570) million dinars in (2018). After (2018), the total bank credit witnessed a remarkable increase, reaching (80615681) million dinars for the year (2021). This increase was as a result of the increase in the volume of cash and pledge credit granted by commercial banks operating in Iraq.

Table (1) The development of bank credit in Iraq for the period (2005-2021) million dinars

| Year | Monetary credit (1) | Pledge credit (2) | Bank credit (1+2) |
|------|------------------------|----------------------|----------------------|
| 2005 | 1717450 | — | 1717450 |
| 2006 | 2664898 | — | 2664898 |
| 2007 | 3459020 | — | 3459020 |
| 2008 | 4587454 | — | 4587454 |
| 2009 | 5690062 | 46071844 | 51761906 |
| 2010 | 11721535 | 39790901 | 51512436 |
| 2011 | 20344076 | 39032461 | 59376537 |
| 2012 | 28438688 | 44174185 | 72612873 |
| 2013 | 29952012 | 53666718 | 83618730 |
| 2014 | 34123067 | 50907626 | 85030693 |
| 2015 | 36752680 | 40533154 | 77285834 |
| 2016 | 37180123 | 33281607 | 70461730 |
| 2017 | 37952829 | 27651378 | 65604207 |
| 2018 | 38486947 | 25336633 | 63823580 |
| 2019 | 42052511 | 25269822 | 67322333 |
| 2020 | 49816906 | 25450156 | 75267062 |
| 2021 | 52971508 | 27644173 | 80615681 |

Sources: Columns (1) and (2) were taken from the Central Bank of Iraq / Department of Statistics and Research, Annual Statistical Bulletin, (2005-2007, p. 20), (2008, p. 24), (2009, p. 15), (2010, p. 30), (2011 - 2021, p. 29).

The development of total investment and public spending in Iraq for (2005-2021):

It is noted from the data of Table (2), the first column that the total investment fluctuated during the study period. By noting the second column, which represents the value of the total investment, we find that it witnessed an increase in the years (2005-2006), reaching (10182362) million dinars in (2005) and (16911154) million dinars in (2006) due to an increase in both gross domestic product and investment. In (2007), the investment decreased to (7530404)

million dinars, which was the lowest value reached by the investment during the study period, then it rose again to (23240539) million dinars in (2008). In (2009) it decreased again to (13471242) million dinars, due to the effects of the global financial crisis, where it rose in (2010) to (26252776) million dinars. It continued rising during (2011-2014) to reach (37255269) million dinars in (2011) and (55837402) million dinars in (2014). The reason for this rise was the result of the increase in international oil prices, which reflected positively on the Iraqi economy. As for the years (2015-2016), the investment decreased due to the deterioration of the security situation to reach (50650572-28703209) million dinars, respectively, and then increased again during the years (2017-2019) due to the stability of the security conditions and the improvement of oil prices, reaching (32330275) million dinars in the year (2017) and (54580010) million dinars (2019). As for the year (2020), the decline recurred to reach (42944041) million dinars due to Covid 19 pandemic and the effects it had on the Iraqi economy. In the year (2021), it increased to (52352566) million dinars as a result of the increase in the quantity of exported crude oil. The activity of the oil sector takes the first place in the generation of GDP.

Table (2) the development of the total investment and public spending in Iraq for the period (2005-2021) million dinars

| Year | Gross investment (I) (1) | Public spending (G) (2) |
|------|-----------------------------|----------------------------|
| 2005 | 10182362 | 26375175 |
| 2006 | 16911154 | 33487877 |
| 2007 | 7530404 | 33545144 |
| 2008 | 23240539 | 59403375 |
| 2009 | 13471242 | 52567025 |
| 2010 | 26252776 | 64351984 |
| 2011 | 37255269 | 69639523 |
| 2012 | 38139871 | 90374783 |
| 2013 | 55036676 | 106873027 |
| 2014 | 55837402 | 83556226 |
| 2015 | 50650572 | 70397515 |
| 2016 | 28703209 | 67067437 |
| 2017 | 32330275 | 75490115 |
| 2018 | 38107186 | 80873189 |
| 2019 | 54580010 | 111723523 |
| 2020 | 42944041 | 76082443 |
| 2021 | 52352566 | 102849659 |

Source: The column (1) was taken from the Ministry of Planning, Central Statistical Organization, National Accounts Unit, for many years. The column (2) was taken from the Central Bank of Iraq, General Directorate of Statistics and Research, Annual Statistical Bulletins, (2006, 2005, p. 34), (2007, p. 42), (2008, p. 48), (2009, p. 43), (2010, p. 64) (2012, 2011, p. 67), (2013-2017, p. 69), (2018-2021, p. 67).

The impact of bank credit on total investment and public spending in Iraq for the period (2005-2021)

Table (3) growth rate of bank credit, total investment and public spending in Iraq for the period (2005-2021)

| Year | Growth rate (BC) % (1) | Growth rate (I) % (2) | Growth rate (G) % (3) |
|------|---------------------------|--------------------------|--------------------------|
| 2005 | — | — | — |
| 2006 | 55.2 | 66.1 | 27 |
| 2007 | 29.8 | -55.5 | 0.2 |
| 2008 | 32.6 | 208.6 | 77.1 |
| 2009 | 102.8 | -42 | -11.5 |
| 2010 | -0.5 | 94.9 | 22.4 |
| 2011 | 15.3 | 41.9 | 8.2 |
| 2012 | 22.3 | 2.4 | 29.8 |
| 2013 | 15.2 | 44.3 | 18.3 |
| 2014 | 1.7 | 1.5 | -21.8 |
| 2015 | -9.1 | -9.3 | -15.7 |
| 2016 | -8.8 | -43.3 | -4.7 |
| 2017 | -6.9 | 12.6 | 12.6 |
| 2018 | -2.7 | 17.9 | 7.1 |
| 2019 | 5.5 | 43.2 | 38.1 |
| 2020 | 11.8 | -21.3 | -31.9 |
| 2021 | 7.1 | 21.9 | 35.2 |

Source: The table was prepared by the researcher depending on the data from tables (1 and 2).

Bank credit growth rate (BC) and investment growth rate (I):

The data of Table (3), Column (1) and (2), show the relationship between the growth rates of bank credit and investment. In (2006), the credit growth rate reached (55.2%) while the investment growth rate reached (66.1%), then both decreased in (2007) to reach the credit growth rate (29.8%) and the investment growth rate (55.5%). The reason for this decrease is the result of changing the method of calculating fixed capital formation (Abdul-Hameed, 2007).

As for the years (2008-2009), it is noted that the credit growth rate rose to (32.6%, 102.8%), respectively, compared to the increase in the investment growth rate to (208.6%) in (2008) and its decline to (-42%) in (2009). The reason for this decline lies in the drop in oil prices in the world market due to the financial crisis. In (2010), the credit growth rate decreased to (-0.5%) compared to an increase in the investment growth rate to reach (94.9%), then the credit growth rate rose again during the years (2011-2012) to reach (15.3%, 22.3%) against a decrease investment growth rate to (41.9 %) in (2011). Despite the high rate of credit growth in (2012), the investment growth rate was low at (2.4%) for the same year. This means that the investment was not at the required level, because the loans were not directed towards the activities for which they were granted.

During the years (2013-2018), the credit growth rate decreased to (15.2 %). In (2013) it continued to decline until (2018) to reach (-2.7%), while the investment growth rate was (44.3%). In (2013), it decreased to (1.5%). In the year (2014), it continued to decline during the years (2015-2016) and then returned to rise to (12.6%) in (2017) and (17.9%) in (2018). In the two years (2019-2020), the credit growth rate increased to (5.5%, 11.8%), respectively. As for the investment growth rate, it increased to (43.2%) in (2019) and then decreased in (2020) to (21.3%). The reason is due to the repercussions of the (Covid 19) pandemic, which negatively affected the Iraqi economy in general and investment in particular, then the credit growth rate decreased to (7.1%) in (2021) compared to the increase in the investment growth rate to (21.9%).

The growth rate of bank credit (BC) and public spending (G)

The relationship between bank credit and public spending can be clarified through the data of Table (3), column (1) and (3), which shows the relationship between the growth rate of bank credit and the growth rate of public spending. In (2006), the growth rate of credit reached (55.2%) and the growth rate of public spending (27%), then both decreased in (2007). The credit growth rate was (29.8%) and the public expenditure growth rate was (0.2%). As for the years (2008-2009), the growth rate of credit increased (32.6%, 102.8%) and the growth rate of public spending (77.1%) in (2008), then the growth rate of public expenditure decreased to (11.5%) in (2009). It decreased the rate of credit in (2010) to (-0.5%), compared to the increase in the growth rate of public spending to (22.4%). As for the year (2011), the credit growth rate increased to (15.3%), compared to a decrease in the growth rate of public spending to (8.2%). Here, the relationship between them became inverse as a result of the decline in oil prices. In (2012) both of them increased to reach the credit growth rate (22.3%) and the public spending growth rate (29.8%). In (2013-2018), the credit growth rate decreased to (15.2%) in (2013) and continued to decline until it reached (-2.7%) in (2018). As for the growth rate of public spending, it decreased to (18.3%) in (2013), and continued to decline until (2016) to reach (-4.7%). Then, it rose to (12.6%) in (2017) and then decreased again until it reached (7.1%) in (2018).

It can be noted that the relationship between them fluctuates between positive and inverse during that period. The reason for this is due to the deteriorating security and economic conditions and the increase in military spending for the war against the terrorist gangs of ISIS. In (2019), both the credit growth rate increased to (5.5%) and the public expenditure growth

rate to (38.1%). This means that the relationship between them is direct. In the year (2020) the credit growth rate increased to (11.8%) compared to the decrease in the growth rate of public spending to (31.9%), then the relationship returned inverse between them due to the repercussions of the (Covid 19) pandemic and the subsequent drop in oil prices globally due to the lack of demand for it. This reflected negatively on the Iraqi economy. As for the end of the study period in (2021), the credit growth rate decreased to (7.1%) compared to the increase in the growth rate of public spending to (35.2%), as the inverse relationship between them continued.

Estimating the standard model and analyzing the economic relationship between bank credit, total investment and public spending in Iraq for the period (2005-2021).

In this topic, the economic relationship between bank credit and total investment and public spending in Iraq will be analyzed for the period (2005-2021) by applying statistical tests and measures using the program (EViews12) to study the impact of bank credit on total investment and public spending for time series data.

The first requirement: The Augmented Dickey Fuller (ADF) test for extrapolating time series:

ADF test was conducted to determine the stability of the model variables. It was found from the results of Table (4) that all the original time series of the model variables did not settle at the level $I(0)$ for the three cases (with the fixed term, the constant term and the general trend, without the fixed term and the general trend). To make the series of variables (bank credit (Bc), investment (I), and public spending (G) stable, the first difference is taken. The results of Table (5) showed that the time series of the variables (BC, G) were stable at the first difference $I(1)$ at the level of significance (1%) and (5%), except for the investment variable series (I) that did not stabilize at the first difference $I(1)$. So, the second difference was taken for her. The results of Table (6) showed that the time series of the above variable (I) was stable at the second difference $I(2)$ at the level of significance (%1) and (5%).

Table (5) Results of Time Series Stability at Level I(0)

| Variable | Without the fixed limit and general trend | | | |
|--------------------|--|--------|-------------------------------------|-------------------|
| | The result | Prob | Critical value | Statistical value |
| BC | Unstable | 0.7199 | -2.602185 -1.946072 -1.613448 | 0.129363 |
| I | Unstable | 0.1884 | -2.604746 -1.946447 -1.613238 | -1.261624 |
| G | Unstable | 0.7181 | -2.604746 -1.946447 -1.613238 | 0.124303 |
| Variable | With the presence of the fixed limit and the general trend | | | |
| BC | Unstable | 0.5973 | -4.110440 -3.482763 -3.169372 | -1.986275 |
| I | Unstable | 0.1717 | -4.121303 -3.487845 -3.172314 | -2.894717 |
| G | Unstable | 0.2319 | -4.121303 -3.487845 -3.172314 | -2.722219 |
| With a fixed limit | | | | |
| Variable | The result | Prob | Critical value | Statistical value |
| BC | Unstable | 0.3282 | -3.538362 -2.908420 -2.591799 | -1.9043541 |
| I | Unstable | 0.3120 | -3.546099 -2.911730 -2.593551 | -1.940440 |
| G | Unstable | 0.1612 | -3.546805 -2.911730 -2.593551 | -2.346805 |

Source: Prepared by the researcher using statistical programs (Eviews).

Table (6) Results of the stability of time series when taking the first difference I(1)

| Variable | Without the fixed limit and general trend | | | |
|--------------------|--|--------|-------------------------------------|-------------------|
| | The result | Prob | Critical value | Statistical value |
| BC | Stable at level (1%&5%) | 0.0083 | -2.602185 -1.946072 -1.613448 | -2.672429 |
| I | Unstable | 0.1200 | -2.604746 -1.946447 -1.613238 | -1.517727 |
| G | Stable at level (5%) | 0.0363 | -2.604746 -1.946447 -1.613238 | -2.087856 |
| Variable | With the presence of the fixed limit and the general trend | | | |
| BC | Unstable | 0.1364 | -4.110440 -3.482763 -3.169372 | -3.014941 |
| I | Unstable | 0.7378 | -4.121303 -3.487845 -3.172314 | -1.702508 |
| G | Unstable | 0.3925 | -4.367004 -3.487845 -3.172314 | -2.367004 |
| With a fixed limit | | | | |

| Variable | The result | Prob | Critical value | Statistical value |
|----------|------------|--------|-------------------------------------|-------------------|
| BC | Unstable | 0.0501 | -3.538362 -2.908420 -2.591799 | -2.907475 |
| I | Unstable | 0.3766 | -3.546099 -2.911730 -2.593551 | -1.800980 |
| G | Unstable | 0.2044 | -3.546099 -2.911730 -2.593551 | -5.198035 |

Source: Prepared by the researcher using statistical programs (Eviews).

Table (7) Results of Time Series Stability When Taking the Second Difference I(2)

| Variable 1 | Without the fixed limit and general trend | | | |
|---------------|--|--------|-------------------------------------|-------------------|
| | The result | Prob | Critical value | Statistical value |
| | Stable at level (1%&5%) | 0.0000 | -2.604746 -1.946447 -1.613238 | -8.378144 |
| | With the presence of the fixed limit and the general trend | | | |
| | The result | Prob | Critical value | Statistical value |
| | Stable at level (1%&5%) | 0.0000 | -4.121303 -3.487845 -3.172314 | -8.220696 |
| | With a fixed limit | | | |
| | The result | Prob | Critical value | Statistical value |
| | Stable at level (1%&5%) | 0.0000 | -3.546099 -2.911730 -2.593551 | -8.297944 |

Source: Prepared by the researcher using statistical programs (Eviews)

The second requirement: The co-integration test

The co-integration test of the model variables was carried out following the (Johansen) methodology. From the results of Table (8), it is noted that the methodology discovered the existence of three vectors of co-integration, according to the results of the Trace test and the Maximum Eigen value test. This indicates that there is a long-term equilibrium relationship between the model variables.

Table (8) Methodological Results (Johansen)

| Hypothesized | | Trace | 0.05 | |
|---|------------|-----------|----------------|---------|
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.312320 | 45.18224 | 29.79707 | 0.0004 |
| At most 1 * | 0.228889 | 21.96750 | 15.49471 | 0.0046 |
| At most 2 * | 0.090074 | 5.852274 | 3.841465 | 0.0156 |
| Unrestricted Cointegration Rank Test (Maximum Eigenvalue) | | | | |
| Hypothesized | | Max-Eigen | 0.05 | |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.312320 | 23.21475 | 21.13162 | 0.0251 |
| At most 1 * | 0.228889 | 16.11522 | 14.26460 | 0.0252 |
| At most 2 * | 0.090074 | 5.852274 | 3.841465 | 0.0156 |

Source: The table was prepared by the researcher by using the statistical program (Eviews).

The efforts of the Central Bank and its commercial banks in Iraq should be unified to create a suitable climate for bank credit by dealing responsibly with all the factors affecting credit in terms of supply, demand, and compatibility between financial and monetary policy and not differing in the objectives of each of them by following a financial policy that leads to an adequate display of savings and an adequate demand for investment. Reducing the bank credit provided to some unsuccessful economic sectors with not good economic feasibility, which ensures the achievement of economic development within the country. There is a need for a banking system that is more productive than consumer. This means that the bank credit provided must be directed towards the production of goods and services that lead to increased investment.

Monetary policy must have a major role in providing the requirements of the development movement in Iraq. On the contrary, monetary policy must have an active role in supporting the process of economic growth, especially in the real non-oil side. This will make economic development a well-established reality within the national economy.

CONCLUSION

Despite the fact that bank credit plays a critical role in financing investment projects that require large sums of money in order to be realized, commercial banks in Iraq are still underdeveloped in this area. It is mentioned that, generally speaking, the security instability of the nation has a negative impact on investment and public spending in Iraq.

The results of the co-integration test showed, through the (Johansen) methodology, that there is a long-term equilibrium relationship between the variables of the study. The results of the standard analysis of the research variables showed that they contradict the logic of economic

theory. The reason is that most of the credit provided by commercial banks operating in Iraq is not directed to production, but rather to consumption (such as buying homes, furniture, cars, etc.).

The findings of the descriptive and quantitative analysis of the data for the study period show that bank lending has no impact on investment and public spending in Iraq (2005-2021). This is due to the lack of awareness and weak public confidence in banks and the banking sector's failure to keep up with modern technological developments, as well as the lack of bank credit towards the objectives for which it was granted.

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